An investigation into the lived experience of recreational mountain bikers in Southwest England

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Abstract

This study places important attention upon the lived experiences of male recreational mountain bikers in Southwest England. Using a sociological phenomenological approach developed by Allen-Collinson and a unique conceptual framework that integrates the concepts of flow, pain, and intersubjectivity, this qualitative ethnographic study explores how riders engage with their bodies, senses, and interactions with others during their experiences. The study addresses three key research questions that include how riders' bodies influence their experiences on the bike, the role the senses play in riding experiences and how intersubjective encounters with others shape the experience of riding.

Four key themes were developed from thematic analysis. The first theme, 'Mountain Biking and the Senses,' explores how riders attune to and engage with their senses during riding. The second theme, 'Flow, Fear, and the Senses,' examines how the body and senses contribute to optimizing flow states and managing fear. The third theme, 'Fatigue, Exhaustion, and Pain,' investigates how riders experience and interpret pain, both emotionally and sensually. The final theme, 'The Role of the Other in the Mountain Biking Experience,' explores how intersubjective and intercorporeal encounters shape the riders' experiences.

The study's conclusions highlight the significant role of the body and senses in the lived experience of mountain bikers. Specifically, it demonstrates that during flow states, the mind-body dualism is repositioned, privileging the embodied experience of riding. Conversely, during encounters with fatigue and pain, the mind assumes a central role in regulating experience. In both contexts, the senses heighten the experience and play an active role in the riders' engagement with their environment. These conclusions are significant as they

represent the first consolidated investigation of the body, senses, and the "other" in mountain biking, offering new avenues for further research in this and other activity spaces.

Authors Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

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Introduction

1.1 The Trailhead

> *Humans are attuned for relationship. The eyes, the skin, the tongue, the ears, and nostrils – are all gates where our body receives the nourishment of others… We must renew our acquaintance with the sensuous world in which our technologies are all rooted. Without the oxygenating breath of the forests, without the clutch of gravity and the tumbled magic of water, we cannot know the textures, the rhythms, and the tastes of the bodily world (Abrams, 2017, p. IX).*

Abram (2017) reminds those embarking on sensuous explorations that life is complexly layered. Competing aspects of life are often guided by work and family, mediated by the array of technology that occupies our world. It is here we are tasked with engaging in daily activities that keep our life moving forwards, towards what, we do not know, but forwards, nonetheless. According to Abram (2017) a product of a relentless pursuit forward is that we have become de-sensitised to daily encounters and bodily aspects of experience. The sporting landscape is not immune to de-sensitisation, athletes' bodies are often regarded as mechanical or robotic, pieces of sporting real estate to be traded or bought by highest bidder (Rowe, 2017). Yet, what this approach to sporting practice negates to appreciate is that sport is inherently bodily and sensual. An experiential encounter that requires the body and senses to work simultaneously and often in the background.

Engagement in sport requires the body to perform specific actions, either individually or as part of a team, towards a specific goal. Whilst those occupying ownership of sporting practices would like to think actions of participants are devoid of free will, something to be simulated or gamified, they are at their core still human. Their bodies are vehicles for action, they get hurt, feel pain, experience joy. Mountain biking is no different, riders experience unique bodily encounters during their engagements with nature. The body is often the source of propulsion which permits the opportunity to ride various trails and experience feelings of

freedom, speed, and awareness. Whilst sport possesses a wealth of opportunity to investigate bodily experiences of athletes, this is an under researched area. Moreover, the landscape of mountain biking research to date has not addressed questions related to the body and senses in any meaningful way. Therefore, I seek to provide unique contributions that bring the body and senses back into focus. This study explores the corporeal and sensual experiences of mountain bikers, seeking to reveal the unique ways the body and senses govern experience.

The Introduction is split into three sections that situate the research problem in a sporting context. The chapter introduces the reader to notions of non-traditional sport through the lens of lifestyle and alternative sports. It details their social and cultural significance prior to, and since their introduction into Western sporting practice in the 1960s. Focus is then placed upon mountain biking specifically and the reader is introduced to its history, and its role as a social and cultural practice. Studies are drawn from an eclectic research base that exists on mountain biking such as trail building, the experience economy, and technological innovations. Overviewing existing scholarship illustrates the lack of consolidated research on the body, senses, and the lived experience of mountain bikers. The Introduction concludes with a discussion of the research aims and objectives central to the study. This is accompanied by an overview of the thesis structure.

1.2 Emergence of Lifestyle/Alternative Sport(s)

Writing in 2003, Robert Reinhardt and Synthia Sydnor note sports associated with the non-traditional proliferate our contemporary Western culture. Traditional understandings of sport involve a rule governed activity that has its roots in cultural and social history. These activities can be individual or team but have at their centre a desire to win with examples including football (soccer), tennis, golf and netball. For Reinhardt and Sydnor (2003) non-

traditional sports include those regarded as action, extreme or lifestyle, and include activities such as surfing, bouldering, base jumping and mountain biking. Furthermore, Wheaton (2014, p.26) defines lifestyle sports 'as a broad range of informalized, non-competitive, non-traditional, adventure-based, or alternative sports and physical activities which typically take place in natural settings, and which embrace an ethos of individualism, expressivity, creativity, and pleasure'.

These relatively new sports decorate the culture(s) we are part of today; they influence our dress, our language, our friendships and our very being. The proliferation of these sports since Reinhardt and Sydnor's 2003 contribution has been astonishing. Statista (2022) note participation in extreme sports in England reached a high of 3.4 million individuals in the year 2018/2019. This figure is even more staggering given the percentage increase since 2015 is over 54% (Statista, 2022). Research from the World Economic Forum (2019) on participation in the experience economy and non-traditional sports suggests 78% of millennials would rather spend their income on a desirable experience rather than a material good. This research indicates the phenomenon is not confined to those in their early twenties or youth, it extends to all age ranges and social groups (World Economic Forum, 2019). Finally, Newcombe (2020) suggests post pandemic, we have seen a 117% increase in mountain bike sales compared to those in the previous financial year.

The growth of lifestyle sports has not gone unnoticed at the policy and governmental level, even if its presence has wavered over the last two decades (Gilchrist and Wheaton, 2017). According to the Australian Government, lifestyle and individualistic sports are one of the important mega trends of the 21st century sporting landscape. The increase outlined is in stark contrast with the declining rates seen in traditional sports (Hajkowicz, 2013; Statista, 2022).

Within England the recognition that traditional sports are less appealing is documented in the Department for Culture Media and Sports (DCMS) strategy (Crouch, 2015), Sporting Future – A new Strategy for an Active Nation. Here we can see clearly a more subtle and accommodating approach has been adopted toward lifestyle and informal sport. The strategy states 'Sports must become demand led, recognising the different motivations, attitudes and lifestyles of its potential customer base'(Crouch, 2015, p.20). The increasing governmental and societal recognition of lifestyle and action sports has implications for academic research. It is imperative academic research seeks to explore the experiences of these participants to contribute to the growing research agenda in this area. Before moving to discuss this and situating this study in a specific field of research, the following two sections provide an outline of the history of lifestyle sports followed by a detailed overview of mountain biking. The purpose of this endeavour is to provide the reader with a set of tools related to language, history and participation to aid understanding the remaining discussions in the thesis.

1.3 History of Lifestyle Sports

This section considers the lineages of contemporary lifestyle sport practice. The section considers their origin and cultural creation alongside wider global flows rooted to some degree in colonialism. Discussion of these areas is important given the predominance of lifestyle and alternative sporting culture in the Western world, and especially bike riding.

Breivik (2010) argues since the 1970s there has been an exponential growth in lifestyle, extreme and what he terms adventure sports. The growth is not isolated from sport more generally but the trends we have experienced in lifestyle sports are unique. The popularity of these sports according to him needs to be viewed against developments seen in Western societies. These include the growth of individuality, commercialisation and the thirst for an

experience that cannot be quenched in traditional sporting pursuits. A key aspect noted by Breivik (2010) but also by many authors writing on extreme or lifestyle sports is their opposition to mainstream sporting culture. Specifically, he notes opposition to societal regulation, their rejection of safety and their anti-civilised nature (Rannikko et al., 2016; Jeanes et al., 2018; Haffmonova et al., 2016; Gilchrist and Wheaton, 2017). Beal (1995) suggests skateboarders' opposition to traditional sporting culture was presented through participant control of the sport, a desire to individualise the sport, reject historical notions of team and to devalue competition. What both sets of discussions note for Jeanes et al. (2018) and Jarvie (2012), is that Breivik (2010) points to a countercultural understanding of lifestyle sports that can be broadly seen to originate in the 1950s (Rannikko et al., 2016).

Two activities of significance in this context and timeframe are surfing and skateboarding. These activities are broadly recognised as the fore founding lifestyle sports of Western culture. These activities have created sub cultural attitudes that reject conformity and regulation in favour of expression, experience, and pleasure (Rannikko et al., 2016). Skateboarding, a lifestyle sport that originated in late 1950s West Coast America is a dry land derivative of surfing. It was created by surfers to continue engagement outside of the water when the waves were flat (Booth, 1995). Drawing on Laderman (2014) the origin of surfing and thus lifestyles sport is far more complex than popular belief. Accounts of surfing history have for a long time been constructed and written against an historically organised, unchallenged colonial and imperialist past (Helekunihi Walker, 2011; Moser, 2017). These understandings represent contemporary surfing as we know it since the 1950s but omit vital narratives dating further back. These understanding suppress the struggles, inequity, and exploitation of many peoples to create and homogenise a practice that was once and in pockets still is, a central part of indigenous epistemologies (Laderman, 2014; Dawson, 2017).

The construction of Western cultural hierarchies and their influence upon experience is something I will return to later when I discuss the senses.

Contemporary understandings place the origin of surfing to the shores of Hawaii. Whilst the wealth of literature depicts this origin, according to Laderman (2014) this is rather a representation of a colonial, hegemonic artistic license of history, rather than a true account of events. Dawson (2017) and McGloin (2007) contend whilst Hawaii is credited with indigenous surfing it cannot be understood as the only location the practice was enacted. Mcgloin (2007) suggests it is likely Aboriginal Australians or Atlantic Africans who position the ocean at the centre of their culture engaged in water-based activities as a cultural practice as well.

What has emerged through historical accounts of surfing is its relationship with a broader set of cultural values beyond those acknowledged in contemporary discourse (Dawson, 2017). Drawing on the work of Helekunihi Walker (2017; 2011; 2008) and Moser (2017) it can be asserted the meaning of precolonial surfing was centred on sensual experience, pleasure, and a cultural relationship with the ocean. In his discussion of relationships with the ocean and aquatics, Dawson (2017) argues the position of the water in Oceanian discourse was central to existence. He points to the role of the ocean in areas ranging from commerce and economics to spiritual beliefs. The positioning of ocean and beach in cultural identities provided stable grounds for the development of surfing as a community centred, playful activity. McGloin (2007) extends this point arguing the rasion d'etre for surfing within indigenous culture was focussed on a relationship with the ocean, people, and rituals. Dawson (2017) suggests in precolonial eras within Oceania and Atlantic Africa, surfing must be seen in a broader cultural relationship with the ocean. The relationship he argues sits

alongside cultural activities such as swimming, canoeing and fishing, all playing significant roles in developing a cohesive social space. These activities were central to the maintenance of life both in the water and on shore, developing social values, cohesion and rejuvenating the body and soul. Surfing was seen to be a playful and thrill orientated activity that expressed feelings of joy and animation.

In a Hawaiian context Moser (2017) provides a compelling depiction of surfing before colonisation and Christianisation. He suggests surfing's strong visceral elements were part of the fabric of Hawaiian people's existence. The embodied experience of surfing in Hawaiian history in suitably articulated by a contemporary Hawaiian surfer who notes "*Surfing has been part of our history for thousands of years… you connect spiritually and physically to all elements around you… it's a Hawaiian thing"* (Walker, 2008, p.93).

The above demonstrates the contentious origins of lifestyle sports as we contemporarily know them. Additionally, the section highlights misrepresentations evident in popular discourses that attribute lifestyle sports to Western cultures. Awareness of this is important because it provides a suitable foundation to understand where, how and by whom lifestyle sports are participated in but also where their risk taking, and countercultural lineages begin. Moreover, the accounts provide a starting point to appreciate the holistic, lived experience of participants that embraces the role of the body and senses. Having established the growth of lifestyle sports, detailed their origins and established how and why they are viewed as countercultural (Wheaton, 2004), a move to focus on mountain biking specifically is taken next.

1.4 Mountain Biking: An Introduction

This section introduces notions of bike riding and specifically mountain biking to the reader. This enables the research to be situated within the intended research context. Below overviews are provided of the recent introduction of mountain biking and charts its development over the last 50 years. Accordingly, the reader is introduced to the major areas of research in mountain biking scholarship. The overview illustrates the lack of existing research on the body, senses and mountain bikers within social research. Consequently, it provides the first opportunity to demonstrate the novel intentions of the study.

The history and invention of mountain biking is a point widely discussed and debated (Cherrington, 2021). The tension exists because the notion of bike riding over rough terrain has existed far longer than the commercialised ideals seen in mountain bike landscapes today. The Marin Museum of Mountain Biking (MMMB) (2022) suggests early examples of mountain biking could be seen in the 19th century. At this time most people were using and adapting bicycles to ride over the rough roads that were available. The contemporary understandings of mountain biking have radically changed since the early incarnations. Now they present a lifestyle and leisure pursuit afforded to specific groups in society (Hagen and Boyes, 2016). At a competitive, organised international level the sport is represented well by both sexes, yet at the recreational and leisurely level it is heavily weighted towards a white, male, and middle-class participant (Cessford, 1995; Gibbs and Holloway, 2019).

Contemporary mountain biking involves the same constituent components to those used in the 19th century. Yet the development of participant, machine and equipment has evolved tremendously over the last four decades. Currently we see a range of riding genres in mountain biking that demand a type of bike and equipment, to be ridden over a specific type

of terrain and topography. The image below (Figure 1) shows an assemblage of further equipment culturally deemed necessary for the mountain biker. We can observe safety equipment such as the helmet and body armour, accompanied by hip belts to carry repair and medical kits, eyewear, and gloves.

Figure 1 Assemblage of mountain biking equipment

The image also indicates an example of the type of terrain mountain bikers are typically depicted riding in popular media. The graded route of this trail is likely to be either double red or black. According to British Cycling (2022) and Forestry and Land Scotland (2022), trail grading, similarly, to skiing follows a red, amber and green rating system. Starting with green being easiest, it is followed by blue, red and black being the most severe. Orange, not included in the typical rating is reserved for trails that are explicitly for elite riders. Increases in severity include the inclusion of drops, jumps and rocks increasing in size and gradient, with the most severe orange including large gaps up to 20 meters wide. Key to this overview is that as trail grading increases, we can observe corporeal differences placed upon the rider and these will be described later.

The mountain biking viewed in contemporary society can be linked to a select group of riders from the 1970s named the Repack Group (MMMB, 2022; Cherrington, 2021). Californian riders comprised of the 'Balooners' from Tamalpais, the Larkspur Canyon Gang, and the Cupertino Riders from South Marin. They were predominantly male and white, engaged in stage racing and downhill off-road races. Coinciding with the birth and development of skateboarding in the same locale, the Repack Group, were named because they had to repack grease into their brakes after every run. The group used a mishmash of children's Schwinn bike frames, broad saddle, large handlebars, and wide tyres, named 'clunkers' that were suited to off road riding. These early travails into nature on two wheels marked the starting point of contemporary mountain biking. The Repack Group are also credited with driving the cultural and technological expectations in mountain biking. Amongst the group the riders were constantly developing their bikes and whether aware or not, the cultural practices of the activity (Cherrington, 2021).

The romantic descriptions of mountain biking's emergence as a lifestyle sport culture provide a starting point to appreciate the activity observed today. Yet, further detail is required to understand the trajectory mountain biking has taken and the contemporary characterisation of a mountain biker. According to Eassom (2003) the emergence of commercial, modern mountain biking can be traced back to the late 1980s. During this period the decline of the bike amongst many Western cultures as a leisure and recreation vehicle was underway. He argues the decline could be attributed toward two competing understandings. On one hand, it was due to the bikes perceived utility; a sociotechnical object with a central purpose of ensuring its rider got to point B from point A. This utility had been driven by a society in need of a cheap machine that could carry payloads in addition to the driver. On the other hand, at a time when wider society was being driven by a free market, lucrative alternative modes of transport were afforded greater attention. The bike lacked aesthetic appeal of many of its rivals.

Parallel to the decline of the utilitarian bike was a societal trend towards consumption and commodification. This trend had already swept through surfing and skateboarding in the late 1970s (Beal, 1995; Eassom, 2003). McCullough (2013) argues further societal changes such as increased leisure time, altered perceptions of the environment, and changing approaches to image and identity created the ideal environment to reimagine the bike. Consequently, the bike was recreated to embody commodified culture and thus regained the public's attention. From the face of extinction, the bike emerged anew, now not a transport mode for the masses, rather an exclusive, hi tech, adventurous bike that could unlock a gateway to nature, freedom and experiential leisure time. This bike was suitably named the mountain bike. This was epitomised, according to Eassom (2003), by Muddy Fox's 1986 advertisement for their Explorer and Bigfoot ranges. Here we can observe in Figure 2 a bike more akin to the

descriptions of the Repack Group, positioned atop of Glaslyn in Snowdonia, performing the impossible, riding on water.

Figure 2 Late 1980s mountain biking promotion, Retrobike

The reconceptualised bike ran parallel to the influence of consumption trends in society noted above in the 1980s. Today, the mountain bike is now ubiquitous in the alternative lifestyle sport space. According to Savre et al. (2009) between the late 1980s and today we have seen a turbo charging of development in all aspects of mountain biking. Mountain bikes form part of the cultural consciousness of many Western societies and still maintain an extreme mystique for many (Hagen and Boyes, 2016). Over the last decade eight separate genres of mountain biking have been created each with competitive schedules, paying sponsors and TV deals for the most proficient.

The phenomenon of bike parks has also emerged for the mountain biking enthusiast. Bike parks are dedicated spaces to ride a mountain bike that are often privately maintained and require payment. Riders can engage with the experience economy by virtue of payment for access, payment for auxiliary equipment, and of course payment for the bike. As Eassom (2003) notes, key to mountain biking's sustained success is it has become an acceptable adult toy to be nurtured and cared for, alongside soft top sports cars or golf clubs. An outcome of this consumerism has the been the fetishisation of the mountain bike and this has led to Eustis (2012) suggesting the quest to maintain authenticity (akin to the Repack Group) in the face of aggressive consumerism is fraught with peril. The search for authenticity is not confined to mountain biking, rather it is a wider point of discussion across all lifestyle sports. Given the huge amounts of money and opportunity on offer from corporate sponsors, tensions exist.

This section provides a discussion of the roots of mountain biking set against wider lifestyle sport culture, traditional sport, and societal changes. Coupled with earlier sections defining traditional/ lifestyle sport, and the provision of a historical overview lifestyles sports generally, the introduction has provided a foundation to appreciate the emerging and eclectic

scholarship on mountain biking. Scholars on mountain biking are a small group exploring authentic aspects of mountain biking in areas such as land rights (Brown, 2016), environmentalism (Eustis, 2012) and trail building (Cherrington, 2021). Next, I provide an overview of the extant literature in mountain biking to begin uncovering the experiences of mountain bikers.

Existing research in mountain biking is eclectic and this diversity provides an interesting set of understandings in a largely under researched sporting domain. Research on cycling more broadly has also experienced this phenomenon and as noted by Jarvie (2012) can be attributed to the dominance of traditional sporting practice and associated discourses. Whilst the prominence of traditional sporting research is not surprising, what is, is the relative lack of mountain biking research in comparison to other lifestyle sports such as surfing and skateboarding. This lack, given the participation rates in mountain biking at present, is unique and requires deeper explanation.

Of the prevailing mountain biking literature, Rosen (1993) provides the first dedicated discussion and paves the way for what is one of the most researched aspects, the bike and technology. Rosen (1993) interrogates the notion of the mountain bike as purely an object, contesting understandings of the mountain bike are socially constructed. He indicates the changes we see in mountain bikes mirror the changes in society. This premise is one that Eassom (2003) whilst not acknowledging Rosen (1993) seeks to develop in his discussion of the history of mountain biking and the explosion of mountain biking culture during the early 1990s. Eassom (2003) argues this explosion can be attributed to society's search for exclusivity and risk within a consumerist landscape. Since these introductions some two and three decades ago, further published research has been scarce in the domain of cultural

studies. What has emerged are contributions from students. McCullough (2013) builds on Rosen (1993) and Eassom (2003) to present an extensive discussion of the creation, and subsequent growth of, mountain biking. McCullough (2013) reveals the synonymity of contemporary mountain biking with cultural desires for fun and camaraderie in an American context. Additionally, Taylor's (2010) work in New Zealand demonstrates the role of wider culture in both proliferating and dwindling participation in a New Zealand context.

Furthermore, successive research from Gibbs and Holloway (2018; 2019) drives towards understanding the consumptive trends of mountain biking against an experience economy. This feature is widespread in lifestyle sports such as surfing, and Gibbs and Holloway (2018; 2019) indicate the advent of trails centres as sites of experience landscapes. Additionally, Savre et al. (2009) argue mountain biking's inclusion in the Olympics is symbolic of its embrace of consumer culture. Whilst the style seen on this stage represents only one genre of riding a bike, the authors seek to examine the economic, cultural and institutional conditions surrounding its inclusion. The authors suggest whilst we can read Olympic inclusion as meeting the highest standards of sports performance, sports scholars must also be aware it represents an opportunity for big corporations to utilise the sport for their gain.

This domain of research and the contributions above reaffirm the position of mountain biking as a culturally and socially constructed leisure pursuit that is heavily informed and influenced by wider societal actors. This point is important for this study because it confirms assumptions drawn from wider lifestyle sport research (Breivik, 2010; Wheaton, 2004; Gilchrist and Wheaton, 2017) that mountain biking is not immune to society's prevailing winds and may in some instances reproduce cultural and societal constructions (Moreland et al., 2024).

Further mountain biking research locates itself amongst issues of environmentalism, space, and usage. The increase in this modest but growing area of research can be attributed to a combination of the participation trends noted so far, and the social construction of the activity set against notions of wilderness and nature in a consumer society. Eustis (2012) observes an increasing demand for wilderness experiences within the UK and subsequent moves to commodify the sublime. The increasing visibility of nature orientated activity and subsequent access to nature is a growing area of research in mountain biking spaces. Katrina Brown (Brown, 2015a/b; Brown, 2016; Brown, 2017) has provided dedicated contributions to this area.

In her 2015a paper focussing on how the appropriation of space is shaped by movement, Brown examines the notion of zoning spaces. Her research explores user groups experiences of natural spaces, revealing damage narratives associated with mountain bikers. Further work (Brown, 2016) and that of other researchers such as Zajc and Berzelak (2016), Santos et al. (2016), and Newsome et al. (2016) build on this. These authors explore the coexistence of mountain bikers with other users and park management responses to increasing participation rates. Findings collectively illustrate tensions exist between free thinking riders and the health safety driven park managers. What these studies reiterate is the existing conflicts between all user groups and the potential demonising of the mountain biker in line with counter cultural narratives of the 1950s and 60s (Wheaton, 2004).

An area to emerge considerably in the last five years has been research on the experience and process of trail building. Cherrington and Black (2019; 2020) deploy established sociological thinking to unpack the phenomenon of trail building and its role within mountain biking subcultures. In their 2019 paper, they utilise the work of Bruno Latour and Slavoj Zizek to

examine questions related to the object and latent function of dirt. They demonstrate unique ways trail builders engage with dirt and how this can be a source of intrigue and pleasure. Cherrington and Black (2020) explore the processes by which socio-natures or 'emergent ecologies' are formed through the assemblage of trail building, mountain bike riding and matter. They draw upon the concept of the 'symbiotic real' to examine how participants connect with a range of objects and non-humans. Their work reveals a 'spectral' existence in which they take pleasure in building material features that are only partially of their creation.

Lastly, Cherrington (2021) explores what it means to know, to be and to govern a human subject in the Anthropocene. Specifically, he applies post-phenomenological theory of space and the notion of ontopolitical hacking to mountain bike riding. He defines hacking as the ability to alter the trajectory of a system from within and asks us to reimagine existing linkages in new ways. For Cherrington, mountain bikers form important bonds with other objects and life forms, engendering novel ways for mountain bikers to reimagine some of the spaces they occupy within nature. Cherrington's work in accompaniment with Black is at the forefront of mountain biking research in the United Kingdom, yet in the above contributions there exists a focus on trail builders. What is apparent so far is the lack of consolidated empirical investigations into the experiences of mountain bikers themselves.

1.5 Disciplinary Orientations of the Study

The purpose of this section is to position this study within an appropriate disciplinary setting. Therefore, below relevant orientations related to sociology and physical cultural studies are discussed, culminating in Sparkes' (2018) discussion of physical culture research. In this final physical cultural discussion, the study finds its disciplinary home alongside research on the body within wider sporting practice. The rationale for selecting sociology as the underpinning

subject discipline is because it offers exciting theoretical and conceptual tools to aid exploration of riders lived experiences. Scholarship utilising these tools, much of which are discussed in detail later, provide rich and thought-provoking insights into the lived experience of sporting participants. Additionally, much of the literature discussed to this point has found a disciplinary home in sociology, therefore the decision is appropriate and fitting.

Sociology exists as a discipline focussed upon the investigation of individuals social worlds and these social worlds are realms where people live their lives. Sport sociology is one of many sub disciplines within sociology and Coakley (2020) argues researchers investigate the social worlds of individuals, their existence, and how they are maintained around sport. Sports provide a window for sociologists to view society and discover more about people, culture, and experience. In recent decades sport sociology has grown exponentially, in no small part to the increase in society's focus on sport itself. Here we can track the trajectories of a rising consumer culture, increase in global flows of products and people, and the privileges afforded certain groups within society (Jarvie, 2012). These aspects and many more are visible within sport and have consequently been researched extensively.

Whilst there is a depth of sport sociology research in these areas, much less has been conducted on the body and the influences of society and culture upon it. This disembodied sports sociology according to Sparkes (2018) has given rise to cries to bring the body back into sociological research since the mid 1990s. This call came from sociologists in response to the distinct and almost alarming lack of sociological research focussed on the body. According to Sparkes (2018) the lack of sociological research on the body stemmed from a reluctance of many to engage in a research topic that stepped over boundary lines towards disciplines such as biology. Additionally, research on experiential bodily experiences in sport

is often overshadowed by investigations connected to wider issues related to gender, consumption, and inequity (Sparkes, 2018). In an area as diverse and as reliant on the body as sport sociology is, it is surprising there exists a paucity of research that focusses on the body as the site of investigation.

Although this paucity exists, research has emerged from a small number of scholars utilising a variety of theoretical lenses to discuss the body. These range from Foucauldian inspired social constructionist insights to those adopting a philosophical phenomenological lens. Sparkes (2018) suggests these theoretical endeavours are not without their limitations but for now this is less a concern as these are discussed in more depth in the Literature Review. What is in focus at this stage is a need to position the study in a research discipline of sport that permits a grounding to investigate the embodied and sensual experiences of mountain bikers. This is no simple task, given the extent of literature reviewed, there exists no single sub discipline. Rather there is an assortment of studies that align with disciplines such as sociology or those driven by a commitment to theory only. Yet the question remains, and I now look to physical cultural studies and physical cultural research for guidance. Academic work on physical cultures is worthy of exploration as it provides researchers with eclectic and unique examples of work bringing together a range of theories and concepts to understand the complexity of human experience.

Physical Cultural Studies

Silk, Andrews, and Thorpe (2017) suggest physical cultural studies is an approach seeking to understand the various examples of embodied practice existing in physical culture from multiple positions. These settings include exercise, health, leisure, sport, and lifestyle activities and can be investigated at multiple levels and through various lens' given their

complexity. Furthermore, they suggest physical cultural studies do not possess explicit boundaries to either step in or out of; rather it is ‘an intellectual assemblage perpetually in a state of becoming’(Silk, Andrews, and Thorpe, 2017, p.2). Given the assemblage of various ontological, epistemological, and methodological backgrounds, physical cultural studies may offer an approach that can be used in this study. Whilst this affordance is apparent, the fit is not neat and requires further discussion to illustrate where and how this study can be understood through a physical cultural studies approach.

Silk, Andrews and Thorpe (2017, p.5) articulate the issues in defining physical cultural studies but have afforded the following as a contribution or starting point:

> *Physical cultural studies is a dynamic and self-reflexive transdisciplinary intellectual project, rooted in qualitative and critical forms of inquiry. Its research object is the diverse realm of physical culture (including but not restricted to sport, fitness, exercise recreation, leisure, wellness, dance, and health related movement practices). Physical cultural studies is concerned with a process of theorising the empirical, in identifying, interpreting and intervening into the ways physical culture-related structures and institutions, space and places, discourses and representations, subjectivities and identities, and/or practices and embodiments, are lined to broader social, economic, political and technological contexts. By contextualising physical culture in this way, Physical cultural studies looks to explicate how active bodies become organised, disciplined, represented, embodied and experienced in mobilising (or corroborating), or at time immobilising (or resisting), the conjunctural inflections of power within society.*

This definition provides a clear starting point to understand physical cultural studies and illustrates where the tensions may exist for this study. Physical cultural studies provide several entry points for this research given both its transdisciplinary nature and its focus on the embodied elements of physical culture. Yet this linking of embodiment to broader social, economic, political, and technological contexts with the intention to intervene is problematic. Whilst this study acknowledges these linkages may exists for mountain bikers, the intention

is to reveal the lived experiences of riders rather than utilising empirical data for intervention. Furthermore, the physical cultural studies focus upon power and its mobilisation within sport (Sparkes, 2018). Whilst this focus is vital in broader research, the fixation upon power and bringing about social change is not one that is central to this study. This is something I have begun to address elsewhere with colleagues, focussing specifically upon gender (Moreland et al., 2024). Therefore, whilst aspects of physical cultural studies are notable and applicable, it is not sufficiently aligned with the research. Therefore, focus now turns to what Sparkes (2018) has noted as physical cultural research.

Physical Culture Research

Not dissimilar both in name and focus, physical culture research unpacks multiple forms of physical activity via specific social practices (Hargreaves and Vertinsky, 2007). These social practices are demonstrated in specific social and cultural context such as sports, dance, and leisure. According to Andrews (2008) this physicality is culturally influenced and emerges to crystallise varied temporal directions for individuals during which they negotiate their embodied identities and experience. For Sparkes (2018), physical culture then emerges as a comprehensive term that draws from a diverse array of disciplines and theory. Physical cultural research thus focuses on the moving body within different contexts and across time. Notable here is both the transdisciplinary focus of physical cultural research but also the removal of a central concern upon power and social change. This latter point is pertinent given the research intentions. Physical cultural research affords a focus on the moving body and the malleability to incorporate a sociologically inspired phenomenological position. Affordances also enable opportunities to discuss issues of power (and other features) if they arise.

Wellard (2015) adds insight into embodied research within the discipline of the sociology of the body. He does not align himself or his work with any sub-discipline, rather he makes numerous references to moving, sensuous and feeling bodies. His notes suggest physical cultural aspects to his work and that of his contributors. Specifically, Atkinson (2015) puts forward a case for physical cultural research when seeking to explore how sports participants derive a sense of response to social inequity through sport. Whilst exploring a range of directions physical cultural research can take, he suggests its capacity to capture experience is unique. He identifies physical cultural research broadly having the capacity to elicit insights into pleasure, fun, pain and fear, something of great import for this study. This insight is promising and is made more so by an emerging body of research exploring these aspects of sporting experience which is discussed below.

Confidence in physical cultural research can be taken from the small but continually growing research on the body and the senses situated in physical cultural research. Early work in this area from Allen-Collinson and Hockey (2007) and Sparkes (2009) highlighted the potentialities available to physical cultural researchers when working within sports practice. Allen-Collinson and her collaborators have been the consistent driving force in this area of research. Her work adopts various theoretical positions alongside a physical cultural research approach to illuminate sporting subjects' experiences. Her work has spanned autoethnographic accounts of distance running (Allen-Collinson and Hockey, 2011), the ethnographic investigations of haptic pleasures of scuba diving (Allen-Collinson and Hockey, 2011) and the sporting embodiment of individuals with asthma (Allen-Collinson and Owton, 2014). This list is not exhaustive nor is Allen-Collinson's work the only noteworthy here, further discussion of this is extended in the Literature Review. What is apparent though is the appropriateness and successful use of physical culture research alongside theoretical

orientations of sociologically inspired phenomenology. It is here a suitable approach is found in amongst the vast array used in the sociology of sport for this study.

1.6 Rationale, Aims & Objectives

The intention of the above was to draw together some of the key elements central to this study and to provide an insight into the contentious landscape of lifestyle sports. These sections discussed the emergence and proliferation of mountain biking and provided a backdrop for the disciplinary and theoretical orientation of the study. The role of the body is central to these activities, as is the experience of the participant. Yet beyond works from Booth (1995), Hough-Snee and Eastman (2017), and Evers (2016) in surfing, and Atkinson in fell running (2015), there exist few studies that examine the corporeal experience of lifestyle sports participants. Therefore, the study responds to calls from Gilchrist and Wheaton (2017) to recognise the specific ways of life manifest in lifestyles sports such mountain biking, paying close attention to the identities, lifestyles and I contest here bodily and sensual experience of participants. Additionally, evident throughout the introduction is the lack of research on all facets of mountain biking and a dearth on the body, senses and lived experienced of riders. There does not exist a study that centrally aims to investigate the embodied and sensory experience of mountain bikers here in the UK or elsewhere. As noted above the work of Allen-Collinson and colleagues provides an entry point, yet none of this work has looked at sporting or leisure activities broadly seen in society as lifestyle sports.

Therefore, the study seeks to investigate how riding a mountain bike elicits a sensuous, corporeal experience for recreational enduro riders in Southwest England. It is the intention to utilise my own body as the starting point for exploration, coupled with the use of a blend of research methods including autoethnography of the body, alongside video recordings and

interviews. The study seeks to capture the ways the body of the rider in action relate to the natural landscape. Furthermore, exploration of how this same body senses this experience both internally and externally is sought to provide an account of the sensuous mountain biking body. I also respond to calls from Howes and Claasen's (2013) to ensure this study does not confine itself to the five senses, rather it provides an expansive understanding of the sensual encounters of mountain bikers. The research also acknowledges Hockey's (2020) recent calls that implore sociologists in the context of sport to attend to a sensory level of analysis, so we can 'understand *how* sport gets done via sensory routines' (p. 1).

It is in response to the calls above the study attends to this research gap, exploring the complex interplay of the body, the senses and the *other* in the lived experience of mountain bikers. To achieve the study's intentions this research has established the following research aims:

- To explore the embodied experience of mountain bikers
- To investigate the role of the senses in mountain biking experience
- To analyse how intersubjective encounters shape mountain biking experience

To accompany these aims, I have developed a set of objectives seeking to mobilise the research process to achieve them. The objectives therefore are:

- To undertake a review of extant literature that informs the theoretical, conceptual, and disciplinary intentions of the study focussed on lived experience, the body, and the senses.

- To develop and mobilise a methodology that enables the research to gather relevant, sustained, and original insights into the lived experience of mountain bikers.
- To analyse data and present findings that present authentic insights into the embodied and sensory lived experience of mountain bikers.

Consequently, this study offers an insight into the corporeal and sensual experience of recreational mountain bikers in Southwest England. Additionally, this contribution adds to the growing body of research seeking to centralise the body as a site of investigation in physical cultural research and acts as a starting to point to address a research lacuna on lifestyles sports. The next section moves to overview the thesis structure before moving into the Literature Review.

1.7 Structure of Thesis

This thesis guides the reader through key debates and discussions related to the experience of mountain biking. I adopt a structure common amongst empirical studies to allow the findings to speak for themselves. The Literature Review explores the theoretical and empirical research drawn from a range of disciplines and arenas. Specifically, the Literature Review begins by providing definitions and an understanding of sensory experience to equip the reader for later discussions. It additionally reveals the paucity of research on the body, lived experience and the senses in sport and specifically within non-traditional or lifestyle sports such as mountain biking. The Literature Review then draws together the work of Merleau-Ponty and Schutz to present a sociologically sensitive phenomenology that provides a theoretical framework for exploration. Concepts related to sensual experience, flow, pain,

intersubjectivity are discussed to reveal significant features of lived experience. The chapter concludes with a presentation of a conceptual framework and the research questions.

The Methodology details the finer mechanical features of study, the checks that occurred to ensure the study was coherent and safe. Crotty's (1998) overview of the research process guides discussions on the epistemological, theoretical, methodological and method decisions made. Considerable time is afforded to the phenomenological method when considering options for the theoretical perspective. Additionally further time is afforded to discussions of ethnography as a methodology, detailing recent developments and illustrating its unique ability to access pertinent data. The later sections in this chapter detail the methods, how they were chosen and how they were deployed. Specific elements related to the somewhat novel use of mobile methods during observation and the tribulations of its use are discussed.

The findings are organised thematically, revealing the significance of the body, the senses and the other within the lived experience. The findings provide original contributions and novel insights into how riders utilise their senses and bodies to engage in the mountain biking experience. Significantly I present, counter to competing narratives, the indispensable role of the other in heightening the experience of riders. The final findings chapter brings together these finding and discusses the implications for the discipline and literature base. Based on the novel findings of the study, I make a strong case for rethinking existing dogma and stereotypes associated with mountain biking and sport more broadly. Additionally, I reveal the original contributions made by the study and identify the need for future research in specific arenas. The conclusion draws together the research project and answers the research questions. The chapter details the significance of the findings and illustrates how successful the undertaking has been in relation to its original intentions.

Literature Review: Theorising the Body and Senses

2.1 Introduction

The Literature Review introduces and discusses the existing research upon the body and senses within sport. Social research into the senses, the body and the associated experience(s) is diverse, spanning many disciplines. Therefore, it is important to this study to review, appreciate and understand the various ways the body has been researched. To date, within research on the body and mind there exists a Western philosophical appreciation that cognitive and corporeal dimensions of experience are understood separately. Furthermore, research has tended to favour the cognitive over the corporeal, creating a research lacuna on the bodies and senses' role within experience. In response, this study brings together those forms of scholarship that shed light on the senses and how they contribute to our experiences of the world. To achieve this, the Literature Review is split into three sections. Section one situates the body and senses within contemporary academic discussion. Firstly, it provides definitions and an understanding of sensory experience beyond the typical Western five senses. This is important to ground existing research on the senses in specific disciplines and contexts such as sport. Next, discussion moves to current sensual research within studies of sport. This illuminates the opportunities available to the research project and better understands the parameters of lifestyle sporting research to date.

The second section pursues the use of existing theory in the exploration of the body and the senses. The section proposes a coming together of sociology alongside philosophy and thus draws upon sociologically inspired phenomenology. Consequently, the section introduces early phenomenological thinkers such as Husserl to draw attention to the opportunity for rich explorations of the lived experience. Subsequently the section explores the work of Merleau-Ponty (1962) coupled with Schutz (1967) to present a sociologically sensitive

phenomenology that permits appreciation of social and cultural structures upon lived experience.

The final section introduces five central concepts that emerged from the extensive review of literature. In the first I blend Merleau-Ponty's (1962) concepts of habit and 'maximum grip' with Csikszentmihalyi's (1975) flow theory to appreciate the sensual depth of euphoric experiences on two wheels. In the second I draw attention to sociological, phenomenological, and emotional dimensions of pain through the work of Leder (1990). These conceptual dimensions provide opportunity to discuss original insights in mountain biking. Finally, Husserl, Merleau-Ponty and Schutz are drawn together to discuss the intersubjective[1] and intercorporeal[2] role of the other. My intention is to demonstrate the significance of other human subjects in sporting experience, and I propose in riders lived experiences. The culmination of this original work is presented in a conceptual framework graphic detailing the relationships.

2.2 Somatic Sensations and Haptic (System) Knowledges

Within the Social Sciences there have been calls from Howes and Classen (2013), Lund (2005) and Crang (2003) to revisit the role of the sensorium within experience. The authors suggest understanding of the sensorium, the totality of a person's sensory experiences, and how those experiences shape their perception of reality, is hierarchal. They argue Western

[1] According to Merleau-Ponty our understanding of the world is inherently social, and we rely on our interactions with others to shape our perceptions and experiences. He referred to this as "intersubjectivity," which means that our understanding of the world is shaped by our interactions with other people.

[2] According to Merleau-Ponty our bodies are not just physical objects but are also sites of social and cultural meaning. He referred to this idea as "intercorporeality," which means that our bodies are intimately connected to the bodies of others in social and cultural contexts.

academic research possesses a predominance on the five often discussed senses such as smell, taste, touch, hearing and particularly the visual.

Howes and Classen (2013) are not alone when calling for a reimagining, anthropologists such as Ingold (2004) ask researchers to perceive the world and culture not through our eyes, ears, or skin but our whole bodies. For Ingold (2004) a muscular consciousness is required to fully understand an experience. Moreover, he suggests an engagement through the entire sensorium permits two key things. Firstly, if the world is approached through our sensorium, then we can fully grasp the richness of cultural experience, rather than dividing it into single sensory experiences. Secondly, he argues the preoccupation with vision in Western culture skews and devalues the role of other senses. This dogmatic position Ingold (2004) argues can limit the depth of representation and fullness of the corporeal experience.

Vannini et al. (2012) argue the sociology of the senses is an approach to corporeal sensation that considers the meaning and influence of sociality on our sensual experience and understanding. For example, as I sit here writing this, I am not long back from a walk. It is spring and I am surrounded by farmers, their animals, and their fields. Walking through the country lanes I am accosted at every turn by the smell of silage, a hugely useful addition to crops but one that demands a strong will and resilient sense of smell to manage the odour. Yet this smell is not isolated from other senses, I also feel the heat on my skin from the sun, the sounds of the animals awaiting their morning feed, and the taste of the air in my mouth. This sensual experience is littered with meaning. The accompaniment of all these sensual feelings or an active sensorium elucidates a total sensual experience for me, one where no single sense can be separated from the others and where sensual engagement is meaningful.

Given the influence of meaning upon sensual experience, Vannini et al. (2012) argue this sensual experience is not passive. Rather they contend that because the senses are active in experience 'their quality as products and practice, as action and interaction, as work and performance' can be highlighted and explored (p.6). Given this position on the senses, they argue the senses are ready to be examined by social and cultural scientists intrigued by meaning and understanding.

Building on the points made by Jones (2007), Vannini et al. (2012) reassert the naivety of the five senses and extend calls from Howes and Classen (2013). The naivety centres on the underappreciation of a wider sensorium during experience. They suggest relying solely upon sight, sound, smell, taste and touch limits understanding of human experience. The authors contend a Western hegemony exists and places focus on external understanding of the sensual experience, disregarding the internal, haptic[3] and somatic[4] sensual dimension.

Vannini et al. (2012) do not seek to provide an exhaustive list of the sensations beyond the five noted above but reach a total of 13 senses the social scientist may want to consider. Their list ranges from sight, hearing, touch, taste and smell to proprioception (the sense of body position and movement), vestibular sense (the sense of balance and spatial orientation), interoception (the sense of internal bodily states, such as hunger, thirst, and pain), empathy (the ability to understand and share the feelings of others), synaesthesia (the blending of two or more senses, such as seeing colours when hearing music), extra-sensory perception (the

[3] Haptic senses refer to the sensory information that we receive through touch, including the sense of pressure, texture, temperature, and movement. Haptic perception is particularly important for tasks that require fine motor control, such as handwriting or playing a musical instrument.

[4] Somatic senses, refer to the sensory information that we receive from within our own bodies, including the sense of body position, movement, and balance. Somatic perception is essential for maintaining our sense of equilibrium and for coordinating our movements.

alleged ability to perceive information without using the traditional senses), time sense (the sense of the passage of time), and the sense of beauty (the ability to appreciate aesthetic experiences). Secondly, they ensure a note is made to clearly draw attention to the social significance of sensation. Whereas this might be examined from an anthropological standpoint such as Ingold (2004), the authors suggest a sociological examination is fruitful. They argue a sociological examination can drive explorations from questions of what we might experience to how these sensations are experienced.

To extend the understanding of the separation of sensual experience, one that offers a set of external and internal insight the work of Paterson (2009) is influential. His contributions reiterate the often-overlooked understanding of haptic senses. He provides helpful insight for those researching the senses and particularly touch, suggesting haptic understandings must go beyond the tactility of cutaneous touch. There exist senses that are felt internally because of touch, something he terms somatic senses. These somatic sensations work synergistically as part of the haptic system. The haptic system acquires information about the subject's environment from external touch such as pressure, temperature or pain and then internalises, feels, and makes sense of this within the body. These internalised somatic senses include kinaesthesia[5], proprioception[6], and the vestibular system[7]. Working synergistically, somatic senses during experience permit sports participants a unique and internal sensual understanding that enhances their understanding. An awareness of a wider somatic experience is something central to the lived experiences of individuals and specifically mountain bikers.

[5] Kinaesthesia is the sensation of movement of body and limbs. Relating to sensations originating in muscles, tendons, and joints.

[6] Proprioception refers to the perception of the position, state, and movement of the body and limbs in space. This includes cutaneous, kinaesthetic and vestibular sensations.

[7] The vestibular system pertains to the perception of balance, head position, acceleration, and deceleration.

Howes and Classen (2013) and Vannini et al. (2012) signify the many ways the senses may influence the lived experience of the mountain biker. In addition, Paterson's (2009) work reveals a unique way researchers can understand the external and internal sensations at play during experience. Having established a foundation and merit in corporeal and sensual research, it is important their application in empirical sports research is examined. Exploring the eclectic sports research reveals the ways in which sensual research has been undertaken. Therefore, I now move to discuss the existing research on the body and senses within sports studies to reveal how they may influence the lived experience of mountain bikers.

2.3 Sport, the Body, and the Senses

This section explores the existing academic contributions on fleshy[8], corporeal experiences within sport. This foray provides an important understanding of the existing research, the ways they have been conducted and any areas left uncovered, all of which contribute to the study's further refinement. Since Howes' (2005) calls for a sensorial revolution almost two decades ago, 'fleshy' contributions in sport have ebbed and flowed. This paucity is surprising given sport has provided some of the most fertile ground for the exploration of bodily experiences. It does however reflect broader dualist traditions in British academia and the dominance of positivism in Sports Science. The work of Allen-Collinson has been significant in transforming understanding and attempting to bring back the body when researching sport. It is these contributions the section turns to next. I examine the sensuous contributions from a range of perspectives, assessing how they will aid further refinement of this research project.

[8] Fleshy, a term proposed by Allen-Collinson is intended to capture the embodied, sensory, and physical nature of human experience. She uses this term to describe the rich, multisensory experience of the body in motion, which is characterized by movement, and sensation. According to Allen-Collinson, traditional approaches to understanding the body often focus solely on the mechanical or functional aspects of movement, ignoring the sensory and experiential dimensions.

Sport by its very nature requires a body of sorts, and therefore one would imagine there exists an abundance of research on it. This research broadly speaking centres on the physiological and cognitive capacities of the body, a performative, positivist body that can be shaped, improved, and altered to enhance performance. This body and investigations into it are worthy, yet it is not the same body I am seeking to understand. The body I am looking to reveal is the corporeal and multisensorial body central to experience. Loic Wacquant is widely credited with one of the most significant contributions to research of this type. His ethnographic research, drawing upon Bourdieu's concept of habitus provides an illuminating insight into the role of the body in learning and experiencing boxing.

Wacquant (2004) reveals sociologically how perceived cultural chaos is mediated by a strong culturally structured order, one in which the body plays a central role. The body for Wacquant, engages corporeal activities, such as sparring and bag hitting that are culturally constructed in a way to develop the boxing body. His contributions are illuminating and his advocacy of an inside out body, a researching body or autoethnographic body that also engages in the phenomena is another vital addition this study seeks to utilise and will be discussed later. He asserts the importance of writiong about the body from an observational point of view whilst additionally engaging your researching body actively in the research process. He argues this ensures the fleshiest accounts and descriptions can be provided.

Wacquant (2004) can be seen as a starting point for sensory research in combat sports, a sporting area possessing one of the largest collections of research on bodily experience. Wacquant's (2004) work has been followed by Downey's (2005) ethnographic research on the Brazilian martial art of capoeira. Downey (2005) discusses the role sound and other senses play in the athletes understanding of the activity. He argues the senses are vital in the

body's ability to feel its way through the music and practices. A final author to have researched combat sports ethnographically is Spencer (2012; 2014) who discusses the embodied experience of mixed martial arts (MMA). He explores the culturally specific ways in which MMA bodies construct and confirm their fighting identities. His research reveals the precise influence culture has on the way fighters touch, see, feel, taste, and hear, and how these ways inform this identity.

Outside of combat sports research on the body, contributions have been eclectic and modest. As a starting point, Sparkes' (2009) autoethnographic vignettes of footballing and gym experiences provide one of the first consolidated sensuous contributions in Sports Studies. Sparkes (2009, p.24) forcibly contests *'people's knowledge of themselves, others and the world they inhabit, is inextricably linked to and shaped by their senses.'* His discussions of the multisensorial experience of purchasing a new set of football boots or finding the sweet spot on a cricket bat demonstrate the centrality of the senses to sporting experience. In addition, he provides a road map for those social scientists seeking to undertake sensual research. He argues the social scientist needs to move beyond a preoccupation with the Western sensual hierarchy and adopt an approach that prioritises a multisensorial focus. One aspect he does not refer to and something this study seeks to resolve in its originality is the relationship between haptic and somatic senses noted by Paterson (2009). What has emerged from the Literature Review to this point is the dearth of corporeal investigations into the bodily and sensual experiences of mountain bikers and lifestyle sport participants. Therefore, the next section reviews the research contributions that do exist in this space and their implications for this study.

2.4 Lifestyle/action sports, MTB, the body and the senses

It is unsurprising few studies have explored mountain biking broadly and the sensual experience specifically given its relative recent introduction. There have however emerged various contributions in the literature that reveal experiences of lifestyle sports participants and those on two wheels more broadly. Reinhardt and Sydnor's (2003) seminal book, *To the Extreme*, was the first consolidated introduction that placed a focus particularly on non-traditional sports, such as roller blading, skydiving and mountain biking. The book brings together insider participant accounts with academic analysis to provide authentic insights into these sub-cultures. This contribution offers an excellent starting point for the examination of lifestyles sports and participants experiences, yet it is rather a mix tape of contributions than an in-depth examination of a single lifestyle sport. An activity that has garnered academic attention has been surfing. Given it is the oldest of lifestyle sports, scholarship over recent decades has gathered momentum. Therefore, I turn to this body of literature first for insights into the lived experience of lifestyle sports participants.

Due to surfing's mainstream appeal since its portrayal in films such as *Point Break* and its recent Olympic inclusion, research on sensation and surfing has drawn considerable scholarly attention. Booth's (1995; 2003) work over the past three decades has examined the sport of surfing and to some degree the experiences of participants. In his 1995 contribution Booth provides an insightful historical overview of surfing and its evolution into a competitive sport. Situated within a consumer capitalist driven society, he charts the emergence of mass, Western participation in surfing due in large part to its bourgeoisie and hedonistic appeal. For Booth (1995) the emergence of surfing in Western culture during the 1950s and 60s placed the body at the centre of experience. He recounts the importance of the body for soul surfers (a surfer seeking only pleasure from the activity) to appreciate and understand the water that

surrounds them. Stranger's (2011) in depth discussion of peak experience identifies that the body and sensual experience are vital in understanding how surfers find peak experience.

More recent contributions in the surfing literature from Evers (2019; 2014) discuss the embodied experiences of surfers in various settings. Drawing upon the sensual experiences of surfers in their engagement with nature, Evers (2019; 2014) illustrates their embodied experiences and ecological sensibilities. However, he does not take this further due to his primary focus upon gender relations. In his earlier work, Evers (2014) briefly pays attention to how immersion in water and the feeling of duck diving in large swell (dipping oneself under oncoming waves), produces both internal and external sensations. For the surfer he argues these sensual engagements provide rich insights into the mundane and challenging experiences of surfers. Whilst these contributions do not provide an in-depth presentation of sensory experiences, they do point towards the opportunity for research to explore lifestyle sports participants and specifically mountain bikers' sensory experiences. Given this promise I now move to explore research on other relevant activities to increase understanding.

Remaining in and on the water work from Humberstone (2011) explores the fleshy experience of windsurfing. She examines how the air and water, alongside sensations of smelling, seeing, and feeling illuminate her experience. Furthermore, she proposes windsurfing is a demonstration of the body in communion with its equipment and the elements. Through sensual engagement the body 'learns to be' in the natural life-worlds in particular ways, engaging senses and rousing emotions. Her work is insightful and provides several theoretical and conceptual provocations for this study, some of which I return to in the second section. Drawing on Paterson's (2009) distinction, Throsby (2013) explores the relationship between the body, nature, and the senses for marathon swimmers. He discusses

how the kinaesthetic sensation during marathon swimming is a primary source of information. Given kinaesthetic feedback the swimmer can constantly adjust their body during the activity to ensure they achieve a desirable outcome in the unstable open water.

Moving to research on land, Bäckström (2014) explores the sensorium of skateboarders, and particularly their kinaesthetic experience. His intention was to elucidate from the skateboarders their understanding and experience of explosiveness through their bodies. Consequently, he found sight was not the primary sensory mode as is often assumed, rather the tactile, kinaesthetic, and auditory sensory modes working together were central. This counter to dominant understandings of visions primary role in experience is shared by the work of Fox et al. (2014) in their exploration of long-distance road bicycling touring. They discuss that whilst sight provided a sensory mode that was of use at times, participants wider sensorium was vital. The riders would shift between one sensory mode to another when exposed to different world views, temporal stimuli, and countercultural understandings. Fox et al. (2014) coupled with Bäckström (2014) offer a reorientation to sensual experiences, one akin to the protestation of Vannini et al. (2012) and Howes and Classen (2013). They offer fruitful insights into alternative sensual encounters beyond sight of sports athletes. Given the promise of Fox et al. (2014) work, I now turn to the bodily experience of those on two wheels to appraise existing contributions.

Spinney (2006) provides some of the most influential work focussed on the sensory experiences of individuals on two wheels. He pays attention to the experiences and spatiality's reproduced through the body-subject in mobility and specifically on a bike. He offers an ethnographic account of road cyclists and specifically the kinaesthetic and sensual

experience whilst cycling up Mont Ventoux[9]. Furthermore, he asserts if scholars are to understand the significance of place and mountainous climbs on a bike they need to draw upon the kinaesthetic and sensuous aspects of experience. His contribution provides important insights into the relationship between mobility, technology, and the body, and how these aspects intersect to provide the experience of riding. An important distinction made by Spinney (2006) and one shared in this research is the focus upon the rider. The rider encompasses the hybrid relationship between the subject/bike and the bodily and sensual experiences associated, not simply the person.

Further contributions on two wheels come from Brown's (2015) ethnography on the appropriation of space through the movement of walkers and mountain bikers. She unpacks peoples claims to spaces and how they way mark through their movement. Whilst not directly related to this study, discussion with mountain bikers on access rights and the types of surfaces ridden does provide a snapshot of the bodily experience. Specific encounters with participants focussed on the surface types, whether rock, gravel, soil or peat bogs and how this was felt. She revealed haptic dimensions to encounters that inadvertently provide a sensorial insight into rider's experiences. Further work from Brown (2017) builds upon these earlier insights to provide understanding of the haptic pleasures of mountain bikers specifically in relation to surface or ground feel. She uncovers internal sensations had by mountain bikers when creating resistance and pressure in aspects of jumping, dropping, and cornering. Furthermore, she reveals sensations related to speed and tyre grip, alongside those that are ignited through unevenness and vestibular play. Brown's work (2015; 2017) demonstrates the first and only contribution in mountain biking that's draws together various

[9] Mont Ventoux is widely regarded as one of the most symbolic alpine climbs for road cyclist across the globe. It regularly features in the Tour de France, one of the major road cycling events in the racing calendar.

sensual modes. This contribution is promising but is limited given the sensual findings were an unanticipated outcome rather than the focus of the study. Additionally, whilst haptic sensation was discussed, exploration of the somatic sensorium was underdeveloped.

Some of the most recent work conducted on two wheels has come from Owton (2022a; 2022b) who explores the intense embodied experience of motorcycle riding. Using autoethnographic vignettes she provides insights into the role of weather, speed, the other, and intense embodiment during her sensory experience. Intense embodiment refers to periods of raised awareness of corporeal existence, connoting a positively extended sense of corporeal aliveness. Her contributions provide detailed descriptions and consequent discussions of a sensory interplay when undertaking a risky activity on two wheels.

This section explored sensual research in lifestyle sports and revealed an eclectic but small body of current research. From the findings possibilities exist to explore the body and sensual experiences of mountain bikers. Assertions from Howes and Classen (2013), Vannini et al. (2012) and Paterson (2009) lay the foundations to understand the senses conceptually. Findings from empirical studies in surfing, fight sports and cycling indicate participants engage in and are aware of sensual experience. Yet to date no research has explored this as its primary research aim in mountain biking. Outside of mountain biking the most relevant are Humberstone's (2011) work with windsurfers and Bäckström (2014) with skateboarders. However, even these pursue different trajectories. Therefore, future research must centrally aim to explore the body and senses in this context. Consequently, the review moves to an emergent research position that has placed increased attention upon the body and sport, that of sociological phenomenology. Whilst contested, this position may provide a set of

theoretical and practical building blocks useful when exploring the experience of mountain bikers.

2.5 Theorising a Sociologically Sensitive Phenomenology

This section introduces the relevance of phenomenology to the consideration of sporting bodies and the senses within mountain biking. Existing phenomenological explorations of the sporting body provide unique insights into the way bodies interact in the act of 'doing' activity. However, within phenomenology there exists various theoretical avenues that can be pursued. Yet for the purpose of this research, a phenomenology enabling exploration of the body, senses, and interaction of the rider and the other is of central interest. Therefore, the section begins by reviewing founding contributions from Husserl and Merleau-Ponty and moves to later work by Schutz. The introduction of Schutz permits engagement with a modest but growing area of research situated in a sociologically sensitive phenomenology. This form of phenomenology possesses an empirical commitment, something central to the aims of this study.

Phenomenologists are deeply concerned with critically exploring culture and reconstructing new understandings (Crotty, 1998). At the heart of phenomenology is a desire to explore the relationship between human consciousness and the world inhabited by subjects. For phenomenologists such as Husserl consciousness plays a vital role in our understanding of objects and experience. Consciousness for Husserl is the essential, basic structure of our experience of the world. He argues consciousness is not a material substance, but rather a mental activity that is intentional and self-directed (Abram, 2017). Consciousness is not an abstract concept, rather according to Husserl this consciousness is set against understandings of intentionality (Dowling, 2007; Laverty, 2003). For phenomenologists, intentionality is a

vital concept in their explorations and underpins the relationship between subjects and objects (Outhwaite and Bottomore, 1993). Intentionality for Husserl centres on a subject's directedness towards an object or being and can be extended to the body and senses. Therefore, bodily action is also always action with purpose. Drawing these together, phenomenologists argue that consciousness is always consciousness of something and thus intentional (Crotty, 1998).

Husserl is credited as the founder of modern understandings of phenomenology and phenomenological research. His investigative intentions were broad and diverse, seeing him draw on aspects of psychology, mathematics, and science (Abram, 2017). In his early work, Husserl believed phenomenology was the science of the sciences and argued it provided a philosophical position to interrogate the lived experiences of individuals. Husserl's objectivist position is unsurprising given many of his influences were situated within mathematical and psychological circles (Abram, 2017). What is somewhat more surprising is whilst Husserl adopted this position early on, in his subsequent thinking he shifted toward a transcendental phenomenology (Romdenh-Romluc, 2011). During this period, he moved towards considerations of an intersubjective, corporeal, and sensorial understanding of the (life) world. The importance of these considerations is significant for this research because they indicate Husserl's move away from a solipsistic understanding of human experience to one that appreciates the role of the other. Later sections address understandings of corporeality and intersubjectivity through the works of Merleau-Ponty and Schutz, however time is needed to outline the significance of Husserl's understandings of the lifeworld at this point. As Husserl continued to move away from a solipsistic understanding of human experience, he increasingly considered the environment experience occurs within. Husserl noted this landscape as being the lifeworld or lebenswelt, the world of *our* immediate experience.

According to Allen-Collinson and Evans (2019) the lifeworld is the basis of experience and takes on a corporeal and precognitive dimension, a lived experience as we live it without thought. For Abram (2017), the lifeworld fosters our daily existence, yet we take little notice or are rarely aware of it at work. Whilst we do not take notice of these things, Abram (2017) argues they are always there, acting as the foundation of any thinking, theorising or understanding of experience.

The introduction of the lifeworld by Husserl according to Abram (2017) was one of his most important contributions to phenomenological thinking. Its importance as a way of understanding the world is vital but its rejection of pure objectivist thinking is crucially important. For Husserl the lifeworld undermines the objectivity and rationality often sought in science. It attests that all thinking post cognition is influenced by the lifeworld. As Abram (2017, p.40) attests:

> *the lifeworld is the world as we organically experience it in its enigmatic and multiplicity and open endedness, prior to conceptually freezing it into the static space of facts, prior to conceptualising in any complete fashion.*

Whilst according to Husserl the lifeworld exists as an open-ended, opportunity laden dimension of experience, contemporary society works hard to silence it (Abram, 2017). There has been a growing separation between societal and cultural progression and the distance between the lifeworld and our awareness of it. Objective, post cognitive features are evident in daily life, whether through the proliferation of automatised work and AI, to the advent of the smart phone, reality television and social media. Each exist as a product in some way of the lifeworld but simultaneously work hard to create distance between the lifeworld and the experience. The subject is unaware of the richness of the lifeworld, its quality, provocations, and their reliance upon it, allowing the experiential world to disappear from perception. The

concept of the lifeworld therefore is implicit in all lived experience, including that of mountain bikers. An environment full of opportunity, mountain bikers often unknowingly engage frequently with it. Specifically, acknowledging the lifeworld and its precognitive dimensions reveal opportunities to explore the role of the senses and body in the experience of mountain bikers. Therefore, the lifeworld will be woven into any analysis moving forward. The rationale for this is that concepts discussed later in the chapter can only be understood if we acknowledge the existence of the lifeworld and the depth of interactions with it.

Before moving towards the work of later phenomenologists, it is worth noting the understandings of Husserl above are drawn from secondary sources such as Abram (2017) and Romdenh-Romluc (2013). While it is true that reliance on secondary readings of Husserl introduces certain limitations, these sources also offer significant strengths that should not be overlooked. Secondary this scholarship provides valuable insights, contextualization, and critical perspectives that can illuminate aspects of Husserl's work that might otherwise remain obscure. Engaging with these interpretations allows the thesis to situate itself within ongoing scholarly debates, demonstrating an awareness of how Husserl's ideas have been developed and contested over time. That said, it is also acknowledged these secondary readings may introduce layers of mediation that may obscure or selectively emphasize certain aspects of Husserl's original texts. However, in response to these potential limitations, the selection of work from Abram (2017) and Romdenh-Romluc (2013) was done so with the upmost care and consideration. They are widely acknowledged as leading scholars and experts regarding the work of Husserl.

Extending the work of Husserl, Merleau-Ponty (1962) proposes an existentialist phenomenology dedicating space to understanding the significance of the body in experience. He deepens the appreciation of the body within experience and enhances Husserl's initial identification. He argues the body is not an object, but a form of consciousness based upon perception. The living body is the very possibility of experience, it provides the opportunity for reflection and thought. Abram (2017) suggests Merleau-Ponty invites us to see the body as the site of experience. Take for example the daily experiencing self, the temperature of the water running out of the tap, the smell of the coffee brewing in the morning, the sound of the birds in spring. Without these senses and the body, there would be no possibility of experience. Additionally, without an attunement to the array of corporeal and sensual experience, mountain bikers are unable to undertake their chosen activity.

Abram (2017) suggests in our lived experience the body is a creative, chameleon-like entity possessing a uniqueness that separates it from other bodies. Yet these mortal limits do not prevent the subject from engaging with things around them. Rather it is a body that creates opportunity for engagement with things all around, to act in a spontaneous way, to participate with those in the immediate milieu and engage in the experience of living. An important distinction made by Abram (2017) considers the relationship between the rational, thinking human mind and all else within our existence. Drawing historical lineages from Aristotle, Descartes and Husserl, Abram (2017) argues Western thought has been driven by an overbearing assumption and dichotomy that the rational, human mind is superior to all else. The mind consequently is superior to the human body, the animal soul or the soul of the earth. This assumption has guided philosophy and many other disciplines of thought, yet when deploying a truly corporeal and sensorially orientated phenomenology it becomes undone. For Abram (2017) this fleshy phenomenology reveals the relationship between

human mind, body and all else as entwined and immersed in the experiences of one another, dismantling any constructed hierarchy and revealing the richness of the lifeworld.

The phenomenology Merleau-Ponty (1962) puts forward is one that considers the breadth of our existence and specifically the significance of the body. There is little priority given to one dimension of being over another, rather Merleau-Ponty proposes an equity of mind and body in the shaping of experience. A move to appreciate a body beyond biological physicality is central to the research aim of this study. Merleau-Ponty's (1962) propositions of a body that can think and act, illuminates the possibilities when exploring the lived experience of mountain bikers. It provides opportunities to explore the taken for granted, mundane experiences often shaped by the body. Alongside the mundane he also enables understanding of fearful, painful experiences that occur and are often governed by the mind. Therefore Merleau-Ponty's (1962) thinking is utilised moving forward and key concepts developed as part of a wider conceptual framework. Before fulfilling this endeavour however, a review of Alfred Schutz's phenomenological orientations is pertinent to discussion, given his focus on the influence of the socio-cultural upon experience.

Schutz's (1967) contributions to phenomenology have been significant, exploring the role of culture and meaning in the lived experience of individuals. According to Schutz (Schutz and Luckmann, 1989) there is much profit to be had if a more sociologised phenomenology is applied to phenomena. Domains such as sport Schutz contests are not the private world of a single individual, rather they are worlds occupied by all of us, where ourselves and others interact (Schutz and Luckmann, 1989). Schutz (1978) suggests if phenomenology is specifically philosophical then their exist shortcomings, notably that culture can only be viewed through a bracketed lens, one where the researcher is removed from the environment.

This consequently provides a distorted view of culture, one not truly representative of the everyday subject's reality.

Furthermore, if our understanding of the lifeworld is solely individual as Husserl notes (Romdenh-Romluc, 2011), we fail to consider the dominant role the other plays in our everyday experience. Schutz's takes issue with Husserl's position on bracketing culture entirely, suggesting if this were to occur then the outcome is one where the very minutia and influence of culture on experience is missed. The central limitation is a sustained aversion to consider the diverse range of effects culture and social structure have upon the lived experience (McNarry Allen-Collinson, and Evans, 2020).

It was Schutz's (1967) intention to utilise several concepts proposed by Husserl such as the lifeworld, pre-cognition and intersubjectivity to develop a more empirical and applied form of phenomenology, a sociological phenomenology. Schutz (1978) suggests the everyday world is laden with meaning derived from historical and present cultural phenomena. Furthermore, developing Husserl's concept of the lifeworld he suggests it possesses a social and cultural dimension that individuals inhabit. Accordingly, individuals experience the lifeworld as a series of interconnected meanings and interpretations that are constantly being renegotiated. Subjects deploy their interpretative scheme, a framework of meanings and assumptions that individuals use to make sense of their experiences in the lifeworld. This interpretation of meaning is also experienced by others; the subject at once posits and interprets meaning as do others and this provides the basis of intersubjective experience. According to Ritzer (2008) Schutz was specifically concerned with how people grasp the consciousness of others while they live within their own stream of consciousness.

The sociological phenomenology of Schutz is an exciting theoretical position and affords researchers the opportunity to explore how Merleau-Ponty's understandings of the body are influenced by society and culture. Therefore, it is a combination of Merleau-Ponty and Schutz, a sociologised phenomenology that is taken forward as a theoretical position for this study. Whilst scholarship in this space has been modest, sociologised phenomenological research over the last decade has grown. The theoretical position has been increasingly applied within sports and leisure contexts, alongside the work of Merleau-Ponty to reveal the corporeal and sensual dimensions of participants lived experiences. Therefore, the next section moves to explore existing empirical work before providing an outline of the key concepts to be used moving forward.

2.6 Sociologised Phenomenology and Sport

The following section explores existing research utilising a sociologically sensitive phenomenology within sport. Discussion examines the various ways this theoretical position has been deployed, identifying its merits and possible limitations. Within a sports context Allen-Collinson and Evans (2019) argue the strengths of a sociologically sensitive phenomenology that draws from Merleau-Ponty and Schutz deepens explorations of corporeal experiences in sport. For instance, a sociologically sensitive phenomenology is aware of the diversity existing within the lifeworld's of sporting participants and challenges the taken for granted assumptions of the natural attitude.

Additionally, a sociologised phenomenology is cautious of determining universal experiences as were the intentions of Husserl. Rather it is highly aware of the potential effects of gender, age, ethnicity, and socio-economic status upon the embodied and lived experiences of sports participants. Furthermore, this sociologised phenomenology requires of the researcher a

heightened sense of reflexivity that treats all encounters with a degree of caution. With direct relevance to this study, a sociologically sensitive phenomenology has the flexibility to incorporate phenomenological concepts from Husserl, Merleau-Ponty and Schutz. Utilising these tools, the research can explore how the minds and bodies of mountain bikers experience sensation and how they interconnect and influence one another in these contexts.

There are tensions that endure when attempting to blend two different and often opposite disciplinary traditions in sports research. Allen-Collinson and Evans (2019) suggest there exists an ongoing compromise for researcher. For some traditional phenomenologists this may mean sacrificing an unwavering devotion to reveal universal truths. For the sociologist this can mean diverting some of their attention away from grand theories of sociology. Consequently, both sets of researchers need bracket some of their established views in favour of critically questioning the immediate subjective experiences of individuals. Wherever the compromise exists it will differ from researcher to researcher given their journey to their research questions. Therefore, it is pertinent *I* clearly outline the significance and relationship of phenomenology and sociology in this research.

It is important to note given the relative freshness of this approach, the merging of sociology and phenomenology in research endeavours has not been proportionally consistent to date. Authors such as Owton (2022a/b) have directed their work predominantly through the lens of sociology, drawing upon phenomenological elements where necessary. Whereas others such as Allen-Collinson and Leledaki (2015) have utilised phenomenological foundations as the bedrock of their work, drawing upon sociological aspects of age and gender to develop understanding of participant experience.

Whether selecting the former or the latter, Allen-Collinson and Evans (2019) call for researchers to be clear on their position. Following the work of Allen-Collinson and Hockey (2007) I have chosen to utilise a sociologically sensitive phenomenological approach and emphasise phenomenology first accompanied by sociology. I have chosen a blend favouring the phenomenological work of Husserl and Merleau-Ponty because they provide theoretical tools to understand the intersection of mind, body, and environment in experience. Specifically, they provide tools to explore embodied and sensuous experiences of mountain bikers. What sociology provides is an opportunity to celebrate the difference in this experience. Whether based on age or economic position, or through individual and shared experience, it rejects the universal expectations often afforded in some phenomenological enquiries.

Moreover, a sociologically sensitive phenomenology differs to that of a sociologically informed sociology given it does not seek to deploy specific conceptual or theoretical elements of sociology. A sociologically informed phenomenology integrates sociological theories and/or concepts to understand experiences, whilst placing less emphasis on the body and senses (Raza, 2024). Instead, a sociologically sensitive phenomenology is a phenomenology that is aware of social structure and difference but remains grounded in the carnal realities of the lived sporting body (Allen-Collinson and Hockey, 2007). This sensitivity enables researchers and this study the opportunity to consider how actors' social position, age and academic background for instance might contribute to the shaping of their lived experience.

Sociologically inspired phenomenological research has to date been dominated by contributions from Hockey and Allen-Collinson. These contributions have provided a concerted contribution to the philosophically grounded embodied literature and a starting point for more recent research. Of this literature, the initial contributions focus upon laying the foundations for empirical phenomenological research on the body (Hockey & Allen-Collinson, 2007). Once established, later contributions have explored embodied experiences of scuba divers (Allen-Collinson & Hockey, 2015) and long-distance runners (Allen-Collinson & Hockey, 2015). These contributions provide vital insights into the fleshy experiences of sporting participants, alongside widening the appreciation of sensual aspects.

An awareness of the breadth of corporeal encounters is vital for this study given the desire to explore all facets of the lived experience. In accordance with the concern of a Eurocentric visual bias (Howes and Classen, 2013), those researching in sociologically inspired phenomenology have sought to move towards an expansive understanding of the senses (Vannini et al., 2012). To demonstrate, contributions from Allen-Collinson and Leledaki (2015) focus on haptic senses in outdoor leisure activity, the role of temperature in the lived experiences of distance runners (Allen-Collinson and Hockey, 2019) and the weathering body in high altitude climbers (Allen-Collison, Crust and Swann, 2019). These contributions provide an external and internal focus on sensory experience, responding to calls from Paterson (2009) to pay close attention to the somatic senses and their role in shaping experience.

In other activity contexts, phenomenological research utilising sociological concepts has explored the embodied experience of dancers (Potter, 2008; Ravn and Hansen, 2013). In Potter's (2008) research the kinaesthetic sense is the over-riding sensory mode sought most

by dancers. An awareness, relationship and understanding with space and gravity is central to the embodied experience for dancers. Additionally, the experience of other senses such as heat and touch work in unison but are felt to be initiated by kinaesthesia according to Potter (2008). Ravn and Hansen (2013) echo the centrality of kinaesthesia in the dancing sensorium, illustrating their constant grapple with the notion of being weighted and weightlessness in the organic process of learning to dance. This study also adopted a phenomenologically informed position and thus reveals a body of work that exists outside of sociology that can add to our understanding of the senses and sport.

Continuing the theme of individual activity, recent work from McNarry, Allen-Collinson and Evans (2020) on competitive swimming and Hughes (2016) on bouldering have illuminated the sensory sociological and phenomenological research landscapes in sport. This work builds upon the contributors above, to provide intriguing and thought provoking, phenomenologically inspired accounts of sporting embodiment. It is here I seek to draw a line in the sand, to suggest whilst these contributions are timely and excellent, neither provide a contribution that uniquely helps us understand the experiences of mountain bikers. Whilst McNarry (2019) provides an insightful account of the feelings associated with high levels of lactic acid in elite swim training and Hughes eloquently shines a light on the role of body transformation and callous development because of climbing, neither sufficiently resembles the unique experience of riding a bike.

What they provide is a strong argument for further research to adopt a sociologically sensitive phenomenology to examine the corporeal and sensual experience of sporting athletes, especially within a sport such as mountain biking. What Hughes' (2016) work provides is an entry point to explore the experiences of lifestyle sports participants (Gilchrist and Wheaton,

2017). In addition, often explicit in works from McNarry et al. (2020) and Allen-Collinson and Hockey (2011) are concepts put forward by Merleau-Ponty and Husserl that deepen understanding of the lived experience. What has not been achieved to this point, is the development of a conceptual framework that draws these concepts together to understand the corporeal and sensual experience of sporting athletes. Therefore, the next section explores these concepts and others such as flow and pain to provide the conceptual foundations and framework for the empirical chapters to come later. It is against this backdrop and the mountain biking subculture noted in the Literature Review that I move to discuss important concepts related to the unique corporeal and sensual lived experiences of mountain bikers. The lived experience and lifeworld of mountain biking exist in an ongoing interplay between seeking pleasure whilst navigating risky moments. To understand this experience most effectively I introduce the concepts of flow, pain, fatigue and return to Merleau-Ponty for concepts of habit, intersubjectivity, and intercorporeality. My intention is to critically appraise existing literature that has placed focus upon the lived, felt, and sensed understandings of these concepts. In addition, I build original conceptual relationships between some of these to provide novel explorations later.

2.7 Intersubjectivity and Incorporeality

Intersubjectivity

Introduced by Husserl and pursued by Merleau-Ponty (1962) intersubjectivity refers to our understanding of the world being inherently social, and we rely on our interactions with others to shape our perceptions and experiences. During his examination of intersubjectivity, Merleau-Ponty developed two features important for the research, the other as subject and the experience of reciprocity.

In response to the first, Merleau-Ponty (1962) asks us to be aware that intersubjective experience involves being mindful of others as subjects rather than solely as objects. We are asked, if only some of the time, to distinguish between the other as an object such as a bike in favour of an active and thinking subject. An awareness of the other as subject Romdenh-Romluc (2013) argues is to be aware of the others as a perceiving, acting and thinking conscious being interacting with the world and others. For Merleau-Ponty and the concept of intersubjectivity, this aspect and one's awareness of other subjects must be captured in any account of the lived experience.

Secondly, Merleau-Ponty (1962) argues to suitably utilise the concept of intersubjectivity we must understand it involves the experience of reciprocity. He suggests reciprocity is how others are aware of oneself as we are of them. This second aspect of intersubjectivity requires other subjects to see the self as another subject and not merely an object. If the latter is the case, then we fall victim to Merleau-Ponty's first point above, namely we are treated as an object that does not perceive nor thinks. If we can achieve a reciprocal relationship with other subjects treating oneself as a subject, then he argues we can then utilise the concept of intersubjectivity effectively.

Drawing further detail, Merleau-Ponty (1962) suggests the intersubjective experience is one where the subject is aware of another body that possesses the power to perform various kinds of action. Here then, the subject does not perceive the other merely absent of context and environment. On the contrary, they perceive the subject as situated, interacting with the environment (Csordas, 2008). For Merleau-Ponty (1962), perception of the other subject's environment informs our experience of their action, and our perception of their action informs our experience of their surroundings. Romdenh-Romluc (2013) argues observing

their interaction with the world allows us to see that it has value for their behaviour. An example of this can be seen when watching a mountain biker pumping their bike into turns or adjusting their position on a drop. We see them move their centre of mass, either downwards or back, their hands forward, their knees bent, actions the other will be familiar with because they appreciate the context they occur within. Thus, the other is attentive of the '*others body and environment as complementary parts of the whole'* (Romdenh-Romluc. 2013, p.138).

In addition to the contributions of Merleau-Ponty (1962), Schutz (1967) discusses the role of intersubjectivity within the lifeworld and deepens understanding. He achieves this by developing understanding of the role of culture and society upon intersubjective encounters. Both authors place significance on the role of the other in the lifeworld, embodiment, and the ways in which they create shared meaning. Yet this is achieved from different phenomenological stances. Whilst Merleau-Ponty adopts an existential position, Schutz seeks a phenomenology that is sociologically informed. According to Allen-Collinson, Crust and Swann (2019) Schutz combined his phenomenological ideas of the lifeworld with a Weberian focus upon social action and verstehen to explore the social structures that exist and how meaning, and lifeworld's are embedded.

The outcome of this position for Schutz (1978) was that he could combine phenomenological concepts with sociology. Schutz sought to overlay Husserl's understanding of a world that is pre-cognitive, immediate and at hand, and is shared with others through the concept of intersubjectivity, with sociological dimensions on intersubjectivity. This enabled an acknowledgement of the interplay *between* intersubjectivities rather than limiting intersubjective experience through the transcendental or primordial sphere such was Husserl's tendency. He notes:

> *the world which is experienced after the completion of the (phenomenological) reduction to my pure life of consciousness is an intersubjective world, that means that it is accessible to everyone. All cultural objects (books, tools, and works of all sorts) point back, by their origin and meaning, to other subjects and to their active constitutive intentionality's. (Schutz, 1978, p.125).*

Additionally, appreciating the significance of social structure within the lifeworld allowed Schutz to develop a primary concern with the significance of the other in a world of intersubjectivity. The world he describes is one where people at once create social reality and are constrained by pre-existing structures. He focussed heavily on the dialectical relationship between how people construct and receive social reality (Ritzer, 2008). Specific aspects of this dialectic centre on what Schutz (1978) argues are intimate face to face relationships and distant impersonal relationships. For the sociologist, the study of the distant, impersonal relationship is much easier than those that are intimate. The former also permits an exploration of the embodied dimensions of intersubjectivity, something that converges with the position of Merleau-Ponty noted earlier.

More recently in sports literature Allen-Collinson and Evans (2019) outline how Schutz's work has been utilised within empirical qualitative research. Schutz's notion of intersubjectivity has been fruitful in exploring the lived experiences and intersubjective lifeworld's of sports such as distance running, tai chi and high-altitude mountaineering (Allen-Collinson and Evans, 2019). The recent surge and interest in his work, if modest, provides an important theoretical ingredient for this study. The culture and social reality of mountain biking like high altitude mountaineering for example, is lived through a complex intersubjective lifeworld, where bodies and people interact, creating and receiving social and cultural structures that influence their lived experience. Additionally, Schutz's work provides

consideration of the influence of the social and cultural upon experience, something not discussed by Merleau-Ponty (1962).

Additionally, the extension of Husserl's intersubjectivity by Merleau-Ponty provides a rich foundation to examine the corporeal and sensuous experiences of mountain bikers' lifeworld. His contributions permit exploration of the corporeal experience not only of oneself but that of the other subject. This starting point ensures there is an agreement there are two bodies, but also acknowledges the experiencing bodies are similar. The actions demanded of the environment of the other are those that are similarly demanded of oneself. Furthermore, this conceptual awareness permits the research to understand how these experiences intertwine and influence one another throughout the mountain biking experience.

Therefore, to truly understand the intersubjective lifeworld it is vital to combine the work of Schutz and Merleau-Ponty. This merge provides a conceptual understanding of intersubjectivity that appreciates the body and senses alongside the social and cultural structures that exist and their influence upon the dialogic. Additionally, the fusion provides a fulsome and robust understanding of intersubjectivity that can explore fully the lived experiences of mountain bikers. Before concluding this chapter, I now move to discuss a final experiential dimension of the lifeworld alluded to above, the role of the others body within experience. Here I discuss how the intertwining of experience can also be realised through the intertwining of bodies, intrercorporeally, and its role in lived experience.

Intercorporeality

Intercorporeality, suggests that our bodies are not just physical objects, but are also sites of social and cultural meaning. Merleau-Ponty (1962) suggests intercorporeality infers our bodies are intimately connected to the bodies of others in social and cultural contexts. He believed that our bodies are not just biological machines but are also part of a larger social and cultural context that shapes our experiences and perceptions.

Intercorporeality emerged during Merleau-Ponty's (1962) analysis of intersubjectivity when seeking to understand the role of the other beyond merely social interaction. He contended in addition to an intersubjective experience there exists an intercorporeal dimension. During this intercorporeal dimension of experience bodies come into contact and influence our perception and thus our lived experience (Merleau-Ponty, 1962). According to Tanaka (2015) he encourages us to develop a carnal intersubjectivity or intercorporeality that permits subjects to illuminate intersubjectivity in a corporeal way. Merleau-Ponty contests that our intersubjectivity and understanding of the other relies upon the interaction of bodies. This intercorporeal interaction provides the foundation of experience and therefore how we are intersubjectively aware of the other, also requires an awareness of the others body.

Merleau-Ponty's (1962) understanding of this embodied intersubjectivity involves recognising the body of the other subject is like my own (Csordas, 2008). Placing this central to the concept intercorporeality, he discusses that being able to perceive the other as an embodied subject allows me to recognise their actions. Take for instance the demands of my environment, as I write my keys require typing, as I look to ride my bike it requires me to turn the pedals. My awareness of the body of another as being like my own allows me to

recognise the requirements demanded by the environment and the actions they subsequently initiate (Romdenh-Romluc, 2011).

A carnal, embodied understanding of experience for Merleau-Ponty is central to our being in the world (Tanaka, 2015). As noted above, we are not alone in our individual experience of the world, rather our experience is shaped and reshaped by other subjects and their bodies. An awareness of the body can be seen in our daily interactions with others ranging from the subtle corporeal gesture to move through a door first, the movement of the teacher's body at the front of the class or the slight of head movement by the cyclist about to make a turn. The awareness of our body and the body of the other is central to our everyday experience of the world.

There are few contexts where the entwining of bodies is more visible in experience than within sport. Allen-Collinson and Evans (2019) argue intercorporeality allows us to explore the ways in which sporting bodies share the world, socially interact, and mutually influence one another during experience. Here we see daily examples of how the corporeal sport is lived, whether it be the running partners in Allen-Collinson et al. (2021) paper or the dancing movements of boxers in Spencer's ethnography (2012).

Mountain biking however is an activity not as obvious as boxing or running given the typical proximity of active bodies, yet it does provide a rich if under researched element to be explored in this study. For the mountain biker their exists corporeal cues that influence the perception of others. These range from a flick of a finger to indicate danger on one side or another, a riding position that indicates an upcoming feature, or a fist bump of reassurance

that a trail was ridden well. Therefore, the deployment of intercorporeality is vital to fully understand the perceptive, social and carnal experiences of recreational mountain bikers.

Therefore, the first two concepts taken forward in this study and that form the first contributions to the conceptual framework are intersubjectivity and intercorporeality. They have been selected based on the discussions above, in short to allow for the comprehensive exploration of the other. This is vitally important given the often discussed but largely unexplored role they possess in mountain bike settings and consequently the lived experience of riders. I now move to discuss relevant concepts to the role of pleasure and performance in the mountain biking experience.

2.8 Habit, Maximum Grip, and Flow

Merleau-Ponty's (1962) concepts of habit and maximum grip provide unique entry points to explore riding proficiency and success during the lived experiences of mountain bikers. He argues the concepts are situated explicitly within the affective dimensions of the lived experience and may help to understand subjects heightened experiences. Whilst this opportunity is presented, work to appreciate and explore optimal experience using these concepts has not been taken in current research. However, research on flow theory, a position that explores heightened experience in various contexts such as sport, has gained a lot of traction in the last three decades. The empirical findings alongside the conceptual tools provided by flow theory present an exciting addition to habit and maximum grip. Therefore, below I explore flow theory's significance for the research project and then the relationship between flow, habit, maximum grip and lifestyle sports.

The lived experience of mountain bikers is comprised of varying elements, good or bad, pleasurable, or painful. It involves an interplay of various actions and sensations, elements coming together to form the experience. What is important for this research project is how this interplay *can* create a sense of heightened experience, one in which the rider is almost lost in the *doing* of the activity. Within the literature there exists theoretical and conceptual frameworks that can help to understand this, and a prominent concept that unpacks optimal experience in sport is flow theory. The theory of flow applied to mountain biking, first developed by Csikszentmihalyi (1975), describes the holistic sensation riders may experience when they are completely absorbed by the activity.

According to Lavoi et al. (2022) a flow state focusses on intrinsic dimensions of experience that are rewarding, and they suggest finding a flow state involves mastery of a challenge. According to Taylor and Carr (2023) and Csikszentmihaly and Csikszentmihalyi (1988) several key indicators have emerged that sufficiently capture the flow experience. For Csikszentmihaly and Csikszentmihalyi (1988) these include clear goals, unambiguous feedback, congruence between skills and task demands, the ability to concentrate on and exhibit control over the task at hand, a sense of merging between action and awareness or unconscious control, a loss of self-consciousness, and a distorted perception of time.

Closely linked to indicators of flow is the appreciation of mastery and specifically the mastery of explicit challenges during engagement in an activity. The interplay of challenge and mastery is a central component of flow theory and becomes more important for participants the more they engage with the activity (Csikszentmihalyi, 1975). Specifically, flow is experienced when the skillset of the participant is challenged sufficiently by the task. Additionally, as people become more skilled and experienced, they may pursue greater

challenge, seeking out revised opportunities to test themselves further. The concept of mastery in a psychological sense is useful, but viewed through a phenomenological lens, I suggest it can be understood in an embodied way.

Mastery can be understood to relate to a corporeal knowledge developed over years of mountain biking. This awareness sits within a pre-reflective intelligent space and permits the rider to trust the knowledgeable decisions made by the body to successfully navigate terrain and trail. Moving forward it is this conceptualisation of mastery that is deployed and the reader will be reminded of this at relevant stages. To this point flow has been discussed separately from Merleau-Ponty's (1962) habits and maximum grip, yet the overlap is undeniable. Therefore, before moving to a discussion of the limited available research that utilises flow in mountain biking and more broadly lifestyle sports, I overview the synergies between concepts of habits, maximum grip, and flow.

Merleau-Ponty's (1962) ideas on habits and the concept of flow popularized by Csikszentmihalyi (1975), are rooted in the realm of human experience. Particularly they explore how individuals engage with the world, their activities, and their surroundings. Whilst they come from different philosophical and psychological backgrounds, there are connections and parallels between these two concepts. Merleau-Ponty's exploration of habits emphasizes the role of the body in shaping our interaction with the world. Habits are learned patterns of behaviour that become deeply ingrained in the body's memory (Merleau-Ponty, 1962). Similarly, Csikszentmihalyi's concept of flow involves an optimal state of engagement where individuals are fully immersed in an activity (Csikszentmihalyi, 1975). In both cases, the body plays a central role in facilitating a seamless interaction between the individual and their environment.

Secondly, habits and flow involve a sense of effortlessness. In the state of flow, individuals feel actions unfold naturally, where skills perfectly match the challenges presented. Similarly, habitual actions become so ingrained they are performed with minimal conscious effort. Extending understandings of effortlessness, both habits and flow touch on the idea of automaticity and intuition. In a state of flow, individuals often describe making decisions intuitively, without needing to consciously analyse each step (Csikszentmihalyi, 1975). Habits, too, involve automatic responses guided by previous experiences and learning (Merleau-Ponty, 1962). Lastly, habits and flow are associated with positive encounters and overwhelming sensual experiences. Engaging in habitual activities that are meaningful can contribute to a sense of pleasure. Similarly, the state of flow as noted earlier can provoke optimal experiences that subjects describe as euphoric and pleasurable.

In addition to his concept of habit, Merleau-Ponty's notion of maximum grip relates to the idea of flow, referring to the seamless connection between the body and the environment, where actions and perceptions are aligned perfectly. Similarly flow indicates individuals are completely immersed in their activities and perceive a natural congruence between their skills and the challenges they face. Maximum grip and flow therefore demonstrate how subjects, if only fleetingly find an optimum experience. Furthermore, the concept of maximum grip suggests the search of grip involves an ongoing interplay between subject and environment. Here then, application of maximum grip to mountain biking suggests riders are continually seeking to understand trails, their bikes and broadly experience. A continual search such as this aligns well with the interplay of skill and challenge proposed in flow theory.

Whilst Merleau-Ponty's ideas on habits alongside maximum grip and Csikszentmihalyi's flow theory emerge from different disciplines, they share common themes related to embodied engagement, automaticity, optimal experience, and how individuals interact with their surroundings. All concepts provide insights into how humans engage with their environment, activities, and experiences to create meaningful and fulfilling moments in life. Therefore, given the affective dimensions of habit and maximum grip, alongside the insightfulness of flow theory, their overlap is exciting. Therefore, I combine the three concepts throughout the remainder of the study and apply them where appropriate to the lived experience of the riders. Before moving on I discuss relevant research in lifestyle sports that adopts flow theory to confirm its usefulness in this study.

According to Taylor and Carr (2023) flow has been popularised as a theoretical entry point to understand the experience of outdoor recreationists. Research has explored flow experiences of participants in a range of outdoor and adventure sports including surfing (Wheaton et al., 2017), climbing (Rickly-Boyd, 2012), and dancing (Douse, 2017). More specifically a modest body of literature exists exploring flow experiences of mountain bikers from Bicknell (n.d.) and Taylor and Carr (2023). The findings reveal flow and subsequently the states of flow discussed by Csikszentmihalyi (1975) play a significant role in the experience of riders. Bicknell (n.d.) reveals flow is commonplace in the mountain biking experience with riders expressing various indicators noted by Csikszentmihalyi (1975) such as unconscious control and a distortion of time. Taylor and Carr (2023) investigate if there is a link between flow experience and motivations to ride. Their findings suggest whilst flow is an important dimension of bike riding, it is a welcome by product rather than a motivating feature.

Whilst flow has often been positioned effectively in psychological research associated with motivation, alongside the concept of habits, flow provides a useful concept to understand riders lived experience. No research to date has used flow and habit in this way as noted above in a mountain biking context, however parallels exist in Hagen and Boyes (2016) work. They explored the affective experiences of riders, with findings suggesting a strong relationship between optimal affective experience and certain aspects that relate to flow and habits. Specifically, they outline riders had nonconscious experiences that were felt in the body and these experiences created an instinctive knowledge that could be drawn upon in the future or as I have discussed earlier habits (Merleau-Ponty, 1962).

This section illustrates the need to explore the pleasurable, corporeal, and affective experiences mountain bikers have. Merleau-Ponty's (1962) concepts of habit and maximum grip present a strong foundation to explore these experiences. Yet they are limited given research has neglected to explore empirically their relationship to heightened encounters. The addition of flow theory, given it also places the body as a central point of experience and empirically explores optimal experience is vital for this research project. Yet there exists no research to date that adopts or merges these synergistic concepts and therefore, I overlay them in the remainder of the study to present novel insights. I have chosen to do this as they possess theoretical and empirical relevance, in addition to providing original insights. The final section in this chapter explores the theoretical relevance of a common mountain biking encounter, pain, and its relationship to the carnal lived experience.

2.9 Dys-Appearance: Fatigue, Exhaustion, and Pain

For sports athletes and recreational enthusiasts, pain and discomfort are part and parcel of the lived experience. Whether it is crashing into a larger-than-life opposition player in rugby or falling off your bike on a descent in the alps, pain and discomfort occur frequently. Whilst sport is synonymous with these often-unfortunate occurrences, as a research area little academic attention has been paid to the felt experience of pain, especially within phenomenological studies of sport. Yet there does exist a growing attention towards how discomfort and pain influence the lived experience of participants (McNarry, 2019; Allen-Collinson et al., 2018). Given the relative frequency riders encounter pain, this section discusses how and in what ways we might conceptualise pain in mountain biking, and how this can be in understood in wider socio-cultural and emotional contexts. To do this Leder (1990) is drawn upon and his conceptualisation of pain related to the appearance and dys-appearance in corporeal experience is utilised. Once established, the modest research upon pain and discomfort is reviewed to demonstrate how his thinking can be applied to this study.

According to Leder (1990) one can understand how the body interacts with the mind and environment in two distinct modes; the dis-appearing and the dys-appearing body. For Leder (1990), the dis-appearing body has a central focus on a harmonised relationship between body, mind, and world, one where all three components work together. Harmonisation permits the body to almost disappear from awareness and consciousness, with individuals not having to think about what they are doing, in favour of just doing it. He terms this ecstasis, a state of being that sees the body cover itself up in plain sight, affording the perceptual environment sole focus. This dis-embodied state presents a body that is away from itself, one that exists in the back stages of lived experience. The body does not completely vanish, rather the body exists quietly in the experiential world as action and engagement bring about being

(Leder, 1990). The dis-appearance and ecstatic body are something experienced by mountain bikers often as discussed in the previous section on habit and flow; purposefully riding a trail, the riders sole focus of which is getting to their destination, the body operating in a state of equilibrium.

Leder's (1990) second mode suggests a vastly different corporeal awareness. Here the body moves to the centre of consciousness, often triggered by an intense disruption or pain. A reappearance of the body, something sat silent in the background now focuses all attention. The disruption breaks the harmonisation and places the dys-functional body at the centre of consciousness. Indeed, painful experiences bring one's corporeality to our explicit awareness, something requiring immediate attending. When once the body stood quietly during our engagement with life projects, present but not of focus, the dys-functional body creates a blockade, something that requires immediate attending. The disruptive nature of the dys-eased body provides a unique entry point to recognise pain and the body's experience of it. It offers exploration of the emotional, sensory, social, and cultural encounter, something so significant it disrupts our everyday consciousness in complex ways.

Pain for Leder (1990) can be characterised as something that alters the very presence of the body. Pain possesses the immediate ability to move one's body from a dis-appearing ecstasy to an overwhelming dys-appearance that requires all attention. The ability of pain and discomfort to lacerate the harmonious structure of disappearance demonstrates its significance to sensory research. Here Leder (1990) notes a sensory understanding of pain requires deeper examination beyond acute trauma and the sensory intensification. There is a need to acknowledge the episodic structure and affective call of pain. To illustrate this, I will use an example from my childhood when I broke my radius and ulna climbing a tree.

When climbing the tree, my hands, and arms alongside the rest of my body existed with little thought, corporeally operating and utilising a range of senses to ascend, something I had done many times before. Yet when I fell and snapped both bones, my sensory focus converged on the site of the break. Leder (1990) argues given the trauma the sensory stimuli in that region of my body spoke up and *yelled* for attention, bringing about a sensory intensification. The fall and break also demonstrates what Leder (1990) terms the episodic structure of pain, a characteristic of pain in this instance at least, that suggests it did not always accompany me, rather it arose at a time of unusual stress. Whilst this may differ for those with chronic disease it is useful here to understand mountain bikers' engagements with pain given the episodic nature of crashing. The final dimension draws attention to the affective call of pain, an affective reorientation, my mind that was once gazing into the estuary from my newfound height, was now directed towards the realisation of what had happened. Whilst Leder (1990) does not extend this point to include the emotional and socio-cultural dimensions of pain at this point, I contest these are very real considerations of the affective call and something detailed below.

2.9.1 Dys-appearance and Pain Research

Research on pain within sport has often been positioned within the sciences and particularly psychology (Bicknell, n.d.). Here research tends to focus on the degrees of sensitivity and tolerance (Pettersen et al., 2020), neurophysical responses (Hainline et al., 2017) and the perception of pain in differing sports (O'Farrell et al., 2022). Whilst these insights demonstrate experiences of pain for sport athletes, they do not position this within the individuals lived experience nor are they useful in a sociologically sensitive phenomenological sense. There is a growing but modest body of literature discussing pain from an embodied and corporeal perspective within the lifeworld of sports participants.

Allen-Collinson et al. (2018) work with high altitude mountaineers is a useful starting point. The authors outlined the relationship between embodied consciousness and feelings related to participants experiences of pain, such as fatigue, discomfort and breathing difficulties. Additionally, Spencer (2014) highlights the centrality of felt pain in the lived experiences of mixed martial artists. His participants discussed the sensation of pain when being hit, particularly in the head and how this coupled with the taste of blood characterised the lived experience of the fighters.

Beyond Allen-Collinson et al. (2018) and Spencer (2014), a closer examination of pain reveals it is more than a haptic or somatic sensation, and can encompass emotion, biology, and physicality (McNarry et al., 2020). This emotional, socially, and culturally constructed understanding of pain has been utilised by researchers employing phenomenology as a theoretical backdrop in recent times. Spencer (2014) for instance notes in his investigation of MMA fighters the feeling of loss and despair when encountering injury. Furthermore Allen-Collinson (2005) deepens our understanding of culturally constructed pain to suggest encounters are not only perceived through the senses, but there is social and emotional turmoil that is also felt. For example, for the professional sports athlete, the encounter of pain might signify an excruciating pain in the knee, but it also bares the worries and anger of not being able to play or earn money.

2.9.2 Dys-Appearance, Fatigue and Exhaustion

A dimension of pain seeing increasing scholarly attention is fatigue and to a lesser extent exhaustion (McNarry, 2019; Allen-Collinson et al., 2018). Allen-Collinson et al. (2018) provide a significant contribution to the sporting literature on fatigue and exhaustion in their research on high altitude mountaineers. The authors found fatigue and endurance can be

understood as cognitively, corporeally, and interactionally lived and communicated through what they describe as endurance work. Participants discussed their experiences of fatigue and exhaustion, describing how their continued experience of tiredness became habituated over time. Additionally, the mountaineers describe the prominent sensations they experienced when undertaking endurance work, especially those of fatigue that at times moved into the realms of exhaustion. These sensations were normalised by participants given the cultural expectations of the mountaineering lifeworld. There exist various crossovers between this work and the experiences of mountain bikers, and this will be revisited in the finding's chapters.

The physical and psychological experience of fatigue are considerations for all sports participants and something central to the mountain biking experience given the degrees of exertion undertaken. For riders in Spinneys (2006) research there was an intricate and complex negotiation of pain and exhaustion for the road cyclists. When riding steep terrain there existed a constant negotiation between body, tiredness and the ensuing pain felt in all areas. Additionally, the work of McNarry (2019) demonstrates the centrality of discomfort and fatigue in the lived experiences of elite swimmers. He argues the discomfort experienced by the swimmers was seen as part and parcel of the work required to be successful, equating these sensations with achievement. The above findings from Spinney (2006) and McNarry (2019) indicate the relevance of fatigue to sensory explorations of sporting participants lived experiences. Furthermore Spinney (2006) highlights the centrality of this amongst cyclists, albeit road riders, and their negotiation of pain.

It has emerged through the above discussions pain, and consequently fatigue and exhaustion, are highly relevant to the current study but remain under researched. Given the risky nature of mountain biking and the self-propelled nature of cycling, pain is positioned as a central investigative dimension of the study. Furthermore, the understanding of pain taken forward is one that moves beyond the raw trauma experienced by sporting participants. Whilst this might be a feature, it is the sensuous, corporeal, emotional pain that is available to researchers that is also harnessed. A holistic appreciation of pain sits well with the sociologically sensitive phenomenology of the study. This combination has the potential to reveal unique insights into the painful and enduring lived experiences of mountain bikers.

Concluding Thoughts

The Literature Review, split into three overarching sections discussed the existing research upon the body and senses within sport. The first section provided an understanding of sensory experience beyond the typical Western concept of the five senses. This foundation was important to ground existing research on the senses in specific disciplines and contexts such as sport. Additionally, it revealed a wider sensorium exists for sporting athletes, but revealed to date this is under researched. Next, the existing sensual research within sport studies was discussed and detailed the parameters of lifestyle sporting research on the body. Discussion revealed a modest but growing research base that lacked focus on mountain biking. The second section introduced theoretical discussions from the existential work of Merleau-Ponty and sociologised phenomenological work of Schutz. Given the promise of both I propose the deployment of a sociologically sensitive phenomenology that permits appreciation of social and cultural structures upon lived experience. This theoretical position provides various conceptual tools to explore the rider's experience.

The final section extends understanding of three areas particularly, intersubjectivity, flow and pain. The promise of intersubjectivity and intercorporeality for the investigative intentions of this study is exciting given the significant role of the other in the riding practices of mountain bikers. In the context of optimal experience, I have brought together flow theory with Merleau-Ponty's habit and maximum grip to create a robust lens to appreciate the sensual depth of euphoric experiences on two wheels. Concerning pain, I draw attention to sociological and emotional dimensions of painful experience through the phenomenological work of Leder (1990). Leder's (1990) work has shown promise in traditional sporting contexts however my application of it in mountain biking is the first of its kind. In figure three below I have provided a graphic to illustrate the relationship between the research aims and objectives, existing theory, empirical research, and the subsequent research questions.

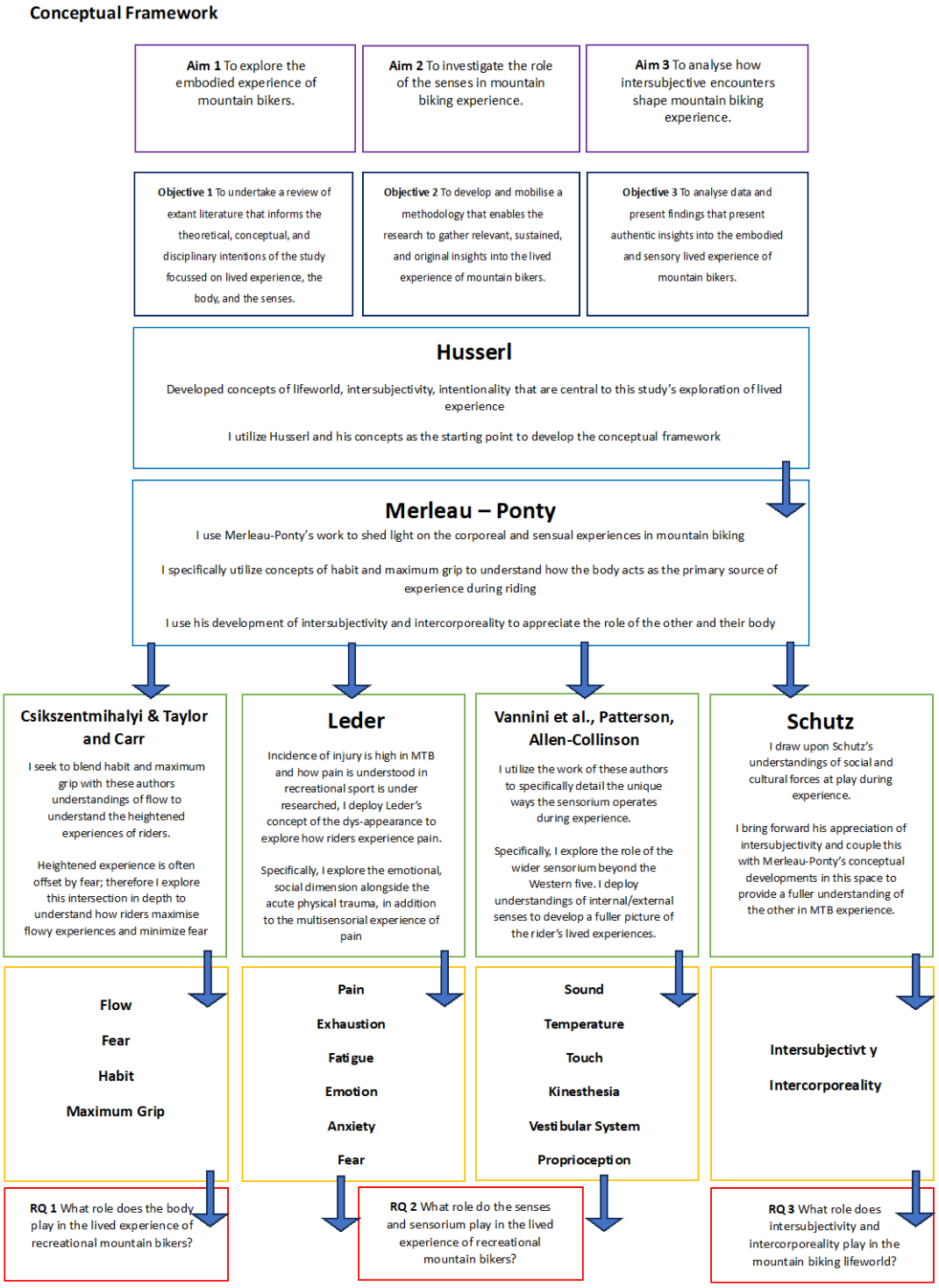

Figure 3. Outline of the research aims (purple) and objectives (black), how these components lead to theoretical understandings of phenomenological thinkers (blue). In green I draw upon relevant conceptual literature from phenomenology and sociology to develop key concepts for analysis (orange), culminating in the final research questions to guide the study (red)

Figure 3 Conceptual framework

2.10 Research Questions

Gaps in the literature have emerged during discussion to this point and specifically there exists a lack of research upon mountain bikers lived experience, their sensory engagement with the lifeworld and the role of other riders in their milieu. To address these gaps and to fulfil the research aim and objectives, I have developed the following research questions to guide subsequent chapters and the project more broadly.

1. What role does the body play in the lived experience of recreational mountain bikers?
2. What role does the senses and sensorium play in the lived experience of recreational mountain bikers?
3. What role does intersubjectivity and intercorporeality play in the mountain biking lifeworld?

Whilst I have established both a philosophical and theoretical position that I feel provides foundations to explore the bodily and sensual experiences of mountain bikers, to date this is the first consolidated contribution of its kind and therefore uncertainty exists on how the study will be undertaken. Spinneys (2006) contribution presents one example of how similar research may be undertaken but it is now over 15 years old. Additionally, he adopted a different philosophical stance and undertook his research amongst a different subculture of cyclist. Brown's (2015; 2017) work provides promise, illustrating some of the sensual modalities that riders are aware of during experience, yet these research findings were not a central aim of data collection. Thus without a roadmap to follow, I now move to discuss the methodological dimensions of the study, justifying the use of specific tools, alongside the

implementation of methods that allow for the collection of data that reveals the experiences of riders.

Methodology: Understanding the Body and Senses: Sensual Ethnography

3.1 Introduction

The Methodology comprises eight foundational sections developed with the intention of ensuring the research can collect rich and meaningful data. To achieve this, sections one and two map the social constructionist and phenomenological orientations of the study. These discussions focus on the epistemological position and theoretical perspective adopted in examining the lived experience of mountain bikers. Section three discusses the research methodology used, ethnography, to provide an overview of how I have designed the research (Crotty, 1998). The next section discusses procedural methods involved in the capture, reduction, and narration of data. It overviews design components, including types of implementations, sampling schemes, and the justification for utilising specific methods. The penultimate section reviews the ethical dimensions of the study, focussing on aspects of procedural ethics and participant's harm. The final section of the chapter discusses the implementation of thematic analysis to reveal unique and original findings.

Literature concerning the undertaking of research is diverse and driven by the theoretical choices of scholars. Within the social sciences Gray (2009) and Crotty (1998) have both offered foundations for researchers to build upon, with Crotty providing useful scaffolding for researchers to follow (Figure 4). Given the simplicity of Crotty's discussion of phenomenology, his framework has been chosen to guide decisions.

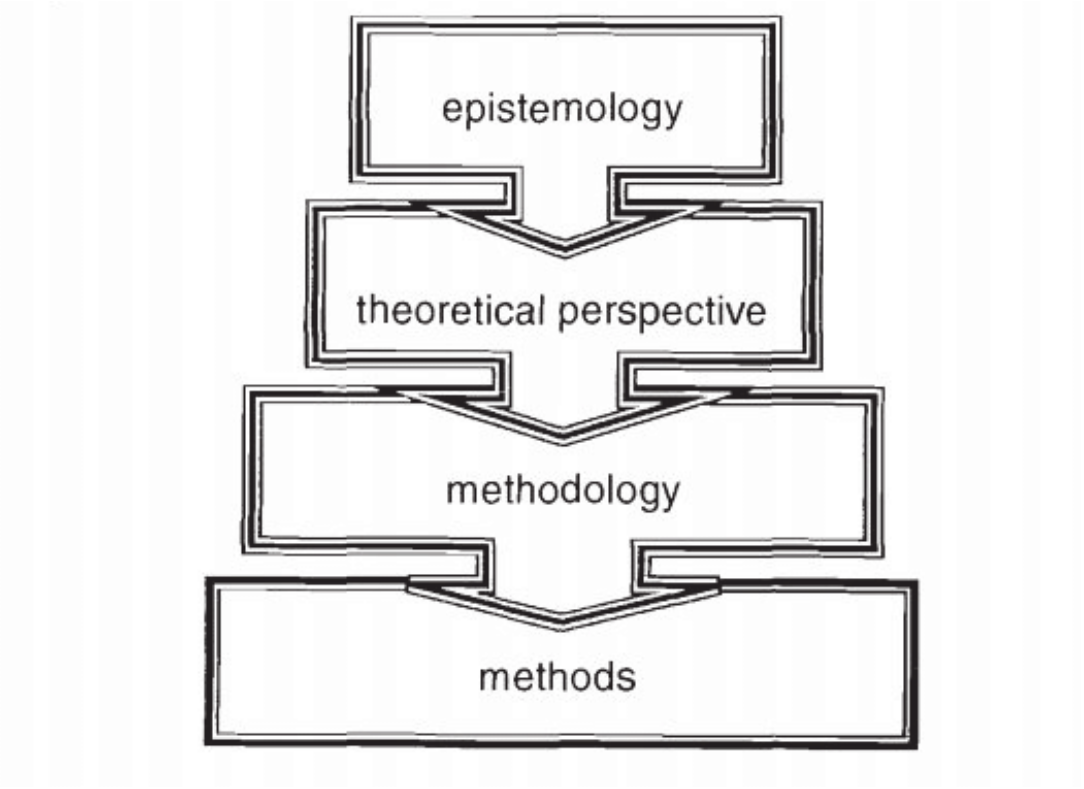

Figure 4 Crotty's elemental methodology

3.2 Epistemology

The search for answers and the acquisition of knowledge has long been sought by humankind and researchers alike. The desire to understand everyday occurrences driven by our inquisitiveness as beings, is something that defines us (Crotty, 1998). Whilst each subject in the world may possess this desire, the lens we see these conundrums through can differ considerably. This difference is what drives researchers in their respective traditions. For researchers at the start of their journey, Crotty (1998) argues it is vital to understand where and why they position their study in this landscape.

The purpose of this section is to critically examine social research traditions appropriate to the study and justify their inclusion (Crotty, 1998). Specifically, the epistemological tradition of (social) constructionism is examined and consequently facilitates critical examination of phenomenology as a theoretical perspective. This structure follows Lopez and Willis (2004) suggestions for researchers to first understand, and then provide clear statements of their philosophical underpinnings before moving any further.

Hammersley (1992) suggests a research philosophy is an underlying philosophical position guiding decision making throughout the research process. The roots of philosophical traditions can be traced back to Aristotelian and Galilean research concerned with causal and teleological considerations respectively (Hammersley, 1992). Acting as the foundation of contemporary philosophical thought (ontology and epistemology), he provides a starting point to understand philosophies available for this study. In contemporary research settings, these philosophies have provided the bedrock for theoretical perspective discussion had later (Crotty, 1998).

Social Constructionism

Building upon understandings of constructionism and its epistemological interest in meaning making, Crotty (1998) suggests meaning making possesses a specific social trajectory for some researchers. He appreciates the social nature of meaning making and the potential relationship with culture. He suggests meaning making for social constructionists is socially constructed in nature. According to Crotty (1998) Fish suggests human beings are preceded by their social institutions and are thus guided by them in the process of meaning making. This point is of import as it suggests the subject is born into a world of meaning and their understanding is guided by a constructed culture (enculturation). Specifically, Bryman (2012) argues in research of a social constructionist nature, the subject is placed as recipient of culture rather than the creator of it. An important note is that understandings of social constructionism are rooted in a constructionist epistemology, something counter to Mayan's (2009) assertions of its subjectivist roots.

Crotty (1998) provides the researcher with further tools to make sense and utilise a social constructionist position. Having understood subjects are born into a culture of meaning and thus see the world through a specific cultural lens, he argues, the subject makes sense of meaning through a historical and social perspective. This understanding of the social world, the role of interpretation and the influence of culture on the human subject is something vital to this study. Additionally it is an epistemological stance that compliments the sociologically sensitive phenomenological position noted earlier. Social constructionism provides the researcher with a specific and highly operational epistemological position to view the world and mountain bikers through. The specific position lends itself to researchers understanding of the nature and construction of knowledge, one that involves the subject, object, and socio-cultural dimensions. Thus, social constructionism provides the first piece in the

methodological framework proposed by Crotty (1998). Now the epistemological position is established, discussion moves toward the next element of Crotty's (1998) framework and explores theoretical perspective.

3.3 Theoretical Perspective

For Crotty (1998), the next step is the examination of an appropriate theoretical perspective, one to compliment the epistemological discussions earlier. Therefore, this section discusses the theoretical perspective of phenomenology and justifies its use. Once justified the unique tools afforded to a phenomenological researcher, most notably the phenomenological method is discussed. I then close the section by outlining how I deploy the phenomenological method and maintain a phenomenological attitude when researching mountain biking subjects given my familiarity in the setting.

Phenomenology

Crotty (1998) suggests theoretical perspectives under a constructionist banner are not all created equally. An alternative to symbolic interactionism, phenomenology, provides the researcher with tools to explore phenomena in the immediacy of a subject's reality. Phenomenologists are deeply concerned with critically exploring lived experience and culture, reconstructing new understandings (Crotty, 1998). As a perspective, phenomenology places examination upon the relationship and experience of individuals to objects surrounding them. Rather than the relationship being developed independently of other influences (culture), consciousness plays a vital role in our understanding of objects. The consciousness spoken of is not an abstract concept, rather according to Husserl consciousness is set against understandings of intentionality, a concept we encountered a little earlier (Dowling, 2007; Laverty, 2003). For phenomenologists, intentionality is vital in their

explorations and underpins the relationship between subjects and objects (Outhwaite and Bottomore, 1993). Drawing these together, phenomenologists argue consciousness is always consciousness of something and thus intentional (Crotty, 1998).

Methodologically, phenomenology provides a unique perspective when exploring the lived experiences of mountain bikers. Constructionist in tradition, some phenomenologists such as Heidegger argue society and culture play a foundational role in our understanding of the world (Dowling, 2007; Laverty, 2003). From the moment we set foot into the world we are enculturated, born into a set of socially and culturally appropriate meanings and understandings of objects (Dowling, 2007; Laverty, 2003). Whilst acknowledged, phenomenologists argue this paradoxically provides the opportunity for exploration as phenomenology in a critical vein, questions culture and the extent it skews our experience of the world (Crotty, 1998). It is here phenomenology deviates from symbolic interactionism, seeking to critique and view phenomena either bracketed from, or considering, their culturally appropriate action and immediacy, taking things back to how they once were. The focus of the research is to explore the lived experiences of mountain biking and whilst I will adopt bracketing, the ways riders understand their experience is heavily influenced by culture as noted in the previous section. Therefore, a phenomenological theoretical perspective is adopted because it affords the opportunity to appreciate the role of culture and where necessary critically examine its influence on riders lived experience.

Phenomenology as Method

Phenomenologists to date consistently diverge in their research focus and at times their strands of phenomenological heritage. Yet one aspect they tend to all possess is the Husserlian notion of the phenomenological method. According to Crotty (1998) this is not necessarily a method of gathering data, rather a set of procedures to be enacted by the researcher. The purpose of these procedures is to gather and analyse data that does not prejudice their subjective character. Allen-Collinson (2009, p.8) goes further to suggest these methods should not be viewed as merely procedural techniques, rather a 'distinctive and encompassing worldview, the phenomenological attitude itself', the latter discussed in the next section.

A central theme is that to be phenomenological is to treat things a new, to view the world in childlike wonderment (Allen-Collinson and Leledaki, 2015). They are suggesting a commitment to remove taken for granted and enculturated understandings, or our natural attitude, when examining the worlds of participants. It is here researchers must approach the phenomenon under investigation with an open and questioning attitude, suspending as far as possible our everyday assumptions (Allen-Collinson and Leledaki, 2015). To achieve this wonderment and suspension (or the phenomenological attitude), many authentic phenomenological studies adopt four key phenomenological elements used as helpful guides to structure this position: description, epoché and reduction, essence, and intentionality. Importantly these are different to the discussions in the previous chapter with the elements acting as tools for the researcher in the data collection process.

Description

The first element suggested by Husserl and arguably the primary purpose of this methodology is describing the lived experiences of individuals. Allen-Collinson (2009) attests description is not merely an abstraction, it focuses on the interrelationship between the consciousness of the perceiver and the perceived. The description I provide aligns with a Husserlian tradition and therefore returns to the things as they originally were and in doing so, suspends as far as possible taken for granted ideas and attitudes of the phenomenon under investigation. The purpose of doing this is to as far as possible uncover the contextually specific, individualised meaning of the phenomenon and experience (Allen-Collinson, 2009). To achieve this, a focus upon epoché and reduction is required. To reveal rich descriptions, I deploy research methods alongside a research methodology to offer opportunities for meaningful data collection that provides insight into rider's experiences.

Epoché, Bracketing and Eidetic Reduction

For phenomenologists adopting empirical approaches alongside the phenomenological method, a key element is epoché or more commonly known as bracketing. Husserl contests the self, intertwined with perception and cultural assumptions need be bracketed to see the phenomenon without prejudgement (Crotty, 1998). Only then for Husserl can a true representation of experience be viewed. The process of bracketing involves removing cultural bias, personal experience, and presuppositions to see and learn from what (the data) stands before us as if it were the first time we encounter it (Crotty, 1998). The removal or temporary suspension of the researcher's tacit assumptions is critical (adoption of the phenomenological attitude) if the process is to uncover rich and detailed descriptions of the phenomenon devoid of bias or influence.

Allen-Collinson (2011) and Merleau-Ponty (1962) contest whilst the notion of complete removal from research is idealistically welcomed, the practicalities of such an approach especially in a sociologically sensitive phenomenological study is difficult. A tension arises for the researcher conducting ethnography; the presence of theory, culture, and experience are vital aspects that make social constructionist research so rich (Atkinson, 2017). These aspects and their role in the research cannot be fully bracketed or removed, nor do many researchers want to. Therefore, a middle ground needs be sought, where culture, history and theory can exist but at the educated discretion of the researcher (Allen-Collinson, 2011).

Allen-Collinson (2009) suggests in a sporting research context, the researcher can achieve the greatest degree of epoché by adopting a self-critical and reflective approach. Specifically, Allen-Collinson (2009) suggests taking the descriptions provided by the participants and ensuring when engaged, the researcher treat the familiar strange and explicitly question and record their conceptualisations of the phenomenon. I discuss in the next section how this was achieved.

Essences

For Husserl, once epoché has been achieved investigation of the essential structures of experiences or essences is necessary. Husserl's central aim of phenomenology and catalyst for the phenomenological method was his desire to discover the essences of experience beyond that of his own. The essences for Husserl were the essential structures of experience, uncovering these he argued would create an opportunity to identify a systematic and widely applicable methodology akin to his scientific persuasion.

An example of this would be to uncover the essential structures of a mountain bike. If I have a mountain bike and I experience it as it is, with tyres, bars, and suspension, I understand it to be so, yet I do not know if it possesses all the essential structures of a mountain bike. To ascertain this, Husserl argues we must engage with eidetic variation, where I swap in and out features to see if this alters the identity of the bike. So, for instance if I were to change the handlebar from black to yellow, whilst this colour may alter the look of the bike it does not change its identity and therefore handlebar colour can be understood to not be essential to the identity of the mountain bike. Yet if I were to alter the bikes tyres and wheels, swapping them for a road bikes, this will change the identity of the bike drastically in various ways and therefore I can be confident to conclude that mountain bike tyres and wheels are essential (an essence) of its identity (Romdenh-Romluc, 2011).

Before moving on, it is worth noting Husserl's desire for universality was met with opposition. Whilst the introduction of essences is crucial, it is important to note Husserl's approach encountered criticism. Notably for this study, Merleau-Ponty (1962) argued the situatedness of experience is socially constituted, culturally and contextually bound and therefore not applicable beyond the research context they are located in. Therefore, akin to the position taken by McNarry, Allen-Collinson and Evans (2019) and given the sociological phenomenological nature of the study, identification of essences beyond the participants is not possible nor searched for. Rather I identify generalities in the phenomenon across the participants I engage with.

Intentionality

For Husserl, intentionality centres on the mind and the activity of a knowing subject who minds something, such as caring about something. Simply put, 'to intend an object simply means to have, or to be mentally directed to, an object in any way at all – in perception, thought, memory, imagination, anticipation, desire, emotion and so forth." (Romdenh-Romluc, 2011, p.72). An appreciation of intentionality as part of the phenomenological method is important for this study because it allows appreciation of difference during experience. Specifically, whilst all participants are mountain bikers their engagement with and intention towards the activity will be different (Willig, 2008). Therefore, an appreciation of this detail is important to understand lived experience and is presented throughout the finding's chapters.

These then are the core elements of phenomenological approach or what Allen-Collinson (2009) describes as the phenomenological attitude, a position through which we can be attentive to the things or immediate experience. Whilst these elements sit behind the theoretical understandings of the research, it is vital, if seeking to produce a truly authentic phenomenological analysis of mountain bikers lived experience that they are operationalised. Allen-Collinson (2009) draws upon the work Giorgi (1985) who provides guidelines for researchers undertaking this form of investigation and suggests its application to sporting phenomena. It is worth noting, Giorgi's (1985) work focussed on psychological phenomenon yet given its use by Allen-Collinson (2009) and affective conversations in the Literature Review, with subtle adaption it can be used effectively to capture and analyse the experience of mountain bikers. The guidelines proposed by Giorgi (1985) are:

1) The collection of concrete, naïve descriptions of the phenomenon from the participants, as co-researchers
2) The researcher's adoption of the phenomenological attitude
3) An impressionistic reading of each description to gain a feel of the whole
4) The in-depth re-reading of the description to identify meaning units, which capture specific aspects of the whole.
5) The production of a general description of the structure(s) of the experience, with the aim of letting the phenomena speak for themselves (Giorgi, 1985, p.151)

It is with Giorgi (1985) guidelines alongside Husserl's phenomenological method this study is equipped to engage in an authentic phenomenological exploration of mountain bikers lived experience. Before moving discussion towards the methods undertaken, a focus on how the phenomenological attitude was adopted in this study is discussed.

3.3.1 Positionality and Adopting the Phenomenological Attitude in MTB

Adopting the phenomenological attitude relies upon the researcher bracketing or putting to one side as best they can their biases. This core characteristic is vital in phenomenological research, especially for me, as a cultural insider and active academic with interest in this area. Additionally, positionality in research is a dimension requiring consideration, especially in a study that explores the lived experiences of mountain bikers through first-hand accounts. McNarry, Allen-Collinson and Evans (2019) suggest they encountered similar obstacles in researching competitive swimmers, arguing whilst epoché is vital, total removal of their influence was impossible. I adopt a similar stance and suggest total removal of my influence is impossible therefore what follows is a discussion of how this was minimised as much as possible.

A strategy advocated by Pink (2015) is to 'stand back' and maintain an analytical and critical perspective by employing a reflexive and self-critical approach to assumptions. She suggests reflexivity is fundamental to studies adopting sociologically sensitive phenomenology and ethnography. She proposes researchers will find themselves drenched in knowledge from both their experience and that of the participants. Therefore, key in phenomenological research is how to best bracket this alongside my values and preferences related to aspects such as the research process and my paradigmatic preferences. This reflective gaze requires the appreciation of the external relationships of power surrounding the research and needs to consider the role of the researcher. Without acknowledging this I would be unable to provide authentic accounts of the participant experience (Pink, 2015).

Pink (2015) and McNarry, Allen-Collinson, and Evans (2019) propose reflexivity is critical in research, yet there are no specific guidelines nor framework to follow. This presents an obstacle requiring further consideration. Allen-Collinson (2013) suggests reflexivity is commonly allied to specific ontological, epistemological, or theoretical traditions alongside disciplinary preferences, yet she contends descriptive accounts are rare. Whilst there is a scarcity of descriptive accounts, given phenomenologically inspired research adopts the phenomenological attitude, there are some examples to consider. Therefore, below I review current contributions and then return to Allen-Collinson (2013), before documenting the actions undertaken to ensure as much as possible the phenomenological attitude was authentically adopted. The first example is provided by Hughes (2016) in his work on the embodied experiences of bouldering. He acknowledges the need to critically reflect on how his personal background impacts upon the research in the foreground. He asks questions such as who I am, what I know and how I know things were central to his reflexivity. Yet beyond

this and in keeping with the points made about scarcity, the remainder of his reflexivity is intertwined in the study rather than explicitly presented for the reader.

McNarry (2019) offers detail on how to capture reflexivity in his study of the lived experience of competitive swimmers. He possessed a strong familiarity with swimming having been a competitive athlete himself and at the point of research had moved from athlete to coach. To gather data, he volunteered at a swimming club and held the role of assistant coach. He conducted observations followed by interviews over the course of a three-phase immersion. Given his familiarity, experiences of swimming personally and his professional role, the deployment of the phenomenological attitude and reflexivity was essential.

To do this McNarry (2019) challenged some of his own personal physical cultural knowledge about and experiences of competitive swimming and coaching. The first was to acknowledge the levels and degrees of insiderness of the extended research team through bracketing conversations. This ascertained the degree of familiarity or naivety within the team. A second action he undertook was to engage in auto-methodological self-elicited reflections on his experiences of the lifeworld. This action allowed him to reconnect with his swimming self and to contrast his present self and embodied swimming capabilities of those from previous swimming engagements. Thirdly he engaged with swim coaching texts and old training logs to provoke reflections on his assumptions of swimming, recording this via video and audio. Alongside the deployment of these elements, he utilised video recordings during observation and a structured proforma to help reflect on his second data collection method through interviews. This consisted of reflecting on his relationship with the participant, his response to their account, the participants reaction during the interview, how he responded to their answers and finally, anything that needed to be altered for future interviews.

The need to adopt the phenomenological attitude authentically is crucial given my positionality and embedded insiderness within the subculture. The contributions above provide a vital insight into actions that can be undertaken to maximise this, and I now move to discuss my insiderness and the actions undertaken to bracket my influence. It is important to note whilst these are detailed individually below, in action they worked synergistically throughout the research project. In line with Allen-Collinson's (2011) assertions it is vital I provide a detailed overview of my history and involvement in mountain biking. This will then permit a greater understanding and confidence in how I suspended my internal (researcher) suppositions (Gearing, 2004), biography, insider subcultural knowledge of mountain biking, my academic knowledge, and my personal experiences of being mountain biker.

3.3.2 Positionality, Reflexivity and Bracketing

My journey to this point is of a working-class boy, expelled from school and an opportunistic university student. Whilst I may not have been academically orientated during my youthful years, I was uniquely attuned to experience and pushed every boundary I could. Like most working-class young men in the Noth East whilst my time in the classroom was turbulent, I found my home on the sports field. It was here I established a modicum of belonging and performance. I was never elite but good enough to represent my county and have trials at a football academy; in essence sport was my life. But like most sporting athletes, it is fine margins and health that often dictate success. After a ruptured cruciate ligament my relationship with sport changed. I became increasingly intrigued by the body, how it operates, how it feels and on occasion how it might think.

Leaving teams sports behind and hoping to a build a relationship with my dad, I took up cycling and subsequently mountain biking. Cycling afforded a change of pace to team sports and got me into nature, somewhere I was often as a child. Riding a bike affords you time to think and contemplate. Whether this be on my commute to work, down the trails in my local spot or when crashing into walls and breaking bones and teeth, riding *my* bike has been ever present. With relevance to this study, I have been riding my mountain bike consistently since my second year of university in Gloucestershire 2007. Here my bike and I sought to explore the local countryside, adopting what would be commonly understood as a cross-country approach to riding. Since then, I have been all over UK and Europe most commonly by myself exploring enduro trails from Fort William to Finale Ligure and everything in between.

Whilst I have spent lots of time sitting and hanging onto my bike, I would not identify as particularly proficient. Rather I derive a pleasure from riding in the natural environment, it provides a solitude, struggle, and catharsis I find unique. My involvement in the subculture of mountain biking is one of distant cultural insider (Evers, 2006), where I undertake the activity but tend to engage less in the increasingly prominent social media space. It is this juxtaposition between the experience on and off the bike and the growing instant trend in the subculture that drew me to this research and my current academic focus. As a sports scholar I have interest in how different people engage in diverse activities and derive distinctive lived experience from them. It is the culmination of the above that requires an overt discussion of how I sought to suspend these understandings and assumptions to detail and describe the rich, lived experience of the mountain bikers I encountered in this research.

The first bracketing action was to review as McNarry et al. (2019) did the degrees of cultural insiderness within the research team. This process was afforded greater ease than McNarry in that I was the only member of the team with a degree of cultural insiderness. The remaining members of the team such as Andy, brought an outsider, leisurely interest in cycling given his role as a father and an individual concerned with remaining healthy and environmentally aware. Equally Dan and Pete, fell into this category, possessing an outsider awareness keenly sharpened to issues related to sustainability and the environment. Whilst I possessed the greatest degree of insiderness, during meetings the team utilised their 'naivety' to challenge some of my assumptions of the mountain biking lifeworld.

The second action undertaken as noted by McNarry et al. (2019) was that of auto-methodological self-elicited reflections. Whilst for him this was entwined in his transition from athlete to coach the same cannot be said for me. Given the outbreak of coronavirus and the subsequent pandemic and restrictions, I was unable to mountain bike individually for 8 months and ride with others for over a year. This enforced time off the bike provided an opportunity upon returning to capture what previously had been normal and taken for granted sensations in a new way. As noted by McNarry (2019) this enabled me to reconnect with my embodied mountain biking experiences and contrast these with those prior to the pandemic.

The final two actions undertaken represent a desire to ensure the practicalities of the research represented the actions undertaken above. I adopted the use of a reflective diary, keeping notes on my experiences throughout the research project. The final action of reading other phenomenologically ethnographic inspired accounts of the sporting lifeworld such as McNarry (2019), Hughes (2016), and Spinney (2006) enabled constant reflection to be

undertaken to ensure I was cognisant of the actions, possible mistakes and solutions found be other researchers working in the discipline.

The undertaking of bracketing and reflexivity throughout enabled me to acknowledge and to some degree problematise my deep insider status within the lifeworld. Managing my bias was something I was conscious of from the outset and was very prominent in my initial thinking during data collection. After spending time in the lifeworld of other mountain bikers, the awareness of my bias lessened, and I was able to approach the collection of knowledge less weighted down. Additionally, through action one, the outsider status I possessed and the *naïve* position of my supervisors, engaging in conversations related to the introduction and importantly maintenance of epoché was essential. These conversations permitted the exposure of some of my pre-existing assumptions I had developed and held in my perception of the mountain biking lifeworld. At times these conversations were not easy, nor were they difficult all the time, they provided alternative perspectives that enhanced the effectiveness of the bracketing process.

This section outlined the phenomenological method and attitude as it has been discussed within the literature. The section subsequently discussed how aspects of this attitude and especially epoché were engaged with to limit the possibility of my tacit assumptions of the mountain biking lifeworld impacting the study. What remains now and where we turn next, is the need to discuss the mechanics of data collection. Specifically in accordance with Crotty (1998) the chosen research methodology and methods to elicit concrete descriptions required of the participant's mountain biking lifeworld.

3.4 Methodology, Ethnography

The section firstly discusses the merits of ethnography as a research methodology, justifying its appropriateness here. The second section deepens understanding and explores the application of a sensory ethnography for the study. The final section explores the existing predominance with vision during ethnographic research and the processes I undertook to limit this bias during the project.

It was always clear the research was going to be an ethnography. By that I mean I wanted to study the lived experiences of mountain bikers on a day-to-day basis: to write (-graphy) the tribe (ethne). Denscombe (2003) suggests ethnography is a methodology focussing on the description of people and/or cultures. Ethnography has been utilised as a methodology to explore the 'exotic' cultures regarded foreign and misunderstood through Western eyes alongside more recent explorations into the everyday lives of social beings (Donnelly, 1985).

Atkinson (2014) argues ethnography and ethnographic fieldwork[10] is not just one way of undertaking the collection of data, it is a very special way of doing so. Ethnography is focused upon understanding other people's social worlds (Katz & Csordas, 2003) and provides a methodological approach devoted to fieldwork enabling the researcher to follow cultural contours and dimensions of the temporal, spatial and interpersonal in everyday life.

Much of what is printed in mountain biking texts presents a hypercommodified, commercial, white, middle class leisure pursuit, the new kid on the block in a fast-moving experience economy. Academic discussions of mountain biking are scant within the UK, with Cherrington (2019) the most prominent and additional eclectic work from writers such as

[10] Fieldwork here denotes both observation and interview methods

Brown (2008) adding interesting but limited aids. Within these contributions there is little work about why people ride nor is there much on what it might feel like (Brown, 2015). Outside of academic research, mountain biking occupies various social spaces and most notably social media. Contributions range from dedicated YouTube Channels discussing everything from which bike to buy and the most up to date technology, to Instagram accounts documenting the most epic fails and the most equipped vehicle to accompany you on your endeavours.

In this research I wanted to put a lot of this to one side and use ethnography as an accompaniment to my philosophical and theoretical positioning to describe the everyday lived experience of the mountain biker. Although I am familiar with mountain biking having been immersed in its cultural practices for over a decade, I did not know beforehand what would emerge from the research, what themes would develop and what lived experiences might be captured. Therefore, I have adopted what Atkinson (2014) suggests is ethnography as my research methodology. Not to be confused with ethnographic research, an ethnography according to Atkinson (2014) relies heavily, if not completely on participant observation. It is only through this constant observation that the researcher will possess the opportunity to understand the subtle goings on and actions within the lived experience. Atkinson (2014) suggests ethnographic research on the other hand utilises variants of the interview technique to obtain its data. This mode of enquiry is more than adequate in qualitative research, but its development of understanding draws solely on the interpretation of the participant, rather than gathered observational data (Atkinson, 2014).

It is with great care Atkinson (2014) cautions ethnography is conflated with broader qualitative research approaches that, for instance, adopt short term, researcher focussed, interview-based approaches. Whilst it is true ethnographic research is qualitative; all qualitative research is not ethnographic. For Atkinson (2014) distinction is clear and absolute. For ethnography and ethnographic fieldwork to maintain its opportunity for richness and innovation, providing insight into the everyday, complex lived experiences of individuals, it is vital scholars, and I uphold the central tenets of the approach (Atkinson, 2017; Katz and Csordas, 2003). These are namely immersion in culture, authentic representation and appropriate method use. As a starting point these tenets are discussed below.

Firstly, for the researcher, ethnography is an opportunity to immerse oneself in the social and cultural forms of life over an extended timeframe. It is this embeddedness that enables the researcher to become part of the social world under investigation to reveal unique understandings. However, if this first and primary tenet is not fulfilled sufficiently then the ethnography loses it very reason for adoption (Atkinson, 2014; Denscombe, 2003). The second tenet is a commitment to sharing the richness of a subject's everyday world and social reality. If this is compromised or tainted, then ethnography loses its authenticity and legitimacy (Denscombe, 2003). Lastly, it is vital appropriate methods are utilised, as Atkinson (2017) notes above, authentic ethnography should prioritise observation as the central method of data collection. In response to the requisites of these tenets, I seek resolutions to these questions in what comes next.

Whilst the ethnography discussed above is a suitable methodology for the investigation of the lived experience of mountain bikers, it also possesses one final bias that is pertinent here. Given that observation as noted by Atkinson (2014) is the cornerstone of ethnography, it is

important to note it also often presents but one sensual dimension to view experience through, that of sight. Given the intention of this study is to understand experience in its fullest and mundane nature, the work of Pink (2015) and other academics on sensory ethnography is considered next.

3.4.1 Sensory Ethnography

Atkinson (2017) suggests ethnography has frequently positioned material and embodied phenomena in the background, choosing to place focus on the reconstruction of social domains. Yet in contemporary ethnography there is a growing engagement with corporeal and sensory dimensions. Whilst there has been a tendency to render these the preserve of only a few, Atkinson (2017) contests these should be features of all ethnography to varying degrees and especially studies of this nature. For Atkinson (2017, p.126) ethnographers should consider *things in all their thingness*. So rather than seeking reconstruction, we should be aware of the smells, tastes, touches, auditory and visual dimensions of experience.

According to Paterson (2009) the body has emerged as a common feature in contemporary ethnography, providing an additional site for the exploration of experience, yet discussions of the senses and sensual experience are less common. He places focus on haptic understandings but investigations into other sensory modalities are equally under-represented. Work to emerge in sensual experience in sport includes Dutkiewicz (2015) work on rock climbing, Spinney (2006) on road cycling, Hockey (2020) on long distance running and McNarry, Allen-Collinson and Evans (2020) work on competitive swimming. This work demonstrates sport and physical activity provide an abundance of opportunity to engage with corporeal and sensory experience.

The underrepresentation above can be attributed to a research dogma favouring the visual and its position in the complex ordering of the senses. However, Pink (2015) and Hockey (2020) argue the collection of knowledge on the wider sensorium can unearth insights into experience in a fuller and deeper way. This is because the senses have always been present in experiences and therefore ethnographies until recently have remained largely on the periphery of research in sport. How did the scrummage smell when playing rugby union on a cold December morning, or what did it feel like when you heard someone else or even your own injury occurs? Pink (2015) contests it is an ethnography and possibly a sensory ethnography that could reveal this knowledge.

When positioned within sociology, the senses play a key role in engaging with and understanding the other. For Simmel (1908) his focus was on how sensory perception possessed meaning and how this influenced the interaction between social beings such as cooperation, opposition, and oppression. Whilst the work of ethnographic sociologists on the senses is important and relevant, the focus on how the senses influence interaction solely is a limiting factor in its disciplinary influence here. I am concerned with these interactions but also the lived experience of the mountain bikers. Contributions from Bull (2001) adopting a phenomenologically inspired ethnography centred on Walkman use and listening are promising. Bull (2001) pays less attention to interaction between individuals and more upon understanding the experience of the Walkman user, providing a critical commentary relating to the significance of the auditory in everyday experience.

Bull's (2001) work provides a starting point to recognise the opportunity available to draw together both sociological and phenomenological elements of knowing in an ethnographic context. A bridge between sociology and phenomenology is something under researched in

the methodological literature yet has been pursued by researchers such as Allen-Collinson and Hockey (2009) and McNarry, Collinson, and Evans (2020). This work, under an ethnographic methodology, places attention upon the phenomenology of the corporeal and sensory experiences in the sociology of sport (Pink, 2015). It is this ethnography, under a sociologically sensitive phenomenology that offers the most exciting opportunity to understand the experiences of mountain bikers.

The use of sensory ethnography under a sociologically sensitive phenomenological backdrop presents several opportunities significant to this research and allows the representation of ways of knowing and knowledge of mountain bikers. In this research, the use of sensory ethnography provides a methodology enabling the researcher to represent knowledge that is multi-sensory and embodied amongst the mountain bikers. This knowledge provides a unique and original insight into the lived experience of the riders. Additionally, it permits the researcher to see how the knowledge intersects with other persons (and the researcher), places and things, all of which are of central interest. Furthermore, the adoption of sensory ethnography permits the researcher to observe how flow, pain, intersubjectivity and intercorporeality influence or are influenced by human and sub cultural interaction (Allen-Collinson and Hockey, 2009).

3.4.2 The Senses, Perception and Multisensoriality

The section below explores existing debates regarding prominent sensual hierarchies and dogmas within sensory ethnography. The intention of this exploration is to navigate potential pitfalls and thus gather the richest data related to riders lived experience. An ongoing debate exists on two very important features of ethnography related to the senses. Firstly, an assumption exists that sight is the prominent, powerful, and overarching sense. A

preoccupation with sight comes at the expense of the less discussed hearing, feeling, smelling, and tasting. This hierarchy has consequences for how we understand senses independently but importantly how these senses interconnect with one another.

This was discussed at length in the Literature Review and therefore further discussion is not warranted. Yet continual consideration of the predominance of the ocular is required throughout all components of the research, especially those on the how the study will capture data. Secondly, a common discussion amongst academics investigating the senses is how the sensorial experience is influenced by culture. Appreciating the influence culture has upon carnal and sensual encounters is vital to appreciate the fullness of the lived experience. These two points are inextricably linked. A hierarchy can only exist once something or someone has constructed a reality where one sense is favoured by the existing culture.

According to Pink (2015) understanding perception as fundamental to sensual experience is not contested, however appreciating how each sense operates and the linkages between them can significantly impact the use of sensory ethnography. In response to the value of each sense a set of ongoing debates related to the positioning of the senses in sensory ethnography and a potential hierarchy exists. These debates unpick how perception is understood, and whether there have been affordances given to one sense over another. It has been proposed by Howes and Classen (2013) that sight or vision predominates much of sensory ethnography and for that matter, ethnography more broadly.

According to Pink (2015), Howes (2003) takes issue with the work of Ingold (2000) and Merleau-Ponty (1962) suggesting both are pre-occupied with vision. Consequently, a preoccupation provides a skewed discussion and understanding of the perceptual system.

Whilst these arguments may hold merit in broader ethnography, for Ingold and Merleau-Ponty the discussion of vision and the assumption it dominates is loose. After further reading, it can be understood their focus on vision should not be understood as representations of the mind. Rather the use of vision suggests a visual understanding of how the interplay of all the senses at any one time underpin our experience. For example, if we ask the question how do we *see* the environment around us at the time of reading or in my case writing this, I would respond with a detailed description of 31-degree heat, the perspiration on my forehead, the smell of cut grass, the sound of summer birds and the feeling of warm, close air from the fan alongside the keys as I type. In this example I would not describe only what I see on this screen or just the view out of the window as it would only provide a limited appreciation.

The image painted above provides insight into a perceptual experience that sees senses intertwined and interconnected. Understanding perceptual, multi sensorial experience in this way has become a more prominent line of enquiry in recent years, with Pink's (2004) research acting as a starting point. Her investigation of domestic and household experiences was not dominated by a single sense, rather each sense played a unique role for the participant when describing their home, such as the smell of the kitchen, the feel of the floor underfoot. What Pink's (2004) research illustrates is lived experience is complex and the sensory engagement we have with our environment is contextually unique.

Recounting my writing above, what struck me was my search for language that in no way favoured or gave the impression through semantic slip that vision does dominate. This grappling led me to then consider to what extent culture influences our daily lives, lived experience and perception. For Ingold (2000) and Merleau-Ponty (1962) amongst others, the search for the role of culture and sociality in the lived experience possesses a non-

representational, fluid, and changeable set of features. Perception is not absent of cultural and social influence, rather each experience is imbued with influences, but key for Ingold, this is not discussed in a representational way. For Howes (2003) and Howes and Classen (2013) the influence of culture on sensual experience takes a more representational line of enquiry. Howes and Classen (2013) understand how sensory experience is shaped by culture, adopting a culturist approach to their investigation of sensory experience. In the context of this study, I have sought to marry non-representational with the representational given the theoretical influences in the Literature Review. I have adopted this approach as it permits lived, fleshy and sensual experience to be viewed in ways that favour corporeal habitual practice and how the body and senses are influenced by culture and society when reflected upon.

This section has unpacked the methodological options available, and I have selected sensory ethnography. I have outlined the appropriateness of ethnography broadly, drawing upon the influential work of Atkinson (2015). What does emerge are the limits of ethnography surrounding its lack of focus upon sensual modes broader than vision. To mitigate this shortcoming, I have selected the work of Pink (2015) and her compelling research on how researchers might engage in sensually sensitive ethnography. This decision provides the penultimate piece in Crotty's jigsaw, complimenting the social constructionist, phenomenological position. I now move to discuss the ethical and recruitment dimensions of the study, before returning to Crotty's final jigsaw piece, that of methods.

3.5 Research Ethics, Risk, Sampling, Whistle Blowing

3.5.1 Research Ethics

Palmer (2014) argues ethics in Sport and Exercise research are non-negotiable. Researchers have a responsibility to ensure the participants they engage with are treated and respected in a

moral and ethical way. Key questions related to research ethics centre on harm, deception, and the potential impact of the research on participants in the future. Whilst this list is not exhaustive there is a difference and propensity of the types of questions depending on the methodology undertaken. Palmer (2014) suggests researchers applying ethical elements in qualitative research can often apply them in very different ways. Given the intimate nature and my insider position within mountain biking, it is vital for the research to adopt an approach to ethics that moves the study beyond the minimalist approach alluded to by Palmer (2014). To provide detail and strength in the discussion of ethics in this study, I utilise Silverman's (2013) overview of ethical research.

The first step is a consideration of procedural ethics and specifically the negotiation of the research ethics panel. The role of the ethics panel is to monitor and approve the rules the research must follow (Palmer, 2014). In accordance with the requirements of Doctoral Study at the University of Gloucestershire, a research ethics application (Appendix 1) was submitted to the School of Sport and Exercise Review Panel in December 2020, and I was provided with approval in January 2021 (Appendix 2). In addition to the submission of the ethics proforma, all requisite additional materials used for recruitment of participants such as information sheets (Appendix 3) and subsequent informed consent were submitted (Appendix 4).

As part of the recruitment of participants, all were sent an information sheet detailing the nature of the study and the requirements of participants if they wished to sign up. The information sheet was developed using unambiguous language the participants could easily understand and was piloted on mountain bikers who were good friends and unable to be part of the study due to a conflict of interest. The purpose was to cross check the language, detail

and tone used to ensure my cultural assumptions did not bias or make difficult the process of understanding. Once initial interest was registered a follow up online call via Microsoft Teams or FaceTime was conducted to verbally discuss participant understanding of the research, to answer any questions and to confirm the expectations of commitment. Only when the prospective participant was fully aware and understood the expectations of their commitment, were they asked to complete a voluntary informed consent form (Appendix 4). Voluntary informed consent was confirmed by sending the participants a PDF copy to read, question and then complete using an e-signature. The completion of the calls and the informed consent were impacted by the coronavirus pandemic, therefore the use of available technology to both meet and sign was required.

It is the moral responsibility of the researcher to maintain the confidentiality and the right of privacy of the research participants, in accordance with the premise of qualitative research and the information provided in the informed consent (Silverman, 2013). Silverman (2013) suggests the complexity of issues related to confidentiality in qualitative research can vary considerably. Whilst there are several unique considerations in this study, issues of confidentiality were not one and were dealt with in a straightforward manner. To ensure confidentiality, it was appropriate to store all personal data on a password protected computer. At the start of each interview this was relayed once again, and in addition during observational data collection, if at any point the issue was raised, the participants were reassured of their confidentiality. Anonymity was assured in the ethics form using pseudonyms, however during data collection and subsequent analysis it emerged changing the names of the riders would devalue their role in the study. Therefore, as noted on the consent form, I sought permission from the riders to use their first names and this was granted by all.

3.5.2 Risk and Harm

Risk and potential harm are considerations for many research projects, and they are particularly important when conducting ethnographic fieldwork. In addition, given the focus of the study is on deep immersion in mountain biking cultures through mountain biking itself, this, coupled with an ethnographic methodology created a unique set of circumstances where risk and harm were heightened throughout data collection. In contrast to Gibbs and Holloway (2018) study utilising recognised and dedicated mountain bike trails in a privately run bike park, the premise of this study dictated a need to visit various locations deemed significant to the lived experience of the participants. In addition to various locations, we would encounter various terrains with a multitude of topographies that made trails fast and flowy, or steep and soggy. At all times potential risk and harm was present. Whilst most research seeks to actively limit or remove risk and harm to both the researcher and participants, doing so in this study would alter the very experience under investigation.

Therefore, rather than influencing the experience in any way, I developed a protocol for every engagement to control risk and harm from a distance. I developed a password protected spreadsheet detailing the times/days I would be riding, where I would be riding, and a pin dropped location of where my car would be parked. My next of kin was given access to this spreadsheet and was informed of my intentions for that day and my estimated time of return. In addition, a mobile phone was always carried, a First Aid kit was taken on every ride and my Outdoor First Aid Training was completed. These measures ensured if an instance of harm or risk was encountered, I had the necessary protocols in place to respond.

A unique and final aspect related to risk and harm was the presence and necessary consideration of Covid 19. Discussed in other areas of the study, the influence Covid 19 had was considerable and it is important to acknowledge procedurally how this was managed. During observations and given the outside nature of mountain biking, the adherence to space and air guidance from the Government was straightforward. In addition, it was also important to acknowledge and discuss with participants that individual travel was necessary to minimise further spread of Covid 19. During interviews, which occurred post the Omicron variant (2022/23), the location chosen was one where Government guidance could be adhered to whilst also maintaining strict confidentiality. Therefore, large open spaces such as car parks used during riding or available seating were prioritised, and if the weather was unkind, a suitable alternative location, typically a coffeeshop with outside canopy was found. Whilst the impact of Covid 19 on this aspect of the study cannot be underestimated, at this point in the pandemic, two years in, the everydayness of Covid 19 considerations was not peculiar. Therefore, the impact on this aspect of the study was managed with common sense and in line with government guidance.

3.5.3 Sampling

Bryman (2012) suggests a research sample is the segment of the population selected, and the sampling technique is the method chosen to recruit these individuals. Typically split into non or probability, the use of sampling techniques varies based on the particular methodology adopted in the research. The sociologically sensitive phenomenological nature of this research, one seeking to obtain rich descriptions of mountain bikers lived experience is required to utilise a sampling technique that provides the opportunity for engagement with this knowledge. Therefore, this study adopts a purposive sampling technique that allowed the strategic selection of participants to ensure their suitability to answer the research questions.

With a sampling technique identified, the process of recruiting appropriate participants was next. Key here was not to rush and select participants based on convenience, rather the process was approached in several phases. The first phase centred on sharing my research idea with mountain biking groups I was already part of. This allowed a gauge of interest and an assessment of reaction. The second phase involved placing a Facebook post asking for interested parties in local mountain biking groups where some of these individuals and others were part of. A request such as this was not uncommon and this theme alongside the buying of equipment and discussion of riding opportunities provided a large percentage of the overall discussion in the group(s). This technique of recruitment sought to achieve two things. The first was to remind and rekindle the thoughts of those already aware of the study, or to present it to other audiences for the first time in a familiar and digestible way. Secondly it ensured those being asked fulfilled the purposive criteria required for the study.

Of those individuals who saw the post, there were 12 firm responses from prospective participants. Of these 12 and after initial discussions outlined in the ethics section, four remained and these formed the sample for the study. It is worth noting, it was anticipated that a snowball effect may have occurred given the phases undertaken, but surprisingly this was not a factor in the recruitment of participants. Of the four participants, all were white male, their ages ranged from 25-55 years of age, frequently rode (at least once a week) and all were of varied ability but identified having a skill level of intermediate or higher, therefore were classed as keen recreational riders. The participants presented a mix of free, enduro and trail riders. Definitionally a free rider would be a rider who focusses on big jumps and drops, whereas those identifying as enduro, or trail rider focus on long day (or days) riding up climbs and racing down technical and steep descents. In many ways, it is the form of riding mountain bikers generally undertake outside of competition.

3.5.4 A sub cultural whistle-blower

Sheridan (2012) argues the ethnographer's existence in the research site fosters questions about whether they can remain objective. This simple question has occupied space in critical discussions of ethnography and is pertinent here. As a mountain biker of over 10 years who is working with likeminded riders, I am by my very nature a cultural insider (Evers, 2016). The idea the ethnographer is both participant and observer are an inherent contradiction and brings into question researcher motive. To understand my role as researcher beyond the theoretical discussions earlier, Atkinson (2017) draws attention to a deeper understanding of social encounters and the negotiation of interaction.

For Atkinson (2017) a researcher's role in ethnography is to capture the encounters, rituals and conventions of interaction, the lived experience of groups of individuals within sub cultural contexts. It is very easy for the ethnographer to focus on the quirks or polarising behaviour of individuals especially when they find themselves in local, mountain bike settings. Yet he argues the ethnographer cannot be overwhelmed by these encounters and must position these isolated incidents in a wider web of subcultural interaction. Influenced by Goffman (1963), Atkinson (2017) proposes ethnographers need to acutely acknowledge the rituals of interaction and even those that are strategic and exist in specific social settings. It is not an implausible proposition to suggest we are all familiar with what and how we allow ourselves to transmit information to others. We take care of how we manage information to others and illicit it from them, as he notes, the truth is never simple. It is up to the researcher to understand this effectively enough to ensure they can gather data of relevance and authenticity. Additionally, it is important data is guided by action and interaction, rather than researcher assumption or implausible interpretation.

I found myself in a methodological paradox, at once seeking to uphold the authenticity of ethnography, whilst being conscious of my competing role of researcher, rider, friend, and university lecturer. After careful thought I realised I was in an ideal position to uncover insights into the lived experience of mountain bikers and my biography was essential to this. Rather than seeing my role as cultural insider and perceived sub-cultural whistle-blower as a negative, it permitted me possession of the cultural understandings of those I was researching and how to navigate the interaction ritual in a way few could. I could understand subtleties of the lifeworld of mountain bikers I engaged with, the irregularity of riding times and locations (Figure 5), the sporadic changes of plans on a whim, the complex need to be out on the trail with others, the celebrations when we encountered a break in the British winter weather and importantly how to still be confident in collecting meaningful data and information. Additionally, the riders were very keen to understand their experiences academically, noting they had often thought about the role or meaning of bike riding in their lives.

Figure 5 Overview of riding locations during data collection

Drawing on Mishler (1984) I was also extremely mindful of the competing voices in the research or lexicon. He guides researchers to constantly reflect on their role and voice within interactions. Important is an effort to limit the potential of an overly formulaic research lexicon that could marginalise the participants. To achieve this, I continually drew upon reflection throughout each encounter to check my own understandings but was also acutely aware of the responses of participants across all communicative modalities within each interaction. It is this awareness of multiple communicative modalities within ethnography that makes this study unique, not so much rejecting talk but also not privileging it a position above all other forms of communication.

In this section I have discussed the sensitivity to which I approached issues of an ethical nature. Given the extended period I spent engaged with the riders it was important to resolve issues of anonymity, confidentiality, risk, and harm. Once I had addressed these aspects, I have then outlined the ways in which I recruited the participants and my awareness of the precarity of my role as a potential sub cultural whistle blower. In response I discussed and justified specific choices made to ensure trust was maintained and how I limited my own bias. The next section discusses the methods deployed to gather rich insights into riders lived experience.

3.6 Method

In the penultimate section of this chapter, I have spent considerable time outlining the methods deployed to collect rich data to answer the research questions. In what follows, I justify the methods selected and take time to outline how they were used during the research. Within these discussions exists an overview of my informed role as observer, how I gathered

data using mobile technology and my frequency of interaction. Additionally, I discuss in depth the deployment of interviews and their relationship to the observational data.

Since the inception of ethnography, two methods have come to the fore both in terms of literary discussions and practical use: participant observation and interviews. These methods of data collection whilst typically included in research textbooks have very particular lineages and uses in ethnography (Atkinson, 2015). As noted earlier, it is important to be reminded before moving forward, ethnographic research may be qualitative, but not all qualitative research is ethnographic. Therefore, the use and deployment of these methods in ethnography requires care as they can have a bearing on the direction of any study. Atkinson (2015) stresses providing a dualism between observations as authentic and interview accounts as lesser is misguided, rather he calls for a true understanding of both. Thus, in what follows, whilst the choice and use of method will be assessed at times individually, the researcher does not advocate or reinforce this dualism.

3.6.1 On the Trail: Observations

Atkinson (2015) notes observations of action, speech and encounters have been the bedrock of ethnographic research historically. These participant observations and consequent fieldnotes are one of only a few research methods created solely by the researcher through their engagement with, and interpretation of, the phenomena (Denscombe, 2003). Atkinson (2015) argues it is vital for the ethnographer adopting participant observation to move beyond merely watching the subject; they need to consider all dimensions of the phenomena.

For Atkinson (2015, p.40)

> *Participant observation requires attention of the multiplicity of actions, spoken and unspoken - and of social actors, material culture, spatial and temporal arrangements that together constitute the field.*

This study gathered knowledge on the lived and sensory experience of riders. Whilst the knowledge gathered provides rich insights into this, Atkinson (2015) argues before gathering, researchers must attune their senses to ensure they are prepared to gather the knowledge they seek from the social setting. This means attuning all senses so when researchers hear talk, they are actively listening to a soundscape, or when experiencing touch, they are haptically aware of the physical and material environment. Importantly when utilising participant observation, the researcher should take the role of the other, to see through their eyes, feel through their feet, to provide a reconstruction of the social phenomena. Extending this, Atkinson et al. (2007) suggest when seeing through the eyes of others, researchers need to pay close attention to the cultural significance of sensory phenomena to ensure they make sense of it.

Whilst Atkinson (2015) places distance between any inference of sight being hierarchically set apart from the other senses, it is worth clearing this up given the broader multisensory position of the study discussed earlier. Pink (2015) attests the eyes are only one sensory organ the researcher can use when seeking to understand the lifeworld of riders. Therefore, it is essential a multisensorial approach is taken. Pink (2015) alongside Atkinson (2015) reiterate placing the participants sensory and corporeal experience and sub cultural understandings at the centre of knowledge gathering. Before moving into a deeper discussion of the deployment of participant observation through sensory participation, it is important to map the landscape of classical understandings of researcher involvement. I now turn to prominent discussions of researcher involvement to ascertain the most suitable position for this study. A discussion of

my role as researcher and my engagement with participants during observations is vital to ensure transparency and ethical conduct.

3.6.2 Researcher Role

The role of the researcher in the field is discussed often in the literature with contributions ranging from the work of Atkinson and Hammersley (1983) to more contemporary discussions from Bryman (2012). Whilst this volume does exist it should not detract from the consideration required to understand the role, and consequently researcher involvement in social settings. Atkinson and Hammersley (1983) liken an ethnographers first encounter with their research setting much like a baby trying to stand or walk. The ethnographer is unaware at this point of the intricacies of communication, hierarchy, and temporality, yet over time familiarity is acquired.

In this study, I had previously met the riders during the vetting and sign-up phases, getting to know them a little whilst sharing stories. Whilst we would not class one another as friends, given my mountain biking background in addition to the above, I found myself in a position of familiarity. Hammersley and Atkinson (1983) suggest a position of familiarity is laden with questions of a different nature to that of the novice observer. Will the participants permit me to take a novice role, relinquishing my existing familiarity, am I able to bracket my existing knowledges and will the participants authentically engage in the social setting once I begin collection of data? The answers to these questions Hammersley and Atkinson (1983) suggest are bound up in the specific role or roles I assume as observer. This is important to the essence of the study and therefore I now interrogate the observer role for the purpose of understanding the potential role(s) I occupied as observer.

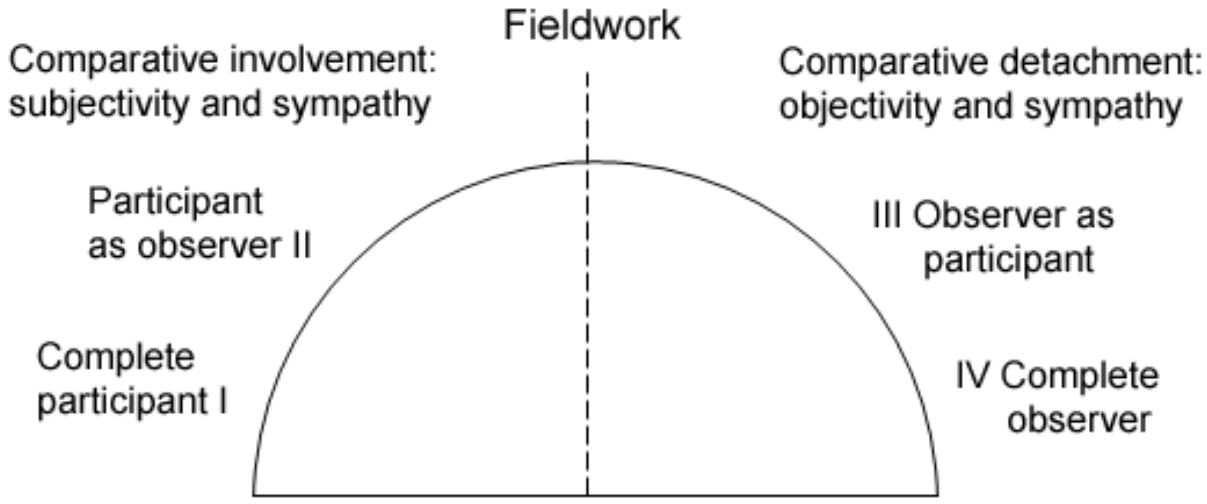

Figure 6 Golds (1958) typology of the role of the researching observer

Hammersley and Atkinson (1983) draw upon Golds (1958) typology of the role of the researching observer (Figure 6). Hammersley and Atkinson (1983) highlight distinctions between overt or covert roles in addition to those grappling with active participation of observers. The typology provides a starting point for researchers to understand and question their intended role within the observations, envisaging the impact they might have. Hammersley and Atkinson (1983) suggest the role of the observer depends centrally on the specific social setting and the purposes of the research. Whilst Gold's (1958) typology provides a useful intellectual starting point, more recent work from Atkinson (2015, p.39) suggests ethnographers should be less concerned with the 'virtually useless' questions related to the researcher's participation. Atkinson (2015) instead proposes an understanding that degrees of intimacy will change throughout the entirety of the study.

Splitting participation and observation into their constituent parts, Atkinson (2015) argues is a fruitless task. He contends questions related to participation should focus upon more than just physically being there. According to Atkinson (2015) researchers should recognise the human capacity they hold and see from the perspective of others, entering the world of others and occupying a shared social world. Here then, Atkinson (2015) is advocating a participation centred on becoming immersed in familiar or distant cultures. The aim? To become part of a social world, occupying various roles as participant, actively engaging and being part of the rhythms. My participation in this study therefore embraced my role as cultural insider aligning closely with Atkinson's (2015) call for a participation that ensured I was immersed in the everyday of the riders' social world. Here I occupied analytical participation that systematically documented through observation the everyday lives of riders in their local forms.

Given I have recognised my participation is fundamental, it can be surmised so too is my observation of the social setting I found myself within. As noted by Atkinson (2015) observation is fundamental to ethnography but far too often it is understood to be merely the practice of watching. This understanding of ethnography is both narrow and unfortunate, given the richness of potential data to be observed. Atkinson's (2015) contemporary contributions to observation are not to merely assume the role of the other. Rather I should do so with a commitment to actively utilise my range of human capacities, sensory and interactional, to do all the things those riders do every day. Furthermore, to attune sensorially, the social setting needs to be understood through all the sensory modalities available to the researcher. Attunement ensures analysis of social settings explores systematically the social worlds and lived experiences of the riders, beyond merely providing a description.

Therefore, my role as a participant observer goes beyond categorisation to encompass active engagement with the social setting being researched. I sought to attune my sensory and interactional modalities to gather knowledge on the lived experience; hearing what they hear, feeling what they feel, touching what they touch. My role also moved beyond observing and recording through mere description to provide an ordering to knowledge that permitted systematic analysis of the social setting (Atkinson, 2015).

Adopting the position of participant observer is not without its drawbacks or obstacles (Hammersley and Atkinson, 1983). For instance, three key obstacles emerge i) whether because of the research intentions I have, does my role within the subcultural group change; ii) whether the role of participant as observer is fixed or will I move between this, and other roles noted by Gold (1958); iii) will I be able to maintain a position of marginality. In response to concerns of my role being fixed, it transpired I did not move between the other

roles noted by Gold (1958) due to my established cultural insider involvement. This insiderness permitted me to remain as a participant observer due to my proficiency, relationships with others and social status I held within the subcultural group.

Whilst my cultural insiderness ensured my role of participant observer was stable, it conversely draws questions related to my marginality (Hammersley and Atkinson, 1983). I draw attention to earlier sections on reflexivity and epoché and add the role of marginal insider or native was assumed. It is in this role Hammersley and Atkinson (1983, p.100) argue '*the ethnographer must be intellectually poised between familiarity and strangeness, while socially poised between stranger and friend.*' As an active and overt researcher striking this fine balance was not without a sense of insecurity yet drawing on the work discussed in earlier chapters centred on the phenomenological method, the use of reflexivity ensured this was managed.

3.6.3 What to Observe

Gathering observational knowledge is not something that necessarily comes easily to the researcher nor will at times there be an obvious way of recording knowledge. Hammersley and Atkinson (1983) suggest the success of ethnographic methods such as observation are built upon what the researcher chooses to observe rather than describing all occurrences. Being selective is often contrary to popular academic discussion and there exists a misconception amongst some researchers that the ethnographer must engage with social settings with an open mind. This does not mean according to Atkinson (2015) researchers attend with an empty mind. Rather researchers should adopt an intellectually flexible and active mind, one attentive to the knowledge available, how it changes and how it develops over the course of engagement.

For Atkinson (2015) deciding what to observe and gather is not a linear process. Rather the researcher needs to approach the research setting with knowledge in phases that represents the emergence, development, and consolidation of ideas throughout the data collection. The process of engagement requires the development of selection criteria that govern what is important or valuable to the research. A selection criteria Hammersley and Atkinson (1983) argue are likely to develop over time due to the theoretical developments of the researcher, the familiarity with the process of knowledge gathering and the refinement of thinking in response to emerging issues. I move to discuss the selection criteria used in the next sections.

A note of caution provided by Hammersley and Atkinson (1983) is that over time what may have tended to be significant in early phases or encounters of observation may lessen or be matched by encounters emerging as significant later in the research journey. Possessing an openness to encounters but eventual refinement is echoed by Thorpe and Olive (2016) as a key requirement of successful observation. Importantly, this research required observation of the many *scapes* of the rider. Therefore, I decided to start recordings from the moment I met the riders to the moment I left. The approach allowed me to capture the mundanity of putting on pads and checking bikes to taking all the gear off and putting the bikes away. These dimensions of the lived experience offer unique insights into the sensual and corporeal aspects not seen or reflected upon in research to date.

3.6.4 Recording Observational Fieldnotes (How to observe)

Pink (2015) suggests classical participant observation has long focussed on social organisation, human practice, and sociality. Whilst these areas still command attention, for the sensory ethnographer they must also place emphasis on the multisensory experiences of the ethnographer. Given the study's premise and Pink's (2015) calls, the recording of

fieldnotes during observation is a key consideration and cornerstone of success. Constantly on bikes, riding together but also separated, at different speeds and in a range of seasonal conditions, it was important to find a way to record observations that was pragmatic and comprehensive. Additionally, Atkinson (2017) argues any recording through participant observation needs to be attentive to the culturally specific and embodied techniques of the riders.

The attention paid to the riders also requires thought beyond mere description. This ethnographic gaze according to Madden (2010) needs to be disciplined, analytical and systematic to truly represent the social setting under observation. He suggests being attentive to the structures and behaviours of the subjects, relating these to literature and theory, alongside an awareness of the ethnographer's personal notes from within the social setting.

Brewer (2000) suggests the lone observer cannot note down everything occurring in the social setting. It is an impossible task and the sooner this is realised, the sooner the ethnographer can move to a systematic approach noted by Madden (2010). Therefore, it was crucial to consider the timing of note taking and the collection of observed knowledge within the social setting. To achieve this, two forms of knowledge gathering occurred: the use of a GoPro Max and the consequent review through fieldnotes using an application called Timelinely.

Evers (2016) research into the multi-sensory experiences of Australian surfers utilised a GoPro to capture the entirety of the surfing experience, from the mundane and boring to the thrill and stoke. For Evers (2016) the use of the GoPro raised several questions focussed on technology, its functionality, and the contested subcultural relevance of objects. The presence

of GoPro's has often been viewed as synonymous with lifestyle sports, yet the visibility of a Go Pro is not welcomed by all mountain bikers. Mobile video use in ethnography has emerged in recent years as a viable vehicle to capture a range of knowledges existing within social settings (Evers, 2016). Mobile technology has been used by a range of researchers such as Pink (2015), Spinney (2009; 2011) and Lorimer (2013) and usefully by Brown et al. (2008) in mountain biking who argue this mobile method offers an opportunity to deepen our understanding of the social lives of the mountain biker.

Given the emergence of video technologies to explore multi-sensory realities of subjects, it was decided video technology would be used to gather observational data. The use of the GoPro Max centred on the lack of ability to capture the fullness of the experience of riders during traditional observation due to the pace of everyday riding. The video permitted the collection of a range of knowledge related to riders lived experience and importantly captured the boring, mundane, everyday interactions during bike riding. Additionally, the video enabled real time capturing of the experiences and corporeal movements of riders during both the ups and downs, something traditional note taking would not fully capture as it would rely on my ability to recall (Atkinson, 2015).

Whilst the practical use of a video camera proved a logical decision given the focus of the research, deciding on what camera to use was not necessarily straightforward. The video camera had to be robust, waterproof, easy to use and possess excellent battery life, given rides could last upwards of five hours. Therefore, a Go Pro Max was chosen for the research. The GoPro Max is the revised offering from GoPro of a camera that can capture audio and 360-degree video. This final function was a significant factor in the choice alongside those noted above as it permitted the capturing of the rider, their body, and nuances. Additionally, it

captured the trail, its topography, riding lines, and seasonal condition, all of which are integral to understanding the lived experience.

Furthermore, a vital consideration was the social significance the object (camera) had within the social setting. Careful thought was needed given the strong and pervasive media that exists within contemporary mountain biking. As Evers (2016) notes, in sport and specifically those sports deemed alternative, lifestyle or extreme the video camera and in particular the GoPro is ubiquitous. Since its introduction in 2004, the GoPro has emerged as a staple component of many riders' equipment stable. Seen alongside helmets, pads, and bike, the GoPro is an essential piece of kit. Yet this essentialism also exists to counter the views of some riders that knew the activity before the emergence of the video camera. For them, the GoPro is a nuisance, a representation of how far the culture has moved away from riding to focus on the re-creation of riding through video.

This tension is not confined to mountain biking as Evers (2016) notes similar encounters when seeking to capture the experiences of surfers. He notes local policing of accepted cultural and social norms within specific surfing locations, seeing the GoPro as an object that represents a lack of authenticity, a newness and 'kookness' (a lack of proficiency).

3.6.5 Reviewing Observations

Atkinson (2015) suggests the guiding principle of fieldwork is an exploratory one, but it needs to be set against the pragmatic use of tools used by the researcher to capture knowledges as they emerge. Whilst ethnography for Atkinson (2015) is predominantly a textual mode of inquiry, the transformation of knowledges gathered in fieldwork into textual form limits the diversity of recording and provides only one dimension of the knowledges

encountered. Atkinson (2015) contests knowledge gathering must be multimodal given the rise of technologies and the opportunities they afford to the ethnographer. Therefore, observations were multimodal and embraced digital opportunities to gather the richest data.

As noted above, a Go Pro Max was utilised throughout fieldwork and recorded all aspects of experience when riding. Data ranged from the mundane conversations about children, work, and mechanics, to capturing all aspects of the sensory and corporeal experience of the rider's lifeworld. A video aid according to Laurier (2010) enables the ethnographer to adopt a co-immersive approach. Additionally, Merchant (2011) suggests capturing experience through an audio-visual medium ensures those experiences that are too difficult or too intangible are recorded. Capturing the entirety of the event ensured the limitations of immersed participation and consequent impact upon 'when and where' to make fieldnotes was overcome (Thorpe and Olive, 2016).

To manage the observational data recorded there are several mechanisms and applications that can be used to review the data. Whilst applications such as the GoPro app itself provide opportunity to clip and enhance the audiovisual experience, given the nascent area of digital ethnography, very few allow to you watch and simultaneously code the data. After much investigation the Timelinely application was selected as a suitable vehicle to familiarise myself with and code the raw data. The benefits of using the Timelinely application were threefold. The application allowed for the seamless uploading of GoPro footage from the camera, an aspect often problematic for a researcher given GoPro uses an exclusive file type to restrict users. Secondly, the sophistication of the application allows researchers to play, pause, and instantly add a comment to interesting or important moments in the video. Furthermore, for the digital ethnographer the application allows for comments to be made by

the second, 7something that was essential in a volatile context such as mountain biking. Finally, given the self-funded nature of the research project, the free access of the Timelinely application made logistical and financial sense.

Throughout fieldwork Atkinson's (2015) question 'What might this be a case of' was a driving feature of knowledge capturing. As I began reviewing the observations through the Timelinely app, a structure was required to ensure consistency and detail. Ravn's (2016) work was influential here, providing a sensory ethnographic and phenomenological insight into how to understand the observations. Ravn (2016, p.208) broke this down into four central areas:

1. How the practice is organised by the participants. Describe the different kinds of practices within the practice. Aim at being specifically aware of the differences, similarities and connections between these kinds of practices within the practices when it comes to the movement that can be seen and felt.
2. How do the practitioners use their attention and (maybe) change their awareness in the different kinds of practices within the practice? Which kinds of sensations seem to be of importance or special interest to them?
3. Which kinds of saying, words and concepts are used by the practitioners? How and when do they communicate, and how is the communication timed in relation to or as part of the movements and interactions?
4. How can the sensory involvement related to the practice be described? Prepare certain tasks for yourself to enable you to strategically use a shift in your own perceptual mode of awareness when observing. For example, use 10 minutes three times during the activity to note the sounds of the practice, the smells, the temperature.

Therefore, during review of the data on Timelinely I recorded aspects beyond the knowledges captured that focussed on everything else. Tags ranged from what was going on with the riders, what they did, how they performed and how they seemed after it. Additionally, aspects providing the fullest picture of the rider's experience and those playing a vital role in their multi-sensory experience were captured. These included the weather, the temperature/wind/humidity, the trail conditions, the topography of the landscape and the smell of that specific context. Further aspects of who was riding, where we were riding, the history of riding this location, the atmosphere of the riders and how each rider linked socially to one another were captured to enhance the fullness of recording.

Atkinson (2015) suggests in line with epoché deployment observations are an analytical reconstruction of the phenomena by the researcher. They need to be treated with care and consideration in terms of potential researcher influence and must not be treated as raw data. Therefore, alongside the capturing of these fieldnotes, I was cognisant of epoché, bracketing and reflexivity. Therefore, I approached these reflections as Atkinson (2015) suggests, as my reconstructions of the phenomena. This overt acknowledgement allowed me then to revisit these fieldnotes during the interview process with the participants, to ensure my description of their and our experience weas a true representation. In addition, I continued to maintain dialogue on this topic with my supervisors, ensuring it was an agenda item in our meetings, checking and overtly asking for feedback on my engagement. I will return later to how I specifically utilised these reconstructions during the interview process.

A final point is to draw linkages between the usefulness of observations and their relationship with the deployment of semi structured interviews (to be discussed in the next section). Throughout this study, observation was acknowledged as a key component in enriching the

interpretation of the semi-structured interviews. The observations in this study provided a broader contextual understanding of mountain biking practices beyond what could have been explicitly articulated by participants. By observing mountain bikers in their natural environment, paying attention to their interactions, decision-making, skill execution, and engagement with the terrain, it was possible to gain insights into behaviours, social dynamics, and embodied experiences that might not have been fully captured through interviews alone.

Capturing this observational data allowed for a more informed and nuanced approach to the interviews, enabling questions to be tailored to real-world actions rather than relying solely on retrospective participant accounts (Atkinson, 2015). For instance, witnessing how riders adapted their techniques to different trail conditions provided a basis for probing their experiences of risk, flow, and skill progression in more depth. The integration of observational insights with interview responses strengthened the interpretation by grounding participants' narratives within the lived reality of their practice, ensuring that analysis reflected not only what was said but also what was enacted.

3.6.6 Interviews

In contemporary society there has been an interview culture explosion (see your favourite podcast/YouTube for instance) and this has shaped understandings of what an interview *can* be. Smith and Sparkes (2016) suggest research environments, especially social ones, have at times followed suit, treating research interviews as informal settings for a catch up. Yet Atkinson (2015) contends this proliferation has led to an over reliance in the use of interviews in qualitative research and has negatively impacted the realms of ethnography. A key aspect for him is interviews do not automatically provide the researcher with analytical

insights into the phenomenon under investigation, instead they typically provide a descriptive narrative recreated by the participant (Smith and Sparks, 2016).

Additionally, interviews are by their very nature performances, constructed versions of participant histories. Therefore, portrayals must be treated through the lens of how the interviewee either views the phenomena under investigation or how they think the researcher would like to hear it recounted (Goffman, 1990; Seale, 2018; Silverman, 1997). A key distinction is made in the use of interviews in ethnography, they are participant accounts of phenomena, they are not an exact representation of history or action (Atkinson, 2015). Thus, ethnographies using interviews as a data source or solely relying on interviews to provide a representation of the phenomena can lack trustworthiness, reliability and legitimacy (Denscombe, 2003).

3.6.7 What is an Interview

Smith and Sparkes (2016) suggest interviews are a social activity where groups of two or more people actively engage in embodied talk and jointly construct knowledge about themselves. Knowledge construction occurs within their social world and is influenced by their interaction with time, place, and the senses. Interviews can be an effective method when used appropriately as noted above, yet Atkinson (2015) argues if solely relied upon or used simplistically in ethnography they can become 'bereft of the sensory and material means of mundane social reality' (Atkinson, 2015, p.93). Whilst he adopts this strong disapproval of the interview, he does suggest there is an important role for the ethnographic interview, but this relies heavily upon the researcher's analytic intent. Therefore, the purpose of an interview for Atkinson (2015) and Smith and Sparkes (2016) is to create a conversation where subjects are invited to tell stories, provide perspectives and insights into their

experience. Furthermore, this spoken interaction is treated by the researcher with proper analysis towards spoken actions in situ, paying sustained attention to the use of language.

Now the need for an analytic foundation to interviewing has been established, the next encounter in understanding the role and use of the interview in this research focussed on how the analytic conversation would be approached before moving to discussions of the specific type of interview used. Pink (2015) suggests within qualitative methods literature; two prominent interview approaches can be viewed. The first is to treat the interview as a one-off encounter, where the interview itself is often seen and analysed as a social event between strangers. The second is to approach the interview as a conversation between two individuals that are known to one another, where the analytical ethnographic position is taken to approach language with an active and inquisitive gaze (Atkinson, 2015).

Given the phenomenological ingredients of this research, there is a commitment to criticality assess the embedded participation of the researcher. Therefore, the latter approach of a conversation influenced by the myriads of factors within social life was chosen (Atkinson, 2015). Choosing this approach enabled interviews to possess an inquisitiveness alongside the analytical mind required to move beyond merely descriptive understandings that would not provide adequate insights into the experience of the riders. Furthermore, from a practical point of view, having been within the lifeworld of the participants for a minimum of several months and thus becoming familiar with them, choosing anything else would have been problematic.

3.6.8 Interview Type

Now the approach to interviewing has been established, it is important to ask and discuss alongside the phenomenological and sensory underpinnings of the study, how this might influence the type of interview utilised. Amongst much research literature there exist a saturation of academic work focussed on the types of interviews available to the qualitative researcher, but as discussed earlier this cannot be a decision taken lightly. Before moving to the detail of the interview it is important to establish the interview types on offer. According to Smith and Sparks (2016) four prominent forms of interviewing exist; individual structured interview; the individual semi structured interview; the individual unstructured interview; and the focus group. Without labouring their differences, it is sufficed to say when viewing these along a continuum with subsequent dichotomies, the first three range in their ability to elicit responses that vary in openness, detail, and focus. The focus group differs considerably in that it is typically semi – structured but the environment is not made up of the researcher and participant, rather the participant(s) can be numerous. The intention of the focus group is to stimulate conversation between researcher and participants but also through participant/participant conversation.

Given the choices outlined above by Smith and Sparks (2016) the semi structured interview was chosen because it permitted the asking of pre-planned and spontaneous questions that were focussed but open ended. However, acknowledged by Brinkman (2013) whilst the semi structured interview was chosen, investigation of interviews should not stop there as there exists a variety of subcategories within interview type. Therefore, having chosen semi structured it important to investigate which subcategory would be most appropriate for corporeal investigations. Subcategories available such as the grounded theory semi structured interview were discarded early because it is not the intention of the research to develop new

theory. Discerning the suitability of the life story and phenomenological semi structured interview however required further thought.

According to Smith and Sparkes (2016) the life story interview adopts a narrative approach to conversation, where questions are focussed on inviting the participant to share stories about their life and in the context of this study their experiences of riding. Whilst this would provide a unique opportunity to understand the stories central to the riders and their experiences, there is little scope to focus on recent events. Rather as Smith and Sparkes (2016) argue the life story interview is guided largely by the participant telling the stories they want.

Alternatively, Brinkman and Kvale (2009) propose the usefulness of the phenomenological semi structured interview or lifeworld interview. The focus of this interview is on seeking to understand the everyday lived experiences of the participants from their perspective. Vitally these interviews grasp understandings and descriptions of the lifeworld of the participants. The intention is to provide room for questioning to guide towards specific experiences, their meanings, and phenomena. Brinkman and Kvale (2009) suggest it comes very close to a conversation and therefore serves to align with the above points from Pink (2015) but is also purposeful, involving a specific approach and technique discussed below. Given the ability of the phenomenological semi structured interview to uncover descriptions of lived experience, their corporeal and sensory dimensions, it was selected.

3.6.9 The interview process

Just like the carpenter wood working, the mechanic listening for the clunk in an engine or the horticulturalist tending to their exotic plants, interviewing for Smith and Sparkes (2016) is a craft. A crafted interview requires careful consideration beyond simplistic understandings of sitting down and having a chat. The craft of interviewing requires practice, an apprenticeship if you like, to understand how to perform, how others might perform and how to conduct analytic interviews (Atkinson, 2015). Therefore, the remaining subsections focus on the implementation of the interview in concert with guidance provided by Smith and Sparkes (2016). It outlines the necessary considerations before, during and after the interview.

Before the Interview

Smith and Sparkes (2016) in their overview of interviewing list 11 considerations required of the researcher prior to the interview commencing. Ranging from the drafting (1) and consequent refining of questions that take account of literature and personal experience (4), to structuring grand tour and ice breaker questions appropriately (6). In addition to considerations noted above further logistical considerations such as dress, contact, and digital device condition are outlined to ensure the interview can run smoothly.

The sociologically sensitive phenomenological nature of this research coupled with the frank assertions from Atkinson (2015) on the nature of the interview led to the development of set of questions that focussed on eliciting descriptions of the *what* and *how* of participants lived experience rather than the *why*. In addition, questioning sought to gather further insight into participants sensory experience and therefore information from observations was constantly revisited to ensure the questions were appropriate and accurate. A key aspect of the interviewing process was the use of stimulated recall and therefore prior to the interviews it

was vital to accurately edit recordings from observations as noted in the earlier subsection. The use of stimulated recall was influenced by Merchant (2011) in her study of scuba divers. Merchant (2011) argues the collection of audio-visual data from observations serves as a catalyst for participants to see and hear themselves in action. Furthermore, the use of video can provoke physical responses and can represent sensory experience in a way that open more directly onto the sensorium. Ravn (2016) suggests video recordings are a useful technique when seeking to learn more about the kinds of movements undertaken and how the external representation of these is felt internally.

When utilising stimulated recall, it is vital to ensure the audio-visual material utilised is appropriate to elicit responses from the participants (Merchant, 2011). The process of selecting recordings for participants started with Smith and Sparkes' (2016) call for researchers to possess a sensory intelligence. This sensory intelligence centres on the researcher's ability to firstly understand their and other sensations. Building on this, Pink (2015) suggests intelligence needs to become a sensory imagination, moving to a sensory subjectivity that permits the researcher an ability to limit their own bias. Once this sensory intelligence and imagination had been cultivated through immersion in the ethnographic field of the mountain bikers, I was able to then approach the recorded data. Merchant (2011) argues before providing the film to participants she went through a process of cleaning up the recording, however this is a risky undertaking given the desire of this study and others such as Evers (2016) to capture the entirety of the lived experience.

Therefore, before sending the video to participants, I used Timelinely to make various notes throughout the hours of video footage that were relevant to the research questions. Once this had been undertaken, key areas of questioning emerged against the backdrop of the research

questions. Once I had reviewed the audio-video footage, I then sent a clean copy to the participants to review. Participants were asked to watch the film and identify key instances they wanted to discuss during the interview they felt related to the premise of the study. Upon receipt of the participants comments and combined with the extensive notes on Timelinely, I developed the interview schedule.

During the Interview

Due to the ethnographic nature of this study and the schedule of observations followed by interviews, at the time of interviews the participants and researcher were already aware of one another. This does not infer that work was not required to build rapport, rather as the researcher I had to manage my 'self' from the moment I first engaged with the participants (Goffman, 1990). This was vitally important to ensure I had a suitable rapport and relationship with the participant so I could gather knowledge at the time of interview. The practicalities of building rapport during the interview for Smith and Sparks (2016) centre on the first moments of the encounter. The participant will make a judgement and assessment of you as a researcher and person; therefore, it is vital this is positive. Ways this was achieved during the interviews was through appropriate greeting, being courteous, appropriate dress and trying to make the participant feel comfortable. Before commencing the interview proper, the researcher reminded the participant about how the interview had come about and explained again the purpose of the study.

Having completed the introductions and formalities of the interview, attention for Smith and Sparks (2016) turns to the engagement of both subjects during the interview. They suggest it is vital to be an active listener throughout the entirety of engagement. To be an active listener it is important to understand that you listen with your whole body, whilst using hearing to

gather responses, the body can also be used as a tool of reassurance or agreement. Central to this active listening is being attentive, curious, and responsive throughout. These keys to active listening can manifest in various ways ranging from probing or curiosity driven questions to appreciating silence and not cutting the participant off.

An observation made by Smith and Sparkes (2016) pertinent here is the translation of familiarity through agreement or a perceived shared experience, examples of which may see researchers suggest I have felt like that too or I have had the same experience. This can be problematic and especially given the ethnographic and phenomenological underpinnings of this study. They suggest a need to take caution to ensure they do not influence or guide the participant, rather they need to place the lived experience of the participant centrally. To achieve this, I drew upon the observational data relevant to the participants and only on limited occasions did I relay a shared experience, but those recollected were only when riding with the participant in question.

After the Interview

Once the interview concludes Smith and Sparkes (2016) suggest successful transition from interview to writing is contingent on two key tasks. Firstly, the researcher needs to make reflexive notes as soon as the interview has terminated and is suitably possible. The intention of these notes is to recall as much information from the interview as possible in addition to the recording itself. These notes serve as additional knowledge recording and may focus on how open or closed the participant was or their demeanour throughout the interview. The second task is to transcribe the interview recording as soon as feasibly possible. The central reason for this immediacy according to Smith and Sparkes (2016) is that transcription forms

part of the analysis process. Therefore, the sooner you can begin analytic development the more effective later observations and interviews may become.

To respond to both task's, transcription was completed after each interview and before the next where feasibly possibly. Of the 12 interviews this happened on 10 occasions. Additionally, to achieve a heightened degree of reflexivity after the interview as noted by Smith and Sparkes (2016), I built in additional time in my diary to allow for this to happen. This tended to be at least one hour after the interview and before any further commitments to ensure I had time to decompress and accurately record the interview occurrences.

Interview Schedule

A total of 12 interviews were conducted with participants across eight months. The development of the interview schedule required consideration of various factors that included the observational data, existing literature on sporting lived experience and the research questions. Each participant was interviewed three times, an approach utilised due to the duration of each encounter. On average each interview encounter lasted approximating 1.5 hours. The initial interviews centred on thick description from the participant considering their lived experience and understandings of this. At this point the video recordings were used to get a general sense of the experience and now refinement beyond that outlined earlier related to user error was undertaken. The central purpose of this first interview was to gain an initial description from the participants to then investigate further. The second set of interviews were deployed in a way to cultivate understanding and in line with Ravn (2016) to explore the structure of experience. Here I asked further questions that would provide clarification and depth to initial points, and raise further questions that may have emerged during interview one.

The intention of the final interviews was to consolidate my understanding of the structure of experience and specifically the structure of meaning (Ravn, 2016). The purpose of this was to explore further what it might feel like to be a mountain biker. This final interview by its very nature was a very familiar terrain to the participants having been engaged in observations and interviews over the prior five months. At this stage the participants were familiar with questioning and confident to contribute further. To aid this process, given the timeline of data analysis, I was able to draw upon early theme development and present this to the participants for thought. This member validation according to Seale (2018) is an effective method to undertake when seeking to ensure the themes developed by the researcher are those that are felt to be important to the participants. To do this I brought early thematic development in visual and pictorial format to aid discussion and questioning.

3.7 Data Analysis

According to Ravn (2016) and given the sociologically sensitive phenomenological intent of the research project, before commencing the formal analysis of the rich data, the researcher must outline their analytical intentions. Importantly intentions must align with the overall questions of the study. Ravn (2016) suggests studies exploring the structure of meaning from participants, that are (sociologically) phenomenologically inspired and are qualitative in nature need to utilise an analytical process that brings together description and analysis. Whilst Ravn (2016) outlines a 3-phase approach to data analysis inspired by Giorgi (2008), more recent contributions to sociologically sensitive phenomenologically inspired research adopt thematic analysis. Thematic analysis as proposed by Braun and Clarke (2022) is an analytical process that aids in the researcher's desire to reveal thick description guided by the research questions. Furthermore, according to Smith and Sparkes (2016) thematic analysis is

a flexible analytical undertaking giving room to writing as part of the process, something central to the intentions of this research.

For Braun and Clarke (2022) thematic analysis comprises of six stages that provide a toolkit for the researcher to aid in their understanding and interpretation of the data. Importantly this six-phase approach is not prescriptive, rather the researcher can move back and forth between the phases, seeking to make sense of the sometimes-messy nature of analysis. The six phases as outlined by Braun and Clarke (2022, p.35) are the following.

1. **Familiarising yourself with the dataset**: This phase involves reading and re-reading the data, to become immersed and intimately familiar with its content, and making notes on your initial analytic observations and insights, both in relation to each individual data item (e.g. an interview transcript) and in relation to the entire dataset.
2. **Coding**: This phase involves generating succinct labels (codes!) that capture and evoke important features of the data that might be relevant to addressing the research question. It involves coding the entire dataset, with two or more rounds of coding, and after that, collating all the codes and all relevant data extracts, together for later stages of analysis.
3. **Generating initial themes**: This phase involves examining the codes and collated data to begin to develop significant broader patterns of meaning (potential themes). It then involves collating data relevant to each candidate theme, so that you can work with the data and review the viability of each candidate theme.
4. **Developing and reviewing themes**: This phase involves checking the candidate themes against the coded data and the entire dataset, to determine that they tell a convincing story of the data, and one that addresses the research question. In this

phase, themes are further developed, which sometimes involves them being split, combined, or discarded. In our TA approach, themes are defined as pattern of shared meaning underpinned by a central concept or idea.

5. **Refining, defining and naming themes**: This phase involves developing a detailed analysis of each theme, working out the scope and focus of each theme, determining the 'story' of each. It also involves deciding on an informative name for each theme.
6. **Writing up**: This final phase involves weaving together the analytic narrative and data extracts, and contextualising the analysis in relation to existing literature

Thematic analysis for Braun and Clarke (2022) is not a theoretically rigid analysis method, rather it is flexible, lending freedom to apply a range of theoretical and conceptual influences. Moreover, for Braun and Clarke (2022) there are three different approaches to thematic analysis: coding reliability thematic analysis, codebook thematic analysis and reflexive thematic analysis. The two former approaches provide the researcher with a rather restrictive approach to coding that emphasise reliability arguably at the expense of flexibility. The sociologically inspired phenomenological nature of this study and the focus on the lived experience of mountain bikers requires a flexible approach to data analysis amongst many other things. Given this need and the ability of reflexive thematic analysis to provide the researcher with tools to explore the research questions akin to my own, it was selected as the data analysis approach for this study. The next subsection discusses the application of the six stages as outlined by Braun and Clarke (2022) to this research.

3.7.1Thematic Analysis

Familiarisation with the Dataset

According to Braun and Clarke (2022) the first stage in analysis is for the researcher to immerse themselves into the rich descriptions provided to get an overall sense of the data. Braun and Clarke (2022) and Ravn (2016) suggest becoming intimately familiar with the data. At this point, making notes on the immediate emerging aspects is important as these provide a feature to return to when developing themes and questioning the coherence between descriptions of themes. As a start I immersed myself in the data, familiarising and refamiliarizing with the experiences captured on film, fieldnotes and interview transcript. Familiarisation permitted me an opportunity to garner a sense of the overall body of knowledge gathered. In line with Braun and Clarke (2022) there was no attempt to identify or note themes at this point, rather I sought to get to know what had been gathered.

Coding

The next phase is coding, a process that involves generating labels that capture and conjure features of the data that might be relevant to answer the research questions. It is important these labels are succinct and evocative, rather than general or mundane; this ensures meaningful descriptions are brought forward. During this phase, the entire dataset requires attention and Braun and Clarke (2022) suggest the researcher must complete at least two rounds of coding to ensure nothing is missed and that all relevant data can be brought together for later analysis. It is important to note at this point, no analysis has commenced rather further organisation of the data has occurred.

The coding process adopted a two phased approach that firstly engaged with the observational data solely and then both observational and interview data combined. During the development of the interview schedule, I was required to review the observational data to inform question development. During this process initial codes were identified as part of my reading of the data, and this enhanced my familiarity of the data. Whilst these codes were developed, I upheld the phenomenological method and Braun and Clarke's (2022) directive during interviewing, ensuring interviews were guided by the participants and not my bias. Upon completion of the final interview, I then undertook the second phase of coding that included observational and interview data. Following Braun and Clarke (2022) I systematically moved back and forth between observations and interviews twice more, the first assigning tags to anything that had potential relevance to the research questions and aims. The second reading of the data allowed me to sharpen and expand codes that I had initially tagged to specific areas, rigorously ensuring their relevance, and meaning to the research questions.

Given the nature of the videoed observations, Timelinley was used as the platform to facilitate the coding of observations and Microsoft Word for interviews. These platforms allow for real time data tagging to occur and therefore proved indispensable to the data analysis process. Once all codes had been generated, they were transferred into a separate Microsoft Word document for the next phase in the process.

Initial Theme Generation

The next step was the generation of initial themes, and this phase involves examining the codes assigned in the previous phase to initiate the development of broader patterns of meaning. This potential theme development requires the researcher to collate data relevant to

each developing theme so they can commence the process of reviewing and (re) working. For Braun and Clarke (2022) themes are defined as patterns of shared meaning underpinned by a central concept or idea. A theme is required to capture a diverse array of data and evidence a shared idea, with these ideas sometimes being obvious and others less so. This initial process is encouraged to be adventurous with the researcher exploring, developing, and reviewing themes often.

To initiate theme development, I engaged with the existing codes located in Microsoft Word. Here I found a range of codes that related to the lived experience of mountain biking and specifically the corporeal, sensory, and intersubjective experience of riders. What I did next was to identify the central organising concept of the theme, something Braun and Clarke (2022) suggest is the centre point that shared meaning is organised around. Codes potentially connected were clustered and explored further as candidate themes. This phase produced a range of themes that represented the data collected and were now able to be developed and reviewed.

Developing and reviewing themes

This phase involves checking the candidate themes against the coded data and the entire dataset; to determine they tell a convincing story of the data, and one that addresses the research question. In this phase, the purpose is to review the viability of candidate themes and to explore whether there are any better ways of presenting them thematically. Braun and Clarke (2022) encourage researchers to operate in non-linear ways, continuing to be the adventurer, moving back and forth between the data and the developing analysis. The purpose is to ensure nothing is missed, no stone remains unearthed. Additionally it is important that

researchers do not become blinkered to something they are passionate about but does not present the data in the most appropriate way.

This phase involved allocating consolidated time to let the initial theme development settle before commencing. This enabled me to ensure a critical distance was established so I could, as freely as possible, move between the data and the initial themes to develop analysis and to ensure those themes developed presented the data in the most appropriate way. During this phase I frequently grappled with how the corporeal, sensual, and intersubjective dimensions of the lived experiences could be surfaced in a way that told the richest story. For example, I moved between thematically presenting findings aligned with sensory modes independently, however upon reflection and review, this did not suffice. This approach did not provide a rich account of the multisensory experience of riders and therefore further revision was undertaken.

Refining, defining and naming themes

Braun and Clarke (2022) suggest this phase involves developing a detailed analysis of each theme, working out the scope, focus, and 'story' of each. The purpose is to ensure you can discuss and detail your defined theme succinctly, a definition that should exist in no more than a few sentences. Positioned closely to writing up, Braun and Clarke (2022) acknowledge the undertaking can, and sometime does overlap with writing up. This is because the researcher is seeking to 'figure out' the flow of their theme presentation, working through the ordering to ensure there is fluency and continuity.

I undertook this process over a sustained period, immersing myself once again in the data, reviewing the themes established, playing devil's advocate, and having extensive conversations with my supervisors. This approach permitted me to grapple with existing central themes but also demanded from me a clarity on each theme, their sub themes, and the proposed ordering I had chosen for presentation and discussion. During this phase I revisited the literature to reflect on the themes established, critically reviewing the sophistication and legitimacy of each. Given the desire to be guided by the data, this approach tested the effectiveness of epoché and bracketing I had undertaken. For example, and as you will see below, some of the findings proposed are novel and original, not existing in current sociologically sensitive phenomenological research or elsewhere and therefore I had to work and rework, alongside redeveloping my literary understanding. This ultimately proved worthwhile but required extended periods of time in this phase of analysis.

Writing up

This final phase involves weaving together the analytic narrative and data extracts and contextualising the analysis in relation to existing literature. This final phase represents the diligence and time devoted to the earlier phases and can be best understood in its effectiveness by engaging in the next set of chapters.

3.7.2 Representation

Atkinson (2015) suggests a key element of the ethnographic process is when data has been transformed into a representation of the social world or in this case the lifeworld of mountain bikers. Atkinson (2015) argues the ethnographic researcher encounters the most significant and contentious elements of the research process at this point, an attempt to authentically reconstruct lived experience through the written word. Part of this contention lies in the fact

there exists no perfect medium of expression available to the researcher and therefore the opportunity for imperfection is available at every written turn.

Atkinson (2015) suggests swathes of ethnographic research seeks to employ rhetoric, an inescapable rhetoric that relies typically on extracts of ethnographic material, in most instances vignettes that are drawn from fieldnotes or interviews. These vignettes are used by researchers to anchor generic statements about the social world under investigation and are used to answer their analytic questions. He argues this can be understood as the traditional approach to representation, a realist form of ethnographic writing, that sees an obvious absence of the researcher.

For Atkinson (2015) and as noted in earlier sections of this methodology, this quest for a realist form of writing is somewhat undone by the recognition that fieldnotes and interviews alongside their consequent presentation are textual reconstructions of reality. These reconstructions of reality involve and entwine the researcher more and more in the process of writing. Furthermore, this awareness of the fragility of realist reconstruction has led many ethnographers to revisit their earlier works, examining their role in the reconstructions presented and how this writing represents positions or views.

Given this evolving understanding of the representation through writing and the increasing visibility of the researcher in the writing Atkinson (2015) presents three key areas of experimentation ethnographers may consider during their writing:

- A greater propensity to write the author into ethnographic text
- An acknowledgement of the analytic opportunities afforded by ‘messy texts’ that challenges smooth, realist texts
- A willingness to adopt more overtly literary forms of text to create distinctive representational effects.

Given this championing you could be led to believe that Atkinson (2015) is seeking to proliferate a shift in textual representation in ethnography, yet we would be mistaken. His point is that realist and more experimental forms of representation rather than being dichotomous, sit well together; blended and infused. He sets this infusion against a proliferation of overly romantic, fictionalised, research centred accounts that invite an emotional rather than intellectual response from the reader.

Moreover, in sociological sensitive phenomenological analysis such as Allen-Collinson and Hockey (2009, p.12) they advocate a departure ‘from more orthodox, author-absent accounts of sporting embodiment’, by constructing forms of narrative portraying evocative, analytic writing of the lived body experience. Their call is pertinent to this study and poses a further key question; how, as the researcher am I able to recreate through written text, the subtle, embodied, and sensual experiences of mountain bikers? To answer this and to respond to Atkinsons (2015) call I have sought to convey the phenomena evocatively and aesthetically by generating rich, fleshy and suggestive descriptions of the lived experience of mountain bikers. To do this was not straightforward nor did it come easy to me, however through constant reflection and revisitation of text (Atkinson, 2015) I have sought to represent the lived experiences of mountain bikers, their embodied and sensual encounters as evocatively as I can.

Noted by Read (2023) language will always be a blunt instrument used to aid human thought and this brusqueness is most notable when we come up against its limits when trying to fully articulate our lived experience. Read (2023) suggests words as useful as they may be, dilute and struggle to fully capture emotion and sensation because they can never truly conjure the precise feelings of pain, heat or sound. Read's (2023) suggestions are noteworthy given the nature and intention of this study to provide a rich and thick insight into the lived experiences of riders. Therefore, I have drawn upon additional forms of media to compliment textual representations, and this decision has been taken for two reasons. Firstly, the corporeal and sensual dimensions of the research can be at times difficult to present in the written word due to their complexity. Therefore, I have opted to use excerpts of video and audio data from data collection to elicit and provoke sensory and corporeal feelings in the reader. I am acutely aware this does not put the reader in the rider's position, but it does bring the reader closer to the data and provides an opportunity to engage with the lifeworld of mountain biking very few are accustomed to. The second reason was a pragmatic one, I have over 60 hours of unique observational data available and therefore not using it in forms of presentation would be a limitation of itself.

Results and Discussion

Introduction

The forthcoming five chapters provide a discussion of the results garnered from data collection and subsequently interpreted in accordance with thematic analysis. The purpose of the five chapters is to provide an insight into the key themes to emerge from data analysis. Additionally, I explore how these themes respond to the research questions of the study. I draw upon various authors from earlier chapters such as Allen-Collinson, Hockey, Merleau-Ponty, Csikszentmihalyi and Leder to discuss the sensual, fluid, painful and intersubjective experiences that form the lived experience of the mountain bikers in the study.

The chapters have been authentically organised and structured given the emerging themes, but this has also been done with the reader in mind. The purpose of this is to ensure the reader is guided through the lived experience in a logical way, steered somewhat by me through the layered accounts. To achieve this, two key decisions have been made. The first is the chapters have been organised in such a way to ensure there is opportunity to acclimate with mountain biking through relatable sensory modes such as touch, heat, and sound. This ensures building blocks are positioned thoughtfully to appreciate how these, and other senses interweave to provide multisensory experiences that go beyond the Western five. Secondly, given the breadth and depth of data achieved, alongside the role of the GoPro Max during data collection, I have drawn upon various modes of presentation as discussed in the previous chapter.

The intention to include various modes of presentation is not to achieve novelty value, rather it is to present the most authentic sensory and lived experience of mountain biking. As noted by Allen–Collinson and Leledaki (2015) it is extremely difficult for the researcher to

represent the sensory experience of others. Therefore, by drawing upon interview transcripts, research diaries, photographs, audio, and video footage, I have mitigated as much as possible the separation between the lived and interpreted experience of riders. As the reader/listener/watcher negotiates the subsequent chapters, I have noted subtle prompts. At first this may be antiquated to moving quickly through the findings, but I ask for perseverance. They have been inserted with care, consideration and for the reader's benefit. The rationale is simple, as a mountain biker I can easily relate to the sounds, the visual stimuli and haptics portrayed through narrative. Yet for others it is unlikely they possess this. Therefore, I hope through the use and investment in alternative forms of presentation, the reader will be brought closer to their lived experience.

The first findings chapter discusses the senses and the sensual dimensions to emerge from data collection individually. Whilst it is appreciated mountain biking is rarely understood through a single sensory mode, it is important to establish those influential senses for riders. This allows each sense to be discussed on its own merit limiting opportunities to become preoccupied with sight as critiqued in the Literature Review. The second findings chapter discusses the experience of flow had by riders, and how this pleasurable experience was often interwoven with the feeling of fear. I bring together the work of Merleau-Ponty (1962) on habit and interweave this with the work of Csikszentmihaly and Csikszentmihalyi (1988) to provide novel insights. In the third findings chapter, using Leder's (1990) work on the dys-functional body, focus is directed towards the often illuminating but problematic sensations of fatigue, exhaustion, and pain and how this shapes experience for the riders. The fourth findings chapter focuses on the role of the other in mountain biking and drawing upon Merleau-Ponty and Schutz (1967), I discuss in detail the intersubjective and intercorporeal experience of riders. The penultimate chapter draws the preceding chapters together

theoretically to understand what these findings mean for the study's contribution to the discipline and literature base.

Before discussing the findings, it is important to introduce the riders. These introductions permit you the opportunity to put faces to names.

Name: Chris

Age: 21

Years Riding: 10

Bike: Bird Aeries

Job: Student

Riding Style: Enduro

Name: Alan

Age: 46

Years Riding: 4

Bike: Vitus Escarpe

Job: Electrician

Riding Style: Enduro/Bike Park

Name: Theo

Age: 23

Years Riding: 11

Bike: Trek Remedy

Job: Software/Computer Programmer

Riding Style: Enduro/Trail

Name: James

Age: 43

Years Riding: 15+

Bike: Cotic Flaremax

Job: Small Business Owner

Riding Style: Enduro/Jump Park

Mountain Biking and the Senses

4.1 Introduction

Our experience in the world is made up of our continual sensory engagement with the environment and the complex interplay between various sensual modalities. An appreciation of the active sensorium during sporting encounters can illuminate understandings of lived experience. However, within existing literature this is an under researched area. The findings from the mountain bikers suggest they possess an intimate relationship with their senses and actively deploy them during their time on the bike. To date research on the senses within sport practice has focussed upon modes ranging from sight and haptic touch to dimensions of heat. What is currently underexplored is how these senses are understood in cycling and specifically mountain biking contexts. Furthermore, there has been no exploration of the mountain biking sensorium within a sociologically sensitive phenomenological domain. Whilst lacking, an exploration of sensory experiences of mountain biking is ripe given the opportunity afforded by the conceptual framework proposed in the Literature Review.

Therefore, in the chapter below I reveal the active role of the mountain biking sensorium in the lived experiences of riders. Specifically, I present novel insights into the role of various haptic encounters of riders, alongside the role of thermoception and sound. To propose novel insights, I draw and build upon dimensions of the conceptual framework related to the work of Paterson (2007) and Allen-Collinson and Hockey (2010). Specifically, I apply Paterson's (2007) understanding of haptic sensation in new ways to illuminate its role in the lived experience of riders. My application permits an original discussion of the haptic attunement riders have with the trail through the bike, and how their stock of corporeal knowledge often permits pre-reflective corporeal action. Moreover, I draw upon this work to offer the first academic contribution into the somatic sensations of mountain bikers and the significance of

kinaesthesia and proprioception. The significance of somatic sensations for riders cannot be underestimated, given staying upright and appreciating bodily movement is central to mountain biking. These findings are the first consolidated presentation of the unique role of specific somatic senses and presents a new way of understanding the significance of the senses when riding a bike.

In the later sections I uniquely grapple with the sensory modes of temperature and sound. In these sections I present the first contribution in mountain biking literature of the subtle and significant role of heat for riders. Heat possesses the ability to unravel the most seasoned mountain bikers and riders keenly discussed their thermoceptive attunement and experiences of heat. To conceptually appreciate the role of heat I uniquely apply somatic learning to reveal the upmost respect riders have for heat and the role it plays in the lived experience. Exploring thermoception in this way allows me to unpack how rider's attunement to the sense of temperature governs experience and decision making. Finally, I explore findings related to aural dimensions of the riding experience, presenting the first foray into the significant role of sound for mountain bikers. Utilising the concept of soundscape, I reveal the interplay between rider, bike, and nature. This section particularly highlights how the riders often prioritise aural feedback above sight when going down trails. Moreover, I uniquely propose the concept of sound work to represent aural learning and knowledge development undertaken during their riding experiences.

Before engaging in discussion, I believe it is important to provide a first-hand account of mountain biking. For the research this is defined by riding down a natural trail, with ranging gradient, in mixed conditions, and at speed on a full suspension bike. Next it is my intention to ensure those reading this are drawn into the rider's cockpit and positioned in a place likely

unfamiliar. To help demonstrate sensual experiences of a biker, a video clip has been provided. It should be viewed while wearing headphones to allow aural sensual dimensions.

Figure 7 Chris riding during data collection

(Click Here)

4.2 Touch, Feel and the Haptic Dimension of Riding

According to Allen-Collinson and Hockey (2010), touch and the haptic modality of the sensual experience has often been attributed low status because it has been presumed to be the most physical of senses. For phenomenologists however, Allen-Collinson and Hockey (2010) argue touch is a central sensory modality, multifaceted and complex, it is something to be appreciated. For Paterson (2009) haptic dimensions of experience can be understood through outwardly sensual experience such as cutaneous contact and through inwardly, somatic sensations such as kinaesthesia and the vestibular system. Whilst this separation provides an opportunity to explore the haptics of sporting experience, he argues the current research literature often solely relies on discussions of cutaneous contact. The consequence of this approach is the limited investigation of somatic sensation and its role in lived experience. He therefore calls for a deepening of understanding of touch and feel, one that considers the internal haptic modes alongside the cutaneous. In the below I present findings related to both the outwardly and inwardly haptics that exist for mountain bikers. I do this to illustrate the breadth of sensory encounters for riders and because this is the first exploration of touch in mountain biking research.

James notes often the first sensory encounter had when going riding is the sensation of fresh air when stepping out of the car and beginning his bike set up:

> *James: Fresh air itself, I think is a, it's definitely got its own sensation, I'm sure we can all relate to it, when we get out of our car and depending on the weather conditions… you feel it on your skin and it might feel tingly or whatever and of course it will feel very different in very different weather, sometimes it feels wet sometimes it feels cold, sometimes it feels really hot.*

The cutaneous sensation of fresh air on the skin is one dimension of the haptic experience for riders. Often out in all weathers the skin is available to be touched by the environment. James surfaces something often taken for granted in the everydayness of our existence, the sense of air as it engages with our skin. For him, when stepping out of the car in the local trail's car park, this interplay between facial skin and the air surrounding him has significance. The above extract demonstrates at a basic level, the interaction between the skin and air and the subsequent haptic experience for mountain bikers. Whilst Paterson (2009) provides an influential critique of the limited use of the haptic cutaneous sense, in explorations such as this, for the mountain biker it is an important element of the experience.

Beyond the significance of cutaneous attunement to wind, more broadly, seasonality for riders was understood often through haptic sensory domains. Specifically, the haptic dimension of how the elements and seasons interact with the sense of touch. For riders the seasons and elements were an influential aspect of their lived experience. All riders referenced how weather conditions evoke certain haptic sensations. These sensations at times were viewed positively with Theo outlining the almost spiritual response to warm summer air on his face:

> *Theo: When it's cold, it doesn't feel too great, it feels painful. And your eyes. I do squinty things and you're worried about getting mud in your eyes. Oh my gosh. And I could actually crash. And that would be such a cheaper [embarrassing] way to crash. But if it's summer and it's August and you're blasting through and there's no mud spring around, the wind feels like. Hard to know. There's something like going through and going really fast and feeling the air blasting on your face. That feels really good. Like even when I'm driving in the car and I'm going quite fast, and I'll turn the fans on in the car. It just feels really good. Something on the air was so warm. And even when you were going really, really fast through it, it felt like really hot air on your face. Kind of felt like Eden or something or heaven.*

James provides a balanced account of the haptic, cutaneous experience of mountain bike riding outlining how he enjoys the warmth of a summer breeze but also the bracing chill of winters wind or cold rain upon his skin:

> *James: Yeah, I mean each season brings with it its own individual aspects, that I perhaps tune into, autumn, there's wind there's rain and those sorts of things… it's those sorts of feelings when you realise that you catch the warmth of the sun on your skin and that's such a really nice feeling, and you know sometimes in the winter it's like, ow, that's bracing, it's like a positive, perhaps it's not super comfortable but it's actually quite a refreshing feeling to go out in the freezing and winter. and it can be very satisfying in any season, especially if the weather conditions aren't necessarily perfect but it can be quite satisfying, you know you're riding it when it's chucking it down, I've had some of my best rides when it's been chucking it down with rain come to think of it.*

Invariably the cutaneous feeling of touching and being touched by the elements can play a significantly negative role in the experience of riders. Participants discuss a reluctance and need to persevere when in weather or seasons that evoked haptic displeasure. Haptic displeasure was something articulated by all riders, with Alan outlining the cutaneous sensations evoked when his shoes are full of water due to rain:

> *Alan: I don't mind riding the wet, it is good fun actually and splashing through the puddles, but I just don't like getting wet feet it is just, I had wet feet all day on Sunday, and it was horrible, I was walking along, and I could feel my feet squelching in my shoes.*

For Theo it is the role of mud and its ability to ‘cake’ the skin in a cold, slop like texture that provides a haptic displeasure:

> *Theo: I don't really go riding much in the winter when it's cold I think that's more to do with mud and not wanting to deal with mud rather than the cold… if you go to Holden you'll just get absolutely plastered in mud from the start, the trails are just canyons and you just get plastered in mud, even after a little bit of rain… I know that feeling on the skin just discourages me from riding a lot.*

The video below illustrates the trail conditions the riders are referring to and illustrates the extent mud transfers to the body and equipment. Here attention is drawn to the visual dimensions but also the aural aspects that emphasise the comments made by all the riders above and especially those of Alan and Theo.

Figure 8 Mud

(Click Here)

The contributions from all riders demonstrate the opportunity for seasonal aspects of bike riding, specifically contact between the weather and skin to evoke haptic pleasure and displeasure. For some of the participants such as James, these seasonal encounters were relished. James identified encounters as a site of intense pleasurable embodiment, evoking a heightened sensory awareness. Conversely the haptic attunement to the seasons can evoke displeasure as discussed by Alan. This displeasure can impact the riding experience dramatically, demonstrating the unique role of the senses in lived experience. The depth of haptic attunement reveals novel insights into the lived experience of mountain bikers, illustrating the profundity of connection between body and sensorium.

4.3 Tactility and Pressure

A particular haptic sensory dimension is the experience of pressure and specifically attunement to tactility. When riding a bike there are five contact points for the rider, the hands, the feet, and the bottom. Given the latter is often not in contact when going downhill, the former are constantly engaged in some form of interaction with the bike, applying pressure to ensure the bike and body remain whole. This interaction can hold positive and negative significance. Chris articulates the abrupt feelings when a feature does not go as planned and how this relates to his tactile awareness:

> *Chris: normally it's just through the pressures through the bike and my body is just like, if I have cased it [landed with the bike half on and half off the gap], then it's the shock that comes through the ankles on the wrists, and that goes all the way through your body it's just a really big shock. The angles and there is one drop I can remember in a place down in Cornwall, I was too far over on the take-off, too much on one side of the take off and when I landed the back wheel slipped off the edge, but the front wheel made it, and I made it just possible to ride it out. If I land quite nose heavy, and it's a really big compression on the fork you really feel it through the wrists.*

Alan adds to this when describing the experience of going over roots or rock gardens:

> *Alan: It's umm, suppleness, it's not getting battered by the roots and the rocks, so you can still hang on rather than getting rattled when you hit the rough stuff, it's keeping the wheels on the ground. for a non-rider it's hard to describe but it's all about feel, getting that feedback from the bike especially through the front tire and the front fork, without getting thrown around too much and just being able to let go but being in control.*

In the above Chris and Alan articulate the cutaneous sensation when riding a mountain bike downhill. Often things are uncomfortable, and this discomfort is felt, albeit initially through contact points with the bike. Central to the interplay of (dis)comfort is the amount of pressure applied to the hands and feet, something both respondents noted. For Alan and Chris, the pressure felt through the hands and feet when negotiating trail features brought about a heightened, unpleasant sensation due the unplanned landing and rough terrain. These reflections present unique understandings of the rider's sensory attunement and demonstrate the rider's active deployment of their sensorium to avoid unpleasant riding experiences.

It emerged through analysis the role of tactility was not fleeting rather riders were continuously receiving tactile feedback. This ongoing interplay enabled rides to make micro adjustments to their equipment such as the front suspension, rear shock or tyre pressure in the hope of finding a more enjoyable experience. All participants discussed these dimensions during interviews, and this was also picked up during observations. Typically, at the start of a ride, riders will adjust their bikes given the location, trail type and conditions, and once set leave it alone. Alan and Chris illustrate this 'tinkering' approach suggesting:

> *Alan: my approach is once it's set up, I just leave it alone even if it's taking me a long time to set it up, I'll keep tinkering with it until I have it where I want to, such as using tokens, such as the rebound and the sag. I played around with lots of other little bits and found oh I don't like it it's a bit too hard take a step back Oh no it's too soft I need to add some more in there.*
>
> *Chris: Regarding pressure in the fork, I don't really have a set pressure in my fork it's whatever really feels nice. I'm not one to have a really hard, rock-solid fork, like the top end being quite soft and mushy, and the more you go to the travel the more it ramps up. Compression I don't really run too much, I like the suspension feeling quite soft I'm more prefer having the compression when it's at the bottom. rebound is quite slow because I don't think it's anything worse when you land a jump and you get shot back up, which has happened a few times and you feel like you're out of control completely. and stem height is something I don't like too long; I think I only run two spaces one big one and one tiny one.*

Alan and Chris discuss the ways they limit the discomfort of pressure, adjusting their front suspension using tokens and air pressure. These skilled micro adjustments to facilitate corporeal attunement increases their maximum grip during experience. Additionally, the adjustments ensure pleasurable cutaneous tactility is maximised and the discomfort of too much pressure mitigated.

Another area the riders discussed related to pressure and sensory attunement is the use of brakes and the role of pressure. According to Owton (2022a) braking is less about knowing how to brake and more about feeling when to brake and with how much pressure. In mountain biking there are various micro adjustments you can make to the brakes to increase responsiveness and hardness. Responsiveness is individual to riders and without an attunement to pressure, setting up brakes on a bike can be a lottery. Brown (2017) overviews pressure when presenting findings of riders in her study. She outlines pressure is a two-way sensation, where the body and bike communicate. All participants discussed braking and the degrees of pressure they prefer. Alan discussed the various haptic dimensions involved in the

braking process, a two-way encounter much like the points above that lead to him generally feathering the brakes:

> *Alan: I'm a featherer, in fact it's something I've learned from riding motorbikes is that I dragged the back break through corners, and this is because it stiffens the rear suspension and it turns better, I didn't realize I used to do it, but I used to wear rear pads on my bike really quickly. And then reading into how the racers ride and starting to think about my own riding, I realized I was dragging the back breakthrough corners, and I didn't think I'd do it, I still do it now. The back brake comes on and it helps her bike turn.*

Alan outlines the sensory attunement garnered from years of motorbike riding has transferred to mountain biking and he uses a feathering technique that involves a constant tactile back and forth and attunement to pressure. The outcome is Alan can turn the bike quicker and with more precision. James adds to give him confidence when on the bike he prefers a 'strong' brake. A strong brake refers to pressure already existing within the mechanical dimensions of the brake, subsequently little pressure is required on the brake levers. This precision is offset against a brake that is 'spongy', one that requires a lot of pressure to be applied by the rider. The significance of having a brake to your tactile liking is something James discussed after an experience riding a rental bike:

> *James: I definitely like a relatively strong break and that gives me a lot of confidence… I hired a bike three weeks ago in Innerleithen, the bike had Sram Guides on it and that's a different break to how I run mine, and they did have a different setup and I didn't really notice it initially and thought that's fine and all right. But then I went over the bars twice during the day and I had a couple of other little incidents where I couldn't work out what was going on… I thought am I just making silly mistakes… And I worked out at the end of the day, or at least towards the end of the day, oh, I'm actually using three fingers on the brakes, when I'm going down towards the bottom of these trails, because one or two fingers wasn't giving me enough breaking for what I was liking and feeling. I think also I have been bringing the brakes back so far, they were stroking my finger, they were quite weak brakes, and they were set up very differently. I suddenly found then what I was doing was what*

> *people say when you grab a handful of break, at some point I was losing control and one or two fingers wasn't enough and the whole hand was going to grab in this case the front brake, and that is why I think I was grabbing a load of front brake and then that was throwing my weight over the front of the bike, and that is why I think I fell off more times than I had done in absolutely ages.*

James demonstrates when tactile attunement does not exist it can have dramatic consequences for the rider. Whilst duration and familiarity are an important feature when developing tactile attunement with the bike, there are instances when they can be undermined by external forces. One such example involves the seasons and particularly during hot weather. The friction created when braking generates heat and, in most circumstances, when braking heat is something sought. However excessive heat can provoke unexpected changes in performance, inhibiting rider confidence. This is understood through tactility and Chris provides an illustrative example:

> *Chris: In the summer your brakes are going to get hotter and it's something I never thought would be noticeable, something I've notice in a car but not on a bike, but on a bike, you definitely start feeling them fade in this summer whereas in the winter they get in mud and water thrown out of them and they cool down at that bit quicker.*
>
> *Ben: Can you tell me what that feels like?*
>
> *Chris: Scary because it sort of feels like you're pulling the brake, and they feel spongy, and they don't really seem to do a lot you've sort of just gotta hit a corner and hope for the best. it's weird because it's something that you just so used to being able to pull and it will instantly slow down just like you know it should but then when their fading they don't react the way that you think they will and so when you pull them it can be quite scary because they're not going to work as you expect it to and then they become really unpredictable. and your first reaction is to ask why it is not doing what it's supposed to do.*

This section has demonstrated how riders engage with their bike and trails through the lens of tactility. Riders illustrate the attunement they possess during experience and demonstrate their unique understanding of this experience to bring about (dis)comfort. Importantly riders explain the range of factors that impact this experience and provide original insights into the

role of tactility in mountain biking. The next section moves to discuss internal, somatic sensations and their role in the rider's experience.

4.4 Somatic Sensation, Staying Upright and Finding Grip

Discussion has so far focussed on the cutaneous haptic modality. However, as most of us have ridden or at least sat on a bike, we can appreciate there exists other, internal (somatic) modalities that shape our experience. Kinaesthesia according to Paterson (2009) is the perceived way the body moves, using a range of nerve information to understand muscular tension. Proprioception is the position, state or movement of the body or limbs in space, and this is generated from the sensory returns from nerve endings in the muscles. Here an awareness of the body's axial position is a timely example. For instance, when riding a mountain bike, you are aware of the position of your legs and feet on the pedals, yet you are unable to look down to check otherwise you risk crashing. Therefore, you are required to trust your body's proprioceptive ability. Lastly the vestibular system or the sense of balance involves sensations related to the orientation of the body, alongside an attunement to acceleration and deceleration. Paterson (2009) cautions researchers treating the vestibular system solely as balance neglects its ability to appreciate corporeal inertia (speed) and momentum.

In most of the existing research these somatic sensations have been discussed individually and within mountain biking a research lacuna exists. Furthermore, when engaging in mountain biking, a reliance on separated understandings of somatic senses is difficult as they are often attuned to all at once. Therefore, in the section below I push current research boundaries and seek to understand these senses synergistically, working together to provide sensual feedback. A specific example discussed and observed during data collection related to somatic senses when jumping and searching for grip. Grip is a crucial part of the riding

experience because without it the bike will not stay upright. Both jumping and the search for grip rely on the mechanical attunement and the interplay of all the haptic senses I noted at the start of this chapter. During riding experiences that involve searching for grip or jumping, sensation is influenced by proprioceptive, kinaesthetic and the vestibular modes. These modes are interdependent upon one another during this endeavour and when successful culminate in what Brown (2017) refers to as 'hold' on the ground.

The interplay of the proprioceptive, kinaesthetic, and vestibular systems was discussed by all participants in the context of jumping. It was epitomised by Chris who outlines these senses in concert and then makes specific reference to the vestibular system during the jumping phase of a trail:

> *Chris: I would say it is a full body experience… you adjust the angle of your feet on the pedals, and you changed the way your wrists are on the grips, and you change the way your weight is on the bike use it just a little bit further back on the bike just over the seat. so yeah it's definitely linking it all together and using your whole body…Balance I think is quite a key one, obviously when you're going at speed the bike feels more stable whereas if you going at slower speeds when you might be weaving through a couple of like trees you really got to essentially use those core motor skills that you've learned over the years, but then I guess that's one of the things, without really knowing you build on through mountain biking because balance is so important. I think it's just a core skill because it allows you to just keep your bike upright whilst also working out where you need to weight the bike, and that's not a conscious thing it's something the body just does, when you might be hit in particular parts of a trail or when you're jumping you need to know where to balance and put the weight on the bike, essentially if you don't have good balance you're not gonna stay upright.*

For Chris the interplay between the kinaesthetic, proprioceptive, and the vestibular system is crucial to a successful riding experience when jumping, and he places emphasis on the vestibular systems role. Chris suggests as part of somatic sensation, the effective interplay

between body and vestibular cues are central to staying upright and on the bike. This singling out of the vestibular system during jumping was also articulated in detail by James:

> *James: OK. I think that it is generally and particularly a gap, jumping a gap, you largely want to feel like you are, at least your head is going up vertically, at least I want that feeling, I think if you go slightly off axis, so a couple of degrees left or right with your head angle and you're not intending to, if we take a straight jump by way of an easy example. if for whatever reason you slightly tilt your head tilts and therefore a lot of the rest of your body will tilt as well, but that feeling of just being, you just start to get that feeling of things going wrong and things are not what they should be, fortunately I do such tiny jumps the fraction of a second that I'm in the air, is, it is rarely, it's got to go pretty spectacularly wrong for me, for me to not land on the bike, I can usually land it and steer out of it or whatever, but I guess you know, that can be forward or backwards or left to right, but I'm feeling it more left to right, as I say whether it's my head or my hips, it's just that feeling that you lose control ever so slightly and I would say, perhaps you feel it, you sort of feel it in the air, that feeling of Oh my goodness that nearly went wrong, I think you get that when you land, is actually when the wheels touch the ground, and you touch the ground and you may be swerve a little bit or you have to slam the brakes on because the landing exaggerates the initial feeling of a loss of balance, that initial slight loss of control can become a much bigger loss of control on landing because of the forces at play.*

James and Chris highlight how vestibular activation is vital to a successful riding experience, yet much of what happens, the micro adjustments to alter hip or head position, occur without thought. This multisensory experience generally devoid of reflection was something shared by most of the participants. Riders articulated the ability of somatic sensory interplay between bike, rider and trail that repositioned the mind/body dualism. Riders developed a corporeal trust permitting a deprivileging of the cognitive, whilst letting the body do its thing. The points put forward by James and Chris I propose suggest current understandings of the mind/body dualism in sport and specifically mountain biking is problematic. In the above I have illustrated the existence of a pre-reflective state where the body is central to decision making and is overwhelmingly the pivotal dimension of successful bike riding. This

dimension, often influenced by the concept of habit is pursued further in the second findings chapter.

Parallel to the interplay of these somatic senses when jumping is their role when seeking to find grip, something brought to the fore when this interplay is influenced by seasonal dimensions. No trail is ever ridden in the same way twice due to weather conditions and therefore the predictability of grip cannot be taken for granted. For riders, grip is an essential component of a successful ride, without it, it is likely to end in an unpleasant encounter such as crashing. For the riders grip was discussed in the context of wetter conditions. Riders searched for trail aspects that would increase the likeliness of having purchase on the ground or 'hold'. Furthermore, all participants outlined the centrality of the vestibular system in this endeavour. Theo suggests:

> *Theo: in weather like this (wet) you're going to take into consideration the terrain, the steepness, the general conditions into account and get a feeling for it and the wetter it is you've got to take into that instinct into how the bike is going to behave and if it's really wet, you might have to angle the bike more differently or take it slower to ensure that you can get round the corner over the jump all drop.*

Theo articulates the interplay of the proprioceptive and vestibular senses when riding in wet conditions. Theo specifically outlines the need to 'feel' for the trail through muscular nerve endings, alongside appreciating the speed corners and jumps are taken. Furthermore, counter to the volatility of grip during wet months for some riders, Chris articulates how on a hot summers day the ground can be equally unpredictable and mimic conditions experienced during winter:

> *Chris: if we use Cann and Spanish [trails] for example, in the summer it is brilliant, it does get very dry, very dusty and sometimes it can feel like you're riding on ice. What this means is the bike feels like it's all over the place, you can always feel that squirming underneath you when the bike is struggling for grip and you're looking for any form of damp patch to make sure the tyres can bite.*

Chris indicates the overwhelming haptic experience of riding down dusty trails that possess little predictability, and the sensory cues riders address to ensure they stay upright. The vestibular system receives various feedback that incorporates dimensions of acceleration and deceleration, alongside keeping momentum, to ensure the bike continues to move in the intended direction. During these experiences there exists little reference to the visual dimension of the experience. This indicates the haptic senses reconstitute the sensory hierarchies at least in this scenario. Further examples of this reconstitution in the context of seasonal riding are provided by James and Chris who outline their search for grip when the ocular dimension is rendered ineffective:

> *Chris: yeah I would say so, it feels similar when the trail is just coated with wet leaves there is only so much your tyres can do whereas if it's been ridden loads it's normally being cleared out and if not then we can't really see what you're riding over and again that's just a massive factor, because there might be a big chunk of rock that you can't see that might throw you offline. Again, it's a totally different riding experience, you're sort of guessing at that point where the trail goes come which isn't great, but you're more in tune with how the bike is reacting how your tyres might be struggling for grip, and how your brakes are responding but they normally feel alright at that time of year. Grip I think is a massive one, it's really hit or miss so you're so focused on it.*

> *James: so, you're riding a trail that is normally fairly predictable gravel and largely flat, and you can see the lines so you're using lots of sight as a major sense, sight would be the prominent sense. there's not much going on beyond that, I'm not about to ride into a hazard and I'm going in the right direction. When the trail is 2 inches under water the whole way, absolutely you have touch and feel, balance which I think the vestibular system, I would say those come in a lot more, it's much more about that I can't see what is below and there's a lot more debris, a few sticks with odd rocks, to*

> *an extent I'm still using my site but I would say absolutely more senses kick in and were helping me through that. Touch definitely.*

The points made by James and Chris present novel insights that indicate the importance of haptic and somatic senses in favour of sight. Specifically, the sensory attunement the riders have with the somatic senses widens the understanding of the lived experience of riders. These findings offer novel insights of the breadth of attunement during any given riding encounter and push back on broader societal stereotypes of mountain bikers discussed earlier. Furthermore, these findings illustrate a complex relationship for riders that does not wholly favour one sense over the others.

In this section I discussed the various dimensions of haptic sensory experience of riding a mountain bike. Using specific sensory modes, I have established a range of cutaneous sensations derived from elemental forces such as wind alongside the role of pressure in the haptic experience. Additionally, I explored the somatic senses, discussing their unique role in the sensual experiences of riders. Next, I continue to map the sensory experiences of riders and specifically explore how heat impacts their experience.

4.5 Heat: Thermoceptive Attunement and Somatic Learning

Paterson (2007) suggests the sense of temperature or the awareness of hot and cold through the body's thermoreceptors can be understood as part of the cutaneous sensual experience located within the haptic sense of touch. Temperature he argues is distinct from the traditional five sense hierarchy, and Potter (2008) calls for temperature to be understood as a specific sense. In her exploration of professional dancer's experiences, she illustrates how heat operates throughout the body, from the centre to the tips of fingers, overwhelming the body with sensory information that informs practice.

More recently Allen-Collinson et al. (2018) have deepened understandings of temperature, calling for an appreciation of a thermoceptive sense. This is distinct from Paterson's (2007) cutaneous considerations and includes temperature felt from inside the body. They explore the role of lived temperature in the experiences of MMA, boxing, distance running and traditional Chinese martial arts participants, illustrating the significance of thermoception. Therefore, in the section below I reveal the unique ways riders understand and experience temperature to reveal novel insights into their lived experience. Furthermore, I deploy the concept of somatic learning to illuminate the sophisticated understandings riders have of heat and how they navigate distress.

In concert with Potter (2008), I propose thermoception can be understood as a distinct sense and whilst cutaneous dimensions of temperature were experienced by riders, there existed a complex relationship between this external and other internal sensations of temperature. The interplay between internal and external sensations of heat emerged significantly for the riders in this study. James provides a useful starting point to appreciate the acute attunement he and other riders have with temperature, quickly reinforcing Allen-Collinson et al.'s (2018) assertion of a specific thermoceptive sense:

> *James: so, the heat of the outside temperature on my skin and usually my face is a good place to start, but I also am aware on my body heat form inside so to speak. Clearly extremes up or down, usually affect me and inhibit my riding considerably. Somewhere in a British middling sort of heat works for me.*

James indicates the role of temperature (hot/cold, internal/external) exists and influences the riding experience. Specific dimensions of thermoceptive sensation for all riders included the role of temperature felt through cutaneous contact. The role of moisture upon the skin particularly was discussed by riders, using this as a gauge to understand whether they were

getting too hot or too cold. Alan notes his experience of sweating in summer heat and how the volume of sweat felt upon the skin is a gauge of overheating and discomfort:

> *Alan: I don't feel overwhelmed, but it feels like most of it comes out of my head underneath my helmet, on my body a little bit and on my back, the worst feeling is sweat running down your back, it just runs down, and it feels, urgh… I don't know but it's just not a nice feeling having that cold trickle of sweat running down a warm back into your backside, it's really just not nice, and you just know you're getting too hot, it's just really uncomfortable.*

Additionally, Chris illustrates discomfort through an awareness of moisture and cutaneous feeling but discusses this in the context of getting too cold, suggesting:

> *Chris: I would definitely say hands and feet are right in the firing line because my shoes have probably got puddles in by that point of what we've been riding through, and your hands are just getting smashed all the time by the cold… normally by this point your gloves are normally soaked and so your hands are just freezing.*

Alan and Chris establish a unique cutaneous awareness of temperature and its relationship with moisture. For both riders their sensory attunement to either cold, running sweat or sodden shoes and gloves, permits a subtle awareness of how their body is performing and if they are on the cusp of having to stop riding. The detail provided is not contained only to moisture, riders also possessed a thermoceptive awareness of temperature related to points of bodily friction. Invariably mountain bikers will wear an assemblage of protective or riding equipment to minimise risks, yet for all riders this same equipment also brought about unique experiences of warmth and heat. Chris outlines the role of knee and back padding, and how this friction causes excessive heat:

> *Chris: yeah definitely, I always feel my back, if I'm wearing a pack or a hip bely that feels the most hot, obviously it's got more of the kit on it, also with your knee pads, which is always an interesting one where you take those off at the end of the ride (laughter)… you don't really notice it too much when you're on the bike and going down the trail, it's normal on the climb when you feel hot and sweaty, and it slides around a little bit as well, so you tighten up your pads that little bit more.*

James extends this discussing the impact of headwear alongside body armour and knee pads upon his thermoceptive experience. Whilst most contact is made between head and helmet for riders, it was the role of goggles that most significantly brought about a sensory awareness of heat for James:

> *James: I do get some difference in the feeling of heat when wearing a full face or enduro helmet but the main thing for me is goggles. Full face on its own is something I can get used to fairly quick and I have a fairly light full face, it's a lightweight full face with lots of breathability, but put goggles on and I think it's that thing of, and I am sure it's heat and that heat around your face around the eyes, is, that is definitely a feeling I am very well aware of and probably as to a slightly claustrophobic feeling of wearing goggles. I don't wear them in my day-to-day life and therefore it's an unusual feeling and it's an unusual feeling that takes a while to go or disappear or get mentally beyond. I mean, yes you get the heat from body armour and pads because they have a level of discomfort that goes with them because they're there to do a job, I'm often in body armour I immediately get a bit too hot and almost whatever the conditions I get home because it's not a normal T-shirt or whatever.*

The above extracts reinforce understandings of temperature as a sensory modality of touch argued by Paterson (2007). They illustrate the unique, developed, and subtle understanding riders have of cutaneous heat and how this is influenced by moisture and protective equipment. These findings also align with the work of Allen-Collinson et al. (2018) and their discussion of the temperature-touch relationship when exploring elemental and weather dimensions of sporting practice. For the long-distance runner in their study as with the mountain biker, the role of moisture either through sweat or rain, evocatively illustrates thermoceptive attunement or the temperature work riders undertake. Temperature work

according to Allen-Collinson et al. (2018) is a form of somatic learning. It incorporates dimensions of thermoception that involves thermoregulation and fine sensory attunement to heat. This attunement and awareness allow riders to make informed decisions regarding when and how they might ride their bike. An intimate relationship consequently fosters pleasure or discomfort. Temperature work and understandings of heat ensure riders can complete the trails they choose alongside reducing the likeliness of illness or injury. Application of temperature work to the comments above suggests rider possess an acute attunement to temperature and utilise this effectively to maximise pleasure during their lived experience.

Whilst exteroceptive dimension of temperature were significant for riders, they also commented extensively on the interoceptive dimension, or intense form of inner heat. During their experience of bike riding, all riders articulated a sense of internal warmth when riding. James outlined how it was important to generate internal heat to get him going and engaged in the activity:

> *James: my own body I am conscious of it overheating and I'm conscious of it needing some heat. at 8:00 o'clock on a Sunday morning I am very much thinking that I might be cold now but I'm fairly sure if I put a little bit of effort in, I'll be pretty hot in a few minutes, so that is, that can be a very satisfying internal feeling.*

This interoceptive attunement to temperature for James is viewed positively, yet overall, the riders described their experiences of internal heat in relation to discomfort and overheating. The rider's comments produce exciting insights into the significance of heat for mountain bikers and the often-drastic consequences if this is mismanaged. An example of this extension is Alan's reference to the somatic learning he has undertaken in relation to hot and cold temperatures:

> *Alan: WE DON'T LIKE HEAT. NOT WHEN IT'S TOO HOT (His emphasis). we are really not happy when it's too hot, it's really uncomfortable. in the summer it's just really uncomfortable, umm, obviously in the winter, I run fairly cold anyway, so I don't get cold if you know what I mean, I don't really get too cold so I can regulate my temperature pretty well whereas everybody else might be stripping off, I'll have three layers on whereas everybody else will have just one left. yeah, heat equals no.*

Additionally, comments from Theo, Chris and James reiterate the rider's ability to subtly appreciate temperature and how this impacts riding choices:

> *Theo: I guess when it's really hot, I'm more like discouraged from going mountain biking because it's really hot. although we did go mountain biking at Woodbury a few times when it was baking, and as long as you're moving on the bike and you had the wind cooling it down it was alright but if you stood still and you were pushing your bike up the hill then it was absolutely baking it's all about how it feels if it feels too hot then I won't go mountain biking.*

> *Chris: I get hot quite easily, riding in 30c degree heat is never really my ideal, whereas I would normally be happy riding in 12 to 15, but it's not like I can pick and choose the weather, that's the weather I find is most comfortable where you can whack a jacket on for the first part and then take it off halfway through… Yeah it's a weird one, you don't really notice it too much when you're on the bike and going down the trail, is normally on the climb when you feel hot and sweaty.*

> *James: Excesses of either can usually hinder my enjoyment of mountain biking… I don't know, I think, I genuinely don't know what makes temperature what it is. I guess it's that sort of, you know really, it's probably just kind of generally just spring weather and that sort of thing is about right for me and anything sort of above and below that is usually a bit of a chore to haul my carcass out at that point. you know, I guess you can overheat, and I suppose I've had experiences of that a little bit…*

What emerges from the comments during intense temperature work is rider's wariness of overheating. The outcomes of overheating can be disastrous for riders, impacting their immediate and future lived experiences. Theo and Chris alluded to this above and importantly outlined their ability to mediate this when riding downhill but not up. This demonstrates their ongoing thermoceptive learning, one that is partly developed but never complete.

Thermoceptive learning demonstrates an ability to offset the potential of heat to cause discomfort and James provides a vivid account of when this does not work. The below extract articulates a process of learning, suggesting during temperature work and especially in the early phases of skill development, not all experiences are pleasant or enjoyable, rather they can be arduous and cause discomfort:

> *James: I think more than anything it was a sort of dizzy and out of breath dizzy and bleary eyed, and it's probably, whether it's purely just overheating, I don't think I've ever got sunstroke through it but it will be accompanied with bonking with something along those lines and just generally, you know I've probably overheated and things, I have overheated in a bike park in Norway, that was one of my first experiences of downhill riding so I was wearing a full face helmet for the first time and all that sort of thing and I just remember that I felt really dizzy, and my heart rate was racing, and it might have been accompanied with a few things going on and it all just got a bit much and I felt faint and that sort of thing, but that sort of thing has happened but importantly I have learned from it and it has rarely happened again.*

This section has provided novel insights into the significance of temperature and heat in the lived experiences of the riders, illustrating overlooked subtilties whilst providing the first insights within mountain biking. It emerged that feelings of hot and cold can be understood as a thermoceptive sense, one that possesses an external, haptic temperature touch dimension alongside an internal aspect. The riders have outlined how the feeling of cold mud or moisture on their skin can cause discomfort and impact the riding experience. Additionally, they have outlined their understanding of inner heat and its ability to foster an intense embodiment related to overheating and uncomfortable consequences. Moreover, these experiences are not isolated but rather align with an ongoing sensory and somatic learning or temperature work that riders use to develop their thermoceptive attunement. An attunement to various dimensions of heat allows riders to make informed choices about their riding location, kit, and duration. It is important to note this learning is not finished, rather it

represents their lived experiences to this point and therefore is rarely, if ever complete. These findings present new and exciting additions to the lived experience of mountain bikers and extends understandings of the complex role of temperature within their lifeworld. The final section now moves to discuss the significance of sound for riders and the role it plays in the lived experience.

4.6 Sound, Maximum Grip and Harmony

Bull (2001) argues the role of sound in the experience of everyday life sits invisible given society's predominance upon the visual. Sound for him possesses a range of spatial and relational dimensions in his investigation into Walkman use, suggesting it plays a significant role when unpacking the lived experiences of users. In mountain biking little concerted attention has been paid to the role of sound and specifically the auditory attunement I suggest below. One such contribution from Warren (2018) reveals the role of music in riders experience. A by-product of his research on music listening during riding were findings related to sounds outside of auditory technology. These sounds form what he terms the mountain biking soundscape, and amongst this soundscape exists music and additionally sounds generated by the rider(s) such as breathing or communication, the bikes mechanical dimensions and nature.

Duffy and Waitt (2011) suggest soundscapes are not static, arguing there is a need to appreciate the soundscape as something that is interactive, spatial, and dynamic. The rider is 'simultaneously encountering, listening, giving meaning to, responding to, and interacting with silence and rhythmic and tonal qualities of music and sound' (Duffy and Waitt, 2011, p.21). Furthermore Warren (2018) argues close attention needs to be paid to this soundscape and aural attunement because whilst there exists a research lacuna, it is central to riders lived

experience. Additionally, vindicating Bulls (2001) calls over two decades ago, Warren (2018) suggests the role of sound for the mountain biker is at times more important than the visual when describing mechanical issues or malfunctions with his bike.

The soundscape of riders forms the final section of this chapter; findings from data collection reveal all riders discussed extensively the role of sound in their experience. These findings add to existing research and provide the first discussion of its type in the context of mountain biking. As a starting point, an audio clip from an observational session (July, 2022) with Chris provides a vivid overview of the array of sounds that exist within the mountain biker's soundscape and seems an apt place to begin discussion. I have chosen to select only the audio from the video recording. This decision has been taken given the arguments put forward by Bull (2001) and Howes and Classen (2013) alongside the findings so far that demonstrate a preoccupation with visual modalities, thus an ocular dimension may alter attunement. Therefore, I ask before listening to plug in a set of headphones to cancel the soundscapes that exist in your environment and to appreciate the various noises and sounds the rider is attuned to:

Figure 9 Mountain biking soundscape

Click Here

The audio recording demonstrates the complex aural soundscape of the rider and how attunement to noises is vital to ensure successful riding. What can be discerned is whilst the resonances culminate in the wider soundscape, there are distinct aural reference points worthy of discussion, including the mechanical performance of the bike, the grip of tyres, and self-talk/the other. Chris provides a useful starting point to appreciate the significance of sound in his understanding of how his bike operates effectively:

> *Chris: The sound of the hub plays is significant because essentially the louder the hub the more engagement it's got, and in the summer, there's especially one trail it dips down and shoots back up, I know I've got to pedal and knowing that my hub will engage that bit quicker means I'll get more power through much quicker and the bike will get up, and that's probably one of the key roles it (sound) plays, And obviously regulating your speed, you can sometimes see and feel how fast you're going but I think hearing how fast the hub is going plays a massive part in the experience with quieter hubs you can hear the tyres on the ground whereas with louder hubs is sort of drowns out. Essentially the way I've pictured it is that it sounds like you've got Wasps following you, the bigger the swarm of Wasps the faster you're going the higher the consequences if you do crash, and then it just allows you to, especially if you know the trail, you can build up a sound memory where when it's making that sound everything just clicks in and you just base it off that sound.*

The points provided by Chris detail extensively the aural attunement he possesses with his bike and specifically the mechanical dimensions of his rear hub. Aural engagement with the noises made by the hub ensures he is aware of subtle changes in pitch and volume that indicate speed. These noises enable him to adjust other aspects of his bike riding maximising his grip and limiting the risk of crashing. Positioned outside of sport and physical activity Chris's auditory experience represents an intimate understanding of bike by rider. His sensory attunement and knowledge demonstrate the unique role of sound in the experience of riders. Furthermore, it represents a novel insight into how mountain bikers ride their bikes and to what degree they are happy to push their limits.

Riders also noted the role of sound when seeking to 'dial in' their bike setup to achieve maximum grip or when identifying mechanical issues. Significant attention was given to the noise brakes make and how this influences the perceived mechanical harmony with the bike and consequently pleasurable riding experience. Alan discusses his awareness of squeaky brakes and how this brought about feelings of embarrassment:

> *Alan: Having squeaky brakes used to really annoy me and I would get angry. Almost embarrassing, when you're riding with other people especially, especially when thinking back to when I was a kid it was like when you were riding your bike and your brakes squeaked people who were around you would just look at you, and that was a look of there must have been something wrong with the bike rather than the bike just doing what we're supposed to do in a wet condition. now I just realize it's just part of mountain biking, everybody else breaks are doing the same so it's fine.*

Additionally, all riders discussed the significance of aural attunement with the drivetrain and its contribution to the mountain biking soundscape. The drivetrain is the propulsion mechanism, the part of the bike that transfers human energy into momentum. The drivetrain includes the pedals, cranks, chainrings, chain, cogs (cassette) and derailleur, thus any noise emanating from one of these components either provides reassurance or dismay. Discussing aural attunement with the drivetrain, Alan and James provide the following comments to illustrate the disharmony experienced when it does not work effectively, jeopardising maximum grip:

> *Alan: In terms of this chain ring, I suppose the only noise it makes is when it skips a gear. it's a real negative feeling, it's like oh here we go again I've knackered 9th gear again, it's really frustrating when it skips a gear.*
>
> *James: I would say I'm attuned to different parts of my bike, I don't really hear, I do hear the suspension but I don't seem to take a lot of notice of it, but perhaps something like changing gear, I don't think, that feeling if it hasn't quite got into a gear and it's almost worrying or clunking, or if you've gone from changing from a smaller to a larger cog and it's doing the crunching sounds, actually I probably can't*

> *feel much difference in my legs apart from knowing that it hasn't really changed gear, I can't really feel it through my body but what I can hear is that it's stressed and it's making bad noises behind me, and I will then seek to change something to correct that.*

Whilst James and Alan alongside other riders noted sounds from other components such as suspension and their subsequent responses, the two quotes above demonstrate noises from the drivetrain hold greater significance. The worry both riders articulate exhibits two overarching dimensions; firstly, for James he clearly unpacks the significance of sound set against haptic modalities and secondly, they both illustrate the importance of the aural system in their ability to internalise and consequently diagnose issues with the bike.

Whilst all riders discussed aural attunement with their bikes, importantly, no two riders perceive the same noise in the same way. Rather they perceive noises in accordance with their social and cultural understandings. Chris notes his awareness of this in his description of the aural attunement he has with his bike and the annoyance this might cause for others:

> *Chris: In terms of sound I think it means more to me in my experience then maybe others because of the type of bike and relationship I have, I don't think problems is that words but maybe clunks and rattles the bike makes, it's always been something I've got used to with the bikes I've had, I've never really actually had a bike and for someone like yourself when you ride my bike those clunks and rattles will be way more prominent then they are with myself and I think I just adjust, is like having that hub those rattles, I've just got used to or those are the noises I like to block out because the more noises and rattles it makes the more money it's going to cost, but then again I know my mate Jake gets severely frustrated with my bike when he can hear it rattling, because he's always had silent bikes, he rides a carbon fibre Canyon obviously if that's rattling, it's broken whereas if mines rattling I think it will be alright for another ride at least*

Auditory attunement plays a significant role when seeking to keep the bike moving yet it is limited to the knowledge a rider possesses. This fallibility was not discussed by all riders, but Chris provides an instance where he was not sufficiently attuned. He recognised a sound that he thought could be managed when in fact it resulted in a dangerous mechanical failure:

> *Chris: I can think of a prime example when this happened, there was a rattle that I thought was manageable and it was just the wheel bearings needing a bit of greasing, and then not much long my rear mech managed to get snapped clean off, and all I had left was a snapped hanger and a rear mech on the floor, and I thought to myself maybe that rattle was something I should have attended too, it turns out essentially the mech was just loose and then it just came free and snapped the hanger with it.*

Chris illustrates whilst riders possess a unique aural attunement within the riding soundscape, this learning is an ongoing process in their mountain biking engagement much like the temperature work discussed previously. The continual development of auditory cues related to the bike only exists through continual engagement with the lived experience. This finding provides an exciting and original contribution to the literature and is developed further in later parts of the section.

For the rider there are various biking engagements with the environment that exist but in a physical sense the bike is most often connected to the trail by two points, the tyres. It is these rubberised features that cause riders considerable issues ranging from the nobbliness of the tread to the PSI (pressure) in the rim. It is often assumed the visual takes precedence here, *if I can see that I have bigger nobbles then the tyre must be right for softer ground*. Moreover, *if I can haptically sense through tactility the pressure of the tyre is where it needs to be, then I must be able to ride hard and find grip*. It is not my intention to counter these points, especially given the earlier discussion of tactility and its centrality as a haptic modality. Yet I

want to extend understanding to appreciate sound's role. James provides a starting point to appreciate the interplay of tactility, vision, and sound in his recounting of a wheelie:

> *James: Ooh tyre wear and whirr, and I probably use that more, there's probably noise and it is a bit like tyre whir, that's a part of what I'm sensing, let's say when you do a wheelie, but thinking about it there is probably, I am probably almost listening to what my tyre is doing as much as I'm feeling and watching to ensure I maintain that balance point whether it is to accelerate or break but to maintain that wheelie. so yeah, that's a nice example of how I might use sound. with these questions, more you think about one thing the more things that pop into your head… I would absolutely agree, what I'm saying is that it absolutely makes sense to me that to do a wheelie or to do anything on a bike you were using a lot of your senses and I totally feel that I'm probably using my ears as much as I'm using my sight.*

James illustrates the intricate interplay of sound, pressure, and balance in the experience of pulling a wheelie. In this instance the whirring sound the tyre makes, a reference to the friction created when the tyre and the trail move against one another, produces a distinctive sound. Success when performing a wheelie is predicated upon finding the centre point between (de) acceleration. This unique sound allows James to appreciate the tyre speed and adjust the body accordingly. Alongside the whir from tyres when performing manoeuvres, all the riders expressed the central role of sound when finding the smoothest line on the trail. Chris and Alan explain the aural dimensions of cornering and the interplay between sensory feedback when finding grip:

> *Chris: There are some bits where it's very steep and loose, and all you can hear is the rocks bouncing underneath your tyres and your tyres trying to grip. You hear them (tyres) bite into the dirt, which sounds like a bit of a soft crunch depending on the dirt, if your tyres are running too soft you can hear the tyre burp when the air comes up and out, and any clunks I know the noises my bike may make and all the rattles.*

> *Alan: when they're (tyres) not gripping you can tell because the sound is a lot quieter, I guess, when they're sliding, they just get loud, you can almost hear it digging in… you get the same kind of sounds when you come out of berms and stuff. You always get that same sound when the tyres digging in and you go around the corner, you know you're going fast and can be confident.*

For Chris and Alan, the noises made by tyre and trail provide an invaluable insight into what is going on beneath them. For Alan the louder the sound from this interplay the greater confidence he possesses to push his riding. Confidence because of aural awareness provides a further addition to the soundscape of riders and permits an aural attunement that aids their grip upon experience. Additionally, it acts as sensory safety net for the riders, providing aural feedback that allows riders to calculate decisions about the degree of risk they may take.

The final aspect related to sound is the *other*, something heard in the audio excerpt in this section. For Bull (2001) and Warren (2018) the sound of the other was something mediated and often drowned out using music technology. Thus, the role the other might play in the lived experience of someone walking down the street or a mountain biker riding a trail has been underexplored. The study fills this small but significant lacuna initially and then builds upon it in the fourth findings chapter. Therefore, to clearly separate these sections, the other in this section is only discussed through the noise made and not the social and cultural significance of the sound and language experienced. Theo provides a helpful introduction into the significance of sounds made by other riders on the trail, articulating in relation to self-preservation and wellbeing of other riders:

> *Theo: I'm always listening out for the rider behind. you don't really know how far they are behind you all the time and you try really hard to hear sticks breaking to be able to know how far they are behind, I guess you just trust they're not going to hit into the back of you, I think there's an element of trust there because you know they're good enough and you're good enough and therefore you're going to be OK. Conversely you*

> *try and listen out in case they crash, like when you crashed, I heard that sound I was like oh no. There was that sort of gut wrenching feeling that I knew you'd had a big crash and were hurt.*

Theo outlines a key dimension of the soundscape involves an aural attunement that ensures he appreciates where other riders are and how they are doing. Specifically, he discusses a crash I had during observation where I was following him down a trail, misjudged a six-foot drop and ended up severely injured. Without an aural attunement to other riders, he would have likely ridden off unaware of my plight. Conversely for James, the noise made by others on the trail and beyond enables him to feel reassured and pleased:

> *James: … another sound I think is probably pretty important is actually the sound of other riders, particularly other people enjoying themselves, I reckon, that can have a pretty massive effect on me, especially on a social ride. I think it helps to bring out the enjoyment and it transfers to me, if we were riding together and I can hear you whooping or doing whatever, I think that's great and that's good and I'll get a real buzz from that… I would say human noises are part of the mountain biking experience for me, not always because clearly, I ride on my own sometimes, you can throw in all sorts of things.*

For James the noises made by other riders provide him with a sense of pleasure and they play a significant role in his lived experience. Using this finding alongside the comments from Theo allows me to reveal a unique and unexplored dimension of mountain biking. Often taken for granted and just part of riding, sound from various sources is central to riders lived experiences.

The section provides opportunity to understand the role of sound in the experience of mountain bikers. I have established novel findings related to the intricate awareness and attunement riders have with the noises around them. As I have termed the mountain biking soundscape, attunement with the diversity of aural stimuli provides novel insights into how

riders facilitate maximum grip and recognise when it might be lost. In addition, there exists a range of subtle sounds related to tyres and the *other* that are significant dimensions of the soundscape and play a noteworthy role in a rider's lived experience. Attunement to these sounds enables riders to push harder and take more calculated risks, whilst monitoring the wellbeing of themselves and others.

I have demonstrated that whilst an awareness of the soundscape is central to the riding experience, knowledge related aural attunement is never complete, rather it reflects the experiences had up to this point. Excitingly, I propose parallels between this sound work and the concept of temperature work I deployed in Section 4.5. In the context of sensory knowledge, findings suggest a somatic learning undertaken by the riders that involves interpreting and making meaning of sound, seeking to push bike riding further alongside limiting the potential for injury. The learning undertaken and the delicate attunement to sound is something developed over time and through riding encounters, it is much like that of temperature. As Chris noted, once he had heard a mechanical sound for the first time and experienced the consequence such as failure, he was aurally attuned to this in future riders. Additionally, given the predominance of findings suggesting sound can be at times a primary sensual dimension and at least regarded as equal to others such as vision, I reassert a reprioritisation of the senses be considered. I am not naive enough to suggest vision is obsolete, of course it still has a central role in the hierarchy, however I have demonstrated there is a need to reconsider our sensory worlds and how they are structured.

4.7 Chapter summary

In this chapter I have discussed the lifeworld of mountain bikers by examining specific sensory modalities related to touch, heat, and sound. The intention was to present a vivid and introductory chapter providing access for readers to appreciate the sensory dimensions as they exist often independently. In the first section I presented the various modalities of haptic touch, from external sensations upon the skin to internal, somatic sensations such as pressure. The findings allow me to display a new way of understanding the of role haptic touch beyond cutaneous contact. I have demonstrated the significance of internal haptic dimensions alongside kinaesthesia and proprioception. These findings illustrate that when on a bike, the riders experienced a complex interplay of multisensory stimuli that allowed them to navigate encounters on the trail. Ultimately, I have demonstrated the intricate role of touch in the mountain biker's lifeworld and its centrality in the rider remaining upright.

In the second section, I present novel findings related to temperature and the somatic learning riders utilise to navigate the perils of being too cold or overheating. I have presented the first thermoceptive insight into the riding experience, one that plays an important role in shaping the lived experience. Findings articulate the subtleties of temperature and how this acts as a gateway to riding, actively shaping the experience on the bike. Furthermore, during heightened temperate experience riders became acutely aware of how far they could push their bodies and under what conditions. Engagement in these experiences developed a somatic knowledge or temperature work that stuck with riders for future rides, permitting an awareness of when they were getting too close to overheating for example. By applying the conceptual framework to thermoceptive dimensions of lived experience, the research provides unique findings within mountain biking and offers potential for future research to explore this further, especially in elite riders.

The chapter finishes by presenting findings that illustrate the role of the aural system for riders and how this sensory modality is vital to the experience. Drawing upon audio from observations alongside transcript findings, I have demonstrated the importance of the aural system in the experience of riders, and how it often overrides all other sensory modalities. Utilising ideas related to soundscape I have demonstrated riders' awareness is aurally attuned to a diverse range of sounds beyond those of their body. Their engagement with the soundscape offers them unique opportunities to understand their own riding proficiency alongside the mechanical performance of the bike. Furthermore, through the deployment of the conceptual framework, I present a new way of understanding the aural engagements riders have on the bike and liken this engagement to the thermoceptive knowledge they possess. I propose riders undertake sound work, an aural learning that develops experiential riding engagements and permits an intimate understanding of the riding experience. Whether this be the sound of others in trouble or an imminent mechanical failure that might provoke danger, findings related to sound work illuminate further the depth of riders lived experience.

The chapter then has provided several aspects exhibiting the role of specific senses in experience. Additionally, through the conceptual framework and specifically work on the senses, the research has provided original contributions that require at the least, a rethinking of the taken for granted sensory hierarchy that dominates Western thought. These findings permit a new way of understanding the lived experiences of mountain bikers beyond going down trails very fast. This analysis extends the framework by presenting novel applications of current research on haptic, thermoceptive and aural encounters and proposes new concepts to be utilised in future research. Additionally, the chapter responds to the research questions by presenting key sensory dimensions of the lifeworld of the mountain bikers and their role in the lived experience. Discussion clearly responds to research questions one and two to

suggest the body and senses have a significant role to play in the lived experience. Additionally, there exists a vital interplay between the body and the senses that ensures maximum grip. The next chapter presents findings related to the pleasurable dimension of the riding experience, offset with feelings of fear. To do this, I layer various senses alongside concepts drawn from the earlier framework to present the sensorium at work. This will extend the understandings for the reader and paint at times a fuller ‘sensory picture’. During these discussions I ask the reader to open their imagination further, embrace the unfamiliar and imagine yourself as the rider or at least on the bike with them (Read, 2023).

Flow, Fear, and the Senses

5.1 Introduction

Discussed in the Literature Review, flow theory, proposed by Csikszentmihalyi (1975) is one way to understand euphoric and pleasurable experiences broadly and in sport specifically. At its core, flow theory is concerned with rewarding intrinsic dimensions of experience and the interplay between skill and challenge to bring about mastery. According Csikszentmihaly and Csikszentmihalyi (1988) mastery refers to the process of gaining a high level of skill or proficiency in a particular domain. Mastery occurs when an individual's skills are well-matched to the challenges they face, creating an optimal experience. This balance is essential for entering the flow state. To date the understanding of mastery in the context of flow has been structured around key indicators proposed by Csikszentmihaly and Csikszentmihalyi (1988). This can be seen in the only research undertaken in a mountain biking setting by Taylor and Carr (2023) who explored the relationship between flow experience and motivations to ride.

What they and more broadly researchers deploying flow theory in and out of sport have negated to explore is what role the body and senses play when seeking mastery. Specifically, research to date has not covered how the thinking body, one that can operate unconsciously and utilises sensory feedback, governs the likelihood of flow on the bike. During data analysis it emerged riders possess an acute awareness of the pleasurable experience had on two wheels. For riders it was this optimal experience that was important, therefore it is key to understand how pleasure plays a role in the experience of riders.

In the below chapter I extend current understandings of flow theory by applying it in a mountain biking context. This reveals the significant role of corporeal and sensory dimensions. To achieve this, I uniquely couple phenomenological concepts of habit and maximum grip with indicators of flow such as unconscious control. Blending these concepts provides a unique set of lenses to view the optimal experiences of mountain bikers. The findings deepen current understandings of euphoric experiences and allow me to reveal why and how mountain bikers embark on a quest to find flow. Additionally, the role of Merleau-Ponty's habit and maximum grip reveal how familiarity and a skill/challenge balance foster greater opportunities for mastery and subsequent flow.

I have arranged sections to focus upon the rider's search for flow, the relationship between challenge, skill and fear in search of mastery, and the role of trail characteristics and type. I develop one specific indicator of flow, unconscious control, to deepen exploration of the unique and often pre-reflective experiences. Throughout discussion an appreciation of flow and habits are in concert with a multisensory interplay. Overlaying the active sensorium reveals original insights into the holistic nature of flow. What emerges is an intricate discussion of riders flowy and habitual experiences, their desire to mediate fear and how the senses are significant in this experience.

5.2 Flow, Habit, and Sensation

According to Taylor and Carr (2023) flow is a highly complex state often difficult to articulate from the perspective of the experiencing subject. The difficulty lies in the ability to recall and describe at times euphoric experiences beyond the grasp of language. For Safvenbom et al. (2018) expression is made increasingly difficult because in sports such as mountain biking riders tend to understand flow but find it very difficult to articulate it. Whilst

this may be the case in other research, it was evident from the findings flow was something experienced by riders and they felt able to communicate their experiences with clarity.

For all riders flow emerged as a significant dimension of their lived experience. All participants discussed how this optimal experience was something they encountered with varying degrees of frequency. The following collection of findings provides insight into the flow experiences of riders and their articulation of flow. This is important as it affords the riders understandings and interpretations of what they are experiencing. To begin Alan offers a vivid example of his experiences of flow highlighting key aspects of mountain biking that increase the likeliness of finding the optimum experience.

> *Alan: some of our favourite trails you hit again and again and again and again, and you get to the bottom, and you think that felt really nice, that felt flowy, really fast and really smooth. The run I'm well known for, when I did the fastest time according to Strava (laughter), I was playing rather than trying, relaxed, smooth and quick, so getting into that flow, when you get to that point where you're so relaxed, you can do anything.*

Theo extends understandings of flow suggesting his sense of flow is closely aligned with the trail grading and specifically the lack of jumps or drops. For Theo the need for speed and technical aspects is paramount for optimal experience.

> *Theo: I like a fast flowy trail, red or a blue where there are no jumps or drops, if there are drops, they are small, and tiny jumps… I will actually put myself in a bit of danger and go quite fast on it, but there is not that cognitive process of whether I should do that or not, it's more physical and I will sort of know whether I can or I can't and people of have said that like I go quite fast when I am doing that sort of stuff.*

For James his understanding of flow is closely aligned with his riding ability and time spent on the bike, discussing how more frequent riding allows him to push his speed, something key for him finding flow:

> *James: I think also just generally when I probably perform, just a note I am not a sports rider as such and I am not into racing, but I know when I have done some of the better things I have done, I am going fast and keeping up with people. That is probably the closest I get to flow or the term flow state. So yeah, but that's probably time on the bike that does that mostly. Can I also throw into the mix, in those states, I probably progress my riding more than any other time, so frequency, flow state or whatever label, and the progression comes easier, it just feels easier, albeit I am still at a mediocre level, but my progression will come on quite well with that time.*

Whilst all riders discussed flow, their focus and detail varied. This is no surprise given the individual nature of mountain biking and the range of riding proficiencies. Yet key aspects to emerge were discussions of habitual practice (Merleau-Ponty, 1962) and unconscious control (Csikszentmihaly and Csikszentmihalyi, 1988). Below I uniquely combine the indicator of flow with the phenomenological concept to illustrate how the rider and the experience interweave to become one. Alan and Theo illustrate their interplay when discussing understandings related to muscle memory and instinct. They describe their unconscious control as a corporeal knowledge that can be drawn upon when needed:

> *Alan: And because I've been riding for so many years, I just have that feel and my body understands what to do. I had a front-end slide in the race, and I realized very quickly my body told me that I wasn't going to fall, so I dabbed[put a foot down], I was ready for it and expecting it and if it didn't happen, I would have been fine, and because I was ready for it, it wasn't a problem either.*
>
> *Theo: Yeah, so that's definitely that sort of riding I enjoy the most and its sort of like, when I'm doing it I'm not thinking and it becomes very instinctual and muscle memory, you sort of trust your body knows what it is doing and you sort of do it, and it's much more enjoyable like that because you feel more in the moment and you feel,*

> *less like in your head worrying about stuff, worrying if you can do it, and thinking about. It is sort of like, much more like a fun style of riding for me.*

Alan and Theo demonstrate the role of corporeal knowledge and instinct when riding in a state of unconscious control something that can be attributed to the development of habits overtime. These findings illustrate how mountain bikers encounter a heightened corporeal experience when riding by instinct, positioning the mind on the periphery. Additionally, findings demonstrate phenomenologically the centrality of movement as a form of consciousness. Theo and Alan articulate the intelligent, active body, a body acting unconsciously. A body riders note deploying muscle memory and habits through prolonged engagement with riding. Alan and Theo were not alone in their description of unconscious control as James also discussed this. His description of unconscious control focuses on a wholeness with the bike and how this allows him and his equipment to just *do* the activity rather than thinking about it.

> *James: Yes, I think I have encountered it and can conclusively say I have. Thinking of a good example, the feeling of being as one, usually comes from when I have spent a bit of time on the bike, so you know, there has been a bit of break at the moment so when I get on to the bike next it is going to feel a little bit clunky and a little bit forced, but it doesn't take long and it generally can feel really good. I think there is, yeah, it is a confidence thing, it's a time thing, I don't think I have to force myself to think 'oh I must do that thing here', I think sometimes I can be, in a limited scope, please don't be thinking 50 to 1 rider here (laughter), but sometimes I think I can be creative, I can see lines, opportunities, things to mess around on, that I will find really rewarding, and that is a really nice thing, and I will perhaps look at something in a slightly different way to another rider I am with or someone else, and that feels good.*

James illustrates the importance of frequency of engagement with the bike and trail as central to creating rich conditions for finding flow. This notion of frequency represents a unique way that I can utilise the concept of habit. Early experiences on the bike for the riders represent a continual, reflective dialogue, where their body develops intimate understandings of the

equipment, trail, and experience. This happens to a point until they take little notice of the bike and trail because they are so used to it. Chris extends understanding of habit and supports the description of James suggesting frequency not only relates to the time spent on the bike but also familiarity with the trail itself.

> *Chris: So, with like trails I've ridden loads, without even really thinking about it I know how to move the bike in a certain way if I need to compress it, if need to pump out of it to get over certain bits. For instance, one trail in Loo, I know if you take the lower line, it's so much slower, whereas the highline there's roots but if you can hop over them, that's a line I usually take so that's just something I do a second nature really, and I think it's just something my body does and the bike is part of that. whereas if I'm riding a trail for the first time, I will probably have to do things a few times and realise that I can't do that. I think it definitely comes down to muscle memory because my body knows what it needs to do and just does it, and the brain and the mind is just in the background.*

The unconscious state Chris and James highlight aligns with flow theory's notion of mastery, whereby they have developed a comprehensive knowledge of riding permitting them to finely balance the skill and challenge of the activity. Additionally, this state also represents phenomenological understandings of habit, with riders demonstrating a continued engagement with riding that has developed habitual knowledge and proficiency. They detail in their own words the importance of muscle memory and how that can be enhanced or depleted due to time spent on the bike. It is muscle memory or corporeal knowledge that permits opportunity to find flow and optimal experiences. Flow is not constant in the experience of riders and is often fleeting for the mountain bikers. For all the riders flows fleetingness is often localised to a specific part of the trail or riding location, unsurprisingly these are often the ones most familiar with. Chris describes how flow may only occur once during a ride and extends to suggest this makes a rough ride all worth it.

> *Chris: It can be just such a small snippet of the ride that makes the ride so good, I think doing something that gives you that buzz just once during just one mediocre ride, makes it into one of your better ones.*

Taylor and Carr's (2023) findings suggest flow is a state easily accessed when completing big or challenging features such as jumps or drops. Whilst this may be the case for some riders in some instances, it did not emerge as a rule for those in this research. The divergence of the riders from popular thinking rejects the thrill-seeking rider depicted in the Introduction and represents an important nuance to the lived experience of recreational riders. Theo notes his experience of completing a drop that did not facilitate flow, rather it facilitated immediate reflection:

> *Theo: Yeah, I actually remember that drop, and I think it was for like, I did it, but I didn't feel like I knew why it worked, it worked but I thought I don't think I could do it again because I would fall off the bike. I didn't know why it worked, I didn't feel like I learned anything, and it felt quite frustrating and although I had done it, I wasn't sure why it worked and if it was just chance that I had somehow done the correct thing. I didn't really like not knowing why it worked or not.*

Theo suggests he was pushing at the very outer limits of his skill when in an unconscious state and had not developed habitual knowledge of a drop. Upon completion of the drop, he could not comprehend what had happened. This disruption of his unconscious state demonstrates he did not possess the corporeal habitual knowledge required to understand nor continue riding. The encounter was a first, acting as a developmental learning experience likely to contribute to skill mastery and habituated practice in the future if pursued. Other factors such as preoccupation with time or competition can inhibit flowy experiences. Voelkl et al. (2003) asserts when riders alter their focus of attention to reflective, social, and cultural dimensions of experience rather than the immediacy of their activity, flow state is likely to be

inaccessible. James notes how the pressure of racing acts as an external distraction that limits his opportunity for flow:

> *James: it's competing, it's the beeps, it's Red Bull TV following (laughter), it's the camera, it's the interviews, no. I don't know because I'm only competing with myself generally, aside from maybe a small marginal rivalry with friends or something like that but basically, I'm not trying to prove anything to anybody else apart from myself. For whatever reason it just doesn't happen for me, and I don't think, I just get tense and end up in survival mode, and very rarely have I ever been in a flow state. Which is probably where I need to be if I want to be successful in these races. For a stupid man I've got a lot going on in my head*.

The section illustrates the relevance of flow and demonstrates the important role flow plays in the lived experience of riders. I discussed riders' awareness of unconscious control and the significance of frequency and familiarity in finding flow. The aspects of frequency and familiarity created the opportunity to integrate habit to deepen understanding. Consequently, discussion revealed a relationship between unconscious control and habituated corporeal knowledge possessed by the riders that facilitated mastery and flow. One specific aspect of mastery that emerged was the important role of the senses in finding flow. The senses operate in unique ways to bring about euphoric experience. Therefore, in the next subsection discussion of the role of the senses is pursued to deepen understanding.

5.2.1 The Search for Smoothness: Senses and Flow

> *Ben: Some people might say mountain bikers can be weird sort of people and what I mean is when we hit drops or we hit jumps, we might complete the feature, but it doesn't feel like we've done the feature because of the sensations that we get. Could you tell me more about that?*
>
> *Alan: um, I would say it's how smooth it feels, so it's like when you're down at the bike park and you hit the tables first for the first couple of runs. You are chasing them, so you're landing half on top of them, and you haven't really got that flow, that's the word I've been looking for, the flow comes, the smoothness. So rather than being*

> *juddery and erratic it's smooth and fast, and then when you get to the bottom you think oh, I've smashed that and let's do it again. I got the same sort of flow at the bike park that I do on natural trails, particularly some of our favourite trails you just hit again and again and again and again, and you get to the bottom, and you think that felt really nice that felt flowy, really fast and really smooth.*

In the above Alan captures his experiences on the bike that have elicited flow. What emerges from this dialogue is the significant role of trail smoothness, something offset against the alternative of erratic, juddery and lumpy trails in his experience. The search for smoothness of trail is something all riders discussed during interviews and was captured through GoPro Max observations and fieldnotes. It was often a key feature in their location/trail choice, and a topic of conversation. Taylor and Carr (2023) and Brown (2017) suggest trails eliciting a smoothness or weightlessness were those classified as flowing singletrack; smooth trail surfaces that did not disrupt the riders speed or momentum, often enhancing it as they proceed.

Existing research has discussed the importance of smoothness in the lived experience of riders; however, no exploration of the smoothness's sensory dimensions exists. Findings from this study fill this gap and suggest vivid sensory modes related to smoothness that are positioned within the haptics of mountain biking. Chris in his description of smoothness provides a starting point to explore the haptics of the experience suggesting:

> *Chris: I really focus on feel when trying ride smoothly, and I know if I have done this well because the impact isn't as harsh when you land, it feels a lot smoother, I think it's one of the hardest feelings to explain but you'll know, when you take off and land perfectly on the landing, it doesn't feel like you've been bucked off the take-off or you case the landing, it's something that I find really hard to describe because it's one of those feelings you have to do it to feel it. To be fair if I'm describing it for somebody who doesn't mountain bike, it feels a bit like a rollercoaster, it sort of feels like your weightless or that the bike is on rails, it goes where it's meant to go and how it's meant to be ridden, but with my skill level that's normally not how it goes and if it does that is usually pretty positive.*

Chris reinforces earlier comments that centralise the search for smoothness and deepen understanding of the haptic sensory dimension. For Chris tactility and feelings of pressure whilst not overtly noted are central to the feeling of smoothness. Recounting the landing of a jump, his description of a smooth take-off and landing is akin to riding the trail as if there was no gap or jump at all, rather it was if *the bike was on rails*. For Chris and Alan, to achieve smoothness and subsequent opportunities for flow, there needs to exist a constant pressure between bike, rider, and trail, one that limits erratic topography in favour of consistent trail conditions.

In addition to tactility, the vestibular and proprioceptive modalities were highlighted by riders as a significant part of feeling the smoothness of the trail. The vestibular system was highlighted by riders as a significant modality when discussing the smoothness of the trail and speed, emerging as a significant dimension of the flow experience. Riders were deeply concerned with ensuring they enter specific aspects of the trail at the correct speed, therefore an attunement with the vestibular system is vital. Theo provides an illustrative account of finding flow and the centrality of speed, something offset against the opposite, having to pedal to get over roots and rocks, devoid of smoothness.

> *Theo: It's just like a feeling of flow and just like and feels like really satisfying … you are not like doing anything special or anything challenging necessarily, built it feels just very satisfying, then there is the element of adrenaline which feels good as well, and especially, if you don't feel like you are in danger too much but it's like element of speed and stuff. Yeah, I guess it feels exciting and sort of, yeah like a bit of buzz. It's sort of hard to put into words. There's something unsatisfying sometimes if it's you're having to pedal over roots and rocks and put lots of energy into it. That can be more of a pain than anything else. If you're going downhill and you keep your speed and you're just gliding over this sort of stuff on a full SUS and it's absorbing it all up, it feels great.*

Theo's overview illustrates how the sensory perception of speed through the vestibular system, enhances the likeliness of achieving the flow experience for riders. Importantly, the findings demonstrate a harmonisation between the vestibular system and trail for these riders is closely aligned with their mastery of mountain biking. Therefore, the experience noted by Chris, Alan and Theo represents *their* mastery and skill level, rather than being homogenous.

This sub section provides findings that illuminate sensory dimensions of flow, one that relies upon the unique haptic interplay between rider and trail. The role specifically of tactility and the vestibular system in the sensory, lived experience of riders is significant given the relationship between mastery, smoothness, and speed. For the rider's smoothness of the trail or more appropriately the absence of undulating, textured trails were central to increasing the likeliness of finding flow. Furthermore, the responses from riders that include an appreciation of the sensual dimensions of the experience are novel and the first of their kind. Whilst a coming together of rider and trail are vital for a flow state, and the significance of the senses is high, for most riders this is offset against the importance of challenge and fear proposed by specific trails. Consequently, this offers an opportunity to reorient the role of the mind and body, and in the next section I bring the mind to the fore. I discuss findings related to challenge, and skill, alongside the feeling of fear.

5.3 Challenge, Skill, and Fear

Much attention has been paid to psychological dimensions of challenge and skill, and Taylor and Carr (2023) assert mountain biking provides a rich context to explore this. Whilst this project is not psychological in nature, I have sought to pursue the affective dimension of habit noted by Merleau-Ponty (1962). Therefore, discussion of rider's experiences of challenge and

skill is worthy here, given it emerged as a significant sub theme of flow and is a significant aspect of the riders lived experience.

For all participants during riding, they were often engaging in a subtle interplay between the trail challenge and the skill mastery they currently possessed. James notes the difference in degree of challenge posed by his local woods in comparison to a bike park. He highlights the intimate familiarity and habituated knowledge with his local woods, allowing him to appreciate every trail angle and curvature. This permits a comfort and mastery when riding within his skillset, with the level of challenge well within his competency:

> *James: I also know my local woods really well, I know exactly what that jump, drop or whatever looks like, and I have probably looked at it a dozen times and from all different angles. Whereas at Bike Park Wales you are just following a trail down and you do not know what is coming around the next corner and I don't go there often enough to know it, as with all these things it is complicated.*

For Theo this mastery is also found when riding trails he is familiar with. He outlines the successful balance of challenge and skill and the consequent flow experience. For Theo a key dimension of challenge in this experience was the duration of the trail and possessing the requisite skill mastery to overcome it:

> *Theo: yeah, so this is really good trail at Café side, it started all the way at the top and it start at D2, and you could bomb it all the way down and it was all really steep. It was like a good few minutes of downhill descent, really fast all the way. It was really fun and really flowy, you were never bored or like it was just really good and there was something about it being so long, it was long enough that you properly entered a different mode and you were so in the moment for two or three minutes, it felt different to like doing a small descent, almost like you were in that mode to operate even though you weren't in that mode for too long, you felt like everything else would just go away and after you got to the bottom it was like everything else will go away. whereas a smaller trail gives you a smaller buzz, but it doesn't allow you to get as such an ear-to-ear grin.*

For James and Theo getting the right balance between challenge and skill ensures the likelihood of finding flow is increased. Whilst all riders articulated their experiences of harmonising challenge and skill successfully, they all provided detailed accounts of when this was not apparent. According to Martin and Priest (1986) in this situation participants often experience boredom or tragedy because the challenge is either too low or too high. Riders discussed their experiences of specific trails lacking challenge and subsequent boredom. Theo presented instances on the bike where he was daydreaming and continued to offset this against encounters with features that were too demanding, culminating in a description of when challenge, skill and mastery were reached:

> Theo: *if it's too easy, I won't be as present because I will be daydreaming or something (Laughter), I will be daydreaming if it's just a wiggly blue run or something. And if there are too many features, I will be worrying about whether it's actually ok to hit, I won't be able to fully relax into it, and what's around the next corner, is it going to be a jump that is beyond my skill level or something. But when it's a steep, rocky, descent, I know what I can do in terms of that, and I just sort of pick the line sort of subconsciously.*

A lack of challenge or boredom was less present than the contrair fear, with fear taking up a significant element of the riding experience literature (Hagen and Boyes, 2016; Brymer and Schweitzer, 2013). Brymer and Schweitzer (2013) suggest fear is the most associated emotion with extreme sports, noting it stems from the potential physical destruction of oneself. Specifically, they suggest fear experienced as an adult brings with it a social and cultural dimension associated with responsibility and acceptability. A consequence of risky activities such as mountain biking is the assumption participants are fear hungry, taking unnecessary risks. Yet as I demonstrate in the commentary and video below, this is far from the case.

Fear was something given the upmost respect because all riders understood the consequences of living up to the stereotype, pain and injury. Additionally, much of the literature approaches fear from a psychological perspective, however I uniquely contend fear can be felt. I demonstrate through sensory and embodied accounts the corporeal manifestation of fear amongst the riders. As a starting point, I draw on a video excerpt from Theo. In the excerpt he and I firstly discuss a rocky descent with a drop and then separate to start a trail at different points. What emerges is an intricate replay of Theo working through his fear of riding, firstly with another rider present and then out of the purview of other social actors.

Figure 10 Theo grappling with fear

(Click here)

Displayed above is the visceral experience of fear and the whole corporeal consciousness of what is to be undertaken. Leder (1990) suggests in the context of pain and sensation when we encounter pain the body dys-appears or is placed at the forefront of thought. The video demonstrates the antithesis of flow discussed earlier. Theo has not developed habituated knowledge or mastery of the trail and is fully immersed in overcoming and reflecting upon fear. Theo's mind and cognition have taken precedence in the lived experience, engaging in self-talk, replay and contemplation of risk. These findings represent an original contribution to the literature and uniquely demonstrate the complex interplay riders undertake when switching between pre and reflective states.

The role of fear in the lived experience of all riders was discussed with significance, all highlighting a similar relationship with representation and reflection. Alan notes how the mind takes full control of the body suggesting:

> *Alan: My body is less fluid, not to the point where I can't actually do anything, but I'll come up to it and literally, and your body and your brain just go no you can't do it but mainly my mind. It's almost like a switch just says no don't do it, I can't do it.*

Chris reinforces this describing how reflective thinking and the mind act as worrisome thoughts that focus on the negative consequences:

> *Chris: the overthinking side is something I get when I'm mountain biking, sometimes I'll ride into something, gauge the speed and then I'll just do it, but then sometimes I'll be sat at the top rolling in constantly and just won't do it because I will think I have crashed in a jump like that two years ago. I should think well this isn't that jump I should be able to do it, but I'm thinking about I've got work or uni tomorrow and that plays a really big role.*

The comments demonstrate the interplay of the mind and body when riding and how fear can paralyse some riders. Importantly, from a sociologically sensitive phenomenological position the riders are experiencing a preoccupation with their perception of risk and the socio-cultural influence upon this perception. In these instances, riders are not drawing upon their habitual knowledge or intelligence in a pre-reflective way. Their mind instead is subject to social and cultural forces that influence their perception of the feature. This is something that can be clearly seen in Theo's video. Whilst he was unable to ride the chute he painstakingly agonised over, he can be seen riding over similar terrain and gradients. This reinforces the centrality of the body and its habitual knowledge in the flow experience of riders.

Whilst fear for Theo was too much and he rode away, Chris and James demonstrate a negotiation that can exist. For the riders they suggest successfully negotiating fear is a key part of their lived experience, especially when they overcome it.

> *Chris: Fear is a really weird one and I really link fear with adrenaline, I'm really scared of heights, but I love going climbing because of the adrenaline rush that you get from it. so, if I'm doing something I know is a little bit higher than my skill level, rolling into it (the jump) I'm nervous, I'm worried if I'm going to make it or not, the second your wheels roll out of it, next second is the relief, rather than being like cool I've made it, it's like thank goodness they've made it.*

> *James: if I want to really clear it (a big jump) and I've looked at it a few times and I think I then have a little debate with myself as to whether it's a yes or a no, or maybe when I'm coming down a trail and I encounter a no turning back obstacle and you have to go over it and you don't know what's the other side of it and clearly that's a properly visceral fear thing. There were definitely obstacles, whether it's at our local woods or bike park Wales or places that I have been before that I've looked at and they just scare me, make my knees go weak just looking at them. Conquering some of those fears and I know I have definitely ridden a few of those obstacles now that we have encountered and I have walked away before, and I have now ridden them and that's such a great feeling,*

Chris and James describe whilst fear is a prominent part of the lived experience, it can be overcome and mastered, the outcomes of which bring about feelings of relief and joy, but not necessarily flow. It is worth noting, it was jumps and drops that were the focus of all participants when discussing fear and this aligns with the findings from Brown (2017), Hagen and Boyes (2016) and Taylor and Carr (2023). This may represent the socially constructed nature and sub cultural focus equating jumps and drops with successful riding and fear. Outside of the occupation with the cognitive dimensions of fear, riders also provided accounts of the sensorium at work, a distinct set of sensations that represent fear.

Whilst I have noted an ocular occupation signals a limited understanding of the overall mountain biking experience for riders, it aligns significantly with the rider's articulation of fear. All riders noted through their recollection of fearful experiences that it was the sight of a challenging obstacle that triggered fear. A delineation of senses and acute awareness of which senses are at work provides a novel insight into broader sensory research. Theo illustrates the interplay between the remembering mind and sight when articulating a fear response:

> *Theo: I just get like a fear response, because I have really hurt myself biking before and I think my body remembers as does my mind. So, when I see something and I am not entirely sure even though I could probably do it, I will get this big fear response.*

Chris reiterates this describing specific features that are at the outer limit of his mastery and how sight acts as a trigger of fear:

> *Chris: even in the build-up to a ride, if I know I want to hit something I already know that I am going to be a little wary and scared to do it, and then you get there, I think you realise that when you get there and see it, it is bigger than you think and conditions aren't right, that's when I think it (fear) really starts to kick in.*

Theo and Chris illustrate the role of vision in the complex relationship with challenge and fear in mountain biking. This finding is not represented in the mountain biking literature and therefore fills the research lacuna. A further addition to understandings of the sensorium at work during fear experiences was the internal sensory responses triggered by outward sight. Specifically for the riders the proprioceptive tension felt in and across the body was a significant outcome of fear. Alan discusses his experiences of muscular tension:

> *Alan: It's like a switch going no! It's like saying no I'm not doing it; I suppose a freeze up a little bit.*

Theo extends tensing and freezing up, describing the intricate relationship between the mind and proprioceptive sensations in his body and muscles:

> *Theo: I guess it's like, feeling your diaphragm tensing up, I think for me it's quite mental as well, I sort of internalize it as wall, I sort of, I really want to do this because it will feel really good and then I don't know if I should do it and then I begin to over think it. Then I sort of turn it into a bit of like mental sort of problem when it's just like, I'm just scared of it because it could hurt me and that's probably quite reasonable, so, yeah, I dunno really, yeah.*

It is clear the sensorium related to fear involves a relationship between outwardly, exteroceptive senses such as sight acting as a precursor to interoceptive, somatic feelings of tension. The riders demonstrate when outside of the flow state and lacking habituated knowledge, the mind and consequently vision are at the forefront of experience. In unison riders seek to continually negotiate and limit risk for fear of injury. This complex back-and-forth is a significant dimension of the lived experience of riders, and one not discussed in the literature. It demonstrates the stark differences the senses play when negotiating challenge and mastery in mountain biking. Findings also extend current understandings, adding a

unique dimension to calls from Brown (2017) to explore the aesthetics of mountain biking beyond visual representations. Findings add needed depth and demonstrate how risk and consequently fear act as mechanisms that elicit a reaffirmation of vision and cognition as the dominating aspects of experience.

5.4 Chapter Summary

The chapter provides a unique insight into the positioning of flow in the rider's experience and how riders understand the momentariness of these feelings. The first section discussed the rider's awareness of flow and how they represent the feeling in their lived experience. Riders discussed flow in competing terms but all draw attention to the degree of habituated knowledge required to increase the likelihood of finding flow. All riders described the feeling of flow as something that was instinctual, and relied on habitual knowledge, rather than reflective, cognitive thought. The deployment of the conceptual framework in this way provides the first exploration of the corporeal and sensual dimensions of flow in mountain biking and sports research more broadly. The outcome reveals new insights into the development of habituated knowledge and the reliance sports enthusiasts have upon it to foster flow. Additionally, it represents a shift from psychological research focus on motivation and reveals novel insights into the significance of frequency, habituated knowledge, and grip upon experience.

The application of flow theory to the experiences of mountain bikers represents the nuances and subtleties of riding a bike that foster flow. This corporeal and sensory attunement of riders demonstrates a novel application of flow theory and pushes against misrepresentations of mountain bikers as cultural misfits. What I have found is mountain bikers are dedicated, thoughtful and sensitive individuals in search of pleasurable experiences. What will be of

interest to phenomenologists specifically is riders' discussion of unconscious control. It represents a clear demonstration of the thinking body, one that can bring about action pre-reflexively. This finding signifies a novel application of phenomenology in empirical research.

Additionally, I have extended the conceptual framework to reveal a significant component of flow experiences for riders that is closely related to the active sensorium. Whilst previous research has paid limited attention to the sensory dimensions of flow, these findings reveal how the sensorium, particularly through haptic modes and the vestibular system, undertakes the complex task of finding the right lines and governing speed. This analysis contributes a more embodied and multi-sensory perspective of flow theory which has traditionally emphasized psychological or cognitive aspects. These findings illustrate the sophistication of mountain biking bodies, deepening understandings of how movement, balance, and perception are interwoven in flow experiences. Moreover, they provide further empirical detail on the thoughtful riding body, offering valuable insights for scholars studying mountain biking or other lifestyle sports.

In the second section the relationship riders have with fear was discussed. Fear was often discussed in concert with flow throughout the findings. I reveal for all rider's fear is a constant consideration when mountain biking and during a fearful encounter, pre and reflective roles are reversed. I suggest the mind and reflection take precedence in this aspect of the lived experience, something of interest particularly to phenomenologists. Deploying the conceptual framework to explore fear in a consolidated way in mountain biking reveals unique insights into the how at every twist or turn, riders negotiate the search for flow offset by opportunities to encounter fear. Additionally, through concepts related to the senses and

interaction, I demonstrate the sophisticated and thoughtful way mountain bikers negotiate fear. This provides novel insights into their lived experiences whilst increasing societal understandings of those within recreational mountain biking subcultures. What is thought-provoking is the significance of sensual modes such as vision and tension as predictors of fear. Sensual insights present the first work in a mountain biking context, moving beyond authors such as Brymer and Schweitzer (2013) to uncover this complex sensual interplay when navigating fear.

The chapter responds to the research questions by providing significant insight into the role of flow and fear in the lived experience of riders and to what extent the mountain biking sensorium influence this. Furthermore, the original application of the concept of habit reveals the intricate ways riders become more familiar with their settings and how this shapes their lived experience. In the next chapter I discuss the lived experiences of riders when encountering pain. The chapter seeks to move one step beyond fear, to discuss the sensory encounter when things go wrong. Here I present a unique set of experiences influenced heavily by internal and external senses that shape the lived experiences of the riders.

Fatigue, Exhaustion and Pain

6.1 Introduction

Experiences of pain are familiar to many sports participants and are unique to the sporting subcultures they are part of. Yet existing research related to sport and pain often focuses upon the nociceptive (the central nervous systems awareness of injury) dimensions measured using scientific apparatus. Whilst these findings are useful, Leder (1990) suggests a preoccupation with causation prevents exploration of the depth and detail of a painful experience. Discussed in the Literature Review, Leder's (1990) phenomenological understanding appreciates the role of the body and sensation during painful experiences. His concepts of dis-appearance and dys-appearance appreciate how the body is understood; often outside of thought until trauma is encountered. These insights are vital to this study given the frequency of injury in mountain biking and the habitual, flowy experiences often offset against fear noted in the preceding chapter.

Additionally, activity such as mountain biking often uses the body as the mechanism of propulsion. Notions of endurance work and learning how to endure have been discussed by Allen-Collinson et al. (2018) in their exploration of elite mountaineers and McNarry's (2019) investigation of elite swimmers. In both contexts the athletes were striving for excellence and often adopted a 'win at all costs' mentality. The context of recreational mountain biking is far removed from elite sporting domains, and I propose we can understand endurance work in a different way.

Therefore, in the forthcoming chapter I interrogate the relevance of endurance work in recreational mountain biking contexts given riders often disengage from activity when they reach a certain point fatigue. I argue riders possess corporeal knowledge and are not elites,

they adjust their biking approach according to the sensual experiences they perceive. Additionally, my application of the dis-appearing body offers novel insight into how mountain biking bodies exist in states of dis-appearance and dys-appearance. Moreover, I present fresh insights that illustrate the interplay of the body, sensorium and emotions during painful encounters. This application is the first of its kind and findings illustrate two dimensions of significance. Firstly, they present a broader and deeper understanding of mountain biking practices and how they are felt physically, sensorially, and emotionally during instances of extreme pain. Specifically, application presents unique insights into the interplay between acute trauma and the emotions of anger, frustration and fear. Secondly, they offer the first foray into painful experiences of mountain bikers, illuminating a significant aspect of experience.

The first section draws upon findings that illustrate the role of fatigue and exhaustion, discussing how this is negotiated and perceived. The intention is to separate discomfort and pain. Acknowledging one can be precursor for the other, they are not the same and shape the rider's experiences in differently. The second section explores sensory dimensions of pain alongside the acute experience of the dys-appearing body. Specifically, the section draws upon earlier discussions of the auditory and thermoceptive sensory modes alongside socio-cultural and emotional influences to illustrate the complexity of pain beyond the initial trauma experienced.

6.2 Fatigue and Exhaustion

The emerging literature on endurance, 'defined as the ability to keep going (physically and mentally) in the face of pain, discomfort and suffering' (Allen-Collinson et al., 2018, p.7), provides a starting point to appreciate a rider's relationship with and feelings of fatigue.

Riding a mountain bike over undulating terrain requires a degree of fitness relative to the task, and the ability to keep riding when the body becomes increasingly tired. Spinney (2006) notes central to riding a bike is ensuring momentum is maintained to keep the rider and bike moving forward. During this negotiation the body is required to expend valuable energy and consequently becomes fatigued. The degrees of fatigue are unique to the rider and trail context they are on, yet thematic elements exist shared by all. During observations and subsequent interviews, it was evident fatigue is a pivotal aspect of the lived experience of riders, given it occupied considerable amounts of time. Additionally, riders offset feelings of fatigue with tiredness, and this is where discussion begins.

Theo and Chris appreciate the onset of fatigue and the difference between tiredness and fatigue. They demonstrate an experiential awareness built up over years of riding:

> *Theo: My legs go like jelly, and I can feel it in my stomach, I have always been like that with mountain biking, when I have energy, I have energy, but then when I don't, I just stop*.

Chris provides further detail to the difference between feeling tired and feeling fatigued noting:

> *Chris: so tired just means I feel like I'm just switching off a little bit, everything starts to just perform under par and this is in comparison to the start of the ride but on a fatigue side of things this tends to be aching and I might start to cramp up and I get arm pump and I find that I get more arm pump in the winter, compared to the summer, and I think that's just because my whole body is just that little bit colder. I find the tiredness a lot more in the bottom of my calves, where you're dropping the pedal down it's just that bit tighter.*

Chris and Theo demonstrate the rider's corporeal awareness and the sensory modes at play when dealing with tiredness and fatigue. Chris provides depth and delineates the subtle difference between the management of tiredness and fatigue. This experiential knowledge is akin to the mountaineering participants in Allen-Collinson's et al. (2018) study who articulate how previous experiences and consequent knowledge provide knowledge of *how* to endure. Both sets of participants demonstrate a vital familiarity with their bodies that enables informed decisions to be made.

Theo and Chris acknowledge the constant stream of sensations related to tiredness and fatigue suggesting this stream of sensation evokes a corporeal dys-appearance. All riders acknowledged and articulated specific sensations related to tiredness, most notably arm pump. Arm pump occurs typically when riding downhill, on rough and fast trails with high intensity and focus. Anderson (2020) suggests arm pump is a result of intense, consistent pressure on the forearms over time and is typically understood through thermoceptive sensory modalities. Arm pump and the thermoceptive understanding was articulated by all riders and Alan provides a vivid account:

> *Alan: I do get arm pump, particularly on really rooty sections, I'm built for short bursts rather than long ones, so I'm more of a sprinter. I do get leg pump as well on particularly rooty sections… my arms go. they basically give up and stop. They hurt so much that they tell you they're not pushing anymore, and that hurts feels like a burning sensation in your forearms. Oddly enough it's my arms that go before my legs, and I'll lose grip through my hands, and I think I'd better get off and push otherwise I might hurt myself.*

Furthermore, Theo discusses specifically the dys-appearance of his body when experiencing arm pump, outlining how cognitively present he is during this experience:

> *Theo: yeah, you are fully present because you're thinking 'Oh my gosh can I hold on' this arm pump is really painful, because you're not even going that fast it's more about keeping your muscles just operating where they probably wouldn't be and everything else is just working.*

Typically for novice riders who possess little or no experiential knowledge of arm pump, they are less equipped to understand and manage the ensuing fatigue and discomfort. Anderson (2020) argues many novice riders will engage in an all or nothing approach during their riding. Contrary to Anderson (2020) experienced riders in this study also discussed arm pump. Yet this was likely due to them pushing skill levels to their outermost areas, something that can end in exhaustion and the inability to hold onto the handlebars as noted by Alan. Alan's account also illustrates the somatic, thermoceptive sensation evoked by arm pump, highlighting how the build-up of pressure within the muscles triggers a burning sensation and dys-appearance of the arms.

Alongside fatigue felt in the arms, riders also discussed sensations in their legs as noted earlier by Theo. In comparison to the burning sensations felt in the arms, the sensations related to the legs were understood in relation to the notion of jelly or shaky legs. The sensations associated with the legs reveal something different to those felt by the arms, rather than being catalysed by descending on a trail, the dys-appearance of the legs typically occurred when ascending. The sensations for the riders were less aligned with pressure and more with an inability to function. Akin to road cyclists in Spinney's (2006) research, riders discussed quickly moving from tiredness to complete fatigue when ascending. Here Chris

provides an illustrative account of moving from a felt tiredness to an overwhelming proprioceptive disarray culminating in pushing:

> *Chris: it's normally my legs are hurting the most, breathing is obviously a lot more intense, but my legs tend to just start to go. They just start cramping, they feel like they just give up, I just don't really want to work anymore and there's this heaviness to them, they just feel really heavy and that's when I made the decision to hop off. Screw it, I will walk this last one, you are just knackered, and you just want to get off and walk it.*

Much of the literature discusses this sense of enduring in a character building, mental toughness type way, suggesting the perceived wall of performance is something to be pushed through (McNarry, 2019; Allen-Collinson et al., 2018). This enduring creates environments for participants to develop an acute awareness of their body and thus undertake endurance work (Allen-Collinson et al., 2018). Yet findings demonstrate the opposite, with all riders willing to step off the bike and push. I propose the riders have undertaken endurance work but reject the opportunity to endure when riding up hills. This is in large part to the perceived outcomes associated with enduring and the consequence of having built a stock of knowledge (Schutz, 1967). For the competitive and high-performance athlete success is measured in meters or time, yet for the recreational rider, their measurement of success is focussed towards finding flow as established earlier. Therefore, the riders attunement to their sensorium and corporeal awareness ensures they expend only enough energy to get them back to the top of the hill, and another opportunity to find flow. Thus, riders through their stock of knowledge perceive ascents as an obstacle to be overcome to permit the opportunity for flow.

Closely associated with proprioceptive and muscular sensations of tiredness and fatigue, riders discussed acute bouts of hunger overcoming them when increasingly becoming tired. Often associated with taste and smell, hunger can also be felt somatically, an interoceptive sensation indicating emptiness (Vannini et al., 2012). There exists a research lacuna in relation to sensory accounts of hunger broadly within sports research, yet it emerged richly for riders in different ways. Alongside the proprioceptive sensations associated with fatigue, Theo recounted a complex feeling of hunger culminating in an energy crash. Findings related to hunger are novel and illustrate how the lack of attunement with feelings of sustenance influences the lived experience of riders in unique ways:

> *Theo: I guess I'm really prone to that feeling of glucose crashes and where you don't have the blood sugar and your legs go all shaky, and you feel really hungry and almost ravenously hungry and then your arms get really shaky. It's such like an intense feeling when I get that glucose crash, I sort of feel a little bit out of it and then just daydreaming about food and what I'm going to eat, a bit zoned out. And then you feel really grouchy, and it just comes over you really quickly and once that happens, I just want to go home and get a McDonald's drive-through or something. I just feel really done with riding at that point and it does hit me quickly when that happens.*

The above extract indicates an almost instant energy crash is at once felt through sensation and then understood through a dys-appearance of the body. This experience is so strong that often upon encountering it Theo stops riding and heads home. Implicit for Theo is an experiential knowledge built from encounters before. Consequently, Theo now prepares sustenance for his riding sessions, to offset to some degree the impact of hunger if only for a little while:

> *Theo: I guess the stuff I do to prepare now is to bring energy bars, not just chocolate but proper energy bars, so I've got some solid energy in my pack and that makes me feel a little bit more secure about it and it can postpone that chilling crash a little bit*

> *until I really need some proper food and that helps a bit but really helps psychologically as well.*

Time spent on the bike also allowed Chris to prepare and actively manage hunger and fatigue, offsetting potentially painful experiences suggesting:

> *Chris: it's all part of the experience, obviously when you've done a big ride is quite a big achievement, but you're also prepared to be tired, so you pack gels and some snacks to keep you going.*

The final dimension of fatigue is its link with exhaustion, a dimension expressed by the riders related to time, the onset of fatigue and their sensory attunement to degrees of discomfort. When engaging in sporting activity requiring endurance the body encounters various barriers illuminated through the senses. Given the discomfort indicated by these senses, coupled with cognitive awareness triggered by the dys-eased body, participants discussed how they had a choice of whether to push through or stop. Findings indicate the riders possess a finely attuned understanding of their bodies related to fatigue and discomfort. All riders discussed temporal phases during the riding experience, and the relationship between time and fatigue. James provides a starting point to appreciate this interplay between senses, body, and time:

> *James: OK so I would say that it is harder to maintain stamina for longer as I got older, it is probably the thing I most noticed. For example, when we're on the Quantocks you were pretty comfortable, and I was starting to get pretty tired. so yeah, that's where I probably notice it more, the 1st 20 minutes of the ride I probably feel as good as you and some other riders, and the same if we were riding with a 19 year old lad and girl or whatever, and I would be as good as they would be for the first 20 minutes, but as time ticks on I guess I begin to notice it more and that I get less and less comfortable, and usually I push on through and keep myself at that level, but that didn't used to be there.*

James demonstrates a sensual knowledge and understanding of his body permitting an opportunity to respond to the sensations he experiences throughout the ride. He often feels fine for the first 20 minutes but then increasingly experiences discomfort. The increasing dys-appearance he experiences requires greater cognitive engagement to push through, even though he may not feel or want to. The conceptualisation of a timed domain in the lived experience of riders was reinforced by Theo:

> *Theo: Fatigue always seems to hit me really quickly, I usually find that I start riding then I get tired and then I get a second wind where I get really into it and then I get tired again and that second tiredness is just not comfortable, I just feel really tired. I guess the first one feels like tiredness whereas the second one feels more like shaky arms, shaky legs, shaky everything and exhausted, it does feel quite different, the second one feels way more like an energy and glucose crash where I just don't have anything left whereas the first ones more like just a little bit of tiredness.*

Theo articulates a similar experience to James, identifying two differing experiences of tiredness, one he can endure and the other he cannot. Extending the points above related to hunger, it is clear both riders are willing to endure and push through to some extent. Yet the intricate attunement to their bodies through the riding sensorium ensures they do not push too far and bonk. Bonking is something often discussed in mythical terms amongst road cyclists yet is less common amongst mountain bikers (Morgan, 2022). Given the efforts of the riders to limit the opportunity to experience extreme fatigue, it is no surprise that part of this reluctance is because they have experienced some sort of bonking before.

Bonking indicates a total sense of exhaustion, where riders are unable to turn the pedals rhythmically and run close to or fall off their bike (Morgan, 2022). In these instances, an overload of multisensory information is sent and represents a body in severe dys-appearance. Understandably, these experiences for riders are formative in their understanding of their

perceived limits on the bike and contribute to their hesitancy to push beyond. To help with understanding the experience of bonking, James recalls an experience during a competition where he pushed too hard:

> *James: I have bonked a few times, there's this thing called the Hard Rock enduro and it's about 7 stages long and on stage 4 I think I completely bonked, I had to really sit there for almost an hour or something on this hill with my previously unfit friend who is now way fitter than me just calling me rude names, and generally taking the mick, finding everybody that was passing by was asking what was going on in my life. It took food or whatever else to get me back on and so fatigue and my limits is definitely a big thing that stops me from doing the things I want to do.*

James demonstrates the incapacitating nature of bonking or putting the body 'into the red' for riders. This develops an experiential corporeal awareness of bonking sensations to ensure the riders can navigate fatigue accordingly. Importantly, experiences of bonking influence earlier discussions of enduring and illustrate the consequences of pushing too hard, ultimately an overwhelming sensory and corporeal experience rendering any further search of flow fruitless.

This section has revealed the role of tiredness and fatigue in rider's lived experience, one that possesses a complexity far beyond riding or not. Findings demonstrate experiences of fatigue are largely antithetical to pre-reflective flow, with the body in a constant state of dys-appearance. It is when the body is in total conscious focus that riders were able to articulate the sensual dimensions of fatigue ranging from thermoceptive modalities during experiences of arm pump to the proprioceptive muscle lethargy in other limbs. Additionally, findings counter existing understandings of endurance work to suggest at the recreational level riders utilise their sensorium and corporeal knowledge to exert only enough effort to get back to the start of the trail to find opportunities for flow. Whilst fatigue and exhaustion form an

influential aspect of the lived experience of riders, one where their bodies are under siege, it was not the only experience where dys-appearance was encountered. The next section moves to discuss pain and how the sensorium deepens understanding of trauma.

6.3 Pain, Sound, and Heat

Bad pain is often associated with trauma or injury, something commonplace within sporting environments and lifestyle sports such as mountain biking (Manzenreiter, 2013). Noted in the second findings chapter, riders in their search for optimal experience and flow at times push the limits of their skill level. This skill/challenge negotiation can end in feelings of euphoria, but it can also provide traumatic and painful experiences when things go wrong. Often misrepresented as risk seekers, mountain bikers are intelligent and distinctly aware of the consequences of their actions. Riders often spend hours rehearsing subtle aspects of trails to ensure they minimise risk. Inevitably however crashes, falls and injury do occur, and these play a significant role in the lived experiences of riders (Hagen and Boyes, 2016). During discussion of their painful experiences, riders did not do so with bravado or lack of thought, rather they provided intensely embodied accounts. Thematically these centred on the thermoceptive and aural sensations that surrounded and accompanied painful experiences. Additionally, the emotional and socio-cultural dimensions of pain were articulated in detail, deepening understanding of the lived experience of pain.

This section interweaves the sensory dimensions of pain alongside the emotional and socio-cultural to provide an in-depth understanding of the lived experience. Additionally, given the sociologically sensitive phenomenological positioning of this study, the structure ensures findings are discussed in keeping with the project's theoretical underpinnings. Before discussing the key findings from the participants, I provide an example drawn from

observations of Chris crashing, one from his point of view and another focussed upon him. Whilst I hope the words of the participants will paint a vivid picture, the audio-visual medium allows the closest representation of the experience for the reader. The medium allows the reader to hear what he hears, see what he sees, something I believe will bring the data to life.

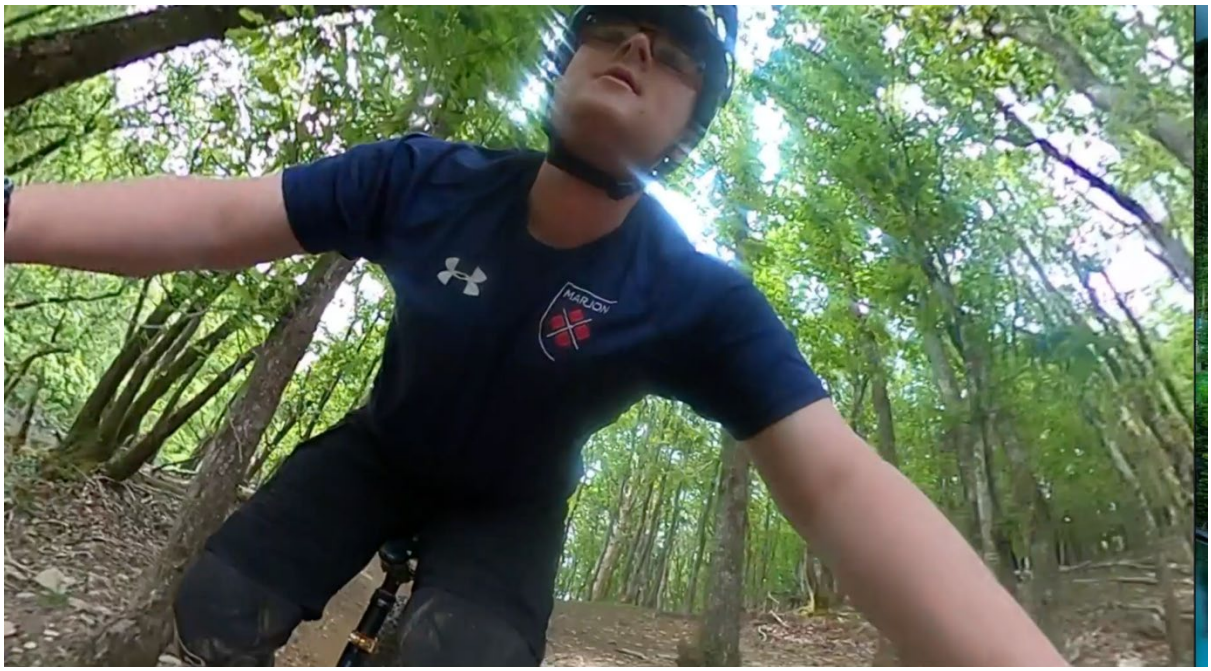

Figure 11 Chris crash from handlebar view

(Click here)

Figure 12 Chris crash from rider view

(Click here)

6.3.1 Sound, Emotion and Anger

Leder (1990) suggests the physical dimension of pain, the agony caused by trauma moves the body to a thematic focus or dys-appearance. The reappearance of the body through physical pain seizes the focus of one's attention, calling for us to attend to the symptoms. It is the physical trauma accompanied by emotion and anger of the injury that provides a full sense of the painful experience for Leder (1990). He suggests when seized through pain, attention moves from a pre-reflective state to one of deep reflection. He contends this may be triggered by various sensations and thus varies from experience to experience. For the chef frying vegetables it may be the *heat* of a burn, for boxer the *taste* of blood in the mouth or for the craftsperson it may be the *throb* of a hit finger. Below I move to discuss how the aural system plays a significant role in understanding the painful experience of mountain bikers, contending the aural sensations occur in advance of felt agony. Positioning additional senses alongside affective dimensions of pain, I reveal a fuller understanding of the experience for the riders.

An important sensory mode existing for a mountain biker is sound and the auditory system provides constant feedback to the rider from the riding soundscape. An auditory attunement permits the rider to notice subtle changes in their fatigue, the performance of their bike or external stimuli that can have an impact on their riding. A modest research literature has explored the auditory experience of sporting athletes such as Spencer (2014) and Downey (2005), yet there exists a lacuna exploring the sounds associated with pain in mountain biking and more broadly in sport. Whilst these studies are useful, they discuss auditory encounters through social interaction. Instead, I provide a novel exploration of the felt sensation of sound and how these interweave with emotion at an individual level. Below two extracts detail the

role of auditory sensations during the experience of pain for Theo and how emotion contributes to a fuller sense of understanding the experience.

> *Theo: Yeah. So, it was T6 vertebrae I broke, so between my shoulder blades and my brain. And it was like pain I'd never been in before. So, like when that broke, I heard it, and it wasn't a sound I had heard before let alone in that part of my body. it was like really internal, and it was almost like accompanying the pain. Your body was like something is majorly wrong. Like it wasn't like pain, you know, if you lost skin on your arm. Like that would really hurt, but it wouldn't feel like it was going to kill you. This was pain, but accompanying it was like this big warning signal. My body was like saying to me like you might die, you might die. It was really weird. It was like almost like an emotion accompanying pain. Like the pain was really bad, obviously, but the worst bit wasn't really the pain. Like, the emotion of life, I was really upset by my dumb ass. I felt like I might die. I was really upset and angry that I done this. And yeah, it was the emotion of, my body was almost like, angry at me, and it was like that that was worse than natural pain.*

Theo's body up until the crash had existed absently, operating largely without thought and in a state of harmonious dis-appearance. During the crash, the body provided a dys-functional presence, something that required immediate attention. Contrary to focussing solely on the located pain, Theo discusses the auditory sensation and the sound of the break as the initial focus of his consciousness. The location of the break for Theo heightened his reflective awareness given it was his back, a location that possesses an existential significance. Additionally, the subtle sound of a break is felt throughout the entire body, provoking a corporeal reaction. Theo notes how this sound acted as the precursor to a somatic dys-function that was not acutely painful but caused high degrees of dys-comfort. The distress caused by the location and sound of the break represents a deep concern for his existence and the potential consequences of his actions. Here Theo is influenced by societal and cultural narratives that surround the fragility of the spine, injuries and the subsequent risk to life.

The seriousness of the encounter alongside the presence of social and cultural forces for Theo gave way to emotional dimensions; emotion to some extent superseded the pain. Allen-Collinson (2005) suggests emotion fits within an expanded understanding of pain. She incorporates emotions such as anger during serious knee rehabilitation to deepen understandings of pain given its socio-cultural construction. Furthermore Leder (1990) notes affective disturbances such as anger can heighten the overall feelings of pain. Theo demonstrates the signification of anger as a component of the felt pain. He details the contempt he had for himself that gave way to questions of his mortality. The anger he describes is at once driven by the mind and the associated consequences of his actions but also by his body, noting the anger his body felt towards him. For Theo the anger emanating from within superseded any pain associated with the trauma and was a reaction to the social and cultural realisation noted above. This extract and discussion demonstrates the physicality of pain but foregrounds new understandings of the sensual and socio-cultural influences that provoke emotional dimensions to feeling. Importantly, these findings encourage a rethinking of pain to appreciate that emotion may supersede the painful information supplied by the nociceptors.

6.3.2 Heat, Anxiety and Fear

Allen-Collinson et al. (2017) suggest in sociological and phenomenological explorations of lived sporting experiences, there exists a paucity of research exploring the role of temperature. Allen-Collinson et al. (2017) build upon the work of Potter (2008) to suggest thermoception as a sensory experience of temperature, one that can be recognised as a distinct sensory mode as I established in the first findings chapter. For Allen-Collinson et al. (2017) thermoception is understood as the lived sense of heat and can be separated into two perceptual fields; one felt somatically and one haptically through cutaneous touch.

Attunement to temperature permits athletes to undertake temperature work, a form of somatic learning incorporating dimensions of thermoception that involve thermoregulation and fine sensory attunement to heat. Sporting athletes can develop a thermoceptive intelligence, an awareness of the subtle changes in heat during activity. This knowledge is built up over time, through participation or rehabilitation after injury. Thermoceptive awareness provides a knowledge base to draw upon when encountering alien forms of heat, a diary of sorts enabling an organised awareness of heat intensities.

Little research explores the relationship between pain and heat, but Allen Collinson et al. (2018) discussion of lived heat does provide a useful starting point. Their participants undertook engagements in a range of athletic practices where heat was an important dimension. Findings revealed experiences of intense somatic heat for MMA fighters during training, and the haptic sensations of cold wind on the face during a boxer's early morning running sessions. Salient for the riders, they refer, albeit infrequently, to the thermoceptive experiences of pain. For the boxer that feels a twinge in the shoulder, they recount the experience of applying ice to attend to the pain and cool it down. For the runner who undertakes warm weather training, the sense of pain from an arthritic foot is heightened due to the warm tarmac underneath. Most useful is the experience of the MMA fighter and their getting punched in the head. The MMA fighter describes the trauma through thermoceptive sensations and the subsequent feelings of heat that were experienced. For the riders, the relationship between pain and heat was something that often centred on the dys-comfort caused by trauma and the heat that ensued. Therefore, this section utilises their encounters of pain to demonstrate the role of temperature in their experience and presents original insights into thermoceptive dimensions of mountain biking.

James articulates the thermoceptive dimensions of pain when retelling a crash and subsequent spraining of his ankle. James highlights the role of heat in his understanding of the initial pain of the trauma and then the constant heat he felt emanating from the ankle during the healing process:

> *James: The pain comes on after the event somewhat and I think because of any of the bigger accidents that I've had I have largely I have been unconscious initially, that sounds worse than it is but it's a reality. Something like an ankle sprain, that sounds pretty light, but it was a fairly bad one. Initially when I did it, I thought that feels a bit horrible, it swelled up really big and was throbbing and really hot to the touch. Then it was OK, and I was more or less walking around, and then that I got that intense feeling of what I assume is blood flow and healing itself. With lots of energy going to that individual point, it becomes more and more intense, yes it can be accompanied with pressure, heat, and all sorts of different things.*

James details the outcomes of building up an awareness of heat through temperature work in the initial diagnosing of the injury and the subsequent healing process. He separates a bad heat with good. For James, heat from a swollen joint, accompanied by a throbbing helps him appreciate the extent and severity of the injury. Conversely, whilst he speaks of heat in a similar manner when outlining the healing process, he does so with a heightened awareness, a consequence of the previous temperature work. The heat he describes latterly is one of intensity and energy, noting this heat is a positive, healing, and rehabilitative indication of the ankle getting better.

The heat of a swollen joint provides one example of the role of thermoceptive sensation during intensely painful experiences. For James this feeling of heat was coupled with the use of sight as a diagnostic tool when noting the swelling. Yet painful encounters on/off the bike are often out of view and it is here thermoceptive sensations become increasingly important. The pain accompanied by its warmth felt through the sensory feedback from injured area can

provide detail enough. Amongst the riders this was supported by Chris when discussing the crash from the earlier video extract.

> *Chris: When I went over the bars and landed at the bottom of the stream, the pain was not instant, rather different parts of my body were warm when really, they shouldn't have been. For instance, my elbow, I knew that was beaten up even before I looked at it because it was really hot. And also, my ankle. Rewatching the video you can see I had long socks on, so I couldn't see the injury, but it had a warmth to it, a warm throbbing of the impact and a growing warmth to the area through the sock, which after looking I realised was blood.*

Chris illustrates the importance of thermoception as a sensory modality, demonstrating how the sensation of heat was felt through internal sensory channels and acted as a detailed diagnostic tool when assessing the injuries. Moreover, this was completed outside of any visual representations of the sites injured and demonstrates thermoceptive attunement. The extract speaks of a thermoceptive modality distinct from the preoccupation of sight as the primary sense. The feeling of heat emanating from the ankle indicates an area of the body hidden by a sock, outside of Chris' gaze, yet the felt heat from the ankle suggested an injury. More specifically heat emanating from this injury provided a detailed outline of the extent and orientation.

Importantly the sensation of heat was not in isolation from other sensory and emotional dimensions of the experience. Heat during a painful encounter can be understood alongside the emotional dimensions of pain such as anxiety and fear. When recounting a visit to the doctor, Allen-Collinson (2005) discusses how testing the injured area not only hurt, but led to her becoming overwhelmed with rage, fear, and anxiety. Spencer (2014) adds depth through explorations of pain in MMA fighters, discussing the despair and loss experienced by MMA fighters when they encountered pain and consequent injury. Despair and loss were woven into

the physical experience of pain to produce fears of returning to action and anxieties associated with a loss of identity and masculinity. After attending to the overwhelming physical pain initially, Chris' attention turned to the other dimensions of his life, provoking feelings of anxiety and fear:

> *After the shock started to wane, and the heat subsided, I realised the consequences of the crash and I got really worried and anxious. It was a pretty big crash by all accounts, and I could tell from the physical pain and the heat emanating all over, heal time would be a while. What was more concerning was the thoughts of how this was going to impact my Uni degree, and my ability to get to work. If I'm honest I was pretty worried because being a third year and supporting myself, I really didn't know if I could earn money or complete my degree. It almost made everything feel worse. It massively impacted my riding from then on.*

The extract above illustrates the sociological and emotional dimensions of pain. For Chris physical agony was one part of the painful experience, yet the emotional and social dimensions possessed equal impact when seeking to understand the experience fully. The anxiety and fear accompanying trauma heightened the overall feelings of pain. Fear and frustration are surfaced above with thoughts focusing on the pragmatic elements of life such as degree completion and working. Whilst not directly physical and thermoceptive, both act as a precursor and added dimension that compound painful feelings. This combination of felt pain, heat and consequent emotional turmoil clearly demonstrates the importance of acknowledging the social and cultural experience of pain, contributing to what is felt.

This section has provided insight into a common but often misrepresented aspect of mountain biking, pain. Utilising the concept of a dys-appearing body I reveal the lived experience of pain for the riders and the significance and risk associated with the activity. Whilst physical trauma was a significant aspect, I have provided original insights into the social, cultural, and emotional dimensions of pain in keeping with the sociological phenomenological nature of

the thesis. These finding present a fuller picture of painful encounters not discussed in lifestyle sport literature and pave the way for future examinations of this unfortunate but common experience for participants.

6.4 Chapter Summary

The chapter discussed the significance of fatigue and pain and how these confrontations influenced riders lived experience. The first section discussed the role of fatigue and exhaustion revealing the complex interplay between the cognitive and corporeal. The riders present a notion of somatic learning or endurance work that has taken place during their participation in mountain biking and discuss their deployment of this knowledge to govern effort. For the riders, effort was often associated with going uphill or getting to locations where they could then ride down trails that offer opportunity to find flow. The second section details encounters with pain and specific confrontations such as Theo breaking his back. These encounters illustrate the risks and consequent trauma occurring in mountain biking. They also counter popular narratives depicting the mountain biker as an unplugged risk taker by revealing sensory attunement and the social, cultural, and emotional dimensions of pain.

Through the deployment of the conceptual framework, findings in this chapter have developed understandings of endurance work and the dis-appearing body to reveal the unique ways mountain bikers experience fatigue and pain. Firstly, through the concept of fatigue, I have proposed a new way of understanding endurance work to reveal a thoughtful rejection of enduring in the context of recreational mountain bikers. Far removed from elite contexts, the recreational mountain bikers in this study were less concerned with the character-building aspects of endurance work, in favour of maximising their experiences of flow. Their bodies were well attuned to the potentialities of endurance work; however, their corporeal and

sensual perceptions were uniquely attuned to minimise exhaustion, in favour of maximising flow. These findings challenge existing literature on enduring that often frames endurance as a universal characteristic of sporting participation. Unlike elite sports contexts, where enduring pain is synonymous with the activity, this study demonstrates how recreational mountain bikers actively reject such narratives in favour of flow. This conceptual shift adds a new dimension to discussions of endurance work in non-elite sporting contexts, which has received limited attention to date.

Secondly, I have deepened existing understandings of the mountain biking lifeworld, revealing the complex interplay between enduring, risk and pain. The depth to this dimension of experience reveals thoughtful, attuned and often risk adverse riders through concepts of dis-appearance and dys-appearance. What is interesting in this chapter is the extended application of the dys-appearing body to present novel understandings of pain beyond acute trauma which has often been the focus in previous research. This study extends the concept of pain by demonstrating how mountain bikers experience pain through a broader sensory and emotional lens.

This marks an important shift in how we conceptualise injury in recreational settings and specifically mountain biking. Furthermore, I have developed understandings of the dys-appearing body through a sports context to reveal the intricate interplay between the corporeal and sensory experience of trauma such as sound and heat, and how this influenced the emotional turmoil riders recounted. This extension of the literature extends conceptual understanding by providing insights into sporting participants encounters with pain and injury, alongside a novel discussion of the consequences amongst recreational participants that operate within the social and cultural fabric of everyday society.

These findings represent a fruitful opportunity for further research to explore the painful experiences of sporting participants in and outside of mountain biking. Additionally, the findings provide an important response to the research questions by adding greater depth on the interplay between the body, the senses, and the relevance of the painful encounters in the lived experience of mountain bikers. Additionally, findings offer a detailed insight into the role of the mind during dys-appearing dimensions of experience.

The Role of the Other in the MTB Experience

7.1 Introduction

In the earlier chapters I have established understandings of the active sensorium and corporeality of the lived experiences of mountain bikers. Discussion has almost exclusively focussed on the experiences recounted by individuals. As I noted earlier this was intentional given this chapters in depth discussion of the role of the other in riders lived experiences. Phenomenological investigations of the other have existed largely in the background given the predominance upon the individual experience. Yet discussion of how individuals interact and the subsequent influence this has on experience is essential in a sporting context and specifically in mountain biking. Importantly this is the first foray into the role of the other in mountain biking and I therefore apply for the first-time concepts of intersubjectivity and intercorporeality, alongside novel applications of informal learning and teaching.

Schutz (1967) places emphasis on the structuring role of the intersubjective experience, noting intersubjectivity is at the genesis of the lifeworld and something all social relations are built upon. He asserts we can only understand aspects of the lifeworld from our own vantage points, and it is the interaction with other subjective beings that permits validation and understanding. Furthermore, during intersubjective experience subjects can develop a commonness of sorts, one that allows the sharing of objects, experience and understanding. For him engagement between subjectivities is a learning process and something developed through interactions facilitated by language. Through language subjects can share their understandings and experiences of the lifeworld. To date no research has considered the role of intersubjectivity in the experiences of mountain bikers, therefore I originally apply intersubjectivity to reveal pleasurable, sensual, and euphoric encounters with the other.

Whilst language is a vital dimension to the intersubjective experience, when undertaking sporting and leisure activities, the role of the body is significant. Intercorporeality is a dynamic system of perception, action, and emotion and it is through our bodies we experience the world and interact with others. During riding encounters the body can replace language, small corporeal movements can be sensed that have significance for the subjectivities of those involved. Therefore, the role of the body as a subjective aspect of the lifeworld requires consideration. Findings illustrate the significance of bodily interaction for the rider's corporeal connection, and this was a significant feature of their lived experience. Consequently, I deploy the concept of intercorporeality to explore how these bodies come together and to what extent riders are aware of the body of the other. Furthermore Crossley (1995) asserts the sentient interaction between bodies can be understood as an intercorporeal experience, one where bodies are able to comprehend the bodies of others. I argue these sentient corporeal interactions can be both pre-reflective and reflective, the latter open to cultural and social representations.

Finally, as subjectivities and bodies interact and encounter each other, the opportunity for teaching and learning encounters increase in likelihood. Through the application of the concept of informal learning I appreciate and explore for the first time the significance of imparting knowledge to another in a fast paced, fluid mountain biking context. For Jeffs and Smith (2011) informal education is a spontaneous act led by a willingness to help people learn. In these instances, and through dialogue, exploration and enlargement of experience can occur. This culminates in the cultivation of relationships that create an environment for human flourishing. Given the synergies between the study's findings and Jeffs and Smith's (2011) outline of informal education, I uniquely bring these aspects together to reveal its significance in the mountain biking lifeworld.

Therefore, in the chapter below I consider the role of the other in the mountain biking experience and draw upon key findings to illustrate how intersubjective and intracorporeal interactions are central to the lived experience of mountain bikers. The chapter discusses three significant themes to emerge from the findings; the role of pleasure and enjoyment derived through intersubjective engagement, the significance of teaching, learning and informal education, and the intercorporeal and sensual elements of the lifeworld.

7.2 Intersubjectivity, Pleasure and Euphoria

A central motivation to emerge for riders was their search for flow and optimal experience. Whilst flow was discussed from an individual perspective, understandings of pleasurable mountain biking experiences would be limited without consideration of how they are shaped by the other. Olive et al. (2018) study of encounters in surfing found all aspects of the surfing lifeworld were shaped by interactions with others, whether this was on the drive to the local spot, out on the water or having a '*brew'* afterword, the intersubjective dimension of experience brought about pleasure constantly. Evers (2006) suggests during surfing participation bodies interact with one another as do the surfers, engaging in an intersubjective encounter that enhances the surfing experience. Absent from the mountain biking literature, intersubjectivity emerged as a significant feature in this study. For all riders they identified the significance of the other from their very first memory of mountain biking to their most recent. All riders detailed through intersubjective encounters how they became a mountain biker. The initial intersubjective encounters are neatly discussed by Chris:

> *Chris: Me and my mates were like let's dig our bikes out of the garage and go for a ride and then it just spiralled from there. We went into the woods and got covered in mud and kept going from there it's as simple as that…mountain biking was something different and it and we started going out every weekend… I think we went out the next day and then the next weekend and then for a few days we had to stop because we*

> *were too busy and then I started looking at new bikes. I got a new bike and that's when it really started to pick up, it was like an addiction from then onwards.*

Chris demonstrates the significance of the other in his formative riding experiences and his consequent engagement with it. The frequency of intersubjective experience, the insatiable need to *'get back out'* on the trails was like an addiction for him. Chris' comments align with Alans first memory of mountain biking:

> *Alan: My first memory of mountain biking was that I was hanging around with a load of mountain bikers, and we were sat around just wondering what to do and then we all said let's just go for a mountain bike in Cann woods. Well, it really wasn't a mountain bike, but it had straight handlebars, with hardly any breaks, and we thought we're gonna play in the woods at Cann. My first memory is of being absolutely terrified but at the same time it being a really good laugh.*

Alan reinforces Chris' comments suggesting the intersubjective dimension of the experience was significant in his initial enjoyment in mountain biking. Importantly as Alan notes, whilst there was significant enjoyment garnered from the riding being a *'really good laugh',* this was not conditional on having found flow. Rather the pleasure of an intersubjective experience was sufficient for the ride to have been worth it. The significance of the social dimension of mountain biking to facilitate pleasure amongst the riders emerged as an influential theme. All riders discussed their continued participation in mountain biking as reliant upon intersubjective interactions. Theo notes this importance when considering the unpleasurable alternative of riding in without someone else:

> *Theo: Yeah, I really enjoy chatting when we're riding and stuff and it's a really nice way of spending a Saturday or Sunday morning, it's having a chat and catching up when we're just pushing up a trail that's just really nice. I guess mountain biking in silence would be hilarious, it would be enjoyable but not as enjoyable, that is definitely a part of riding that's important for me is the social aspect. it's a good opportunity to catch up and check in and see how everyone is doing, and I do really*

> *enjoy that part. When Cafe side [riding trail] was really, really thriving and there were hundreds of people everywhere, it sort of just felt like utopia or something.*

Intersubjective pleasure was reinforced by James when considering the proportions of riding he does with or without someone else. James suggests whilst a high degree of his riding is solo, he cherishes the riding with others and gets most pleasure from it:

> *James: riding is a social thing for me, that's a massive thing as you know, you have been on the receiving end (Laughter), I like the people I meet doing it and very rarely I meet someone that I think is a dick. So that is always nice. So, riding with other people is almost always a positive, it can be a positive for a lot of reasons, the social and it's nice to see friends and have a chat and it's probably a really healthy thing. Riding with people often affects your ride and brings a lot of things to the party, there might be a slightly competitive element, it might go the other way and we're like just chatting stood next to our bikes and having a good giggle and that's also fine and it's nice being out in nature with other people and those sorts of things.*

For Theo and James, the pleasurable aspects of riding centre on the intersubjective communication had during the time on the bikes. Language is a key medium through which the intersubjective experience occurs and is highlighted by both participants above. For Theo and James language is utilised as a vehicle to share experiences of the lifeworld and this is central to the lived experience. Chatting with another permits a sense of belonging, friendship, and trust to be built in a way that gives the participants pleasure. It is this pleasure derived from an intersubjective dimension to riding that keeps all participants riding regularly.

Amongst all riders there was significant time spent discussing the camaraderie built. Given it has been established the mountain biking lifeworld is significantly influenced by intersubjective interaction and language, it was unsurprising findings indicated a camaraderie emerged as a subtheme. Research indicates influential interactions between participants in

most instances builds a strong bond between participants. Waitt and Warren (2008) highlight the intimacy and *mateship* developed amongst surfers through their participation and intersubjective engagements. *Mateship* emerged as a key theme for the participants and can be understood as the knowledge, language, experiences, and riding etiquette on and off the bike. Alan provides a starting point to appreciate the intricacies of the *mateship*:

> *Alan: the group of people we ride with are brilliant, they are all different levels from complete beginners to the similar sort of level as me. They are encouraging and there's no egos at all, if you mess up, they'll laugh at you. It's just a really good social thing. We really look forward to it and there's no feeling that you're forced to do it, it's just a really good group, just really encouraging. if you don't do a particular section or feature it doesn't matter… then we'll spend 20 minutes chatting about nothing,*

This is reinforced by Chris who understands his pleasurable intersubjective experiences in contrast to negative encounters when riding competitively:

> *Chris: The highlight of riding is the social side because that's pretty much how I got into it and how I kept on going. When I started racing it was such a clicky community, everyone else seemed to know each other and when I arrived, I felt like an outsider. Whereas with your mates it's a lot more fun and pleasurable and it's great to watch you mates fall off together and you just have laugh and that's just a massive part of it just going out having a laugh with your mates, see who does the most stupid stuff, and it just about going out and having a laugh. That's probably the most driving factor of it and obviously having a nice ride, I guess… I would say one of the main things is just that social element, being out and acting like kids on mountain bikes, and getting covered in mud and dust with your mates which is always a great experience, and it's usually better with two people than one. I guess people outside of mountain biking will just look at us and think we're a bunch of kids, we're out on bikes and they might think why we're not at work, but it's my equivalent of playing football every Sunday or going to the pub and watching football with my mates, that's how I look at it.*

Alan and Chris establish the significance of the intersubjective encounter's riders have and how this significantly shapes the lived experience. Both outline the belonging and ease they feel towards those they ride with, culminating in a positive experience. To this point experiences have been contextualized on the trail, yet, for all riders further intersubjective pleasure exists in the world of social media. Contemporary mountain biking as noted in the Literature Review has seen exponential growth over the last decade, something that goes hand in hand with the rise of social media (Warren and Reid-Hresko, 2024). Warren and Reid-Hresko (2024) work demonstrates the interplay between riders seeking to find an authentic riding experience amongst the array and influence of multimedia platforms ever present within the subculture. Predictably, given platforms such as Instagram there exists a proliferation of social media use within mountain biking to capture experience and to communicate with others. It is this latter function of social media that shaped the intersubjective experience off the bike for all riders. James and Alan both note the centrality of social media in the organization of their group riding:

> *Alan: Our group of friends they're all riders, so we're on WhatsApp group all the time chatting about bikes, having a laugh and taking the piss out of each other. It's quite big part of my life now. As I say we're always looking at stuff to buy (laughter), thinking about it, this (MTB) has become an expensive part of our lives. I've just bought a plug-in car powered pressure washer, so we can wash the bikes off, I have a friend who got one and we chatted about it on when riding and on WhatsApp, so we bought one.*
>
> *James: social media plays a really big role in organizing rides… I now live miles away from any real trails… in terms of geography you one of my closest friends (laughter), so I don't really have any friends closer than half an hour away, without any social media or socials, I just moved and so it would be very difficult for me to arrange a friendly meetup, and as I don't always ride with friends and actually only a third of my riding is probably only with friends, I think I would really struggle with that that. I know if I ping an e-mail to some old friends, I can go out riding Puddletown or up at Holden Forest, social media is great for that as has YouTube.*

For Alan social media extends his intersubjective experience from trail to home, illustrating the role it plays in his continued engagement and consumption. For James, social media is important given the pleasure he derives from riding with others. If he did not have this, it is unlikely he would be able to organize biking with others. For Chris, social media and by extension the technology used to access it is significant in his intersubjective encounters off the bike. Chris outlines how post ride intersubjective experiences can be shaped pleasurably by watching recorded footage from the earlier biking session:

> *Chris: being outside and socialising with your mates is always fun and just having a laugh, and at the end of the ride just grabbing a beer, sitting down and reviewing the ride, dissecting it especially if you had a GoPro, as we have had when we have had our crashes (laughter). Probably sat in a car park in the middle of nowhere just watching over a crash several times and you keep doing it until you stop laughing, which is probably a key part of it. You see the beauty of social media it allows you to chat to your mates after the ride, and you're also able to send each other any videos or any photos of the ride, I think, it doesn't close the ride off but I think the ride itself is more than just being on the bike, it's the looking at the photos together or sitting watching a GoPro together in the car park, that I would say is all part of the whole riding experience and one of the reasons why it's so fun and pleasurable.*

Chris notes subtle dimensions of the intersubjective experience, illustrating rather than being confined to the time on the bike, it also includes the drive to the location, time spent preparing and reviewing the ride and then sharing some of the experiences after. Implicit is the significant role of social media and its omnipresent nature in the mountain biker's intersubjective encounters. To this point, the intersubjective experience has been discussed in terms of the positive outcomes associated, yet for some riders this was not always the case. Given the intimacy of experiences, it is unsurprising some riders experienced a blurring of the interactional boundaries, sometimes culminating in intersubjective discomfort or alienation. Theo provides an example that demonstrates this:

> *Theo: I guess I've always struggled with that bantery sort of humour, taking the piss out of each other. I've never really got on with that side of things too much, I thought I would do that much more, but I don't. I usually find that I'm so absorbed in the riding I'm not particularly jokey and quite serious, whereas when I'm at work I'll make loads more jokes because I'm bored and I feel a lot less threatened because when I'm riding, I'll be coming up against things that really scare me.*

Whilst Theo's comment was counter to the others it would be remiss to render it an isolated case. From my earlier engagements with mountain biking cultures and my subsequent fieldnotes, this was something I felt during my intersubjective encounters with other riders:

> *Ben: Riding with Si and his mates is great, but I can't help feeling I am a bit of a sore thumb, they tend to ride off, chatting amongst themselves, with little regard for me, even though I am probably the weakest in the group. I am not quite sure I get their banter either, it's a little over my head. I wonder if I will ride with them again.*

For Theo and me, the intersubjective encounters on a bike can on occasion give way to an awkwardness and discomfort especially when unfamiliar language is used. These experiences can be understood through a gaze of what surfers may call kooks and mountain bikers call newbies. I lacked the knowledge and language to legitimately intersubjectively connect with the other riders. Therefore, foundational intersubjective engagements with others are important to ensure fruitful intersubjective experiences. Before summarizing this section, worthy of note is the role of the Covid 19 pandemic in the intersubjective experience. Given the country and world were on lockdown, it is logical to assume participants would have retold their experiences of isolation and an intersubjective famine. Yet for riders this was not the case given their geographical proximity to one another and the ubiquity of social media. They were able to coordinate fulfilling experiences and often optimal experience as Chris discusses:

> *Chris: Covid is a weird one because I know how crap it has been for everyone, but in regard to mountain biking, it has been a massive positive for me because I managed to get out and ride lots through lockdown and it was the one thing that kept me sane a bit like most people. I think it just it impacted riding positively because I just had the time off work and college at the time just to get out and go and ride. I mean I was always cautious about taking Covid home to my family, but at the same time riding with your mates is part of riding, so the way that me and Jake would do it is that he would go one route to the mountain biking area and I would take another route and we would just meet there, because obviously the whole idea of social distancing was really important but we still wanted to meet up in the woods, so COVID was positive in that way.*

A desire to ride with others was also highlighted by Theo discussing his lockdown experiences with his brother. Theo outlines how riding frequently with his brother re-engaged him with mountain biking:

> *Theo: yeah, I would say I went mountain biking a lot more through COVID and I would say it's actually COVID that's got me back into mountain biking. During COVID I was living in the same house as my brother and he has always been really into mountain biking in a big way, and there was nothing to do, and he was always going off mountain biking for his daily exercise and going for six-hour rides, and it was in Buckfastleigh which is right on the edge of the Dartmoor. He would go all the way up to Princetown and all the way across the county and all the routes off the road, whereas I would always go for a walk. I was getting a bit jealous because I wanted to go out and do stuff with him. So, I got a new bike and then I went riding on it a lot and I wanted to make use of it and that's what really got me into I think, actually the first COVID lockdown gave me the opportunity to fall back in love with mountain biking.*

Chris and Theo demonstrate the significance of the intersubjective experience. Even though there was a global pandemic they still found ways to ride their bikes together. This finding is significant given the social and cultural consequences of transgressing pandemic rules and illustrates the importance gifted to the intersubjective experience. These findings illustrate the significance of intersubjective experiences for participants and the ways they found to transgress, prioritizing face to face sociality.

This section has discussed findings related to the pleasurable dimensions of riding a bike with the other. I have for the first time illustrated the significance of intersubjective encounters that exist within mountain biking, and these are some of the most meaningful in the lived experience. Furthermore, experiences are not confined to the trail, and are extended through social media, where language and knowledge can be exchanged. This exchange of language, experience, and knowledge is not, however, limited to discussions of everyday matter, it encompasses learning and teaching elements. It is here I now move with the intention of discussing the importance of these aspects for all riders in the study.

7.3 Learning, Teaching, and Informal Education

The intersubjective experience is characterised as an intertwining of one and another's experience in the lifeworld. Noted above, the role of language is central and provides opportunity to explore the significance of learning and teaching for the riders. Discussed in the second findings chapter, riders are often seeking to push the limits of their skills, calculating the risk/reward relationship alongside managing their fear. Not discussed in the second findings chapter however but pertinent now is how the role of the other can influence decision making and success. When riding and especially on the *'ups'* dialogue is often constant, with discussion ranging from life encounters to work, and most often the focal point of conversation is skill related. This is a significant part of the overall dialogue occurring and is often characterised by a more experienced rider guiding another.

Collaboration during the intersubjective experience is central to riders getting better and is a hallmark of the mountain biking subculture and lifestyle sports broadly (Leeder and Beaumont, 2021). McNarry (2019) notes in his exploration of elite swimmers, the pool is a shared intersubjective space permitting swimmers to look out for one another and to provide

guidance where appropriate. This collaboration within the lifeworld of swimmers is akin to the collective awareness that exists for the riders. Given my immersion in the subculture during data collection for 18 months, I developed first-hand intersubjective experiences with other riders especially in the context of learning and teaching. To characterise this dialogue and collaboration within the context of mountain biking, I draw for the first time upon the significance of learning, teaching and informal education and their role in the intersubjective experience of mountain bikers.

There exists little research discussing dimensions of the intersubjective experience in the context of learning and teaching, however, for von Wright (2014) it is something of great value. She argues for successful teaching to occur, the teacher and learner must engage in an intersubjective dialogue founded upon a commonness and empathy, where all subjects are participators. Accordingly, in these moments the power differential that can occur within the teacher/student relationship is rejected and all subjects act in concert. It is within these parameters all riders discussed their experiences of overcoming adversity and advancing their skill level within mountain biking.

Chris provides a useful starting point to understand the learning and teaching relationship developed, discussing the organic, and often subtle interplay between informal learning and teaching. For Chris this occurs in a dynamic and interactive way, intersubjectively engaging in the experience largely in a pre-reflective way.

> *Chris: Yes definitely when we've been going out riding and bits where I've picked up stuff from you and you've picked up stuff from me, and that part of the experience is a really big part for me, I'm quite open minded to learning new stuff and I think it's been very similar in that aspect, and also very similar into our commitments outside of riding and that plays a big role. Riding in that sense it's really fulfilling and I'm*

> *open minded to learning new stuff then again on the flipside we're both very much aware of each other's responsibilities around riding so we're not like pushing things too crazy or do stuff that's too stupid, And again if I thought you could do something I would encourage you to do that and likewise she would do the same for me.*

The intricate learning and teaching undertaken by Chris can be understood through the lens of informal education. Informal education is the '*the wise, respectful and spontaneous process of cultivating learning. It works through conversation, and the exploration and enlargement of experience.'* (Jeffs & Smith, 2011, p.3). For the rider's, spontaneity is significant during intersubjective interaction given there is little intention to formally learn or develop something on a ride. As Chris noted it is not pre-planned, rather during the intersubjective riding experience, he catches opportunities to provide or receive feedback. Alan deepens understanding, providing a starting point to appreciate the informality and spontaneous nature of the learning:

> *Alan: I like to help them and some of them help me because certain sections for instance, Ian is really good on the technical stuff because of the enduro background. He will help me if he sees me struggling to do a feature, it's good in that respect.*

For Alan the notion of helping is synonymous with informal learnings helping to learn dimension and illustrates the unplanned, spontaneous nature of this interaction. Alan notes the informal learning relationship often occurs when Ian recognises Alan is struggling with a feature. These aspects of informal learning were also noted by James:

> *James: it's a pretty big thing for me (informal education), probably too big and I think sometimes the balance is a bit off with me but I love it, it is really satisfying helping others generally #peopleschampion, I think it does because I like seeing people improve and getting enthusiasm for riding their bike, or not being frustrated at something, that is great accomplishing a minor goal that they might be able to overcome. We have touched upon it previously, guiding kids or whatever, that is the*

> *best part of that for me because it's just so cool to see, it's just one of the best bits or at least it's right up there, I love it.*

For James much like Alan, the informal educational environment is an important dimension of the lived experience. The opportunity to engage in purposeful dialogue that enlarges the experience of those James is riding with is vitally important. I argue James is seeking to develop a mountain biking relationship that is built upon key principles of human existence and on the betterment and flourishing of others. It is flourishing that is central to the intersubjective experiences of all riders, with many suggesting ego and selfish tendencies can be detrimental to the success of the informal education taking place:

> *Alan: no ego and this is almost an unwritten rule in the group and if someone comes along, they've got an ego, then they're out. And that's just to make sure we don't impact the core group. The environment we have created, it just doesn't feel right.*

Alan demonstrates the value attributed to the intersubjective environment the group has created and their protective stance, something that circumvents the potential undermining of the status quo. A final dimension to the educative environment is noted by Theo in relation to technology and the effectiveness of social media when seeking to learn. Counter to the positive relationship riders had with social media when communicating with other riders, Theo acknowledges the limitations when using it to develop his riding. For Theo intersubjective interaction needs to incorporate a synchronous dimension that allows for instant and continued dialogue:

> *Theo: I guess the thing is if I watch the video, I'll have a million questions after I've watched it, and you can't ask those questions when you've watched something on YouTube whereas when you're riding with somebody on the trail you can ask them lots of questions about how it works and really appreciate and understand how to do something. When I'm out on the trails and the person I'm riding with can do stuff that*

> *I can't and its stuff that I want to be able to do then I will try and talk to them to get an understanding of that and get their perspective on it. It doesn't always mean that I'll try this stuff, but I like to understand it more and definitely that's the only way I can progress and learn is working with people and asking questions.*

Theo illustrates all dimensions of informal education at work and how central it is to the intersubjective experience. Whilst he can find resources online, it is the spontaneous and interactive dialogue that is useful. Without this aspect of the intersubjective experience, for Theo and other riders, they would glean less pleasure and satisfaction from mountain biking.

The section has explored the role of informal education as a dimension of rider's intersubjective experience. I have established intersubjective interaction centred on actively enlarging the experience of other riders is a significant feature of experience. An enlarging of experience is founded upon a desire of riders to increase the joy of others with the goal of flourishment. It is not a one-way, transactional interaction much like formal education, rather dialogue, conversation and a commitment to equity are at the heart of these encounters. Creating intersubjective experiences founded upon these principles develops a mountain biking experience more fulfilling and pleasurable for all riders. Having established the pleasure derived from intersubjective interactions alongside the significance of informal education, the final section explores the importance of the intercorporeal amongst these interactions.

7.4 Intercorporeality and the Body of Others

According to Merleau-Ponty (1962) intercorporeality is a significant dimension of the intersubjective experience and encompasses complex layers of embodied responsivity, expressivity, and communication. Intercorporeality sits beneath our subjective consciousness and the sociality of intersubjectivity, acting as a primordial interaction between bodies. For

Diprose (2002) movements and gestures act as tools to produce, maintain, and transform intercorporeal interactions. Thus, bodies are socially constituted through the working and reworking of social beings. Intercorporeality can be understood as a tacit communication between bodies involving an entanglement of self and other when considering intersubjectivity and sociality.

The intercorporeal dimensions outlined by Merleau-Ponty (1962) and Diprose (2002) are useful tools to understand the final dimension of the lived experience of riders. Given the saliency to discussion of intersubjectivity there are limits to its application, most notably when engaging in corporeal contact or when going down trails when language is not available to you. Gestures and movements perceived by others are crucial, whether related to joy or fear. Therefore, in the sections below I provide a unique platform to appreciate corporeal encounters between riders and unpack their relevance. To do this I discuss the gestures and movements on the bike, and the role of haptic touch.

7.3.1 The Lead In, Gestures and Trail Partners

Intercorporeal encounters among mountain bikers are characterized by a dynamic interplay of bodily awareness, movement synchronisation, and affective exchange, shaping both individual and collective riding experiences. Riders do not merely navigate the terrain as isolated individuals but actively attune to one another's bodily rhythms, responding to shifts in speed, posture, and trajectory in ways that often bypass verbal communication. For instance, during a descent, subtle cues such as a rider's weight shift, braking pattern, or change in cadence signal intentions to those following, fostering an intuitive, embodied dialogue between participants. These intercorporeal moments become particularly salient in technical sections, where trust and shared bodily responsiveness enable coordinated

navigation of obstacles. Beyond immediate bodily interactions, the environment itself mediates these encounters; trail conditions, gradients, and obstacles create situations that demand collective bodily adaptation, reinforcing the mutual attunement of riders.

A significant aspect of the intercorporeal attunement discussed by the riders was the usefulness of other riders and their bodies when seeking to develop their skills. The notion of being 'led in' occurs when riding with others and most often it is the strongest and most capable rider that leads. Whilst a simplistic reading of the experience would see a line of riders coming down a trail, a detailed examination would reveal a myriad of intercorporeal encounters occurring simultaneously. In the context of the lead in, as I established during sensory discussions in the first findings chapter, intercorporeality often occurs pre-reflectively. In these instances, riders are seeking an intercorporeal attunement by mimicking the bodily actions of the rider in front. These actions range from pedal strokes to the 'ready position' in anticipation of a feature or jump. Significantly for the novice rider, they are often unaware of the topographical and technical aspects of the trail, therefore the role of the more experienced rider is highly significant. Alan articulates his intercorporeal engagement with another rider when trying to complete a jump he has not done before:

> *Alan: there are some big features up in Burroughs Ford that I have not done yet, with big, big rocks. I could probably do them now, but I would need to see somebody do it, because if I see someone do it, I will know what speed to go in, what line to take, how to position the bike, what my body should look like.*

Alan outlines the importance of the others body in successfully completing aspects of bike riding currently outside of his grasp. Importantly, whilst he believes he could do it; he is unwilling to take the risk without watching another rider, and their body complete it. To appreciate this a revisit to the corporeal habitual knowledge discussed in the second findings

chapter is important. It is knowledge and corporeal cues that relate to the trail specifically, beyond language, that Alan is in search for because he does not possess the corporeal knowledge at this stage.

Enhancing the significance of the intercorporeal encounter for riders, James and Theo move beyond the entwining of bodies, to highlight their intercorporeal awareness using the wider sensorium. From the perspective of the leader and given they are going down the trail first, sight is almost rendered useless when seeking corporeal attunement with the other, given they are situated behind. Rather the proximity and welfare of the rider behind is most often attuned through a wider sensorium that in this scenario is guided by sound. This understanding is reliant upon the auditory system and a unique attunement to the mountain biking soundscape as detailed in the second findings chapter. Specifically, an attunement to aspects of riding ranging from language and the sound of the bike mechanics to the unforgettable noise when someone crashes:

> *James: If we were riding together and I can hear you whooping or doing whatever, I think that's great and that's good and I'll get a real buzz from that. if I hear you wailing in pain that might slightly negatively impact my riding (Laughter). I would say human noises are part of the mountain biking experience for me.*
>
> *Theo: yeah sound, I'm always listening out for the rider behind. You don't really know how far they are behind you all the time and a lot of the time you can really hear sticks breaking to be able to know how far they are behind… you also keep an ear out in case they crash, like when you crashed, I heard that sound I was like Oh no. there was that sort of gut wrenching feeling that I knew you'd had a big crash and were hurt.*

Theo illustrates the importance of an aural attunement to the soundscape of mountain biking and the intercorporeal dimensions of this. He is attuned to the sound of breaking sticks, indicating the proximity of the other rider. He also notes a corporeal awareness of specific

sounds and their significance, most notably when I had a crash. The sounds of a crash are unique and often incorporate many of the riding components but do so in a way that transgresses their usual noise. The sliding of tires when actively not seeking grip, the clink of metal often of bar to frame, the thud of a body and/or bike and the decompression of a rider's lungs. Given this, Theo's intercorporeal attunement through a set of auditory triggers, compelled his body to stop. Furthermore, the severity of the sound(s) enables Theo to appreciate the degree of injury and provokes a corporeal empathy manifested by somatic sensation.

In this example, corporeal empathy provoked an overwhelming synesthetic experience for Theo noted by his 'gut wrenching' comment. This indicates the sound provoked within him a feeling he has already corporeally experienced. Here I return to the severe crash Theo noted in 6.3.1 and the corporeal knowledge he now possesses as a result. Thus, the crash I had triggered an initial aural engagement that permitted a pre-reflective intercorporeal identification of my corporeal state through which Theo could come to understand my feelings.

Lastly, all riders noted the significance of wanting to watch the body of another rider in action and where possible in a flow state. It is important to appreciate the corporeal empathy on a sliding scale rather than as an isolated, painful experience. We can utilize flow to understand the pleasure derived from experiencing another rider successfully negotiating a difficult piece of trail. James articulates corporeal empathy when recounting an experience working with me on a drop:

> *James: remember that time when you hit that drop at Wych Lodge, was it the reason I went out that day? No. But was it the icing on the cake absolutely. And it was a good ride with you, and then we focused on that, and you nearly killed yourself a few times and we were able to do it, initially it was horrific, but it was really good that you managed to do that, and I was able to influence that, I had done a good thing there. It's a thing I get a big kick out of, it was if a I could feel what you were feeling when it was going wrong and then when you got it right, it felt amazing.*

Theo notes a similar experience during a riding session:

> *Theo: You don't hit into them but also, so you don't lose each other or keep an eye to see what they're doing and what they're hitting. You want to watch if they do something pretty cool or interesting, so you're more aware, and that can almost make you feel more aware, because when you're with other people you're less likely to zone out and you kind of know how it feels, so when they do something good it makes you feel good too.*

James and Theo describe a corporeal empathy provoking a pleasurable and positive response. This intercorporeal interaction, whilst not in a physical sense, brings about a significant corporeal reaction for riders. Corporeal empathy builds upon rider's previous experiences, pleasurable or painful, and heightens the overall experience.

7.3.2 Fist bump and hugging

Synonymous within lifestyle sports is the ubiquitous image of two or more participants bumping fists, joy on their faces after completing the respective task. Whilst this cultural representation exists in the fabric of lifestyle sports, little is known of the significance of this corporeal contact. Set against intercorporeality, this interaction between the flesh of one another in a mountain biking context is worthy of discussion. Beyond the fluid coordination of movement on the trail, mountain bikers engage in direct bodily contact as an embodied extension of shared experience and affirmation. These gestures emerge in moments where verbal expression falls short, serving as a tactile recognition of collective achievement,

exhilaration, or relief. Unlike spoken language, which can be reflective and distanced, bodily contact operates in the immediacy of the moment, reinforcing a shared corporeal understanding between riders. For riders, the fist bump for example, was both a symbolic and corporeal encounter, one that holds importance within the lived experience.

As I discussed earlier, key to the intersubjective experience is how language acts as the vehicle for the riders to enact their sociability. Yet in the absence of the spoken word, language still exists and does so in a corporeal way. Communication is through sonorous touch, and we use our flesh and that of others as the vehicle for this (Csordas, 2008). For rider's, fleshy encounters such as the fist bump indicate a shared language for those within the sub-culture. Theo firstly articulates the ubiquity and then importance of this sonorous touch in his experience outlining how it infers a successful trail:

> *Theo: yeah, at the end of a trail, it's sort of a way of sharing that the trail went really well, and you do that little fist pump. it's sort of like, it's a bit of bonding experience, and it is nice, and I do like that. everybody knows what role it plays but I guess, if you had both just done an intense trail, such an out of the ordinary sort of thing, and the fist pump sort of signifies that we just did it together and it was amazing and exhilarating.*

Theo acknowledges the importance of the fist pump as a way of communication and bonding. Communicating through flesh permits Theo an extended lexicon related to his body that cannot be conveyed through words. He notes if a trail has been exhilarating and he is lost for words, he is able to utilise this symbolic and corporeal language to articulate his feelings. The use of his flesh as a communicative vehicle enhances the intimacy of the riding experience and signifies the extent Theo and those he is riding with value this interaction. Furthermore, a fist bump exchanged at the trail's end is not merely a social convention but a tactile

acknowledgment of mutual effort and risk, communicating the intensity of the ride in a way words cannot fully capture.

Additionally, when used after successfully navigating a difficult technical section, the fist bump can function as a bodily translation of shared flow that affirms both individual skill and collective synchronization. The intimacy described by Theo was highlighted by James as a significant feature of his riding experience. James articulates the importance of intercorporeal interactions for him generally and the significance of hugging and fist bumps:

> *James: I think that I am quite a huggy touchy feely sort of guy and I guess I quite like that generally, I'm quite happy with a hug and a fist pump and that sort of stuff and I generally view it as a positive. If you take the fist pump that's a great way of saying you did good there or we did good there, and that was a really positive thing that we did and well done. And a hug is a way of saying good to see you a bit like a handshake but more familiar, and I think it perhaps cements a feeling or something (laughter).*

For James as it was for Theo, the fist bump acts as a non-verbal, corporeal vehicle to express pleasure and positivity after riding a trail. Importantly for James the role of hugging, distinguished against the formality of a handshake, is a way of ending the riding experience. Furthermore, for James particularly, hugging, often reserved for more intense emotional peaks such as conquering a long-anticipated feature or overcoming fear, expresses an embodied solidarity, an intercorporeal ‘being-with’ that transcends verbal articulation. For all riders the intercorporeal interaction during riding was a significant aspect, demonstrating how the body facilitates unique and often misrepresented forms of communication. This intertwining of bodies for the riders is a significant feature of their lived experience and one that allows them to convey feelings they are unable to articulate verbally.

The intention of this section was to reveal and discuss intricate ways the bodies of riders act as communicative vessels; a corporeal interaction between riders that is often pre-reflective and non-verbal. These moments of physical contact are significant because they crystallize the affective dimensions of mountain biking's intercorporeality, revealing how riders experience connection not just through movement but through felt, enacted gestures of touch. In this way, bodily contact becomes a crucial medium through which emotions, camaraderie, and mutual recognition are communicated, underscoring the deeply relational and affectively charged nature of mountain biking encounters.

Specifically, this section established the centrality of the intercorporeal for the riders when riding a trail and signifying pleasure. The use of corporeal movements and gestures that are part of the lexicon of riders enables them to safely traverse trails. Additionally, these movements and gestures provide opportunity to push their own limits, an opportunity to read the bodies of others in ways that promote confidence and potential success. Furthermore, the exploration of sonorous touch through fist bumping and hugging illustrates how bodies are used as communicative tools beyond verbal language and how these bodies possess ways of communicating that words cannot.

7.5 Chapter Summary

This chapter discussed the significance of the other for riders, exploring the intersubjective and intercorporeal dimensions of the lived experience. In the first section I applied intersubjectivity to reveal the pleasure riders derived from riding their bikes with others and the ways in which dialogue and conversation act as central features of this intersubjective interaction. In a first, I extended current conceptual understandings of intersubjectivity and proposed the importance of viewing these encounters through the prism of new media. The

role of this new media provides riders with an opportunity to remain engaged in dialogue with fellow riders beyond the trail and therefore deepening the significance of other riders. Whilst intersubjective engagement involved various aspects, teaching and learning in the guise of informal education emerged as an important theme. This fresh application of informal education offers new ways to view the others significance. For the riders, encouraging and witnessing progress of other mountain bikers enlarged their experience and was predicated upon a desire for others to flourish. These findings represent an exciting opportunity for further research to explore the role of informal education in sporting practice, especially given its prevalence in recreational experiences.

In the final section, I incorporated non-verbal and intercorporeal communication as a tool riders use. Mobilising the conceptual framework in this way represents the first presentation of intercorporeal interactions for mountain bikers and highlights its centrality to their lived experiences most notably when following another rider down a trail. Attunement to the use of subtle gestures and movements absorbed pre-reflectively is an exciting finding. It extends both the conceptual framework and furthers my application of corporeal knowledge development noted earlier in the chapter. Finally, I extend findings from the first findings chapter to illustrate the importance of haptic touch. Haptic encounters related to fist pumping and hugging were corporeal interactions regarded as vital communication mechanisms for the riders, mechanisms possessing the ability to communicate intimately when words were not enough or illusive. This finding presents a new way to appreciate the communication strategies of mountain bikers and sports people more broadly.

The fourth findings chapter enhances existing understandings surrounding the significance of the intersubjective experience, especially in a lifestyle sports context. Often lauded as an expressive platform that embraces alternative ways of knowing and doing, there is little research exploring the role of the other in this way. Through the use of the conceptual framework, I provide creative and important contributions to understand the importance of corporeal interactions between lifestyle sports participants. Regarded typically as solo activities, the application of intersubjectivity and intercorporeality provide unique points of access to counter existing discourses on lifestyle sports and demonstrate the sophisticated ways participants engage in verbal and corporeal dialogue. Moreover, the chapter responds to the research questions having established the importance of the other in the lived experience and outlines how the rider's bodies and senses are actively engaged in communication with others. Furthermore, I have presented novel ways to understand these encounters, something to be built upon in future research.

The body, senses and intersubjectivity: Theoretical and conceptual contributions

8.1 Introduction

The four preceding chapters have presented and examined data linking to the three research questions. Throughout these chapters, I have presented new contributions to existing thinking and novel ways to appreciate the links between the body, senses, and intersubjective experiences through the conceptual framework developed in Chapter Two. Notably however, I purposefully did not pursue opportunities to explore the implications of these findings to the theoretical and conceptual base in accordance with existing literature. I omitted to do so because I wanted to consolidate findings and discuss the theoretical implications in one place. Therefore, this chapter discusses how examinations of sensory, fluid, painful, and intersubjective experiences in mountain biking offer new ways of thinking when understanding the lived experience of mountain bikers.

The first section of this chapter examines implications from the first findings chapter on understandings of the lifeworld of mountain bikers and how corporeal and sensory encounters are central to their lived experience. Subsequently, the theoretical and conceptual implications of the emergence of flow and fear as significant aspects of the lived experience are discussed. The consequences of this novel application of flow for sensory and phenomenological research are discussed. Penultimately, I seek to reimagine often superficial understandings of pain in lifestyle sports. To achieve this, I discuss the corporeal encounter and the accompanying socio-cultural and emotional dimensions that parallel acute trauma. Finally, throughout the research I was struck by the significance the other plays in experience given the dearth of literature on in sporting research. Therefore, the final section explores how the other, in an intersubjective and intercorporeal sense, possesses significance for mountain bikers. All sections raise important questions and contributions regarding the depth

of sporting experience and the significance of sociological phenomenological and sensory explorations in sport.

8.2 Corporeal and Sensual Contributions

The findings in Chapter Four provide a point of entry to explore the role of the body in the lived experiences of mountain bikers. It emerged corporeal understandings were often interpreted and articulated through sensory encounters both on and off the bike. According to Vannini et al. (2012) there currently exists a preoccupation with a selection of senses in the West deemed most influential, such as sight, sound, taste, touch, and smell. Furthermore, Vannini et al. (2012) argue Western societies are unwavering in their support of vision as the primary sense. Given the proliferation of social media and new media technologies this stance is unsurprising (Warren and Hresko, 2024). The findings of this study build on this work through the conceptual framework to present new perspectives that appreciate the unique role of the body and senses. I provide intricate and subtle understandings of the importance of the haptic, auditory, and thermoceptive sensual modes in lived experience. These findings respond to Vannini et al. (2012) calls and offer new modalities for exploration.

In the first section I explore the cutaneous engagements of touch such as the feeling of wind on the face or the feeling of touch when gripping the bike. Specifically cutaneous dimensions of tactility and pressure reveal how significant this sensory engagement is for riders, permitting them opportunities to understand how the bike is handling and how the trail is feeling. Findings related to tactility and pressure are unique and rarely appear in the sensory literature on sports or mountain biking. The findings in this research extend the only contribution to date by Brown (2017), revealing the importance of tactility and the centrality

of it in the lived experience. In addition, these findings align with the work of Paterson (2007) to reveal new ways of applying his conceptual understandings of haptic touch.

Paterson's (2009) contribution represents a seminal reorientation to understanding the sensual experience, notably distinguishing between our outwardly, exteroceptive senses, and the inwardly, somatic sensations. Whilst over a decade old, very little research has utilised the opportunity to explore the somatic sensations of sports participants. In Chapter Four all participants highlighted the role played by kinaesthesia, proprioception, and the vestibular system. Whilst omnipresent in sporting practice and mountain biking, to date there are no studies exploring these somatic sensations in mountain biking and very few in sport (Spinney, 2006). Consequently, I contend investigating somatic modes of sensing when riding a bike and notably when looking to find grip on the trail are vital. Furthermore, through the conceptual framework, I propose an understanding of the complex interplay between these somatic sensations that culminates in a sensorily attuned body that can navigate the trail, appreciate speed, and stay upright. Findings related to somatic sensations provide an original contribution to the literature and illustrate the relevance of somatic sensation for mountain bikers.

Additionally in Chapter Four I uncover the implication of temperature as a cutaneous and somatic sensory encounter, revealing the role of thermoception for riders (Potter, 2008). By deploying the conceptual framework, I propose for the first time the importance of thermoception as a modality of touch and illustrate the role it plays for riders when negotiating outside temperatures, wet clothing, and the will to ride. As a distinct sensory mode, findings extend broader sporting research to demonstrate the somatic, thermoceptive attunement of riders when regulating their body temperature. These findings also represent

the first examination of temperature work within mountain biking, and I uniquely apply this concept to extend Allen-Collinson et al. (2018) and suggest mountain bikers actively engage in temperature work. Specifically, the somatic learning undertaken is pivotal to a successful riding experience and is a key factor in creating conditions for pleasure and flow.

In the final section I develop conceptual introductions from Warren (2018) to illustrate the significance of the mountain biking soundscape. For all riders the auditory system was vital to successfully negotiating trails and ensuring attunement to the soundscape. Whether listening for mechanical issues or the sound of the other, I provide the first contributions that elucidate the complex and continual aural interplay that exists in mountain biking. On this basis I argue aural attunement is developed through continued engagement in the riding experience and is significant in the lived experience. Additionally, I uniquely identify rider's aural attunement with their search for maximum grip (Merleau-Ponty, 1962). The novel application of this concept as part of the wider framework reveals the subtle aural attunement that exists between rider, bike, and trail that offers affordances of extreme pleasure.

Finally in this section I propose the aural understandings possessed by the riders can be understood through the conceptual development of aural work and the extension of the conceptual framework. Akin to the temperature work discussed above I propose the significance of, and attunement to, the multitude of sounds in the riding soundscape is something riders hold on to. They develop and deploy this knowledge to ensure future riding experiences increase the opportunity to experience flow. This novel application creates a myriad of research opportunities in and out of mountain biking to investigate the aural work undertaken by a range of sporting athletes.

In summary Chapter Four reveals a complex and unique sensory engagement for mountain bikers, a synaesthetic awareness requiring external and internal attunement. These findings have implications for current and future research. The importance of somatic sensation in the lived experience of mountain bikers is a strong counter to the fixation upon the Western five senses. I contend often for the mountain biker thermoceptive, and tactile sensual engagements possess greater significance for the rider than those in the Western hierarchy. In addition, vision was not discussed in the findings and therefore, I argue for a reconsideration of the existing hierarchy to consider those senses that sit outside existing social and cultural narratives. Therefore, I am suggesting greater equity amongst the senses rather reconstituting another hierarchy and an awareness within mountain biking at least, there exists a shifted sensorium (McNarry, 2019).

8.3 Situating Theoretical Understandings of Flow and Fear

In Chapter Five I extend sensory focus and build upon the pleasurable dimensions of mountain biking readily discussed in concert with haptic and somatic sensory encounters. Utilising the conceptual framework and specifically aspects of flow and the concept of unconscious control, I deconstruct the euphoric experiences had when riding a mountain bike. Whilst flow theory is most recognised within psychological research, the deployment of the conceptual framework demonstrates how its application to phenomenologically inspired studies is valuable. I suggest heightened experience had in the context of flow cannot be comprehended without an exploration of the body's role. I reveal flow is a significant dimension of the riders lived experience and something highly sought after. Central to the experience is how the body and the senses act as mediators for a flowy experience. Illustrated by the riders, the body operates often without thought and I provide novel empirical and theoretical opportunities to be grasped. Furthermore, I utilise the concept of habit to explore

the flowy and pre-reflective embodied knowledge at play. I reveal rider's bodies possess habitual knowledge built up over extensive engagement with riding. Habitual knowledge creates opportunities for a flowy, often pre-reflective riding experience influenced by an unconscious control. These contributions as part of the wider conceptual framework proposed in this study, extend current understandings of Csikszentmihaly and Csikszentmihalyi (1988) and Merleau-Ponty (1962) to uncover unique and novel insights into the pleasurable experiences of mountain bikers.

Furthermore, I extend aspects of unconscious control to illustrate the delicate interplay between trail, body and senses during the rider's search for smoothness and subsequent flow. I illustrate a vital component of the flow experience is the smoothness of the trail and the significance of the senses during these smooth encounters. These multisensory encounters extend the literature base significantly to reveal how haptic and somatic senses operate in pre-reflective unison. This unison foregrounds opportunity for flow and when encounters of displeasure are anticipated these can be circumvented before they are met.

In the chapter I demonstrate the negotiation of challenge and skill is pertinent to the flow experience given the fine line of risk and reward ridden by riders. This area is under-researched in cycling literature and therefore I provide a new way of understanding fearful encounters. Utilising the concept of fear, I argue during the negotiation of challenging experiences the body and the senses are a key dimension when mediating fear. I suggest riders will ride within their skill and challenge parameters to limit fear and promote opportunities for flow. In this instance I uncover the felt nature of fear, and the multisensory encounters riders had when they successfully negotiated fear. Of significance is the prominent role the mind plays during a fearful encounter. I propose in these instances there is

a stark move away from a pre-reflective corporeal knowledge during flow to a highly cognitive experience.

Consequently, the mind body dualism is reaffirmed, and findings indicate this was consistent amongst all riders. When the skill challenge relationship was at its outermost parameters, the minds prominence over the body was of increasing significance. Subsequently, I reveal how the body and the mind are in constant reflective dialogue during fearful encounters and present unique insights into its role in the rider's lifeworld. In this chapter and through the deployment of the conceptual framework, I push the boundaries of research in this area and provide a strong argument for further investigation into fearful experiences through sensory and corporeal concepts in a way that compliments existing psychological investigations.

Chapter Five provides original insights into flowy experience, and I propose the importance of corporeal considerations to future research. The significance of the body and senses when unpacking optimal and fearful experience is unique. I suggest considering the role of the body and senses during flowy experiences provides additional layers not investigated before. These considerations reveal the complex and subtle interplay between the body and the senses, and the often-fleeting nature of flow. The implications of deploying the conceptual frameworks are that it allows the researcher to provide rich findings that I hope will quell the often-lazy use of flow in various research settings alongside opening new research opportunities. Additionally, this research has presented only one context this can be achieved in, indicating how the conceptual framework can be deployed to provide further fruitful inquiry in other sports. Importantly the riders experience of flow and fear are not homogenous, they were unique to their riding proficiency and frequency. Therefore, further

research into the body and senses alongside concepts of habit, unconscious control, and fear is required.

8.4 (Re)Understanding Pain in MTB

In the third findings chapter discussion moves from pleasurable sensual experiences on the trail to ones bringing about pain and discomfort. In this chapter and as part of the wider conceptual framework I utilise Leder's (1990) dys-appearing body in a novel way to understand the discomfort and pain of mountain bikers. Additionally, Leder's work suitably dovetails discussion of flow and pre-reflective unconscious control nicely. It allows me to reveal how the dys-appearing body disrupts pre-reflective states, to bring into focus a cognitive and corporeal dialogue attentive to the discomfort being experienced. For the riders the dys-appearance of the body in uncomfortable and painful experience adds original insights into the lived experience of lifestyle sports participants and the inter-relatedness of the cognitive and corporeal. Additionally, it extends Leder's (1990) work into recreational contexts, something to date that has not been done.

Additionally, I deconstruct feelings of fatigue and exhaustion to explore their significance in the lived experience of riders and how they utilise sensory attunement to understand these encounters. To date there is a dearth of research in this area, yet fatigue and exhaustion are commonplace in cycling and mountain biking subcultures. Applying Leder's (1990) work I demonstrate there exists a constant communication between body and mind when dealing with tiredness and how this is manifest through sensation. Specifically, thermoceptive and proprioceptive modes of sensation are central for the riders when understanding fatigue. In this instance I reveal somatic learning or endurance work (Allen-Collinson et al., 2018) has taken place for riders to acutely *know* their bodies (Schutz, 1967). The embodied enduring

knowledge informs their decision to push through the discomfort or retire (Paterson, 2009; Leder, 1990). These conclusions extend Spinney's (2006) findings on fatigue and exhaustion in road cycling contexts and provides a unique application of Allen-Collinson et al. (2018) endurance work outside of elite mountaineering settings.

Through the application of the conceptual framework a significant contribution to existing literature I make is to reveal the role of sensation, and the socio-cultural and emotional dimensions of pain. Participants provided vivid accounts of the thermoceptive dimension of pain and how heat was a significant feature in their diagnosis. Having discussed temperature in the first findings chapter, I extend the concept further and offer unique contributions to the literature into how thermoceptive attunement influences lived experience. Additionally, findings indicate the reflective role of pain and how pain disrupts the harmonious interplay that previously existed. Leder (1990) offers scope to move beyond characterising pain solely at the site of trauma, exploring how pain may bring about feelings of emotion such as anger and socio-cultural consequence such as the inability to work. Developing this I offer novel contributions to the literature on pain generally and reinforce the outcomes of the modest research existing in sport more broadly. Specifically, I introduce a new way of appreciating the mountain biker in pain, someone who is in sensory and emotional disarray and seeking to process the implications.

In summary Chapter Six discusses an omnipresent dimension of riding experience and reveals the significance of fatigue and pain. The findings are exciting and provide deeper understandings of athletes' painful encounters. The conceptual implications of these original contributions are they present a novel application of Leder's (1990) absent body and unpack the corporeal alongside emotion and social significance. Furthermore, they reaffirm the

usefulness of the conceptual framework to allow the research to illuminate the lifeworld of sports athletes and riders. Additionally, they provide direction for future research to explore the uncomfortable experiences of sporting participants in and outside of mountain biking. These findings add to the modest literature investigating pain and show the promise of future research.

8.5 Intersubjective Contributions

In Chapter Seven I uncover the importance of the other in a social and corporeal way by drawing upon the sociologically inspired phenomenological concepts of intersubjectivity and incorporeality. The chapter unpacks interactions existing between riders when engaging in what is perceived to be an individual sporting past time. The intersubjective experience of riders was discussed as the most significant finding in the study, with all riders articulating the pleasure derived from these interactions. In these instances, riding a bike affords the opportunity to discuss everyday affairs in a cathartic way and formed a part of the lived experience. I demonstrate the value of social interaction between riders, concluding without it they would not ride as much as they do. A significant aspect of intersubjective encounters is they occur throughout the riding experience. Whether this be on journey to the trail, during or after, findings indicate riders sought the other in all settings.

Finally, the identification of social media as a vehicle to extend social interactions between riders and its interwovenness in the fabric of the lifeworld is an original contribution and extends understanding. The essentiality of social media was outlined by all riders, and I suggest offers a unique context to further examine riders intersubjective experience. The broad relevance of intersubjectivity to the entire mountain biking lifeworld illustrates the significance of the concept and associated literature. The application of intersubjectivity

provides an original contribution and acts as the first venture in understanding the relationships between mountain bikers.

A key dimension of intersubjective encounters was the opportunity afforded for riders to learn and teach one another. Applying intersubjectivity in this conceptual way extends Schutz's (1967) concept into a realm not used before and I present these exchanges through the prism of informal learning. Informal learning provides an appropriate framework to appreciate the significance and spontaneous aspects of intersubjective exchanges that occur through dialogue. Findings indicate an intersubjective awareness of riders that observes the success of another and provides feedback. Through informal conversations, riders derived pleasure from flourishing and the flourishment of others. Additionally for the riders, learning and teaching emerged as a cornerstone of their continued engagement. Without this interaction riders suggested they would have likely discontinued. My application of informal learning to mountain biking is the first of its kind and indicates a great deal of promise. It provides theoretical and conceptual questions related to how learning takes place in a mountain biking setting and to what extent the role of the other is necessary.

In the final section I draw upon Merleau-Ponty's (1962) concept of intercorporeality to explore the significance of non-verbal, intercorporeal interactions when riding. I demonstrate that sonorous cutaneous engagements of fist bumping and hugging were overwhelmingly significant for riders. These engagements acted as a cultural emblem of the activity and a reassuring physical exchange that deemed the trail riding good. Importantly these exchanges happened often when words were not spoken, when experiences were often so heightened language was deemed insufficient or lost. In addition to these intercorporeal exchanges, riders also noted the pre-reflective, unconscious corporeal movements often occurring during

intense flow experiences. Subtle gestures or corporeal movements were understood and appreciated when riding together, acting as cues of upcoming obstacles or dangers for other riders.

To sum up, in the final findings chapter the application of the conceptual framework provides novel insights into the lived experiences of lifestyle sports participants and mountain bikers. To do date research in mountain biking has explored instances when groups of individuals participate in riding or related activities (Cherrington, 2021; Brown, 2017), yet none have explored intercorporeal interactions explicitly. I demonstrate the significance of intersubjective and intercorporeal encounters for mountain bikers and reconstitute, if only for the participants here, the reasons why they ride their bike. These findings add to the growing literature on intersubjective and intercorporeal experience in sport such as Spencer's (2012) research into MMA and Allen-Collinson and Hockey's (2017) on distance running and provide original contributions in lifestyle sport and mountain biking.

Conclusion

9.1 Concluding the Trail

The primary aim of the research was to explore the various ways recreational mountain bikers experience riding. A particular focus was placed upon the corporeal and sensual dimensions of the riding experience and how influential these dimensions are. Recognising the enhanced public and leisurely focus on lifestyle sports such as mountain biking, alongside its increasing popularity, I have provided insights into the lives of riders. The Introduction began by being attentive to the history of lifestyle sports and lineages from a colonial era that saw the reappropriation of rituals as leisure pursuits. The lineages to surfing cultures of 1960s America provided a foundation to explore the advent of mountain biking and its current proliferation. The chapter concluded by discussing the disciplinary physical cultural position of the research and the overarching aim and objective.

The Literature Review discussed the extant research on corporeal and sensual experiences in sport. The exploration revealed an eclectic body of research, adopting a range of theoretical and conceptual tools. This research is rich but often neglected in lifestyle sports contexts, drawing rarely upon phenomenology and a sociologised phenomenology as a theoretical aid. Therefore, the second section of the chapter discussed theoretical orientations relevant when exploring lived experiences and revealed the influence of Husserl, Merleau-Ponty, and Schutz. These sections revealed concepts of lifeworld, habit, intersubjectivity, intercorporeality and perception and their relevance for the study. Through the identification of concepts, I was able to explore their relevance and subsequent reworkings between Husserl, Merleau-Ponty, and Schutz. The reworkings allowed for a refinement in the understanding and subsequent application of the concepts to the riders experience. Whilst useful, the application of the concepts in empirical research was lacking and therefore the

remainder of the chapter identified and discussed further concepts situated in empirical research. The final section provided a conceptual framework that blended theoretical dimensions from phenomenology with concepts from sociology. The outcome of this conceptual framework was that it provided a sociologically sensitive phenomenological position and original conceptual framework to explore mountain bikers lived experience.

To guide the research three overarching research questions were developed:

1. What role does the body play in the lived experience of recreational mountain bikers?
2. What role do the senses and sensorium play in the lived experience of recreational mountain bikers?
3. What role does intersubjectivity play in the mountain biking lifeworld from a sociological phenomenological perspective?

The discussion in the empirical chapters has been formed around these questions, exploring the themes to emerge from extensive observations and interviews with the riders. Additionally, the role of these chapters was to assess the effectiveness of the conceptual framework as frame through which the research could illuminate the rider's lived experiences. The first of these questions explored the role of the body during the riding experience and was informed by the work of Merleau-Ponty. The intention was to investigate the corporeal dimensions of bike riding and the role of the body in lived experience. Additionally, an important part of this question was to explore the pleasurable and unpleasant carnal encounters when riding a bike. The second question assessed the extent to which riders were aware of their senses and how influential these were. I was particularly interested in

which senses were utilised and to what extent these reorientated existing hierarchies and a preoccupation with sight. The final question utilised the conceptual influences focussed on the other to explore the significance of intersubjective encounters. Often misrepresented as an individual pursuit, mountain biking offers unique potential to explore the role of other riders in lived experience.

The empirical chapters through the utilisation of the conceptual framework provide original contributions to existing literature and clearly answer the research questions. In response to question one, discussion reveals the significance of the body in experience and specifically the ways it operates pre-reflexively during pleasurable experiences. It emerged concepts of habit and flow were conceptually influential when discussing findings. They revealed how the body possesses knowledge permitting riding without thought. Riders discussed euphoric experiences that involved the body taking over and becoming an active and thinking body. Of significance was the role of frequency when finding flow; the concept was often discussed in an elusive way, something sought after on every ride but not always experienced. Thus, it was established the body plays a significant role in the lived experience.

Additional findings focussing on fear, fatigue and injury revealed when riders were outside of habitual and flowy encounters, the knowing body was superseded by cognition. Utilising Leder's (1990) concept of the dys-appearing body, it emerged during encounters of discomfort the body would become the centre of cognitive thought. Focus was placed upon the site of discomfort and the extent of painful trauma. These finding demonstrate the subtle interplay between the body and mind during the riding experience. Furthermore, these novel insights illustrate the fragility that exists in search of optimal experience and how during experience the body and mind influence riding.

The intention of question two was to reveal the role of sensation during the rider's experience. Discussion revealed a diverse and comprehensive set of findings indicating riders are acutely attuned to their senses and these senses are of significance in their lived experience. The first findings chapter revealed the role of touch, heat, and sound in the riding experience. In this chapter I developed Allen-Collinson et al. (2018) discussions of temperature work alongside Warren's (2018) identification of the mountain biking soundscape to reveal the intricacies of sensation. Additionally utilising Paterson (2009) findings I illustrate the significance of haptic and somatic sensation for riders. Specifically, the notion touching and being touched by seasons and their conditions alongside the significance of proprioception, kinaesthesia, and the vestibular system during trail riding revealed original insights into the sensory literature.

In the findings chapters discussion appreciates the synaesthetic experience of riders during euphoric and painful encounters. During pleasurable encounters riders recounted examples of multisensory experiences, where for instance the vestibular system alongside tactility and hearing would interweave to maximise flow. Conversely, during heightened cognitive encounters such as fear or pain, synaesthetic experiences were had but these often heightened the significance of discomfort. Utilising the conceptual framework, I revealed a unique finding centred on how the senses would intertwine with emotion to heighten encounters of pain. These findings contribute novel insights in mountain biking contexts and beyond.

Findings in response to research question two are significant and demonstrate the relevance and original contributions to the literature. Of note is the consequence findings have for a reorientation of the existing Western hierarchy. The response to question two demonstrates the significance of a wide array of senses that are of import for riders. Therefore, this

reiterates Vannini et al. (2012) and Howes and Classen (2013) calls over a decade ago to reorient our understandings.

In response to question three, findings detail the significance of the other during experience and demonstrate intersubjective encounters are those most cherished by riders. The findings clearly answer the questions and provide original insights not unearthed in the literature. Specifically, the findings explore how riders engage with one another on and off the trail and the importance of these interactions. For all riders, the opportunity to engage intersubjectively with one another through informal dialogue revealed the heightened significance placed on these encounters. Extending current understandings of intersubjectivity, riders revealed their use of social media to remain engaged with the other. Social media created opportunity to continue discussion away from the trail and to engage in sub-cultural banter, thus extending the impact upon lived experience away from the trail.

A unique and unexpected finding during discussion was the significance of informal learning for all riders. A novel insight, the use of informal learning to enhance the proficiency of one another significant for all riders. The ability to offer advice and for this to be successfully utilised was cited as a major source of pleasure and reason for riding by all riders. The existence of informal learning within mountain biking is not new but the research findings in addition to answering question three, also reveal exciting future research opportunities.

The final dimension to contribute to research question three was intercorporeality and how the body of others was a significant feature of experience. All riders discussed the significance of informal gesturing and body language to communicate with one another. Additionally, these gestures were significant on the trail as they ensured the safety of other

riders. Alongside gestures, the intercorporeal bodily contact whether through fist bump or hug was significant for all riders. Findings suggest when in heightened states of euphoria, verbal language is often unable to describe the significance of experience, therefore a subtle fist pump or hug represents the feelings of one another.

The findings clearly answer research question three and detail how influential intersubjective and intercorporeal encounters are for the riders. The findings reveal an under researched but highly significant dimension of sporting experience for all athletes and not just mountain bikers. Therefore, further research is imperative to ensure the full breadth of sports enthusiasts lived experience is captured.

9.2 Limitations and Future Directions

This study has revealed various ways the mountain biking experience is influenced and understood through the body and senses. Additionally, it has provided novel insights that extend and challenge current thinking related to theoretical and conceptual understandings. Whilst these contributions are useful, they do not represent the experiences of all mountain bikers, rather it showcases the experiences of White, British, male riders aged between 20 – 50 located in the Southwest of England. Therefore, opportunity exists for future research to explore the experiences of individuals possessing different demographic characteristics such as female riders for whom the mountain biking space possesses various discriminatory and prejudicial dimensions (Moreland et al., 2024). Moreover, the study represents the experiences of riders in the Southwest of England and therefore future research could consider a different geographical catchment to assess the impact of geography.

Additionally, a central feature of the research was the recreational dimension of the riders involved. Whilst this provided unique insights into their experiences, this was often set against those of elite or professional riders. Therefore, it would be an important contribution to the mountain biking literature to understand the lived experiences of elite riders. Specifically, using the conceptual framework, further research would provide additional depth alongside this study and reveal additional complexities related to authenticity that were less present in this work. Outside of mountain their exists work in elite Swimming from McNarry (2019) that could provide guidance and foster collaboration.

A further avenue for future research centres on the use of a sociologised phenomenological theoretical position that utilises selected concepts to deploy a unique conceptual framework. Whilst the framework has borne fruit in this study, this is not the only way to explore the experiences of mountain bikers. Therefore, future research may wish to deploy theoretical influences such as Wacquant's use of Bourdieu's habitus to understand boxers' experiences. Whilst the use of further theoretical influences is useful as noted by Cherrington (2024), given the modest literature in mountain biking spaces this must be presented in accessible formats that attracts rather than ostracises the regular mountain biker.

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Appendices

Appendix One - Ethics Application

Please ensure you have read the University of Gloucestershire *Research Ethics Handbook of Principles and Procedures* before completing this form

Please make sure you have completed the Ethics Self-Assessment Checklist prior to filling out this form. This will give you an indication on the types of research designs that require scrutiny from either the School Research Ethics Panel (SREP) or the Research Ethics Committee (REC). On occasion, some research proposals will also need the scrutiny of an external research ethics committee. Please ensure you have discussed this with your module tutor/supervisor/co-researchers.

Contact Details of Lead Researcher	
Name:	Benjamin Moreland
Student or staff number:	
Please state in which capacity this application is being made (as this affects the gatekeeper process)	Postgraduate Researcher
University e-mail address:	/

Contact Details of research supervisor(s) OR module tutor OR co-researcher(s)

Name:	Dan Keech	Name:	Peter Gaskell / Andy Pitchford
University e-mail Address:	dkeech@glos.ac.uk	University e-mail Address:	pgaskell@glos.ac.uk /

About the Project			
Project Title:	**An exploration of the lived experiences of Forest of Dean Mountain Bikers**		
Start Date:	01/10/2019	Completion Date:	1/09/25

Project Research Questions (include as many as applicable)	
1.	What role does the corporeal play in the lived experience of Forest of Dean Mountain Bikers?
2.	What sense(s) are prominent in the lived experience of Forest of Dean Mountain Biker?
3.	How do cultural practices within mountain biking shape the lived experience?
4.	
5.	

Description of the project	
Include answers to the following questions (unless non-applicable):	
1. *Why is the project being carried out?*	To develop the first insights into the lived experiences of mountain bikers. The participants and setting provide a unique and timely research environment to explore how the societal and cultural environment have impacted the construction of mountain biking subcultures and identities, and how these have shaped the lived experience. Furthermore, an understanding of the embodied and sensory experience of mountain bikers has not been researched to date. Therefore, development of knowledge in this area will provide original insights into a research phenomenon largely engaged with at consumer culture level. Of great importance is to understand if and how these subcultural constructions influence the lived experiences of mountain bikers in a local mountain biking setting.
2. *How has it been designed to answer the research questions?*	This study has been designed to meet the research questions and has utilised the framework provided by Crotty (2008). This framework ensures precision and clarity in

	the discussion of the particular methodological elements pertinent to this study. All design discussions will align with the following structure: Epistemology, Theoretical Perspective, Methodology and Method. The study adopts a social constructionist epistemology. The justification of this choice is premised upon the need to approach the research in a way that ensures the social and cultural construction of knowledge, and its impact on experience can be captured. This study adopts a sociological phenomenological theoretical position (not to be confused with theoretical perspective discussed below) combined with embodied and sensory understandings of experience. It is in light of this theoretical approach coupled with the role of culture in shaping experience, that a social constructionist epistemology is deemed appropriate. The social constructionist epistemology allows the researcher to position himself in

	understandings of knowledge that permit rigorous discussion of the central tenets of the study. The theoretical perspective chosen to guide the understanding and explanation of society in this research project is phenomenology. Closely aligned with a social constructionist epistemology, phenomenology provides a theoretical perspective that enables the researcher to explore critically, the lived experience of participants. Aligned closely with the theoretical position of the study, phenomenology treats culture with suspicion, permitting the researcher to explore the lived experience as immediate aspects of consciousness, and thus the centre point of experience. To achieve this exploration in a manner that appeases both theoretical and methodological positions, the adoption of Transcendental Phenomenological Reduction *(contested)* is vital.

	This reduction draws from the work Husserl and specifically Merleau Ponty to guide the researcher towards a scenario where the thought of daily life can be put to one side. For Husserl this putting to one side enables the researcher to engage with experience a new, free from prevailing cultural understandings with a view to developing the essences of experience. Whilst Husserl's hope of total epoché was central to his thinking, this approach to the social world is unfeasible under a contemporary phenomenological perspective. Therefore, the adoption of Merleau Ponty's later position of suspension of objective thought/ rational thinking is taken. This suspension is built upon the position that our experience is immediately of the world and whilst we must treat it with caution and question it unreservedly, we cannot fully suspend it from our investigation. To mobilise this suspension the phenomenological method developed by

	Husserl is used. This toolkit of sorts provides the researcher with a number of considerations that guide the intricate suspension proposed by Merleau Ponty. The four key aspects include the role of description, epoche, essences and intentionality. Phenomenological explorations require extensive time spent with subjects to gather and understand the complexities of the relationship with the lifeworld. Without this depth of understanding Hockey (2020) contests it is extremely difficult to capture participants understandings of things themselves. Therefore, the chosen methodology for this study is an ethnography (Crotty, 2015). This is because ethnography is felt an appropriate methodology for the exploration of the everyday, lived experience of mountain bikers. Maso (2001) argues an ethnography aligns closely with both a social constructionist and phenomenological position, with both providing a philosophical stance focussed on critically understanding

	socially constructed knowledge and experience. Ethnography adopts a research strategy permitting the researcher to engage in research that explores small scale and intimate understandings of experience under investigation over a prolonged period of time, with the eventual aim of providing a detailed description (contested, see Atkinson, 2017). The sustained nature of ethnography seems a promising and adaptable field-based methodology to explore the lived experiences of mountain bikers (Atkinson, 2014).
3. *Who are your participants?*	20 Forest of Dean mountain bikers of varying proficiency and ability, ranging in age from 18 – 60 and both male and female. None of the participants have been identified as a vulnerable group
4. *How will they be recruited?*	All participants will be recruited utilising purposive, convenience and snowball sampling.
5. *How will data be collected?*	The study will gather data from 20 mountain bikers from the Forest of Dean that participate in what is broadly understood as

	enduro, trail and downhill mountain biking. The deployment of unstructured observations and interviews involves identifying and then riding with participants over an eight-month period from May to December 2021. This engagement will be opportunistic, organised by those available to ride and will range in number of participants and localities across the Forest of Dean. It is anticipated data will be gathered from 20 riders. Observational data will be collected through the use of Otter AI, voice recorded by the researcher pre, during and post the ride, alongside use of a GoPro max. Interviews will be recorded via voice recorder, for ease but also familiarity for the participant.
6. *Where will data collection take place?*	Data will be collected before, during and after riding alongside social interactions that may fall outside of this e.g. coffee shop, pub, bike shop within mountain biking settings. These locations will be within the area of the Forest of Dean in Gloucestershire.
7. *How will data be analysed?*	All interviews will be recorded and transcribed verbatim. The analysis of the transcripts and the unstructured observation

	notes/recordings will be organised using reflective thematic analysis. Once organised, an ethnographic approach to making sense of the data will be followed. Analytical ideas and insights gleaned from subject specific literature, methodological texts and ethnographic studies elsewhere will be used to interpret and make sense of the data analytically. The intention of this specific process is to go beyond description with the intention of going some way in reconstructing the lived experience and social worlds of the mountain bikers.
8. *Provide a sample size calculation (for quantitative data)*	*N/A*
9. *Has the project any external funding?*	*N/A*
10. *Is your research under contract to another organisation? If so, to whom? (please forward the contract to the insurance department)*	*N/A*
11. *Brief description of the project (using no more than 500 words – there is no need to reference academic sources).*	The aim of this research is to explore the lived experiences of mountain bikers in the Forest of Dean. The study positions central the embodied and sensual

	experiences of mountain bike riders. Importantly, the focus on embodiment is set against the lifeworld (social and natural landscapes) that possess infinite opportunities to uniquely impact experience. It is this intersection, between Mind/body, society/culture and the lifeworld that is the focus of study. Research in the sociology of sport seeking to understand lived experience in sport and physical activity is lacking. Given the growth of lifestyles sports, due in part to the commercialisation of sport more broadly and it can shed light on the diversity of embodied and sensual understandings. The lack of research stems from a number of issues, the first being the newness and recent development of activities such as roller blading and mountain biking. Secondly, the tools used historically in research are either inappropriate or insufficient when trying to understand the lived experience, because they have lacked methodological focus/continuity and theoretical innovation

	(Atkinson, 2014). Given the dearth of mountain biking literature generally and those focussed on lived experience and the flourishing participatory trends especially in the Forest of Dean, these have been chosen as the theoretical lens and research location. Therefore, this study seeks to explore the lived experiences of mountain bikers in a forest dense, rural county, with the primary aim of examining how these lived experiences are influenced by socio-cultural forces such as organisation, gender, identity. In recent years sociological and existential phenomenological (used together) research has provided distinctive understandings into the lived experiences of participants, vitally how these experiences are embodied and sensorially felt when set against subcultural interaction and social worlds. These insights have provided crucial understandings of the lived experiences of sports participants and illustrated the relationship between mind-body-world or for existentialist Merleau Ponty, flesh-of-the-

	world. These unique and under researched understandings provide a greater awareness of the experiences, knowledges, embodiment in pursuits such as extreme mountain climbers, elites swimmers and I contest here, Mountain bikers. It is this investigation into the lived experience when set against the social world of mountain biking in the Forest of Dean that makes this study unique and original. The opportunity of the study to analytically examine the role of subcultural interaction, the senses and embodied experiences of mountain biking and their relationship makes this study a vital and the first contribution in its area.

Does this proposal contain any REC/SREP mandatory criteria or elements from the Ethics Self-Assessment Checklist?
No
If yes, please indicate which

1) research which involves biomedical or clinical intervention (with the exception of those approved under standard protocols, e.g. those contained in the UoG laboratory handbook)	☐
2) deceptive research	☐
3) covert research or where the data are not recorded in a manner that protects the anonymity of subjects or participants	☐
4) where the research topic is one dealing with sensitive aspects of the subject's or participant's behaviour, or where proposals for research involve vulnerable populations	☐
5) research where participants are under 18	☐
6) research involving work outside the UK	☐
7) research involving assent-based participation	☐
8) research requiring external institutional approval (e.g. NHS, looked after children, young offenders, military personnel)	☐
9) research which involves staff using students as research participants	☐

About the proposed project
If you answer yes to any of the following questions, please give further details as required.

1) Have actions been taken to ensure compliance with the Data Protection Legislation?	Actions taken:	No personal details will be recorded. Pseudonyms will be used to avoid identification of participants. All data will be kept on a password protected computer.
2) Is partnership /collaboration with another institution involved?	Name of institution:	
3) Has another Ethics Committee approved the project?	Ethics Committee & date of approval:	
4) Have any training needs been identified as necessary for the researcher(s) to complete prior to undertaking the research?	Brief details:	
5) Have relevant professional guidelines been consulted?	Source of guidelines:	
6) Has another form of 'risk assessment' been undertaken (in addition to this form)?	Brief details (and, if appropriate,	

	please append documents):	

Clinical trials insurance: Does the research involve:		
Important: If your research involves any of the following categories, you must refer your application to the University insurance office in order that the relevant liability insurance can be arranged. Under no circumstances can your project commence until you receive confirmation that liability insurance is in place. Contact details for the insurance office: insurance@glos.ac.uk.		
Does the research involve:	**Answer yes or no:**	**Brief details:**
a) investigating or participating in methods of contraception?	No	
b) assisting with or altering the process of conception?	No	
c) the use of drugs?	No	
d) the use of surgery (other than biopsy)?	No	
e) genetic engineering?	No	
f) subjects under 5 years of age?	No	
g) subjects known to be pregnant?	No	

h) pharmaceutical product/appliance designed or manufactured by the institution?	No	
i) work outside of the United Kingdom?	No	

Voluntary Informed Consent	
a) Please indicate what form of consent will be used in this investigation	Written
If not written, please explain	
b) How and by whom will the voluntary informed consent from participants be undertaken? *Please indicate in particular if participants/respondents/subjects are children or young people, or are members of other 'vulnerable populations'.*	
Participants will be asked to read the participant information sheet and sign the informed consent prior to the study. Letters of information and consent can be found in the attachments.	

(Letters to participants and/or any information sheets / questionnaires / interview questions, etc. must be included as appendices when submitting this form.)

Risk of Harm			
Please indicate any possible risks to the **researchers, participants, other persons**			
Tick all that apply	RESEARCHERS	PARTICIPANTS	OTHER PERSONS
ENVIRONMENTAL			
Undue environmental damage	☐	☐	☐
LEGAL			
Contravention of legislation on any of: gender, race, human rights, data protection, obscenity, environment	☐	☐	☐
Defamation	☐	☐	☐
PHYSICAL			
Bodily Contact	☐	☐	☐
Lone working	☒	☒	☐
Physical danger/violence (or threat of either)	☐	☐	☐
Research outside of the UK	☐	☐	☐
PHYSIOLOGICAL			
Ingestion of foods, fluids or drugs	☐	☐	☐

Undue physical stress or exertion	☐	☐	☐
Sampling of human tissue, body fluids including venepuncture	☐	☐	☐
PSYCHOLOGICAL			
Psychological intrusion from questionnaires, interview schedules, observation techniques	☐	☐	☐
SOCIAL, CULTURAL & PROFESSIONAL			
Contravention of social/cultural boundaries	☐	☐	☐
Nudity, loss of dignity	☐	☐	☐
Compromising professional boundaries with participants, students, colleagues	☐	☐	☐
REPUTATIONAL			
Research that unduly and adversely affects the reputation of the institutions involved	☐	☐	☐
Other risks identified, but not listed above:			
If you have ticked any of the previous remarks, please describe the actions that will be taken to minimise the risk. Risk will be minimised during data collection by adhering to the data collection schedule where details of location, time and duration will be left in a shared folder for supervisors to access. Furthermore, the following will be ensured before every engagement in data collection			

- A plan of activities will be shared with a key contact (co-workers & partners) and there is a clear escalation route should the researcher not be heard from within a certain time frame.
- The researcher will be contactable: I will carry a fully always charged mobile with credit.
- The researcher will continue to be prepared and be mindful. The researcher will look out for potential risks, continuously assess them, and have a plan to deal with them or extricate from any potential danger.
- The researcher will be always equipped with an outdoor first aid kit, the researcher is outdoor first aid trained, and it will be ensured that one other is also on all rides.

All the above has been designed in accordance with Outdoor First Aid guidance from British Association of Ski Patrollers (BASP) and British Cycling Mountain Bike Leadership Level Two award that governs health and safety in this context. The researcher is qualified in both and has up to date certificates.

Anonymity / Confidentiality
Please indicate measures that will be taken to protect and maintain the anonymity and/or confidentiality of participants. Confidentiality will be ensured by storing all data on a password protected computer in a locked office that only the researcher has access too.
How are you anonymising your data? Anonymity will be ensured using pseudonyms for participants and clubs/subcultural reference points to ensure they cannot be matched to their data by name. No participants will be identifiable in the written project.

Data storage	
What secure storage do you propose to hold your data in?	**Password protected computer.**
What secure premises will the data be stored in? (*e.g., locked lab or office*)	**Locked office**
What are you going to do with your	**Keep for 15 years and then delete**

data once the project is complete?	
How are you ensuring compliance with relevant data protection legislation?	**A privacy notice will be provided to individuals alongside a participant information sheet prior to collection of their personal data.** **Participant information sheet and privacy notice can be found in the attachments.**
(Please attach the Privacy notice / PIS as an appendix)	

	Name	Date
Signature of researcher(s)		07.05.2021
	Benjamin Moreland	
Signature of supervisor(s) (if appropriate)		07.05.21
	Dr Andy Pitchford	

NB: forms not fully completed and signed by researcher/s and supervisor/s (where appropriate) will be returned without consideration for approval.

Supporting documentation.

Please ensure that when preparing applications to SREP/REC using the Research Ethics Proforma that the following are included on the form or within the project description attached to the form, where these are of relevance:

a) sample information sheet to be given to participants and sample letters about voluntary informed consent and withdrawal (beware of any possible problems of coercion), written in good clear English. University addresses should be used; (depending on timing of the REC/SREP consideration this may be inappropriate)
b) statement about any conflict of interest;
c) statement about DBS check (Criminal Records Bureau) https://www.gov.uk/government/organisations/disclosure-and-barring-service ;
d) copies of questionnaires and/or interview schedules and questions, even if in early draft form.

REC's/SREP's decision-making will be more straightforward if you have covered the following issues in your project description. If you need to, attach further information.

(i) the nature of the observation of human participants;
(ii) the outline planning and procedures for focus group research or one-to-one interviews to include establishing ground rules affecting revelation of any personal details to the group;
(iii) that issues of power relations are taken into consideration;
(iv) that issues of any guilty knowledge likely to arise from the research are thought through;

(v) the details and number of participants (age, gender, whether a vulnerable group – noting that this often depends on the specific research project, size of group);

(vi) whether this is a double-blind study;

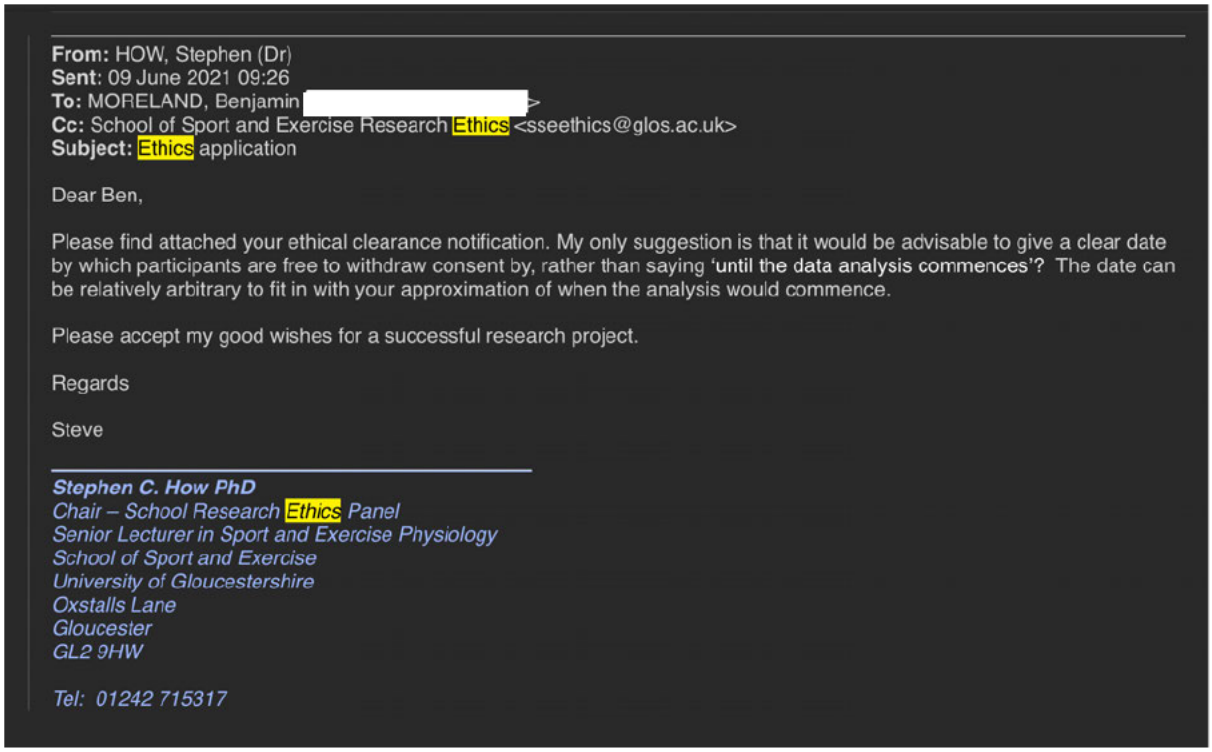
(vii) the justification of use of photography or video and that permission concerning these are planned for;

(viii) that issues of physical and/or psychological and personal danger affecting either the participants or the researcher have been considered fully;

(ix) whether interviews are to be recorded electronically or manually.

(x) if your research involves any of the subject matters described in the Clinical trials section, you must refer your application to the insurance office in order that the relevant liability insurance can be put in place. Under no circumstances can your project commence until you receive confirmation that liability insurance has been agreed. Contact details for the insurance office: insurance@glos.ac.uk

Appendix 2 - Ethical Approval



From: HOW, Stephen (Dr)
Sent: 09 June 2021 09:26
To: MORELAND, Benjamin [redacted]>
Cc: School of Sport and Exercise Research Ethics <sseethics@glos.ac.uk>
Subject: Ethics application

Dear Ben,

Please find attached your ethical clearance notification. My only suggestion is that it would be advisable to give a clear date by which participants are free to withdraw consent by, rather than saying '**until the data analysis commences**'? The date can be relatively arbitrary to fit in with your approximation of when the analysis would commence.

Please accept my good wishes for a successful research project.

Regards

Steve

Stephen C. How PhD
Chair – School Research Ethics Panel
Senior Lecturer in Sport and Exercise Physiology
School of Sport and Exercise
University of Gloucestershire
Oxstalls Lane
Gloucester
GL2 9HW

Tel: 01242 715317

Appendix 3 - Information Sheet

You are being invited to take part in a research study. Before you decide to take part or not, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

The research I aim to carry out is concerned with your experiences of mountain biking. The specific purpose of the research is to explore the lived experience of mountain bikers, focussing on the embodied and sensory experiences they have and what role cultural influences such as gender, identity, and consumption, play in their experience.

To date little work has been conducted on how sporting experience is understood from an embodied and sensory position, yet these are referred to consistently in the cultural narratives. What is missing in the literature is an understanding of what it feels like to ride a bike and how culture might shape this. To this end, I aim to document the lived experience of 10 mountain bikers and how this has been shaped by cultural influences such as organisation, gender, and identity.

What will happen to me if I take part?

If you decide to take part, I will ask to join you on several rides over the next four to six months where I will look to observe your experiences. I may also ask you questions about your experiences, how some of these felt, and what you thought of them. I will ask you if I can record this, so that I may type up what we have discussed. When I have typed the discussion, I will ask you if you could read it and check I have understood what you have told me accurately.

What will happen to the results of the research study?

Involvement in the study is entirely voluntary and any information gathered would be used solely for the purpose of this research, thereby protecting personal privacy, anonymity and confidentiality via ethical guidelines and procedures. All data collected will be used for a current study I am completing for my Doctor of Philosophy (PhD).

Will what I say in this study be kept confidential?

All information you give me will be strictly confidential. Within the study I will change all your personal details, such as your name, and area you live in, so that you are anonymous. Participants will remain anonymous and if in future I feel it would aid the study to identify people, I will seek your written permission first. All information collected will only be used for the purpose of the study and will be kept securely on a password protected computer in a locked office that only the researcher has access to.

If you are happy to take part in this study, please sign the consent form. Please remember you are free to withdraw from this study without reason at any stage until January 2023. Should you have any concerns or questions please contact me or my supervisor on the above details.

Thank you for taking the time to read this information sheet.

Researcher's name: Ben Moreland	Supervisor's name: Dr Daniel Keech
Oxstalls Campus	CCRI
Gloucester	Francis Close Hall
University of Gloucestershire	University of Gloucestershire
GL2 9HW	GL50 4AZ
e.	e. Dkeech@glos.ac.uk

Appendix 4 - Consent Form

Title: An exploration of the lived experiences of Forest of Dean Mountain Bikers

		Please initial box
1.	I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐
2.	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.	☐

3.	*I agree to take part in the above study.*	☐

Please tick box

		Yes **No**
	4. I agree to the interview consultation being audio recorded	☐ ☐
6.	*I agree to the use of anonymised quotes in publications*	☐ ☐

Name of Participant	Date	Signature

Name of Researcher	Date	Signature

Appendix 5 - Interview Questions

Welcomes and Introductions

Confirm the details of the VIC and Information Sheet

Warm up

- How long have you been mountain biking for?
- What is your first memory of MTB?
- Why (if you can remember) did you get into mountain biking?
- How often do you mountain bike?
    - Does this change at different times of the year?
- What bike do you ride?

    - Why did you choose to ride that one?
    - Are there any particular aspects of your bike you like?
- What role does mountain biking play in your life?
    - Look to follow up with questions related to commitment, sacrifice of other things
- What relationship do you have with the bike when riding? How do you describe that?
- What is or are the most significant things for you in mountain biking?
- Do you participate in other sports/activities?
- Mountain biking is seen as a risky, potentially extreme sport, what are your thoughts on that?

The relationship between mind and body

There is a body of research that seeks to investigate the 'presence' and awareness of the body during experience. For instance, when I am riding my bike, I feel as though I am thinking a lot about what I am doing, my position on the bike etc etc. And therefore, my body is very apparent, whereas other riders may not, and the body disappears.

- How challenging do you find mountain biking?
- So, when riding how much thinking or how apparent is your body?
    - For example, are you just riding your bike and the body is in the background?
- Does this differ when riding different locations, conditions, time of year, weather?
- Given the different appearances of the body, are parts more apparent than others and why might this be?
- Given the appearance of the body at different times, do you attribute any particular feelings with this (pain, fear, joy)? Can you tell me more about this? Are their differences in pain? Do you manage different pains in different ways?
- Do separate pain between good and bad pain?
- Do you experience any fear when riding?
- Can you tell me a little bit more about the interaction between mind and body in this scenario?
    - 29.03.2022, 14m42s, Mind/Body - discussion that he knows his body is able to hit particular things yet his mind over rides this in some case through fear and this is something to be overcome.
    - Notes, it was audible that James struggled to articulate this during the video, possible note to this.
- Have you developed any coping mechanisms for this?
    - 26.02.22 p2, 41.48 - Trail/Features - viewing the feature from a different angle provides an entirely different perspective on it, not as daunting nor fearful

Exploration

- What role does exploration play in your experience of MTB?
    - James, 26.03.2022 32m16s

Sensation/Senses/Feeling

We know when riding our bike we encounter many different sensations but we rarely stop to consider these and render them just part of the ride. The next set of questions looks to take some time to consider how we sense when riding and will draw upon your responses and some of the video captured during observations.

- Can you tell me what it feels like to ride your mtb?
- When riding your mountain bike, are there any sensations you can recall or any experiences associated with these sensations? What were these like?
- Unpick visual/auditory/touch/smell/taste?
- Do you feel your body when you are riding? (Injuries, stress,)
- Do your sensations differ at all when riding different locations?
- Do your sensations differ at all when riding different conditions, time of year?
    - James 26.03.2022 41.38; Ride Type - Big fun, cruisy type of ride. How is the sensation of this different to an alternative?
- How aware of you of the conditions created by different seasons, such as leaves dropping and becoming damp?
    - James video clip 11.01.2022, 49m.51s
- Do your sensations differ at all when riding different weather?
    - James 26.03.22 28m23s
- Are you aware of the feeling or sound of wind for example?
- Or the smell of the trail when its dry or wet?
- Do you feel particular senses dominate over others? If so, is this all the time/linked to anything in particular?
- Literature suggests we have a range of senses and they go beyond the western understanding of the five senses. We feel both outwardly (haptic) and inward (somatic).
- Can you describe what it is like riding your bike?
- Making this distinction, could you discuss any outward sensations you have particularly?
- Now can you describe any inward sensations and when these might occur?
- Do you ever get an inward feeling that you cannot describe? If so can you tell me a little more about this?
- What do these sensations feel like?

- Do you find riding exciting/exhilarating/extreme? Can you tell me a little more about this?
- Have you experienced fear when riding your bike? Can you describe this for me?
- Do you derive pleasure from riding your bike?
- Are there particular parts of the biking that give you more/less pleasure?
    - 16.04.2022, 129.31, obvious pleasure gained from hitting jumps and doubles.
- How do you indicate something has been pleasurable?b
- Is there a distinction between voluntary and involuntary indications of this?
    - 16.04.2022 136.21, Pleasure - involuntary woohoo given off before the mind may possibly have time to process what was experienced.

Sound

- What role does sound play in your experience?
- During the ride on the 26.03.2022, we heard bees, can you tell me a little more about the role this might play in your experience?
- An example of sound was on the 26.03.2022 when we heard the noise made by running water. Can you explain this a little more for me.
- Analysis of the observations revealed birdsong was present at all sites, could you tell me a little more about your awareness of this?
- On one ride at Woodbury the songs and shouting of birds was noticed explicitly, can you tell me a little bit more about why this was?
    - 26.02.22, 32m,14
- Do you find the sounds your experience change within and between seasons?
    - 21.01.22, 100.m45s sound of leaves crunching during the winter
- What role does sound play in understanding your bike and how it functions?
    - 26.02.2022, 15m56s, a sound made that is instantly recognizable of a stick in the drivetrain

Speed

- What role does speed play in your experience of riding a bike?
    - Speed, 26.02.22 41m57s - acute awareness of speed, the role it plays in making or not making particular trail features.

Sight

- Nature/Forna - identification of edible wild berries. What role does this knowledge play in the experience?
- Have you ever experienced watering eyes when riding? What does this feel like?
    - 26.02.22 26.10 watering eyes due to the cold air temperature
- What role does the view of the landscape play in your experience?
    - 26.02.22 P2, 2.31 - Nature/Sight - discussion of how a view of a landscape or nature can have a profound impact on mood/wellbeing.

Smell

- Nature/Forna - the smell of wild garlic was illustrated in the observations; can you tell me a little about how that made you feel?

Touch/Feel

- What role does touch or feel play in your experience?
- How do you experience wind when riding a MTB?
    - 26.02.2022, 6m16, wind present when riding to the trail on open common but not there when on the trails
- What does it feel like when for instance the back or front end goes? How do you sense this?
- How do you make sense of what your body feels and consequently does when riding a bike?
    - 26.02.22 - 105m.37s Feeling/sensation - seeking to use the sensation of hitting a drop to understand what the mechanics are doing. body first followed by the mind trying to figure it out.
    - 26.02.22 - 108.20 - Sensation/Feeling - discussing how the feeling of particular aspects of jumping feels 'right' and wrong. Here there is a focus on the arms when riding the hollow.
- When working at a trick or part of trail, how do you know if you have done it ‘right’? What cues or sensations do you associate?
    - 26.02.2022, 114.39, Feeling/Coaching - working with a coach and providing a few cues enabled something to click. This click involved feeling rather than any other visual recognition. Pursue further.
- When the bike does something unpredictable, say slides out or gets a little playful, what does that feel like?
    - 26.02.22, Bike Handling - watching James's slip and slide across the trail. Ask him to elaborate on this.
- What tyre pressures do you run and why do you run them at this?
    - How do you tell if they are dialled in or not?
- Can you tell me a little bit about arm pump and the feeling it provokes?
    - 16.04.2022, 136.46, Feel/touch/inward heat - arm pump, evident having ridden the trail top to bottom without break.

Seasons

- What role does temperature play in your experience?
- Is this different between and within seasons?
    - James 21.02.2022, 6m13
- During a late spring ride at Minehead you noted overtly the heat experienced. Can you tell me a little more about what role heat plays in your experience?

Nature

- How to you understand and approach the concept of nature?
- Are you aware of its role in your experience?

    - James, 26.03.2022, 20m45s.
- What role does flora/plants/trees play in your experience of MTB?
- Does your awareness of nature differ between rides?
    - During some there are overt references to it but at other times there are not.
    - Does this depend on location?
    - Does this also depend on the season? Minehead, 16.04.22, 101.53 Nature - given the part of the push up it opens to vista and therefore James overtly identifies the beauty of this and awe. A note is that this is less likely in the winter due to the seasonal changes.
- During one biking session, you mention one of the best things about biking is engagement with wildlife. Can you tell me a little more about that?
- What role do environmental matters play in your experience?
    - 26.02.2022; 7m44s, the destruction had due to the freak weather conditions.

Fatigue

- What role does fatigue play in your experience of mountain biking?
- Does this differ throughout the course of the year?
- Do different conditions make you more or less tired?
- Is it a different tired in winter to summer, when you are doing mor pushing in boggier conditions?
- How would you gauge how fatigued you are?
- What sensations do you feel when fatigued?
    - During the video it is evident when fatigued your breathing becomes deeper and you rock on the bike, is there anything else going on there? Heat/pain/
- Are there different types of fatigue and are these expressed through different sensations?
    - James video clip 11.01.2022, 46m.35s
    - James video clip 11.01.2022, 107m.11s
    -
- Is there a difference between fatigue and tiredness?
- How does your fitness influence your experience?

Illness

- What role does illness play in your experience?
- To what extent does covid influence your experience?
- How do you understand how you might ride a particular session given the pre ride feeling in your body?
- Do you think this is solely driven by the mind?
- Do you ever feel the mind might say one thing and the body anoher?
    - 29.03.2022, 11m18s, Bodily Feeling/ Sensation - The way James' body feels has a large influence on his expected riding experience. A stiff body suggests a mellow ride. What we find later is that this does not seem to be the case, and after a few runs he warms up and hits a number of features.

Bike and Sensation

- What relationship do you have with your bike?
- In role does your bike play in experience?
- How much time do you spend working on your bike?
- Do you alter aspects of your bike according to feel?
    - James 11.01.22, 122.50; 123.53; 126.16
- Tell me more about the sound of a rear mech?
- How does your relationship with your bike change during different seasons or weather?
    - 21.01.2022, 52m27s
- How do you know or tell when you have a puncture?
- What senses do you use to distinguish this?
    - 29.03.2022, 2m20s, discussing bike park puncture.
    - 16.04.2022, 6m40, discussing the issue of tyre pressure and having to head back to the car.

Temporal

- How often do you spend riding? Individual and collectively per week?
- What role does time play in your experience? Do you find you have enough of it?
- How does time alter or govern the riding itself?
- How do you gauge how fatigued you are?
- How do gauge how hard you might go in a ride before you have begun? Are there any feeling/sensations that aid this?
- Do you find time moves quickly when riding your bike?
    - 21.01.2022 11m 14, notes time has ran away from us

Technology

- What role does technology play in your experience?
    - 26.03.2022 41.53; Technology - use of technology to find routes/segments/mapping, what impact?
- What relationship does technology and exploration have for you?
    - James 26.03.2022 42.40
- What are your thoughts on the introduction of Ebikes?
- Have you ever ridden one before?
- Is the experience different to your regular non ebike?
    - 21.01.2022 22m 52s
- How does different trail wear, clothing, helmet, shoes impact your experience?
    - Minehead, 16.04.22, 48m02 Technology/Shoes/Feel - discussing the different types of footwear used for biking and understanding how a similar shoe in brand and textile, can feel very different on the bike, especially on the pedals.

Trail

- Can you tell me a little more about the role the trail plays in your experience?
- How do different trails alter your sensation?

    - For instance a flowy trail vs a techy trail? 26.02.22, 53m11s
- Are different senses more prominent than others during different trails?
- What sensations are present when riding different features?
    - 21.01.22 54m14s, the beauty of the berm
- What role does thinking and working out the trail play in your experience?
    - 26.02.22 part 2 27m40, Trail/Features - working through prospective runs and features for a long duration of time.
- On one ride at minehead you mention riding over a wall feature and it feeling good. Could you tell me a little more about this feeling? What do you mean by good?
    - 16.04.2022, 36.58, Feeling/Sensation - discussion of going over a feature and in this case a wall, and it feeling good. Pursue further
- What role does the season/weather play in the way a trail might ride and your overall approach to riding a trail?

The other: Intersubjectivty and Intercorporeality

Mountain biking is portrayed as being a lone sport done with others. Can you tell me a little bit more about your experience of biking with and around other people?

- Do you ever go riding with other riders?
- What role do they play in your experience?
- Do they help you ride ‘better’ or prevent you from riding your ‘best’
- Is there a pleasure associated with biking with others?
- Do you experience any negatives when riding with others?
- To what extent does biking with others change your perception of aspects of biking?
- Do you experience sensations either differently or are there sensations only present/absent when biking with others?
- When riding alone, what role do others you might see on the ride play?
- Does this impact your ride/the things you might do or not do?
- What role does teaching or providing guidance to other riders play in your experience?
    - 21.01.2022, 127.32, sessioning a drop and providing guidance and feedback.
    - 16.04.2022, 118.42, Intersubjectivity - Informal coaching once again, discussing and reflecting on the recent trail, how it went and how to improve.
- What role does humor play in your experience or relationship with others?
    - 11.43 on 26.03.2022
- What role does storytelling play in your experience?
    - Storytelling, James 26.03.2022, 17m51s
- Does this storytelling extend to familial and close acquaintance experiences?
    - 26.02.22, 35.46
- Does this storytelling evoke previous sensual expriences?
    - 26.02.2022, 44m25s, Senses/Sensation - experiences not associated with MTB are reflected upon and key sensual aspects such as heat and woodburner are brought out.

- What relationship do you have with the idea of an ebiker?
    - 21.01.2022 21m21s
- What role does bodily contact play in your experience of MTB?
    - 21.01.2022, 117.10, small fist pump.
- What role do the public or other users of the landscape play in your experience?