

**Exclusive nature: Exploring access to protected
areas for minority ethnic communities in the
United Kingdom**

by

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Author's Declaration

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Statement of Contributions

This dissertation is structured as a series of three articles written for publication (an article-format thesis) (Chapters 2-4) bounded by an introductory chapter (Chapter 1) and a conclusion chapter (Chapter 5). Rachael Edwards was the sole author of Chapters 1 and 5, supervised by Dr. Brendon Larson who provided ongoing guidance. These chapters were not intended for publication. Rachael Edwards is the first author for Chapters 2-4 which have all been submitted to peer-reviewed journals. These chapters also had one or more co-author. For these co-authored chapters, Rachael Edwards conceptualized the research, developed the methodology, performed the data collection and analysis, and wrote all drafts. The contributions of the co-authors are detailed below.

Chapter 2

Accounting for diversity: Exploring the inclusivity of recreation planning in the United Kingdom's protected areas

Dr. Brendon Larson was a co-author for this article. Dr. Larson provided ongoing supervisory guidance on the project design, implementation, and analysis as well as feedback on each draft written by Rachael Edwards.

Chapter 3

A “magic teleportation machine”: Ethnically diverse green space users derive similar Cultural Ecosystem Benefits from urban nature

Dr. Brendon Larson and Dr. Andrew Church were co-authors for this article. Dr. Larson provided ongoing supervisory guidance on the project design, implementation, and analysis as well as feedback on each draft written by Rachael Edwards. Dr. Church, who was also a member of this doctoral committee, provided feedback on each draft of the article.

Chapter 4

The significance of belonging: Exploring the socio-cultural barriers and opportunities that contribute to the accessibility of protected areas for Muslim communities in the United Kingdom

Dr. Brendon Larson and Dr. Daniel Burdsey were co-authors for this article. Dr. Larson provided ongoing supervisory guidance on the project design, implementation, and analysis as well as feedback on each draft written by Rachael Edwards. Dr. Burdsey provided guidance during the development of the interview scripts and provided feedback on each draft of the article.

Abstract

Protected areas (PAs) provide a wide range of benefits to visitors engaged in outdoor recreation. However, several groups are underrepresented within these natural spaces including minority ethnic communities. This inequitable distribution of benefits presents an environmental injustice. In response, a large body of work has sought to explain ethnic variation in green space use patterns. Broadly, this research suggests that the barriers contributing to minority ethnic underrepresentation in green space relate to socio-economic inequality, outdoor recreation preferences, and discrimination.

Despite the growing literature on ethnicity and participation in outdoor recreation, the contribution of institutionalized factors to PA access barriers remains underexplored. To address this literature gap, the aim of this dissertation is to advance our understanding of the relationship between PA governance in the UK and access for minority ethnic communities. The UK was chosen as the context for this research given the national priority that the country has assigned to improving equity in access to nature. The dissertation is structured as a series of three articles intended for publication (an article-format thesis) that are all guided by an overarching research question: Are access considerations within the PA management planning process aligned with the access barriers experienced by minority ethnic communities? I adopted a constructivist paradigm for this thesis and, therefore, used primarily qualitative research methods.

I first explored PA access through a governance lens with the objective of identifying how user diversity is accounted for within outdoor recreation planning and programming for UK PAs (Chapter 2). This article involved a document analysis of PA management plans and a survey of PA managers. This analysis included approximately one quarter of PAs with land-based designations in the UK. Although PA managers held clear concerns about the underrepresentation of several groups, diversity and inclusion objectives were seldom emphasized within management plans. Furthermore, PA organizations did not widely recognize socio-cultural access barriers, seldom targeted minority ethnic groups, and rarely placed purposeful emphasis on the delivery of social benefits.

In my second article I explored ethnic variation in outdoor recreational preferences and the related experience of Cultural Ecosystem Benefits (Chapter 3). I conducted one hundred in-situ semi-structured interviews with urban green space users in London, UK. My results suggest that

the primary Cultural Ecosystem Benefits derived from nature are similar across ethnically diverse green space users having divergent preferences. Across participants, peace and relaxation was a primary benefit derived from nature.

Finally, the objective of my third article was to identify the socio-cultural barriers and opportunities that contribute to the accessibility of PAs for Muslim communities in the UK (Chapter 4). I conducted fourteen in-depth interviews with leaders from Muslim communities, finding that a wide variety of factors inhibit access, cumulatively resulting in several layers of exclusion. Primary barriers included a lack of inclusive imagery, insufficient facilities for social gathering, prior instances of discrimination, the perceived whiteness of PAs, and unfamiliarity.

Collectively, my findings reveal several gaps within the PA management planning process that cumulatively result in a failure to adequately address the needs, experiences, and values of minority ethnic communities. These disparities are underpinned by an Anglo-normative conceptualization of the human-nature relationship, or white environmentalism, that is embedded within the PA governance. I contend that to holistically address access barriers experienced by minority ethnic communities in the UK, PA organizations must diversify to embrace alternative worldviews relating to the human-nature relationship. For this change to occur, bottom-up, participatory approaches must be more widely adopted.

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List of Abbreviations

| | |
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| AONBs | Areas of Outstanding Natural Beauty |
| CEB | Cultural Ecosystem Benefits |
| CES | Cultural Ecosystem Services |
| CTN | Connection to Nature |
| ERB | Environmentally responsible behaviour |
| ES | Ecosystem Services |
| IPBES | Intergovernmental Platform on Biodiversity and Ecosystem Services |
| LNRs | Local Nature Reserves |
| LVRP | Lee Valley Regional Park |
| NCP | Nature's Contributions to People |
| NNRs | National Nature Reserves |
| PA | Protected area |
| SACs | Special Areas of Conservation |
| SPAs | Special Protection Areas |
| SSSIs | Sites of Special Scientific Interest |

Chapter 1: Introduction

1.1 Planning context: Equity and protected area management planning

This thesis is situated within the field of outdoor recreation planning, defined as “the application of analytical tools to a systematic and deliberate process of decision making for the future management of recreation resources and recreation opportunities” (Baas & Burns, 2016, p. 17). More specifically, I am interested in the management planning process within protected areas (PAs) and its relationship to perceived access for minority ethnic communities. The IUCN (IUCN, 2008) defines a PA as “a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values”. Outdoor recreation opportunities within PAs provide numerous mental, physical, and social benefits (Jennings, Larson, & Yun, 2016; Twohig-Bennett & Jones, 2018). Unfortunately, minority ethnic communities are often underrepresented among visitors to PAs due to a variety of access barriers related to socio-economic inequality, outdoor recreation preferences, and discrimination (Boyd, White, Bell, & Burt, 2018; Kloek, Buijs, Boersema, & Schouten, 2013; Krymkowski, Manning, & Valliere, 2014). Despite this growing body of knowledge on outdoor recreation participation and ethnicity, the ways in which PA governance contribute to these access barriers remains underexplored. Through three distinct articles, this thesis makes several novel contributions to the literature on minority ethnic access to outdoor recreation in PAs. Collectively, these articles will advance our understanding of the relationship between PA management planning and minority ethnic underrepresentation. The overarching research question guiding this thesis is as follows: Are access considerations within the PA management planning process aligned with the access barriers experienced by minority ethnic communities?

A PA management plan “is a document which sets out the management approach and goals, together with a framework for decision making, to apply in the [PA] over a given period of time” (Thomas and Middleton, 2003, p. 1). Management plans can be written for one of a collection of PAs and are often a legal requirement of designated spaces. The decision-making process underlying the development, implementation, and adaptation of this plan is the management planning process. For all but the strictest categories of PAs, the provision of outdoor recreation

opportunities is typically a key objective and the decisions surrounding outdoor recreation are included within the management planning process.

Although the specific processes underlying management planning can vary considerably between PAs (Rowell, 2009), four general steps that are typically included are 1) assessing the current state of the PA (*where are we now?*), 2) defining the PA vision and objectives (*where do we want to be?*), 3) deciding upon management actions to achieve objectives (*how do we get there?*), and 4) public/stakeholder participation (Alexander, 2013; BC Parks, 2013; Ontario Ministry of Natural Resources, 2009; Thomas & Middleton, 2003). Outdoor recreation presents a key aspect of these questions. Decisions relating to how access is considered within the PA objectives, the ways in which access is assessed, and which leisure activities are allowed and provisioned for are all aspects of the PA management planning process. Therefore, institutionalized discrimination and/or bias within this process has the potential to considerably impact access for minority ethnic communities.

1.2 Geographic context: Ethnicity and outdoor recreation in the United Kingdom

In the UK, the underrepresentation of minority groups has emerged high on research and policy agendas. Research on immigration and green space use has been undertaken in the UK as early as the 1980s (Burgess, Harrison, & Limb, 1988) and, as of a 2013 literature review, the country had been the context for the most numerous studies on this topic in Northwest Europe (over 60) (Kloek et al., 2013). Another European review comparing national research and policy approaches on minority ethnic access to nature found that “[a]n explicit focus of research on under-representation [of minority ethnic groups] and the establishment of a quantitative evidence base are currently to be found only in the UK” (Jay et al., 2012, p. 7). This research has emerged from both the public and academic sectors and has focused mainly on ethnic trends in green space use and the identification of related barriers and opportunities.

Since 2009, Natural England has conducted an annual survey (the People and Nature Survey, formally the Monitor of Engagement with the Natural Environment survey) to, among other aims, monitor use of the natural environment and how this varies over time and among different demographic groups, including minority ethnic communities (Natural England, 2020). These

data, and other research in the UK, strongly indicate that minority ethnic groups use green space less frequently than those of a white background (Boyd et al., 2018; Forestry Commission England, 2009; Scottish Natural Heritage, 2019). Minority ethnic communities have also been identified as facing the highest number of barriers to the use of green space (Morris et al., 2011). Barriers that have been identified include economic constraints, a lack of knowledge and confidence, discrimination, cultural preferences, and less physical access (Boyd et al., 2018; Burdsey, 2013; Morris & O'Brien, 2011; Morris et al., 2011).

Aligning with its strong research tradition on outdoor recreation and ethnicity, the UK has established a legal mandate for ensuring race equality in access to nature through the Equality Act 2010 (Equality Act, 2010). This Act brings together previous legislation related to ethnic equality including the Race Relations Act 2000 and “binds all statutory organizations and those substantially funded by statutory funds, including nature organizations, to take action to ensure and actively promote race equality” (Jay et al., 2012, p. 6). Prior to and following this legislative mandate, several national projects have been undertaken to reduce ethnic disparities in the use of green spaces. For example, the Campaign for National Parks ran the MOSIAC project from 2009 to 2012 which aimed to secure improved and sustained engagement between National Parks and minority ethnic communities (Campaign for National Parks, 2021). Natural England have also developed a diversity action plan titled *Outdoors for All* which “works to improve opportunities for all people in England to enjoy and benefit from the natural environment” (Natural England, 2015). Through this action plan, Natural England have commissioned research on improving access to nature for several demographic groups, including minority ethnic communities (Evison, Friel, Burt, & Preston, 2013).

Despite the UK's legal mandate, large body of research, and policy intended to reduce ethnic divides in access to nature, a recent report suggests that the country is a long way from meeting its diversity objectives (Glover, 2019). Titled the *Landscape Review*, this extensive research report was commissioned by the Department for Environment, Food and Rural Affairs to identify the next steps for National Parks and Areas of Outstanding Natural Beauty, two of the UK's most geographically extensive PA designations. It involved a wide variety of research methods to explore, among other objectives, diversity and inclusion. The authors identified an extreme

lack of representation by minority ethnic communities on the boards of PAs and described how “it has felt as if National Parks are an exclusive, mainly white, mainly middle-class club, with rules only members understand and much too little done to encourage first time visitors” (Glover, 2019, p. 15). They indicated how previous action to improve diversity objectives, such as MOSIAC, tended to be short-lived and identified a wide range of barriers experienced by minority ethnic communities. The report called for more ambitious strategies to reduce these barriers and for greater levels of accountability among PAs to meet diversity and inclusion objectives. If such steps are not taken, the authors warn that the UK “countryside will end up being irrelevant to the country that actually exists” (p. 70).

1.3 Research objectives and questions

This thesis contributes to the advancement of theory related to perceived access to PAs experienced by minority ethnic communities. My overarching aim is to advance our understanding of the relationship between PA management planning and the access barriers experienced by minority ethnic communities. I am particularly interested in exploring potential disparities between how equitable access is considered at the governance level and the needs, experiences, and values of minority ethnic communities. Therefore, my overarching research question is as follows: Are access considerations within the PA management planning process aligned with the access barriers experienced by minority ethnic communities? *Governance of PAs* refers to “the set of processes, procedures, resources, institutions and actors that determine how decisions are made and implemented” (Secco, Pettenella, & Gatto, 2011, p. 105). In relation to equity, critical aspects of governance include “the type of actors involved, their responsibility, accountability, level of power sharing and type of knowledge” (Macura, Secco, & Pullin, 2015; Muñoz Brenes, Jones, Schlesinger, Robalino, & Vierling, 2018, p. 2). I chose PAs as the context for this research for two primary reasons. First, among green spaces, PAs have some of the lowest levels of minority ethnic representation among their usership. Secondly, PA management tends to be heavily influenced by Anglo-normative ideologies (see section 1.4.4) which could potentially lead to institutionalized discrimination.

The thesis follows an article format, composed of three manuscripts intended for publication (Table 1.1), an introductory chapter, and a concluding chapter. Each article is guided by a distinct objective and research question(s), but they are all bounded by my overarching research question. Within the articles, I address several gaps within the literature on ethnicity and access to outdoor recreation. In Chapter 2, I explored PA access through a governance lens. In Chapters 3 and 4 I sought to gain a more thorough, qualitative understanding of perceived access and the human-nature relationship as experienced by minority ethnic communities. A comparison of these two perspectives would address my overarching research question, providing an understanding of whether the management planning process is aligned with perceived access as experienced by minority ethnic communities. Collectively, results of these articles will provide a holistic conceptualization of the interrelated layers of barriers shaping outdoor recreation access in PAs.

Table 1.1: An overview of the three articles presented in this thesis.

| Chapter | Article Title | Objective | Approach | Methods |
|---------|---|---|------------------------------------|--|
| 2 | Accounting for diversity: Exploring the inclusivity of recreation planning in the United Kingdom’s protected areas | Identify how user diversity is accounted for within outdoor recreation planning and programming for UK protected areas | Mixed methods | Document analysis of protected area management plans and a survey of protected area managers (see section 2.2) |
| 3 | A “ <i>magic teleportation machine</i> ”: Ethnically diverse green space users derive similar Cultural Ecosystem Benefits from urban nature | Explore ethnic variation in outdoor recreational preferences and the related experience of Cultural Ecosystem Benefits | Qualitative dominant mixed methods | Semi-structured intercept interviews with urban green space users (see section 3.2) |
| 4 | The significance of belonging: Exploring the barriers and opportunities that contribute to perceived access to protected areas for Muslim communities in the United Kingdom | Identify the socio-cultural barriers and opportunities that contribute to the accessibility of protected areas for Muslim communities in the UK | Qualitative | Semi-structured interviews with leaders from Muslim communities (see section 4.2) |

In Chapter 2, I explore equity in outdoor recreation access at the level of PA governance. The objective of this research was to identify how user diversity is accounted for within outdoor recreation planning and programming for UK PAs. This study was guided by three research questions:

- i. Are PA organizations concerned with the level of user diversity and, if so, what steps are being taken to address these concerns?
- ii. Which outdoor recreation benefits are prioritized, and which are underrepresented, in PA planning and programming?
- iii. Which benefits are identified as facilitating the relationship between outdoor recreation and conservation success?

I undertook an analysis of PA governing documents and a survey of PA managers. Both research components involved quantitative and qualitative methods. I aimed to understand the extent to which UK national equality priorities affect PA planning and management and which barriers to outdoor recreation participation are recognized and addressed at an institutional level.

Chapter 3 explored ethnic variation in outdoor recreational preferences and the related experience of cultural ecosystem benefits (CEB). The study was guided by the following research question: do green space users with diverging outdoor recreation preferences derive similarly varied CEB from urban nature? For this article, I undertook one hundred in-situ semi-structured interviews in parks and PAs within the Lee Valley Regional Park, London, UK. I conducted a qualitative-dominant, mixed-methods assessment of the 1) green space preferences and 2) CEB. These two variables were compared among white and minority ethnic visitors to parks and PAs. I thus sought to distinguish the value added by nature to diverse outdoor recreation experiences.

Finally, the objective of Chapter 4 was to advance existing theory on minority ethnic underrepresentation in PAs in the context of Muslim communities. My research question was as follows: What socio-cultural barriers and opportunities contribute to the accessibility of PAs for Muslim communities in the UK? For this research, I undertook fourteen, in-depth, semi-structured interviews with leaders from Muslim communities. In addition to exploring socio-cultural access barriers, I examined how the human-nature relationship is depicted in Islam to

identified potential opportunities for fostering Muslim use of PAs. Finally, I also sought to gain a broad understanding of variation in how these barriers and opportunities are experienced across Muslim communities.

1.4 Literature review

1.4.1 The social and environmental value of outdoor recreation

Outdoor recreation is a broad term to describe recreational activities undertaken in natural spaces. The US Bureau of Economic Analysis (2017) defines outdoor recreation broadly as “[a]ll recreational activities undertaken for pleasure that occur outdoors”. In an evidence report for their Outdoor Recreation Strategy, Natural England (2005, p. 6) provided a similarly broad definition of outdoor recreation as any activity falling into one of eleven categories: just being outdoors, creative activities, health or relaxation, utility journeys, informal games and play, high adrenaline non-competitive activities, commercially run activities, study of the natural environment, educational activities and programs, conservation volunteering, and sustainable journeys to outdoor recreation. This definition illustrates the diversity of activities that can be undertaken in the natural environment, from trekking and camping, to picnicking and organized sport, to gamified pursuits like geocaching and plogging (litter picking while jogging). These activities can be passive or active, close to home or a planned excursion, and undertaken in solitude or as part of a group. The natural spaces in which outdoor recreation can take place are equally as varied, from ornamental gardens, parks, and allotments, to vast forests, beaches, and mountains. Regardless of where outdoor recreation takes place, however, be it a small pocket park or a large PA, each of these spaces provides users the opportunity to have leisure experiences in and with nature.

A mounting body of research from many fields provides evidence for a connection between nature interaction and human wellbeing. Numerous articles have summarized this literature, highlighting the wide variety of benefits linked to outdoor recreation (e.g., Hartig et al., 2014; James et al., 2015; Keniger et al., 2013; Russell et al., 2013; Twohig-Bennett and Jones, 2018). This body of work has established links between contact with nature and a variety of physical health outcomes including reduced blood pressure, increased life expectancy, and improved addiction recovery. Many mental health benefits associated with nature interaction are also well

established in the literature such as reduced anxiety, increased spiritual wellbeing, sense of place, and improved cognitive functioning. Social benefits of nature interaction such as enhanced social networks and improved social cohesion have also been identified, although these benefits have received comparatively less study. Alongside this growing body of research, many sectors are recognizing the value of outdoor recreation for improving public health outcomes and several countries have started instituting nature-based health interventions, also termed green prescription programs (Institute at the Golden Gate, 2010; NHS, 2020; Robinson and Breed, 2019).

Human-nature interactions that deliver non-material benefits to people have been conceptualized as Cultural Ecosystem Services (CES) and the related benefits as Cultural Ecosystem Benefits (CEB; see Chan et al., 2011; Fish, Church, & Winter, 2016). Recreational human-nature interactions are one category of CES, with each type of recreational activity reflecting a different CES. CES do not exist *a priori*, but are created through the value that people assign to experiences in and with nature (Chan, Satterfield, & Goldstein, 2012). Much of the CES literature unfortunately conflates the terms *service* and *benefit* which has contributed to a lack of methodological consistency in the field (Chan et al., 2012). However, one recent framework for conceptualizing CES explicitly distinguishes CES from CEB and presents a useful categorization of CEB that summarizes the many non-material benefits humans gain through nature interaction (Fish et al., 2016). These authors define CEB as “dimensions of human well-being that can be associated with [...] interactions between people and the natural environment” (p. 212). Given the prominence of the ecosystem services framework within public and voluntary sectors (Chaudhary, McGregor, Houston, & Chettri, 2015; Hansen et al., 2015; UK National Ecosystem Assessment, 2014), and the alignment of CES/CEB with several social determinants of health (Jennings et al., 2016), CEB offers a practical way to frame the many wellbeing benefits humans gain from nature when participating in outdoor recreation.

Alongside the wellbeing benefits of nature interaction, there is also an environmental rationale for providing outdoor recreation opportunities. Outdoor recreation can provide direct environmental benefits through, for example, conservation volunteer work. Additionally, and perhaps of even greater importance, there exists a link between outdoor recreation and

environmentally responsible behavior (ERB), mediated through connection to nature (CTN). CTN is defined by Zylstra et al. (2014, p. 126) as “a stable state of consciousness comprising symbiotic cognitive, affective, and experiential dimensions that reflect a realization of the interrelatedness between one’s self and the rest of nature” and it is a strong predictor of ERB (Frantz & Mayer, 2014). One factor that has been repeatedly demonstrated to foster CTN is direct interaction with nature, particularly during childhood (Giusti, Svane, Raymond, & Beery, 2018; Rosa, Profice, & Collado, 2018). Thus, high levels of participation in outdoor recreation are essential if we are to foster environmentally engaged and responsible communities.

1.4.2 Ethnic patterns of outdoor recreation participation

Given the established links between outdoor recreation, wellbeing, and ERB, academia and the public sector have been increasingly interested in understanding demographic patterns of participation in outdoor recreation (Floyd, 1999; Jay et al., 2012). Unfortunately, this research has demonstrated that certain groups are often underrepresented as users of natural spaces. Minority ethnic groups, in particular, are regularly found to access nature disproportionately less than those from an Anglo-white background (Boyd et al., 2018; Flores, Falco, Roberts, & Valenzuela, 2018). Research on ethnic patterns of participation in outdoor recreation has been growing in the US since the 1960s in response to the civil rights movement, with the underrepresentation of minority ethnic groups first documented by the Outdoor Recreation Resources Review Commission (Mueller & Gurin, 1962). Since then, “study findings have been nearly universal in their conclusion that whites participate more often than minority populations (particularly blacks and Hispanics) in [outdoor recreation] activities” (Krymkowski et al., 2014, p. 36). A smaller, but growing body of work on the topic of outdoor recreation and ethnicity has also taken place in Europe, in particular within the UK and the Netherlands (Gentin, 2011; Kloek et al., 2013). Similar to findings in North America, this research largely indicates that members of minority ethnic groups are underrepresented within green spaces (Boyd et al., 2018; Morris et al., 2011; Schipperijn et al., 2010).

In addition to revealing a demographic disparity in outdoor recreation participation, the literature also suggests that when minority ethnic groups do access nature, they disproportionately select managed parks with built infrastructure (e.g., BBQs, picnic areas) over more biodiverse spaces

such as PAs (Buijs, Elands, & Langers, 2009; Chavez & Olson, 2009; Ho et al., 2005). For example, in their exploration of ethnic and gender variation in outdoor recreation setting preference in the southwestern US, Grill et al. (2020) found that African Americans prioritized the presence of developed features (e.g., cooking grills, picnic tables, equipment rental) to a greater extent than white participants. Similarly, Ordóñez-Barona's (2017) literature review on ethnicity and urban forest preferences and values indicates that minority ethnic groups tend to "prefer [green spaces] to be manicured, functional landscapes, in contrast to wild or more natural spaces" (p. 68-69).

The underrepresentation of minority ethnic communities in natural spaces, particular within more biodiverse spaces such as PAs, has critical equity implications because it indicates that the benefits of outdoor recreation and nature interaction are not equitably distributed across communities (Jennings et al., 2016). Indeed, much of the research on access to green space has been conducted through the lens of environmental justice (Rigolon, 2016). Although the concept of environmental justice was originally applied in relation to the inequitable distribution of environmental hazards, "[u]nequal opportunity to attain the benefits of parks is increasingly being recognized as an environmental injustice" (Smiley et al., 2016, p. 1). Similar to how disproportionate exposure to environmental harms is linked to health disparities across communities, inequitable access to green spaces can also contribute to health inequalities such as the prevalence of obesity and psychological concerns (Jennings & Gaither, 2015).

The urgency of addressing disproportionate participation in outdoor recreation will only rise in light of our diversifying urban landscapes (Roe, Aspinall, & Thompson, 2016). Positively, governing institutions are increasingly recognizing the underrepresentation of minority ethnic groups in natural environments and many have designated the improved equity in the management of these spaces a matter of national policy importance (Alberta Parks, 2014; Jay et al., 2012). For example, the Board of Parks and Recreation in Vancouver, Canada used equity mapping to guide the development of their recently published master plan for provision of parks and recreation (Vancouver Board of Parks and Recreation, 2020).

1.4.3 Explaining ethnic patterns of outdoor recreation participation: Diverging theoretical perspectives

Alongside research exploring ethnic variation in outdoor recreation participation is a large body of literature that aims to explain these trends (Kloek et al., 2013; Krymkowski et al., 2014). This work has investigated a wide variety of factors that influence use of green space by minority ethnic communities and three dominant hypotheses have since emerged: the marginality hypothesis, the ethnicity or subcultural hypothesis, and the discrimination hypothesis (see Table 1.2 for examples of barriers limiting access to green space reflecting each hypothesis) (Krymkowski et al., 2014). The marginality and ethnicity hypotheses were first proposed by Washburne (1978) who explored outdoor recreation in an African American community in California. The marginality hypothesis suggests that minority underrepresentation in green spaces can be explained by socio-economic inequalities experienced by these communities. These factors include inequitable distribution of high-quality green space, the need for car ownership, and a lack of information. The ethnicity hypothesis, on the other hand, proposes that cultural values and norms lead to diverging leisure behaviors, such as a preference for particular types of green space and leisure pursuits. A third and more recent hypotheses to emerge is the discrimination hypothesis which postulates that institutionalized and experienced discrimination contribute to ethnic disparities in outdoor recreation participation (Byrne & Wolch, 2009). This hypothesis has received the least amount of research attention (Krymkowski et al., 2014).

Table 1.2: Examples of barriers limiting access to outdoor recreation for minority ethnic communities relating to the marginality, ethnicity, and discrimination hypotheses.

| |
|---|
| Marginality Hypothesis |
| Inequitable distribution of high-quality and safe green space; The need for car ownership; Lack of information; Entrance fees; Lack of time and energy; Language barriers. |
| Ethnicity Hypothesis |
| Lack of opportunity to participate in desired activities; Different perceptions of natural beauty; A lack of interest in outdoor recreation. |
| Discrimination Hypothesis |
| Racist encounters, and the fear of such encounters; Lack of cultural representation; Lack of representation among decision makers; Lack of representation within promotional materials. |

Although evidence exists in support of the marginality (Byrne & Wolch, 2009; Comber, Brunsdon, & Green, 2008), ethnicity (Buijs et al., 2009; Suckall, Fraser, Cooper, & Quinn,

2009), and discrimination hypotheses (Livengood & Stodolska, 2004; Sijtsma, 2011), scholars generally recognize that, individually, each hypothesis fails to explain the complexities associated with leisure behavior (Floyd, Bocarro, & Thompson, 2008; Krymkowski et al., 2014; Wang, Brown, & Liu, 2015). Despite this recognition, literature on access to outdoor recreation is dominated with objective, geographic measures related to marginality (Wang et al., 2015). These quantitative spatial metrics have been applied with similar prevalence within outdoor recreation planning models (Wang, Mateo-babiano, & Brown, 2013).

The prominence of geographically determined access within the literature and planning practice is problematic as these objective measures are often poorly related to subjectively measured, perceived access (Jones, Hillsdon, & Coombes, 2009; McCormack, Cerin, Leslie, Du Toit, & Owen, 2008). Unlike objective measures of access, assessments of perception account for the many social and psychological factors that might disrupt the relationship between geography and use. Wang et al. (2013) described the process by which perceived access is determined as “a cognitive/affective process that people evaluate their level of access to specific facilities, such as an open space and park, through the integrative evaluation of both physical and social-psychological accessibility dimensions” (p. 4). This thesis focuses on perceived access.

Understanding the factors underlying minority ethnic communities’ perceived access to outdoor recreation is necessary to inform the more equitable planning, design, and management of green space. Wang et al. (2013) have developed a useful model for the many dimensions of perceived access that integrates factors related to marginality, ethnicity, and discrimination (Figure 1.1). This model presents a useful starting point for conceptualizing the many variables that contribute to minority ethnic underrepresentation in outdoor recreation. In the following sections I explore the evidence base underlying the marginality, ethnicity, and discrimination hypotheses and the theoretical perspectives in which they are grounded.

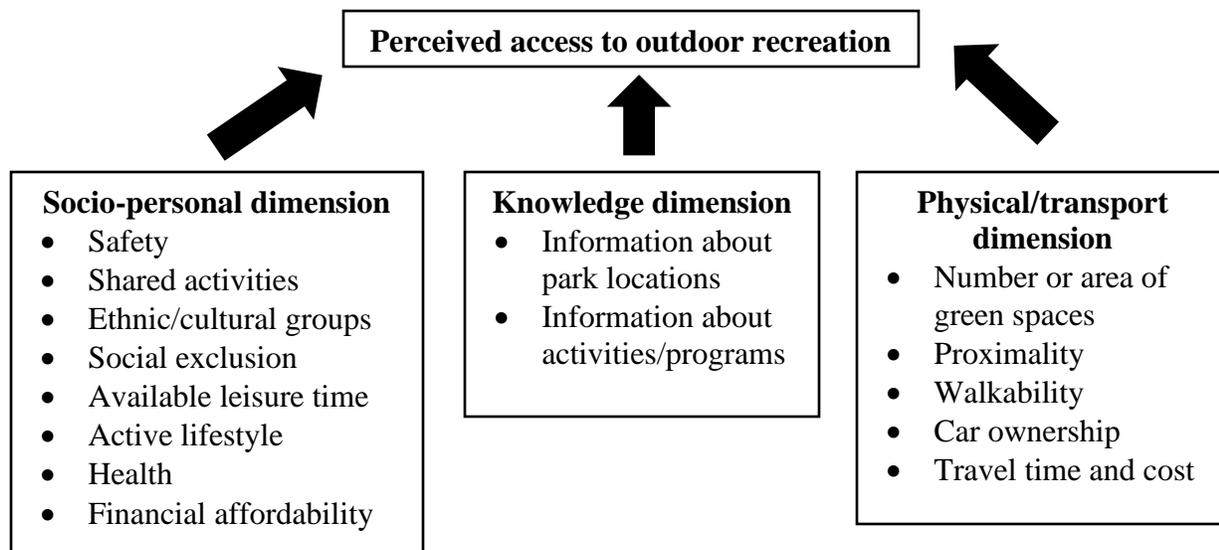


Figure 1.1: A conceptual model of the factors contributing to perceived access to outdoor recreation (adapted from Wang et al. 2013).

1.4.3.1 The marginality hypothesis

The marginality hypothesis suggests that historic patterns of discrimination have led to socio-economic disparities that impede minority ethnic participation in outdoor leisure (Washburne, 1978). Research in support of the marginality hypothesis tends to frame these inhibiting factors, including a lack of time and money, insufficient nearby green space, and a lack of information, as access barriers or constraints (Metcalf, Burns, & Graefe, 2013; Winter, Crano, Basáñez, & Lamb, 2020). Much of the research that supports this hypothesis has applied an environmental justice positioning, indicating that minority ethnic communities have less access to green space and that, therefore, the benefits of nature are inequitably distributed (Byrne, Wolch, & Zhang, 2009; Wolch, Byrne, & Newell, 2014). The evidence base underlying the marginality hypothesis has also tended to focus on geographic dimensions of access, most often employing objective, spatial models of green space distribution in relation to demographic variables, including ethnicity (Comber et al., 2008; Sister, Wolch, & Wilson, 2010). Such work has been termed a form of equity mapping (Rigolon, 2016).

Many studies have found that communities with high minority ethnic populations have lower geographic access to green space (Byrne & Wolch, 2009; Comber et al., 2008). Conversely, however, other work has found no difference in geographic access, or in some cases better access

for minority ethnic communities (Macintyre, Macdonald, & Ellaway, 2008; Morris et al., 2011). For example, a study in Bristol, UK found that poverty was positively associated with geographic access, but that residents living in deprived areas “reported poorer perceived accessibility, poorer safety, and less frequent use” (Jones et al., 2009, p. 500). Indeed, as described earlier, perceived access is often a better predictor of participation in outdoor recreation than geographic access (Bancroft et al., 2015; Byrne & Wolch, 2009).

Two other barriers that have been extensively explored in relation to ethnicity are the quality and safety of green spaces. The literature suggests that communities with high minority ethnic populations have less access to high quality parks and experience greater safety concerns (Hoffmann, Barros, & Ribeiro, 2017; Suminski et al., 2012; Vaughan et al., 2013). For example, from surveys conducted in Houston, Smiley et al. (2016) found that park users from majority-minority communities prioritized improved amenities and safety over increased connectivity between green spaces. Other socio-economic barriers that have been identified, but explored less often, include transport barriers, lack of knowledge and information, language barriers, economic constraints such as high entrance fees, and a lack of time (Kloek et al., 2013; Metcalf et al., 2013; Stodolska, 2015).

Although the literature on marginality has provided valuable information on barriers inhibiting minority ethnic communities from participating in outdoor recreation, there remains a lack of detailed information on the relationship among these factors because of the dominance of objective measurements of accessibility (e.g., audits of green space, surveys) (Rishbeth & Finney, 2006; Wang et al., 2015). Furthermore, there is a lack of research on those socio-economic factors that are more difficult to measure through quantitative analysis, such as information barriers. Notable qualitative work has taken place, however (Morris et al., 2011; Rishbeth & Finney, 2006). For example, Jay and Schraml (2014) qualitatively explored the influence of migration on recreational use of urban forests in two German cities. Their results partially supported the marginality hypotheses in that the significant life changes one experiences after migration, such as a loss of familiarity with regards to surrounding natural spaces, can lead to changes in outdoor recreation patterns. Stodolska (2015) describes how a lack of knowledge of recreational opportunities is partially related to the fact that “many people of color obtain

information about community events through means different than traditional advertising, such as word of mouth, recommendation of community leaders, ethnic radio and church events” (p. 96).

More in-depth, qualitative research is needed to subjectively explore socio-economic factors, how they are experienced by different communities, and why they limit access, particularly those that are not as readily identified through quantitative methods. For example, do socio-economic factors simply present structural barriers or are they related to deeper levels of perceived exclusion?

1.4.3.2 The ethnicity hypothesis

As previously described, the ethnicity hypothesis suggests that ethnic variation in cultural values and norms drive patterns of participation in outdoor recreation (Washburne, 1978). For example, some research has suggested that a lack of interest and preference for alternative leisure activities could contribute to the underrepresentation of minority ethnic communities in outdoor recreation (Boyd et al., 2018; Suckall et al., 2009). However, most research underlying the ethnicity hypothesis has focused on preferences and motivations relating to outdoor recreation and how they explain ethnic variation in use patterns across different types of green space (Kloek et al., 2013; Whiting, Larson, Green, & Kralowec, 2017).

A significant amount of research has identified ethnic differences in preferred outdoor recreation experiences, with minority ethnic communities often found to prefer more social pursuits and recreate in larger groups when compared to those from a white background (Gentin, 2011; Gobster, 2002; Kloek et al., 2013; Ordóñez-Barona, 2017; Peters, Elands, & Buijs, 2010). For example, in their qualitative ethnic comparison of urban forest use patterns and perceptions in Germany, Jay and Schraml (2009) found that activities such as barbeques and organized sport were preferred among Turkish immigrants. In contrast, interviewees from Balkan countries and Russia-Germans did not perceive forests to be a place for significant social interaction. Some have hypothesized that these differences can be explained by the collectivist culture of many minority ethnic communities (Jay & Schraml, 2014; Walker, Deng, & Dieser, 2001).

Research demonstrating ethnic variation in outdoor recreation activity preferences supports the ethnicity hypothesis in that a desire for social pursuits leads to a preference for those natural spaces which support such activities (e.g., those with picnic tables, barbecues). Indeed, much research has linked desired outdoor recreation experiences (i.e., CES bundles) to distinct types of green space (Ament, Moore, Herbst, & Cumming, 2017; Clements & Cumming, 2017; Oteros-Rozas, Martín-López, Fagerholm, Bieling, & Plieninger, 2018; Plieninger, Dijks, Oteros-Rozas, & Bieling, 2013). For example, in visitor surveys within Georgia state parks, “social motivations were associated with [ethnic differences in] preferences for maintained and developed outdoor areas” (Whiting et al., 2017, p. 16).

Research has also linked green space preferences to ethnic variation in conceptualizations of nature. This work suggests that a preference for more highly managed landscapes is due to minority ethnic communities having a more “functional” image of nature in comparison to ethno-European communities who hold a more “wilderness” image of the natural world (Buijs et al., 2009). However, other research contradicts this finding, indicating that minority ethnic communities ascribe a high level of value to “wild” spaces (Yazdani, 2019). For example, Rishbeth and Finney (2006) explored the factors influencing the outdoor recreation decisions of refugees and asylum seekers from Asia and Africa in Sheffield, UK. They found that many aspects of typical British landscapes were familiar to participants, providing a sense of nostalgia and normalcy. The authors, therefore, stressed that it is important “not to stereotype landscape features or types as emblematic of one particular culture, and to be open to unexpected resonances” (p. 293).

One gap in the literature exploring outdoor recreation motivations and ethnicity is that it has largely failed to distinguish the benefits people obtain through the natural setting from those they obtain through leisure activity (Ordóñez-Barona, 2017). The former represent CEB. Motivation can be defined as “an internal force that influences an individual to act in a way that helps them achieve a certain desired experience or outcome” (Whiting et al., 2017, p. 11). In other words, people are motivated to participate in outdoor recreation by the benefits they hope to receive. These benefits can be derived both from the leisure activity (e.g., a family picnic) and from the natural setting. A failure to distinguish these two types of benefits through study design could

lead researchers to underestimate the value added by nature to outdoor recreation experiences. This is particularly true for minority ethnic communities for whom nature is less often the focal point of outdoor recreation activities. Research which contrasts “social motivations” to “nature motivations” could perpetuate damaging stereotypes such as that nature is ascribed more value by those who enjoy traditional Western nature-based pursuits. Participants who identify social motivations, however, may simply be reflecting on why they take part in a particular activity rather than why they chose to undertake that activity in a green space.

Another weakness of the literature underlying the ethnicity hypothesis is that, unlike research supporting the marginality hypothesis, it does not tend to be conducted through the lens of environmental justice. For example, a deficiency of social infrastructure within PAs to support the desired activities of minority ethnic communities is typically not framed as an equity issue. Rather, studies have discussed these preferences as conflicting with traditional conservation design principles (Buijs et al., 2009; Fraser & Kenney, 2000). I contend that this failure to view a lack of preferred recreational opportunities for minority communities through the lens of environmental justice is largely a function of the Western ideologies that have typically governed design and management of PAs, as well as directed research in these settings. This problematic “wilderness” ideology is discussed in section 1.4.4 below.

1.4.3.3 The discrimination hypothesis

Finally, the discrimination hypothesis suggests that experienced and institutionalized forms of discrimination constrain minority ethnic communities from participating in outdoor recreation (Byrne & Wolch, 2009; Floyd, 1998). As mentioned earlier, this hypothesis has received the least amount of research attention, particularly within Europe (Kloek et al., 2013; Krymkowski et al., 2014). I suggest that the emphasis on marginality-ethnicity theory is partially due to the quantitative approaches that have dominated studies of ethnicity and outdoor recreation because such methods limit participants from providing in-depth insight into their lived experiences. Despite the discrimination hypothesis receiving comparatively less attention as a factor explaining minority underrepresentation within outdoor recreation, it is still supported by a large body of evidence (e.g., Byrne, 2012; Davis, 2019; Jay and Schraml, 2014; Livengood and Stodolska, 2004; Madge, 1997; Philipp, 1999).

On-site discriminatory encounters, and fears of such encounters, are frequently documented forms of discrimination limiting minority ethnic participation in outdoor leisure. For example, in their focus group research with Latino non-users of urban parks in Los Angeles, Byrne (2012) found that one of the reasons participants avoided certain parks was because of the park's dominant white usership and fears that "they would be singled out for being different, boisterous or just because they were Latino" (p. 36). In another example, Sijtsma (2011) identified a range of discriminatory behaviors experienced by Muslim women in the Netherlands while participating in outdoor leisure. Such discrimination can come from a variety of sources including other green space users, green space staff, and the police. In their review of research on the barriers effecting minority ethnic participation in leisure more generally, Stodolksa (2015) described a range of racist behaviors such as being viewed as suspicious, being denied entry, receiving substandard service, being followed by the police, and receiving verbal and physical abuse. As would be expected, "avoiding certain areas where they expected mistreatment or had heard of past incidents of discrimination" was the most frequent response to such behaviors (p. 96).

Discrimination can also take other forms which have received less research attention. A lack of minority ethnic representation on staff or in positions of decision-making power, for instance, presents a form of institutionalized discrimination. For example, an independent, government commissioned report to consider the future of two of the most extensive types of PAs in the UK found that only 0.8% of almost one thousand board members of these landscapes were from minority ethnic communities (Glover, 2019). A lack of diverse promotional imagery could also reflect a discriminatory factor inhibiting use of green spaces. For example, in a content analysis of over twenty thousand images used by Dutch nature organizations, Kloek et al. (2017) found that a mere 3.8% depicted people from a non-white background. More research is needed to explore these forms of institutionalized discrimination. Qualitative study would be particularly useful to understand the impact of these factors on perceived inclusion.

A growing body of research has begun to explore how racial discrimination is woven into the very meanings that environmental organizations ascribe to nature and the human-nature

relationship and how this is reflected within management decisions. These critiques of the “wilderness” ideology reveal deeper levels of institutionalized discrimination and are discussed in the following section.

1.4.4 The problematic “wilderness ideal” in protected area planning and governance

When discussing the barriers that inhibit minority ethnic communities from visiting natural spaces, it is also valuable to consider their causal factors. I am particularly interested in those factors relating to PA governance that contribute to the access barriers experienced by minority ethnic groups. As much as PAs might be physically separated from urban environments, they remain culturally constructed spaces for which a select few have largely created the rules (Curry, Joseph, & Slee, 2001). A significant barrier to equity emerges if the voices of the many diverse stakeholders who have the potential to benefit from PAs are not represented among decision makers. This has, unfortunately, been the case throughout the history of Western PAs, and largely remains so today. In this regard, I contend that the wilderness ideology which has been historically embedded within PA management is a primary contributory factor to the access barriers experienced by underrepresented communities.

The PA aesthetic of “untamed wilderness” where one seeks solitude and reflection was first popularized by the Romantic movement of the 1800s (Kloek et al., 2013). Urry (1990) termed this perspective the “Romantic gaze” and described how it tended to be associated with affluent members of society. Throughout their history, PAs of Europe and North America have largely been governed under such romantic ideologies (Demars, 1990; Suckall et al., 2009; Youdelis, Nakoochee, O’Neil, Lunstrum, & Roth, 2020). Romanticism conceptualizes the natural environment as a place to visit for escape and solitude in search of sublime and transcendent experiences (Drennig, 2013). In turn, romantic management ideals view outdoor recreation as an individual experience and one that is separate from civilization (Youdelis et al., 2020). Management in accordance with such ideals has been termed “white environmentalism” as it has primarily emerged from the white middle class who have dominated decision making within PAs (Ho & Chang, 2021). As Drennig (2013) explains, “National parks and other areas labeled as wilderness gave material form to an Enlightenment idea, and allowed for the emergence of a

form of leisure that became today's wilderness- or outdoor recreation with its attendant spatial logic" (p. 556).

In a practical sense, white environmentalism has meant managing PAs to appear "natural" or untouched by modern civilization. In addition, it implies managing spaces for individual experiences where one can view and explore the landscape without encountering this modernity. Certain features and activities are associated with the creation of this experience and are thus prioritized, for example, hiking, camping, fishing, and canoeing (Ho & Chang, 2021). It is not only the formal management that follows ideologies of white environmentalism, however, but also informal expectations and behaviors among visitors. For those whose outdoor recreational preferences align with white environmentalism, there often exist certain expectations for what constitutes an "authentic" outdoor experience related to behavior, knowledge, and even equipment (Cox, 2019; Henderson, 2020). For such recreationalists, observations that do not align with these expectations can lead to experiential degradation or "the perceived loss of an expected experience" (Senda-Cook, 2012, p. 130). For example, Senda-Cook (2012) explored the outdoor recreation walking sub-culture, finding that certain practices such as smoking and wearing inadequate footwear can violate some recreationists' constructed meaning of an authentic walking experience, thereby leading to experiential degradation.

Scholars have criticized the dominance of white environmentalism in PA management, and the wilderness categorization of natural spaces, for contributing to the exclusion of minority ethnic communities (Curry et al., 2001; Davis, 2019). Firstly, the knowledge and experience needed to navigate a PA in the ways expected by the Romantic gazer emerge from a place of privilege that many have not been afforded, including many from minority ethnic backgrounds (Cox, 2019). In addition, white environmentalism places a valuative lens on the "correct" way to use and conceptualize natural spaces, assigning priority to an Anglo-normative view of the human-nature relationship and excluding alternative worldviews and outdoor recreation preferences (Cole, 2007; Henderson, 2020). Urry (1990) contrasted the Romantic gaze with the "collective gazer" who looks for interaction with others to "give atmosphere or a sense of carnival to a place" (p. 45). Scholars have suggested that minority ethnic communities more often hold the perspective of collective gazers (Suckall et al., 2009). Activities that align with a collective gaze, and are

commonly favored by minority ethnic groups, such as community gatherings, barbeques, and organized sport, do not align with a romantic vision of solitude and escape from civilization. As such, they are often restricted through explicitly prohibiting such activities or failing to provide infrastructure to support them.

In this discussion, I do not mean to delegitimize or disparage a romantic view of the human-nature relationship. Solitude, quiet, and traditional Anglo-Western activities are indeed of great wellbeing value to many. Furthermore, highly restrictive PAs such as spaces classified as “Strict Nature Reserves” (IUCN, 2021) are an essential component of the PA inventory to, among other things, protect highly threatened habitats and biodiversity. What I object to is the widespread application of “wilderness” as an ideological construct within PA governance and a lack of representation from more diverse worldviews. The widespread use of the wilderness ideal through a justification of ecological conservation can categorically exclude alternative worldviews and limits creativity in how a space could be sustainably managed to meet the needs of all users. This unreflective and widespread use of white environmentalist ideologies contributes to the continued colonialization of PAs (Ho & Chang, 2021). I contend that inaction relating to many barriers experienced by minority ethnic communities, such as a lack of social infrastructure, can be linked back to the perpetuation of a white environmental ethic.

1.5 Research philosophy and overarching approach

I adopted a constructivist paradigm for this thesis. According to the constructivist philosophical orientation, the world is socially constructed and “[i]ndividuals develop subjective meanings of their experiences” which are “varied and multiple, leading the researcher to look for the complexity of views” (Creswell, 2014, p. 37). In other words, constructivists contend that reality is subjective truth constructed by the individual (Johnson & Onwuegbuzie, 2004). In this research, I sought to understand how individuals subjectively perceive and experience access to outdoor recreation as well as the beliefs of PA managers that shape access. I take the position that factors related to access such as safety, belonging, CEB, and confidence will be individually perceived and shaped by many factors including past experiences and culture. As such, I gathered participants’ perspectives rather than objectively measuring dimensions of accessibility.

Given my constructivist orientation, I adopt an ontological position that reality is a socially constructed set of interpretations (relativism) and take the epistemological position that the researcher should interact with the participants to understand their perspective and have the ability to shape the method fluidly, adapting it to the context (Moon & Blackman, 2014). Aligning with this worldview, I apply predominantly qualitative approaches in my three articles and used primarily opened-ended questions and inductive analysis methods (Crotty, 1998). Denzin and Lincoln (2005) define qualitative research as “a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible” (p. 4). Through gaining insight into the lived experiences of my participants and interpreting this information through a lens of environmental justice, I sought to identify shared barriers and opportunities and contribute to the theory on perceived access to outdoor recreation.

Although this research lies predominantly within a constructivism paradigm, I also draw from a pragmatic worldview in my approach. Pragmatism steps over the debate surrounding the nature of “truth” and focuses instead on exploring and solving real-world issues (Yvonne Feilzer, 2010). The pragmatic paradigm does not constrain itself to a specific approach, but instead adopts the mix of methods thought to be most useful for addressing the problem (Creswell, 2014). While my final article (Chapter 4) uses exclusively qualitative methods, I employ a mixed method approach for both other projects, combining qualitative and quantitative methods (Table 1.1). For Chapter 2, quantitative and qualitative methods contribute equal weight to the overall methodology. For Chapter 3, I apply a qualitative dominant mixed methods approach in which I use predominantly qualitative methods, while including a few closed-ended questions (Johnson, Onwuegbuzie, & Turner, 2007). Therefore, although I adopt the constructivist paradigm, I incorporated some quantitative methods pragmatically recognizing that they would be the most appropriate for answering the research question.

Given the nature of this research, I also consider it critical to discuss and reflect upon my positionality as a researcher (Holmes, 2020). As a white Canadian woman, I am an outsider in many respects to the minority ethnic communities that were the subject of this dissertation. I have also been privileged in the sense that I have not experienced many barriers to accessing PAs. My family visited PAs regularly and felt unhindered in any way. I recognize this privileged

position and acknowledge the racial injustices that have historically shaped the formation of PAs. With this thesis, I aim to actively contribute to the decolonization of PAs through amplifying the voices of my participants and the communities whom they represent.

Particularly in light of my background, privilege, and position as an outsider, I have sought to be reflexive at every stage of this dissertation to identify how my own worldview and life experiences might unintentionally inform and direct the research process (Dodgson, 2019). I adopted a flexible interview processes through using open-ended questions and semi-structured approaches to reduce the extent to which participants' perspectives were constrained by my own understandings (which are shaped by the literature and my own experiences). I also used primarily inductive analysis approaches to, again, avoid overlaying participant responses with a pre-defined framework. However, I also designed my methods to reflect consistency with the literature which allowed for effective comparison. Therefore, my overarching research questions and initial interview templates were largely informed by existing literature and participants were not involved in this process. Through my qualitative methodologies, I hoped that this existing knowledge could be shaped and built upon by my participants through interviews. Despite my efforts to reflectively engage and identify my biases, assumptions and worldviews that could influence this thesis, I also recognize that it is impossible to completely de-center myself from my research (Burdsey, 2013). Finally, I acknowledge that my methods were ultimately researcher driven rather than participatory (i.e., participants were not involved in project development or implementation) and, as such, a power differential remained between myself as the researcher and the participants.

1.6 Dissertation structure

As previously described, this thesis follows an article format, composed of three manuscripts intended for publication (Chapters 2-4) bounded by an introductory chapter (Chapter 1) and a conclusion chapter (Chapter 5). All three articles have been submitted for publication to peer-reviewed journals. I am the primary author for all articles, but they also all involve one or more co-author (see my Statement of Contributions). Given the article format of this thesis, there will be some repetition across chapters, particularly within the introductory information.

In this introductory chapter, I have laid out the theoretical foundations for the research and contextualized the thesis within the existing body of knowledge. In Chapter 2 I explore PA access from a governance perspective with the aim of identifying how user diversity is accounted for within outdoor recreation planning and programming for UK PAs. The objective of Chapter 3 was to explore ethnic variation in outdoor recreational preferences and the related experience of CEB. In other words, I focused on distinguishing the value added by nature to diverse outdoor recreational experiences. Chapter 4 focuses on my final study in which I aimed to identify the socio-cultural barriers and opportunities that contribute to the accessibility of PAs for Muslim communities in the UK. Finally, within Chapter 5 I bring together the findings from the three articles to address my overarching research question. In this concluding chapter, I describe the contribution of this thesis to the advancement of both PA management planning theory and practice.

Research on the relationship between PA governance processes and access barriers experienced by minority ethnic communities is lacking. I have addressed this literature gap through exploring how equitable access is considered within the PA management planning and comparing these decisions to the needs, experiences, and values of minority ethnic communities. Therefore, in addition to the individual theoretical advancements provided by my three articles, this thesis makes a distinct contribution to the literature on outdoor recreation and ethnicity through a governance lens. I go beyond the three-hypotheses conceptualization of access to identify underlying contributory factors within the outdoor recreation planning system. My findings highlight the socially constructed nature of PAs and how the ideologies in which PA management is grounded relate to many subjectively experienced dimensions of access including inclusivity, safety, and belonging.

Chapter 2:

Accounting for diversity: Exploring the inclusivity of recreation planning in the United Kingdom's protected areas

2.1 Introduction

Planners and governing bodies widely recognize that providing opportunities for nature interaction is critical to fostering healthy communities (James et al., 2015; Jennings, Larson, & Yun, 2016; Natural England, 2016). Unfortunately, there exist significant socio-economic disparities in access to green space (Boyd et al., 2018; Jay et al., 2012). Demographic groups that are often underrepresented within green spaces include individuals with health constraints, of lower socio-economic status, and from minority ethnic backgrounds (Boyd et al., 2018). Accessibility is a multidimensional concept including both physical and socio-cultural factors, but geographic measures of access (e.g., park area per capita) have dominated the academic literature and landscape planning frameworks (Wang, Brown, & Liu, 2015; Wang & Brown, 2013). The prevalence of geographic, objective measures in the evaluation of accessibility is problematic as perceived access is often a better predictor of participation in outdoor recreation (Bancroft et al., 2015; Byrne & Wolch, 2009).

The literature has identified a wide variety of barriers that constrain access to green space aside from spatial dimensions. These include a lack of culturally inclusive information, safety concerns, mobility constraints, discrimination, and a lack of confidence (Public Health England, 2020; Smiley et al., 2016; Stodolska, 2015). Two factors which have a particularly strong influence on green space use patterns are an individual's outdoor recreation motivations and preferences which have been found to vary based on several demographic variables (Dade et al., 2020; Fischer et al., 2018). For example, a study exploring urban green space perceptions in Berlin found that older park users were motivated more by direct nature interaction compared to younger users who tended to prioritize social interaction (Riechers, Barkmann, & Tschardtke, 2018). Similarly, individuals from minority ethnic backgrounds are often motivated to engage in outdoor recreation through social activities whereas white communities more frequently participate in nature-based pursuits (Ordóñez-Barona, 2017; Whiting et al., 2017). Understanding such variation is critical as a lack of opportunity to participate in ones' preferred experiences can

present an access barrier to the use of green space (Wang et al., 2015). Therefore, to ensure the equitable distribution of the benefits associated with outdoor recreation, planners and managers must account for varied motivations and preferences through, for example, offering a wide range of programming such as creative pursuits, nature-based activities, festivals, and religious events. Despite our growing understanding of the green space access barriers experienced by underrepresented groups, the institutional factors contributing to these barriers remains underexplored. In this research, I investigated how inclusive access to protected areas (PAs) in the UK was understood and addressed by PA managers. I aimed to further our understanding of the factors underlying PA access barriers at the level of governance.

Among green spaces, PAs often have particularly low levels of user diversity (Buijs, Elands, & Langers, 2009; Chikuta & Saayman, 2019; Suckall et al., 2009). A growing body of literature has criticized PA management practices for being narrowly rooted in a romantic, Anglo-Western belief system (Demars, 1990; O'Brien & Njambi, 2012; Youdelis et al., 2020). Under this ideology, nature is conceptualized as being a place for escape and solitude where one seeks transcendent experiences (Drennig, 2013). Correspondingly, management decisions tend to support activities which are thought to align with these types of sublime interactions with nature (e.g., hiking, camping, fishing, and canoeing) (Ho and Chang, 2021). Ho and Chang (2021) refer to these outdoor recreation ideals as “white environmentalism” and describe how such management practices limit other types nature-based experiences and exclude alternative worldviews relating to the human-nature relationship. Therefore, governance rooted predominantly in white environmentalism could inhibit the achievement of diversity and inclusion objectives. The aesthetic of PAs in the UK has historically been shaped by romantic ideals (Suckall et al., 2009) suggesting that current management ideologies might present a barrier to improving the accessibility of these spaces. Indeed, studies from the 2000s point to an “indifference to difference” in the UK environmental movement in which staff often did not want to improve access for underrepresented groups and the underrepresentation of non-white immigrants was viewed as a lack of interest rather than a factor of exclusion (Agyeman, 2001; Panelli et al., 2009).

Over the last decade, diversity and inclusion have emerged high on the agenda for the management of natural spaces in the UK. Through the Equality Act 2010, the country has established a legal mandate for statutory organizations to ensure equality in access to nature (Equality Act, 2010; Jay et al., 2012). The UK also has a strong research tradition on equity and access to nature. Since 2009, Natural England has conducted the annual People and Nature survey (formally the Monitor of Engagement with the Natural Environment survey) to explore — among other aims — how time spent in nature varies among key groups and over time (O’Neill, 2019). The results have indicated that visitors to PAs are “more likely to be older and from more affluent socio-economic groups” (O’Neill, 2019, 16). Furthermore, proportionally fewer young people, individuals with physical and mental disabilities, and those from minority ethnic backgrounds visit green spaces (Natural England, 2015). Similarly, Scottish Natural Heritage found that a lower proportion of people of minority ethnic backgrounds visited green spaces at least once a week and that they seldom visited the countryside (Scottish Natural Heritage, 2019).

In response to the recognition that certain socio-economic groups are underrepresented within green space, Natural England initiated the *Outdoors for All* diversity action plan which “works to improve opportunities for all people in England to enjoy and benefit from the natural environment” (Natural England, 2015). As part of this strategy, they commissioned research on ways to improve access to nature for autistic children, minority ethnic communities, and adults suffering with dementia. Despite the growing body of both academic and public sector research highlighting barriers to access and identifying potential solutions, little academic research has explored how governance ideologies contribute to the barriers experienced by underrepresented groups. Recent public sector research to identify future priorities for two of the most extensive types of PAs in the UK suggests that these spaces “are an exclusive, mainly white, mainly middle-class club, with rules only members understand and much too little [is] done to encourage first time visitors” (Glover, 2019, p. 15). This research indicates that there are still many factors embedded within UK PA management which impede the achievement of diversity and inclusion objectives.

There is a clear national precedent within the UK for the need to improve the accessibility of PAs, but we lack an understanding of how diversity and inclusion objectives are addressed at a management level. The aim of this research was to advance existing theory on inequitable access to nature through exploring the relationship between PA management ideologies in the UK and access barriers experienced by underrepresented communities. Through an analysis of PA governing documents and a survey of PA managers, the project was guided by three research questions:

- i. Are PA organizations concerned with the level of user diversity and, if so, what steps are being taken to address these concerns?
- ii. Which outdoor recreation benefits are prioritized, and which are underrepresented, in PA planning and programming?
- iii. Which benefits are identified as facilitating the relationship between outdoor recreation and conservation success?

I will examine how white environmentalism is reflected in the results for each research question and explore how this can constrain access to PAs. This study will deliver valuable insight into potential tensions between national equality priorities and management ideologies in the UK environmental sector.

2.2 Methods

I employed a mixed-methods approach for this research, incorporating two methods that both involved quantitative and qualitative components. First, I examined the governing documents, such as management plans and strategies, that direct all PA activity, including their priorities and means of achieving them. I thus addressed my research questions, in part, by analyzing whether these documents focused on user diversity and exploring their prioritization of recreational benefits. Second, I concurrently conducted a survey of PA managers, who are the best source of knowledge related to PA activities and objectives in practice. By compiling information from governing documents and PA managers, I obtained complementary perspectives and thus a more comprehensive understanding. I initially planned to include information from PA websites, but most programming was cancelled due to COVID-19 and the websites were often incomplete. Therefore, this data source was inappropriate for inclusion.

2.2.1 Selection of protected areas

I adopted the holistic definition of a PA put forward by the International Union for Conservation of Nature: “A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (IUCN, 2021). Using this definition, the UK contains a wide variety of PAs falling under a range of designations. To clearly define the scope of this study, I included PAs with a statutory and land-based designation. By applying these criteria, I identified eight PA designations: Areas of Outstanding Natural Beauty (AONBs), Local Nature Reserves (LNRs), National Nature Reserves (NNRs), National Parks, Ramsar Wetlands, Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), and Special Protection Areas (SPAs) (Defra, 2018).

AONBs and National Parks present PAs of a large spatial scale, whereas the other designations reflect smaller sites. Ramsar Wetlands, SACs, and SPAs are international conservation designations; AONBs, National Parks, NNRs, and SSSIs are protected under National legislation; and LNRs are under local control (Defra, 2016).

There was some spatial overlap among these PA designations, with large PAs such as AONBs often encompassing smaller sites under a second designation (Defra, 2018). This created the potential for double counting. However, recreation provisioning for each type of PA was undertaken by distinct organizations and programming occurred at different spatial scales, so it was considered acceptable to include overlapping areas in my analysis.

In addition to spatial overlap, smaller PAs in the UK were often protected by multiple designations (e.g., a LNR could also be a SSSI). Furthermore, because of their small size, most of these PAs did not have unique, accessible governing documents, so I could not examine them individually. However, overarching Wildlife Trusts — independent charities responsible for the management of over 2,300 nature reserves in the UK — oversee the recreational planning and programming of collections of these smaller PAs (see www.wildlifetrusts.org/). Smaller statutory PAs also formed the core areas of Biosphere reserves, an international designation with the primary functions of biodiversity and cultural diversity conservation, sustainable economic

development, and research, monitoring and education (see <https://en.unesco.org/biosphere/about>). Therefore, my analysis used Wildlife Trusts and Biosphere Reserves, and their associated governing documents, to represent the network of smaller PAs.

Using the above criteria, the UK contained 113 PA organizations suitable for inclusion in this study: 46 AONBs, 15 National Parks, 46 Wildlife Trusts, and 6 Biosphere Reserves.

2.2.2 Selection of outdoor recreation benefits

In this research *benefits* refers to the desired outcome that motivates participation in outdoor recreation (Whiting et al., 2017). These benefits can emerge from both leisure activities and from the natural setting in which they take place. For example, an individual could be motivated to go hiking with friends by both the social benefits of the activity and the wellbeing benefits associated with being in nature. The latter benefits have been conceptualized as Cultural Ecosystem Benefits, defined as “dimensions of human well-being that can be associated with these interactions between people and the natural environment” (Fish, Church, & Winter, 2016, p. 212). Fish, Church, and Winter (2016) provide several examples of Cultural Ecosystem Benefits benefits related to identities, experiences, and capabilities which I drew upon to identify benefits related to the natural environment to include in my analysis. To identify further benefits of outdoor recreation, I also examined the literature on outdoor recreation motivations (Irvine, et al., 2013; Whiting et al., 2017) and Connection to Nature (Giusti et al., 2018; Keniger et al., 2013).

To avoid assumptions when coding text in my document analysis, I only included and compared benefits which I could confidently distinguish from one another. Three benefits were included: nature interaction and knowledge, health and wellbeing, and social interaction. These benefits were thought to be suitable as they are often demographically compared as primary motivators for outdoor recreation (Keith, Larson, Shafer, Hallo, & Fernandez, 2018; Whiting et al., 2017). Conversely, my survey allowed me to explore the prioritization of a much larger number of benefits. While still including the benefits from my document analysis, I expanded this list to compare a total of twelve potential benefits (see Appendix A for a full list of benefits included in

my survey). I sought to keep each frequently cited benefit from the three bodies of aforementioned literature (Cultural Ecosystem Benefits, outdoor recreation motivations, and Connection to Nature) as a distinct category, while still maintaining a list of manageable length.

2.2.3 Data collection and analysis: Document analysis

I completed a detailed review of the primary governing documents of a randomly selected 30% sample of each type of PA: 14 AONBs, 5 National Parks, 14 Wildlife Trusts, and 2 Biosphere Reserves (see Appendix B for a full list of documents included in my analysis). A PA was excluded if it did not have a governing document available on its website. In such cases, I randomly selected a different PA for inclusion. The governing documents were read in their entirety and, using Dedoose analysis software (Version 8.3.43, 2021, Los Angeles, CA, www.dedoose.com), I extracted and separated text into three topics reflecting the research questions: 1) diversity and inclusion, 2) benefits of outdoor recreation, and 3) links between outdoor recreation and conservation success.

The 35 governing documents included in my analysis were primarily Management Plans and Strategies, but also included Corporate and Businesses Strategies and one organization's Vision document. The publication dates ranged from 2010 to 2020 while the document length ranged from 4 to 182 pages (mean = 49 pages).

I applied inductive thematic analysis to examine text relating to diversity and inclusion following Braun and Clarke (2006). A preliminary list of codes was produced through an initial review of the data, then finalized by a second review. Codes were then grouped into themes, though some codes were considered a theme in themselves. Themes were identified at a semantic level or, in other words, "identified within the explicit or surface meanings" (Braun and Clarke, 2006, p. 84). I then calculated the percentage of documents that contained each theme and qualitatively described the associated text content, illustrated with excerpts. To further examine diversity and inclusion, I extracted all text that named specific socio-demographic user groups and evaluated the context in which they were discussed as well as the percentage of governing documents that referred to each group.

I used deductive thematic analysis to examine text relating to outdoor recreation benefits, categorizing each excerpt into the three pre-identified benefits: nature interaction and knowledge, health and wellbeing, and social interaction. I calculated the percentage of governing documents that discussed the active delivery of each benefit (Table 2.1). I again used the inductive thematic approach described above to explore the context of each benefit.

Table 2.1: The proportion of governing documents identifying the active delivery of three outdoor recreation benefits, illustrated with example quotes.

| Benefit category and example quotes | Proportion of documents identifying the active delivery of the benefit |
|--|--|
| Nature interaction and knowledge <i>“Every child regularly experiences nature: we will work with families and schools to make sure the next generation grows up connected to the natural world.”</i> - Wildlife Trust for Birmingham and the Black Country | N = 35, 100% |
| Health and wellbeing <i>“Work with healthcare providers to develop and promote activity and wellbeing programmes suitable for different groups, based on key visitor sites.”</i> - Cannock Chase AONB | N = 22, 63% |
| Social interaction <i>“Encouraging active, sociable, meaningful lives to promote good health and wellbeing”</i> - Brighton and Lewes Downs Biosphere Partnership | N = 7, 20% |

Finally, I calculated the percentage of governing documents that identified a positive relationship between outdoor recreation benefits and conservation success. I also examined all text related to this link inductively to identify which benefits were cited as facilitating the relationship.

2.2.4 Data collection and analysis: Survey

The survey component of this study was administered through the software Qualtrics from 2019-2020 (Version April 2019 – August 2020, Provo, UT, USA., <https://www.qualtrics.com>) (see Appendix A for the complete survey and definitions given to respondents). I piloted the survey with two graduate students in the field of conservation and completed minor adjustments. I then followed the Dillman approach for participant recruitment (e.g., personalized emails to potential participants, follow-up emails to non-respondents) to maximize response rates (Dillman, Smyth, & Christian, 2009). Email requests were sent to all 113 PA organizations. When possible, I

emailed the survey directly to the employee who appeared most suitable for my study based on their role on the organization's website. Otherwise, I emailed my request to the organization's general email address. In both cases, I indicated that the survey should be completed by an individual directly involved with recreation planning and programming for the PA. Prior to beginning the survey, participants were asked for their consent and were informed that responses would be anonymized. To gain an overview of my sample, respondents were asked to indicate the type(s) of PAs in which they worked and to briefly describe their role.

Prior to exploring my first research question relating to diversity and inclusion, participants were instructed to consider diversity in its broadest sense (i.e., including all types of diversity: gender, cultural, age, socio-economic, etc.). Participants were first asked to indicate their level of concern related to the diversity of their PA users on a 5-point Likert scale from "*Not concerned*" to "*Extremely concerned*" and whether their organization was undertaking any action to increase the diversity of PAs users. I also asked whether any data was collected by their organization pertaining to user diversity. Participants were also provided optional, open-ended space to expand on, and add context to their responses. This opportunity, along with the assurance of anonymity, would minimize response bias. For example, participants were thought more likely to disclose that their organization was not taking any action to increase user diversity if they could provide a rationale (e.g., funding constraints). Finally, participants were asked how often their organization's recreation plans and programs targeted specific social-cultural groups from "*Never*" to "*Almost always*" on a 5-point Likert scale.

Three questions were used to examine the prioritization of outdoor recreation benefits. From the list of twelve potential benefits of outdoor recreation, participants selected and ranked the four benefits they aimed to deliver most often and described their reasoning for prioritizing their highest ranked benefit. Finally, participants were asked to select all benefits from this list that they rarely considered.

To explore how PA managers conceptualized the link between outdoor recreation and conservation, I asked participants how important they perceived the provision of outdoor

recreation opportunities to be for the success of conservation from “*Not important*” to “*Extremely Important*” on a 5-point Likert scale and to describe their reasoning for this response.

For the three Likert scale questions, I calculated the percentage of participants who selected each item (option) on the scale. To quantitatively examine the prioritization of benefits, I calculated the percentage of participants who ranked each benefit as either their first or second priority and the percentage of participants who selected each benefit within their top four priorities. These calculations provide an indication of benefit prioritization across organizations, while also accounting for the fact that participants might have multiple, equal priorities when designing outdoor recreation plans and programs. Finally, I used the inductive thematic analysis approach described in the previous section (Braun & Clarke, 2006) to examine all qualitative data.

Thirty-two representatives from PA organizations completed the online survey (response rate of 28%). All but one respondent — who described their role as an ‘assistant’ — indicated that they held a senior position (e.g., director, manager, head of department) within their organization. All but five participants described their role to be focused on outdoor recreation, community engagement, and/or outreach (e.g., “*oversight of management plan delivery, including recreation plans and programs*”, “*plan community engagement activities - to raise awareness, understanding and enjoyment of the [PA]*”). Five participants indicated that their role involved a wider remit (e.g., Lead Manager), and one participant did not provide specific details about their role.

2.3 Results

In the sections below, I have separated my results based on the research question to which they correspond. The first section discusses the extent of PA organizational concern relating to diversity and inclusion and the steps being taken to address these concerns. The next section addresses how PA organizations prioritize outdoor recreation benefits in planning and programming. Finally, the third section explores how PA organizations conceptualize the relationship between outdoor recreation and conservation success.

2.3.1 Diversity and inclusion

2.3.1.1 Document analysis

Twelve governing documents (34%) contained no information relating to diversity and inclusion. Within the remaining 23 documents, I identified five overarching themes. First, thirteen documents (37%) included general statements about supporting access for all. For example, the Management Plan for Brecon Beacons National Park stated: “*Ensure that the National Park can be enjoyed by all and that services and facilities do not deliberately or inadvertently exclude people*”. Second, nine documents (26%) identified the broad aim of improving user diversity within their PA, most often describing the need to engage new and more diverse audiences. For example, in their Strategy, the Wildlife Trust for Birmingham and the Black Country described: “*To succeed we must raise the profile of nature and wildlife, communicate with diverse communities and accept the challenge of engaging with people who feel less connected to nature*”.

Eighteen documents (51%) spoke about the specific barrier of physical access and/or identified steps they were taking to improve physical access. This content mainly included discussions about insufficient public transport links and rights of way to connect people to the countryside. For example, the Management Plan for the Forest of Bowland AONB stated that the PA aimed to: “*Maintain and improve access to the countryside in a sustainable way for a diverse range of people*”. These documents also often identified the need to improve trail accessibility for those with mobility constraints.

Fourth, fifteen documents (43%) identified the need to improve access as it relates to information (e.g., printed, online and signage materials for interpretation). This content revolved primarily around diversifying information and ensuring its inclusivity. For example, the Management Plan for the Mendip Hills AONB included the following claim: “*Providing appropriate information including online, and on site, for different, and new audiences is important to ensure people can access the area and are aware of its importance.*” A few of these documents identified the need to provide information that would enhance people’s confidence in exploring natural spaces.

Finally, twelve documents (34%) identified how the PA aimed to improve access through providing a more diverse range of activities. Most of these documents indicated that through

diversifying their programming, they would attract a wider audience including non-traditional visitors. For example, in their Management Strategy, the Brighton and Lewes Downs Biosphere Partnership described how they aimed to “*Improve the range of opportunities that exist for people of all abilities and backgrounds to visit and enjoy the special qualities of the area*”. Nine PAs (26%) discussed physical access, inclusive information, and diverse activities.

Five specific socio-demographic groups were identified within management documents: young people and families (n = 26, 74%), individuals with mobility constraints (n = 12, 34%), minority ethnic groups (n = 6, 17%), individuals of lower economic means (n = 5, 14%), and people with dementia (n = 2, 6%). In relation to children and families, environmental education for children was often discussed and linked to the organization’s overarching aims. Many documents also emphasized how their PA aimed to encourage children to interact with nature, several of which described how young people are spending decreasing amounts of time interacting with nature. Those with mobility constraints were typically discussed in the context of mechanisms that the PA employed to improve access for this group, for example, through creating and better publicizing easy access trails and health programs.

2.3.1.2 Document analysis

Only a quarter (23%, n = 7) of participants indicated that their PA collected data on the diversity of users. Several participants linked this data deficiency to a lack of resources.

Participants held clear concerns about the level of PA user diversity, with twenty-six (84%) indicating that they were at least “*moderately*” concerned with this diversity and ten (32%) being either “*highly*” or “*extremely*” concerned. In the accompanying qualitative detail (n = 25), many managers described how visitors to PAs tended to be from a narrow demographic background, mainly white (n = 11, 44%) and affluent (n = 9, 26%). This lack of diversity was highlighted by a manager who said: “*User profile is not very diverse - typically active adults, often in couples or families, fairly white middle class. Both young and old people are underrepresented*”. Several participants identified barriers underlying this lack of diversity. As with management plans, physical access barriers were most often described (n = 10, 40%), such as the remote locations of many PAs which require a vehicle to access. Six participants (24%) described barriers related to

information and five participants (20%) identified cultural barriers experienced by underrepresented groups, such as a lack of confidence and feelings of exclusion. For example, a participant described how *“the resident population is often resistant to visitors because of the pressures on the landscape, which often leads to discouraging or not supporting greater socio-cultural diversity. There often needs to be greater tolerance, e.g., group visits and wanting barbeques etc.”*.

Positively, nearly half of the participants (n = 14, 45%) indicated that their programming was *“often”* or *“almost always”* targeted at a specific socio-cultural group. Furthermore, twenty-eight participants (90%) indicated that their organization was taking steps to increase the level of user diversity. Of those who provided qualitative detail (n = 22), most identified one or more action or program targeting a specific socio-demographic group. The group most often identified was young people (e.g., through schools) (n = 11, 50%), aligning with the results of management plans. Participants also identified programming focused on those of lower economic means (e.g., through subsidized programming) (n = 7, 32%) and individuals with mobility constraints (e.g., through ensuring accessible paths) (n = 5, 23%). Groups identified by three or fewer participants included minority ethnic communities, people with mental health concerns, and the elderly. Both ensuring information was inclusive and seeking funding for diversity and inclusion initiatives were mentioned by nearly a quarter of participants (n = 5, 23%).

2.3.2 Outdoor recreation benefits

2.3.2.1 Document analysis

Facilitating nature interaction and environmental knowledge was the predominant benefit emphasized within management documents, being described in all thirty-five plans. Education was almost always listed as an overarching objective and a significant amount of text within most documents focused on delivering this objective. Transmitting environmental knowledge was often discussed within the context of environmental objectives. Documents frequently identified how the PA aimed to engender awareness of nature’s value to human wellbeing and promote awareness of the PA, including its designation, landscapes, and wildlife. Numerous specific actions were listed in the context of this benefit such as the development of

environmental education centers, training, and volunteering opportunities. Nineteen documents (54%) specifically identified how the PA aimed to connect people to nature.

Improving health and wellbeing was also emphasized relatively often as a benefit that PAs aimed to deliver (n = 22, 63%). Some of the methods targeting health and wellbeing included promoting the link between human health and nature interaction, running activities such as health walks, and working more closely with the National Health Service. Improving health and wellbeing was rarely mentioned in the context of ecological objectives.

Facilitating social interaction was only identified by seven governing documents (20%), but it was never emphasized. Only three governing documents described how they would facilitate social interaction.

2.3.2.2 Survey

The results of my survey largely concurred with the document analysis, with twenty-three PA managers (72%) identifying “*Environmental knowledge*” as their primary or secondary priority and twenty-nine (91%) placing it among their top four priorities (Table 2.2). “*Heritage and place*” was the next most commonly identified benefit, identified by sixteen managers (50%) as a primary or secondary priority and by twenty-four respondents (75%) among their top four priorities. PA managers also commonly aimed to build “*Confidence in Nature*” and provide a “*Sense of oneness with nature*”. Although “*Improving physical health*” was only identified once among the top two benefits, it was selected by eleven participants (34%) among their top four.

Table 2.2: A prioritized list of outdoor recreation benefits that protected area managers aim to deliver when designing recreation plans and programs based on 1) the percentage of participants who identified benefits as a first or second priority and 2) the percentage of participants who identified benefits within their top four priorities. Benefits identified by less than 10% of participants in these categories are excluded.

| Benefit | % ranked as 1st or 2nd priority | Benefit | % ranked in top 4 priorities |
|----------------------------|--|----------------------------|-------------------------------------|
| Environmental knowledge | 73 | Environmental knowledge | 93 |
| Heritage and place | 47 | Heritage and place | 73 |
| Oneness with nature | 23 | Confidence in nature | 60 |
| Confidence in nature | 20 | Oneness with nature | 43 |
| Reduces stress and anxiety | 10 | Improves physical health | 37 |
| Fun and excitement | 10 | Fun and excitement | 33 |
| | | Reduces stress and anxiety | 17 |
| | | Inspiration and creativity | 17 |
| | | Aesthetic pleasure | 10 |

The reasons participants provided for prioritizing environmental knowledge were often related to how it can lead to environmentally responsible behavior (ERB). For example, a participant indicated: *“Knowledge is essential for people to know how to protect nature in the way they live. Knowledge of how nature is our life support system and how our actions impact it. Without knowledge damage can be done even if not deliberate.”* Establishing a sense of heritage and place was linked most often to establishing a connection to nature and increasing the perceived value of the landscape. A participant described this link in saying: *“[a sense of heritage and place] links the benefits to the specific landscape. People can get physically fit in the gym or get social interaction in many different ways. But we want to connect people with [this] landscape specifically”*. Both in the case of environmental knowledge and heritage and place, participants also indicated that they prioritized these benefits because they represented primary objectives of their organization.

Participants who aimed to foster confidence in nature as their primary benefit discussed how many people fear and lack awareness of how to interact with natural environments. Participants described how reducing these barriers can increase connection to nature and promote ERB. Finally, participants who aimed to increase visitors' sense of oneness with nature as their primary benefit connected it with increasing the perceived value for nature and, again, to ERB.

Several benefits were found to be of low priority to PA managers. Less than ten percent of participants identified “*Cognitive Functioning*”, “*Spiritual Enrichment*”, and “*Social Interaction*” among their primary four benefits. All three of these benefits were also identified by some participants as benefits that they rarely aimed to deliver (*Cognitive Functioning* – n = 9, 28%; *Spiritual Enrichment* – n = 5, 19%; *Social Interaction* – n = 2, 6%).

2.3.3 Outdoor recreation and conservation success

2.3.3.1 Document analysis

Almost all governing documents identified a link between outdoor recreation benefits and conservation success (n = 31, 89%). The documents typically made a link between these benefits, increased value for nature and/or ERB. Within these governing documents, the benefit that was most often identified as facilitating this relationship was environmental knowledge (n = 28, 90%). As mentioned earlier, the provisioning of environmental knowledge was often identified as a primary objective and/or action relating to ecological objectives. For example, in their Corporate Strategy, the Ulster Wildlife Trust indicated that a primary goal was to “[i]nspire people to champion wildlife by understanding and valuing nature. We believe that in order to protect [Northern Ireland’s] diverse landscapes and seas, and secure a future rich in wildlife, we must invest resources into re-engaging people with nature and educating our society to value the environment as a vital investment in our future health, wellbeing, and economy”.

Four other benefits were identified as facilitating the relationship between recreation and ERB: connection to nature (n = 16, 52%), sense of heritage and place (n = 13, 42%), inspiration and creativity (n = 8, 26%), and health and wellbeing (n = 4, 13%). However, many documents simply identified enjoyment as facilitating this relationship and did not identify specific benefits related to this enjoyment.

2.3.3.2 Survey

Twenty-eight participants (88%) perceived the provisioning of opportunities for outdoor recreation to be “*highly*” or “*extremely*” important to conservation success. From accompanying qualitative data (n = 32), most participants (n = 27, 84%) viewed outdoor recreation as positive for conservation success. Twenty-three of these participants (85%) identified a link between participation in outdoor recreation, valuing nature, and ERB (e.g., support for conservation, appropriate use of the space). For example, a manager indicated: “*Exposure to nature experiences has repeatedly been shown to be most effective at stimulating and harnessing positive action for the environment. [It] directly results in offers of volunteer effort, citizen science survey contributions and financial contributions to campaigns and initiatives.*”

Aligning with governing documents, nineteen participants (70%) described how the relationship between recreation, valuing nature, and ERB was facilitated through an increased understanding of nature and its importance to humans. For example, a participant stated: “*Providing a better understanding of the natural world in its most general sense can lead to a greater sense of duty to protect wildlife and landscapes.*” Several participants (n = 11, 41%) linked valuing nature to enjoyment of outdoor space and the other benefits obtained through recreation. For example, a participant stated: “*Linking people with nature through outdoor activity (and even bringing wildlife to them) has an impact on the person's mental and physical health and wellbeing. By appreciating those benefits derived from the natural environment people are more likely to have a more stewardship attitude towards the environment.*” Eight respondents (30%) cited both enjoyment and understanding as important for increasing the public’s value of nature and ERB.

Five participants (16%) spoke in an exclusively negative tone about outdoor recreation, citing the damage it can inflict on wildlife if not managed correctly.

2.4 Discussion

2.4.1 Addressing diversity and inclusion objectives: A need to broaden the approach

My results suggest that PA managers are largely not indifferent to the lack representation from certain user groups as prior research has suggested (e.g., Agyeman, 2001). Conversely, I found

managers to be well aware of national diversity objectives and concerned with taking steps to address access barriers. However, these national priorities were not widely ingrained in overarching management structures. Certain dimensions of access were more widely recognized within management frameworks. Physical and geographic barriers (e.g., inaccessible paths, insufficient public transport links) were emphasized and were also well-known to PA managers. Barriers related to information were also mentioned relatively frequently within management plans. These results align with research on green space access that has predominantly focused on objective, spatial-physical aspects over socio-cultural dimensions (Wang et al., 2015). This narrow conceptualization of access is problematic given the many socio-cultural barriers that have been identified in the UK as significantly constraining green space access for underrepresented groups. For example, minimal confidence in natural environments, a lack of culturally diverse imagery, fear of discrimination, and a deficiency in desired amenities and experiences have all been found to inhibit access to the natural environment for these communities (Boyd et al., 2018; Morris & O'Brien, 2011; Public Health England, 2020; Rishbeth, 2001). The focus on spatial-physical dimensions of access stands to overlook these complex barriers experienced by underrepresented groups.

Young people and families were the most frequently targeted socio-demographic group. Governing documents widely discussed how educating and connecting children to nature was a primary organizational aim and both data sources identified schools as a main avenue through which they engaged this audience. The results align with the *Outdoors for All* objectives which list children as an underrepresented group (Natural England, 2015). A large body of literature suggests that there is an ongoing generational decline in the time young people spend interacting with nature (Soga & Gaston, 2016). However, there was little indication within my data that PA activities targeted at young people varied based on prior levels of experience in nature. Such varied programming is necessary to ensure PAs go beyond “preaching to the converted” (Edwards & Larson, 2020). Targeting schools presents an excellent avenue through which to reach new audience as it can ensure the participation of an entire class rather than only those children who have a pre-existing interest in nature (Schuttler et al., 2018). Such activities must still integrate a high degree of flexibility, however, to appeal to different levels of knowledge, experience, and interests.

PA managers often described individuals from minority ethnic backgrounds as being underrepresented within their PA, aligning with both academic literature and the People and Nature survey data (Boyd et al., 2018; Morris et al., 2011). However, such communities were seldom identified within government documents or by PA managers in the context of addressing barriers or targeted programming. These results suggest that a significant amount of work still needs to be done, both within overarching policy and on-the-ground action, to overcome barriers experienced by minority ethnic communities. The literature on outdoor recreation and ethnicity has recommended a wide variety of actions that can be drawn upon to improve access for these communities such as providing activities which celebrate cultural diversity, having ethnically diverse volunteers on site, holistically engaging with the community, and providing information in multiple languages (e.g., Morris & O'Brien, 2011; Stodolska, 2015). In the context of the UK, for example, O'Brien and Morris (2009) found that facilitated access, which involves transporting specific groups to the site and taking them through guided "taster" activities, was particularly important for engaging underrepresented groups.

Among the many potential benefits provided by outdoor recreation, the clear priority for PA organizations was to foster environmental knowledge. This result aligned with how PA organizations most often identified environmental knowledge as the benefit linking outdoor recreation to ERB. Although enjoyment was also emphasized in connection with ERB, it was predominately described in its most general sense, with little or no explicit mention of the many ways people gain enjoyment from outdoor recreation. The evidence for a relationship between environmental knowledge and ERB is mixed, and many additional internal and external factors (e.g., socio-demographics, attitudes, values) have also been identified as influencing ERB (Kollmuss & Agyeman, 2002; Otto & Pensini, 2017). Some of these factors were identified by participants in this study.

Facilitating social interaction through outdoor recreation appeared to be of particularly low priority for PA organizations. This contributes to the underrepresentation of certain groups such as minority ethnic communities for whom social motivations are often primary drivers of outdoor recreation participation (Stodolska, 2015; Whiting et al., 2017). Young people,

particularly those with less prior exposure to the natural environment, have also been found to prefer social activities and the presence of infrastructure that supports such pursuits (e.g., sports facilities, seating) (Eder & Arnberger, 2016; Van Hecke et al., 2018).

Positively, PA organizations widely aimed to deliver health and wellbeing benefits and many specific examples of connecting with the health sector were identified. Although not emphasized as strongly as delivering environmental knowledge, improving user health and wellbeing appeared to be a common secondary objective. This priority aligns with the large body of academic and the public sector literature advocating for the purposeful and formalized use of green space to improve health and wellbeing (e.g., NHS forest - <https://nhsforest.org/>) (Brymer, Freeman, & Richardson, 2019; Public Health England, 2020; Robinson & Breed, 2019). Strengthening the link between the health sector and PAs could contribute to meeting diversity and inclusion objectives and would be of particular benefit in areas of economic deprivation and among communities known to experience health inequities (Evison et al., 2013; Lovell, Depledge, & Maxwell, 2018). PA organizations should continue to build on their health and wellbeing activity, capitalizing on the rising amount of funding available for health and wellbeing focused initiatives. For example, organizations such as the National Lottery Community Fund and the Esmée Fairbairn Foundation offer a wide variety of grants available to registered charities in the UK including AONBs, Wildlife Trusts, and National Park Foundations.

2.4.2 The dominance of white environmentalism in UK protected area management

The results across my three research questions suggest that white environmentalism is still deeply embedded within PA governance, inhibiting the achievement of national diversity and inclusion objectives. First, the positioning of environmental knowledge as the primary channel to facilitate ERB is problematic, reflecting the privileged and exclusionary perspective that a certain level of knowledge is needed to engender respect for nature. As Suckall et al. (2009) observe in the context of National Parks, “implicit in the idea that attitudes can be changed through education is the assumption that there is only one way that the [National Park] should be enjoyed – through the eyes of the Romantics. The idea of changing the gaze of a whole section of society is laden with value judgements” (p. 1202). Environmental education in Westernized

countries has traditionally been grounded in Anglocentric thought reflective of white environmentalism (Cole, 2007). For example, these teachings typically present a dualistic view of nature and culture (Beery, 2014). Therefore, the educational information through which ERB is assumed to be derived does not tend to acknowledge the value of other knowledge systems and traditions (Datta, 2018; Maina-Okori, Koushik, & Wilson, 2018). Furthermore, the assumption largely overlooks the documented links between other outdoor recreation benefits, such as social and spiritual, and ERB (Asah & Blahna, 2012; Khan, Khumbongmayum, & Tripathi, 2008). For example, Asah and Blahna (2012) found that urban conservation volunteers in Washington State were motivated more by “personal and social benefits rather than by environment-related reasons” (p. 470).

The lack of emphasis on social aspects of outdoor recreation is similarly reflective of white environmentalism as it prioritizes a Western, romanticized image of PAs as wilderness and places of solitude (Suckall et al., 2009). I contend that to improve equity in PA design and management, and to harness the potential of the many outdoor recreational benefits with links to ERB, PAs must broaden their recreational opportunities. Programming specifically aiming to foster social connections would be a particularly valued addition to PA offerings. For example, most community centers offer a wide range of social activity including lunch clubs, dance classes, and arts and crafts activities. Such groups could be offered the opportunity to undertake these activities within nearby PAs. One third of PA documents did, however, recognize that uniform recreational opportunities present a barrier to diverse user representation. Furthermore, a few participants described how they were working to diversify programming.

A large body of PA research has explored outdoor recreation in the context of the trade-offs that exist between these activities and environmental conservation (e.g., Lawson, 2006; Traoré & Salles, 2019). Conventional concepts used in evaluating trade-offs (e.g., carrying capacity) reflect a rational–comprehensive management approach which, similar to white environmentalism, emerges from Anglo-Western scientific thought (Plummer & Fennell, 2009). As with the dominance of objective measurements of access, the use of such top-down approaches, when not accompanied by more participatory governance mechanisms, stand to

result in the continued exclusion of alternative worldviews. This is particularly true when PA organizations fail to include non-users in measurements of visitor preferences.

While acknowledging the need to consider the impact that different activities could have on the landscape, I contend that the dominance of white environmentalism as an ideological construct within PA governance limits flexibility and inclusivity relating to how PAs could be managed to sustainably accommodate a wider range of activities. As Ho and Chang (2021) describe, “[u]nder this form of environmentalism, a person absolves oneself of the responsibility to undo colonial harm, arrogates to oneself the status of ecological steward, and denies other ways of relating to the (natural) world” (p. 6-7). My results suggest that white environmentalism ideology is embedded across many aspects of outdoor recreation management in the UK, contributing to the underrepresentation of user groups who’s preferred activities and worldviews do not align with these Romantic conceptualizations of the human-nature relationship.

2.4.3 Conclusions: Implications for protected area management

PA managers in the UK are widely aware of and concerned with the underrepresentation of many communities. However, diversity and inclusion must be more deeply ingrained within management frameworks if PA governance is to reflect national priorities. A wide variety of steps are being taken to improve accessibility for underrepresented groups, but these actions have primarily focused on spatial- physical dimensions of accessibility. Furthermore, although PA managers widely recognize a lack of ethnic diversity among their visitors, minority ethnic communities are rarely targeted through programming or other action. Indeed, PAs seldom prioritize social interaction, which is often a primary motivator for minority ethnic groups and youth (Eder & Arnberger, 2016; Ordóñez-Barona, 2017). Instead, PA organizations prioritize the delivery of environmental knowledge, aligning with a perceived link between environmental knowledge and ERB. The emphasis placed on environmental knowledge suggests that PA organizations are less aware of the other pathways through which nature experiences can engender ERB (Dean et al., 2019). These results suggest that institutionalized ideologies within PA organizations in the UK limit the achievement of national diversity and inclusion objectives through embodying a narrow conceptualization of the human-nature relationship.

Our findings have several implications for PA management. First, directed effort to facilitate social interaction would lead to greater equity in the distribution of benefits associated with PAs. Examples of actions that could fulfill such social objectives include providing spaces for large gatherings, offering activities with the primary aim of reducing social isolation, and allowing established community groups to undertake their own programming within PAs. Second, PAs should provide a range of recreational opportunities that align with the diverse motivations of potential users (Stodolska, 2015; Wang et al., 2015; Whiting et al., 2017). For example, in their recent publication, *Improving Access to Greenspace*, Public Health England (2020) highlighted that a “[w]ell-designed greenspace will appeal to different groups. It is inclusive and accommodates people with a range of needs, offering opportunities for play, relaxation, social interaction and stimulation” (p. 37). Marketing approaches should be equally inclusive, for example by including photos that represent all communities to promote a sense of belonging (Kloek, Elands, & Schouten, 2017; Stodolska, 2015).

Aligning with the need to provide a diverse range of programming, PA organizations should also explicitly identify the many avenues through which enjoyment from PAs is derived within management plans and describe these benefits in the context of ERB. To ensure outdoor recreation management is truly aligned with the needs of surrounding communities, effective public engagement is key (Evison, Friel, Burt, & Preston, 2013; Smiley et al., 2016). Underlying these actions, PA organizations must embrace a broader conceptualization of access and seek to subjectively explore the experiences of underrepresented groups.

I recognize that a lack of resources is likely to present a barrier to implementing highly targeted programming, detailed assessments of access, and rigorous community engagement. Indeed, resource deficiencies were identified as a barrier by many participants. As mentioned earlier, capitalizing on health and wellbeing funding streams could be one avenue through which to overcome this barrier. Renting space to community groups could also provide a revenue stream, while also offering user groups the opportunity to connect with nature in ways that reflect diverse worldviews. However, I also call on governments to increase funding provisioning for diversity and inclusion initiatives. If governing bodies expect PAs to carry out their prescribed diversity and inclusion objectives, they must provide the necessary support including training

and capacity building opportunities. PA managers can also look to charitable organizations for such assistance. In the UK, for example, organizations like Semble (<https://semble.org/>) and Sustain (<https://www.sustainweb.org/>) have recently provided a wide variety of workshops and guidance on diversity and inclusion for the charitable sector.

I found that white environmentalism was embedded across many aspects of PA management in the UK and reflected in their actions and priorities. These institutionalized ideologies are consistent with the Romantic movement from which PAs emerged (Suckall et al., 2009) and hinder the achievement of diversity and inclusion objectives. I add my voice to calls for PA organizations to move beyond these narrow Anglo-normative conceptualizations of nature that are entrenched in traditional environmental education and PA management strategies. Alternative worldviews must be embraced within PA governance structures through participatory approaches to equitably reflect the diverse human-nature relationships that exist among UK communities.

2.5 References

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Chapter 3:

A “magic teleportation machine”: Ethnically diverse green space users derive similar Cultural Ecosystem Benefits from urban nature

3.1 Introduction

Since the publication of the Millennium Ecosystem Assessment (MEA, 2005), ecosystem services (ES) have been widely adopted in academia and within the public and voluntary sectors as a way to conceptualize the contribution of nature to human wellbeing (Chaudhary et al., 2015; Hansen et al., 2015; UK National Ecosystem Assessment, 2014). In recent years, Cultural Ecosystem Services (CES), one of the four ES categories, have risen on the ES research agenda given their identified links to health and wellbeing (Kosanic and Petzold, 2020). Broadly, CES are human-nature interactions that provide non-material Cultural Ecosystem Benefits (CEB) to people, such as inspiration and relaxation (Chan et al., 2012a; Fish et al., 2016). The terms *service* and *benefit* are often conflated in the CES literature, contributing to a lack of methodological consistency in the field (Chan et al., 2012b; Fish et al., 2016). Therefore, I explicitly distinguish between CES and CEB: CEB are benefits that emerge through CES. CES do not exist *a priori* but are created through the value that people assign to experiences in and with nature (Chan et al., 2012b). CES are consistently found to be among the most highly valued ES (Klain et al., 2014; Plieninger et al., 2015) and are thought to act as “gateway” ES for connecting people to nature (Andersson et al., 2015).

Outdoor recreation is a CES category of particular interest given the widely identified links between green space use and wellbeing (Keniger et al., 2013). However, we have limited understanding of socio-cultural variation in recreational CES and their benefits, knowledge that is necessary to ensure green spaces equitably benefit surrounding communities (Dade et al., 2020). Consequently, the literature has begun exploring CES in relation to several socio-cultural factors including age (Riechers et al., 2018), gender (Yang et al., 2018), and socio-economic vulnerability (Palta et al., 2016). Calls remain, however, for further research on CES variation across diverse social backgrounds. A recent review of the CES literature, for example, noted that “the relevance of [CES] for the human wellbeing of different subgroups needs more dedicated attention” (Kosanic & Petzold, 2020, p. 7).

One socio-cultural variable likely to affect desired recreational CES that has received minimal attention is ethnicity (but see Dou et al., 2020 and Sagie et al., 2013), particularly in urban settings (Kosanic and Petzold, 2020). This knowledge gap is problematic given our increasingly multicultural urban landscapes and the identified barriers to accessing green space that are experienced by minority ethnic communities (Boyd et al., 2018; Jay et al., 2012; Morris et al., 2011). However, a growing body of work has explored CES in the context of Indigenous and local knowledge; this research indicates that CES are intimately connected to identity and wellbeing (Christie et al., 2019; Pert et al., 2015) and that cultural context influences CES distribution (Angarita-Baéz et al., 2017). These findings suggest that ethnic differences in CES and CEB may exist in the context of recreation and wellbeing, highlighting the need for further study.

Despite the lack of research on CES and ethnicity, a considerable amount of work has explored ethnic variation in outdoor recreation motivations and preferences (Ordóñez-Barona, 2017; Whiting et al., 2017). Such information is useful if we are to ground CES research in the human-nature interactions through which these services are experienced and perceived as valuable, thus conveying CEB (Chan et al., 2012b). This recreation literature, which has predominantly been undertaken in Western contexts, demonstrates that ethnic minorities tend to prefer spaces with built leisure infrastructure (e.g., BBQs, picnic areas) (Buijs et al., 2009; Chavez and Olson, 2009) and are often motivated by social activities (e.g., organized sports, family gatherings) over nature-focused pursuits (e.g., bird watching) when compared to those from a white background (Gobster, 2002; Kloek et al., 2013). Although this research shows clear ethnic variation in outdoor recreation preferences and motivations, it has largely failed to distinguish the specific benefits added by nature to these experiences (Ordóñez-Barona, 2017). This raises the question of whether ethnically divergent green space preferences lead to similarly varied CES and CEB.

Exploring how nature contributes to the wellbeing of different ethnic groups with divergent recreational preferences is necessary if we are to move beyond the Anglocentric belief systems that have historically governed the management of green spaces, in particular protected areas (PAs) (Suckall et al., 2009). Through in-situ semi-structured interviews with visitors to the Lee

Valley Regional Park (LVRP), London, UK, the overarching aim of this research was to explore ethnic variation in outdoor recreational preferences and the related experience of CEB. The study was guided by the following research question: do green space users with diverging outdoor recreation preferences derive similarly varied CEB from urban nature? Having been the central venue of the 2012 Olympic Games, the LVRP is one of London's largest green spaces and hosts more than seven million visitors a year. It provided a suitable context for this research because it contains a wide variety of green spaces and waterways, including PAs, gardens, and urban parks, and it is surrounded by boroughs containing some of the highest levels of ethnic diversity in the UK. I conducted a qualitative-dominant, mixed-methods assessment (Johnson et al., 2007) of the 1) green space preferences and 2) CEB of white and minority ethnic green space visitors. These two variables were compared among white and minority ethnic visitors to two divergent types of urban green space in the LVRP: parks and Sites of Special Scientific Interest (SSSIs, a type of strict PA).

3.2 Methods

3.2.1 Contextualizing this research within Cultural Ecosystem Services theory

This research is concerned with the benefits that emerge from physical and psychological experiences that people have in and with nature while recreating. This context reflects one of eighteen categories of human-nature relations identified within the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) framework which, although rooted in ES theory, reframes ES as Nature's Contributions to People (NCP) (Díaz et al., 2018). I found that the NCP reporting category *Physical and Psychological Experiences* aligned particularly well with the types of CES and CEB I explore in this research, defined as "Provision, by landscapes, seascapes, habitats or organisms, of opportunities for physically and psychologically beneficial activities, healing, relaxation, recreation, leisure, tourism and aesthetic enjoyment based on the close contact with nature" (Díaz et al., 2018 – Supplementary Materials). The IPBES framework is critical of the primarily economic valuation approaches that dominate ES literature and was designed to better accommodate a plurality of worldviews. The authors argue that culture and subjectivity underpin all ES. Although I embrace this philosophy underlying NCP, its critiques of the ES literature are not new. CES scholars, in particular, have long held these concerns, contending that CES are often not amenable to economic valuation and thus require novel,

alternative assessment frameworks (Chan et al., 2012b; Fish et al., 2016). Given this alignment of CES theory with the NCP framework, and the widespread use of ES terminology within mainstream policy and ecosystem management (Hansen et al., 2015; UK National Ecosystem Assessment, 2014), I adopt the terminology CES and CEB to explore the NCP category *Physical and Psychological Experiences*.

3.2.2 Study design

I employed a qualitative-dominant, mixed-methods research approach (Johnson et al., 2007) to explore recreation preferences and CEB. CES scholars often favor mixed methods and qualitative approaches given that achieving an in-depth understanding of CES and their CEB relies on exploring complex, lived experiences (Kosanic and Petzold, 2020). Qualitative detail was particularly advantageous in this study given the lack of prior research on how recreational CEB differ by ethnicity.

I compared the 1) green space preferences and 2) CEB between white and minority ethnic users of urban green space (see below for a discussion of ethnicity). As described earlier, the literature has identified trends in green space preferences based on ethnicity, often distinguishing spaces with many built amenities and activities from those with higher levels of biodiversity which are often termed more “natural” or “wild” (Buijs et al., 2009; Whiting et al., 2017). Similarly, the characteristics of green spaces have often been found to influence the types of CES bundles that users derive from them (Ament et al., 2017). Therefore, to capture the range of potential CEB associated with urban nature, I sampled white and minority ethnic users of two types of urban green spaces: parks and SSSIs.

A SSSI (pronounced “Triple S I”) is a statutory designation for spaces that “are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features” (Government of the United Kingdom, 2020). The high level of protection afforded to SSSIs limits development and the types of recreational activities that can be undertaken. Conversely, Panduro and Veie (2013) define a park as having “a high maintenance level with well-kept vegetation and a wide range of recreational possibilities.

Footpaths open the green area to the public and make it possible to walk in the area and enjoy different features such as small lakes, trees, lawns, flowers, and sport activities”.

Comparing green space preferences and CEB between white and minority ethnic visitors to parks and SSSIs resulted in four categories of green space users: white users of parks, white users of SSSIs, minority ethnic users of parks, and minority ethnic users of SSSIs. My aim in gathering data from these two types of urban nature was to attain samples of users (from both ethnic categories) with divergent recreational preferences (i.e., desired CES bundles) across which to compare CEB. This approach offered the benefit of equally representing the perspectives of minority ethnic visitors of more biodiverse spaces, a group that would likely have been overlooked in a proportional visitation sample given that they are often underrepresented in such space (Kloek et al., 2013; Whiting et al., 2017).

3.2.3 Studying ethnic difference

In the UK, one of the most commonly applied collective terms for people from minority ethnic backgrounds, including in the context of the natural environment, is Black, Asian and minority ethnic (BAME) (Evison et al., 2013; O’Neill, 2019). Similarly, research on ethnicity and green space from Western countries often broadly groups and compares the perspectives of white and minority ethnic populations (Buijs et al., 2009; Jay et al., 2012; Ordóñez-Barona, 2017). We, therefore, applied a BAME-white comparison in this study. However, this broad categorization of ethnicity, and the term BAME itself, has been criticized for ignoring the diversity of identities, lived experiences, and discriminatory barriers that exist within and among minority communities (Fakim and Macaulay, 2020; Kivel et al., 2009; Kloek et al., 2013). Kloek et al. (2017), for example, contends that research which fails to explore variation leads to “simplistic and stereotyped images about immigrants and nonimmigrants” (p. 59). These criticisms highlight the need for researchers to be reflective in their categorization of ethnicity, make explicit and informed choices based on their specific research context, and consciously acknowledge and reflect on the limitations of their chosen method (Jay et al. 2012).

Two primary considerations led to my decision to employ a BAME-white comparison. First, it is a term often used within the national UK context (e.g., Boyd et al., 2018; Morris et al., 2011) and

allowed for a comparison to prior research on green space and ethnicity which, as mentioned, often employs such broad comparisons. As one of the first studies of CEB and ethnicity, a comparable ethnic categorization was advantageous, allowing me to better examine my results within the context of this literature. Logistical constraints were also a consideration. Although my qualitative approach would provide the level of initial detail required to explore CEB and ethnicity, it also made it infeasible to gather large samples of many distinct ethnic groups. However, as mentioned earlier, my study design did allow me to equally represent the perspective of BAME users of SSSIs, providing some exploration of heterogeneity in lived experiences among BAME green space users.

In applying a broad ethnic categorization, I recognize the aforementioned concerns and acknowledge that I cannot distinguish intra-ethnic variation in preferences and CEB. Therefore, I suggest that future studies should build off this research to explore variation in the provisioning of CEB within and among distinct communities.

3.2.4 Site selection

Created in 1967, the Lee Valley Regional Park (LVRP) is a 40km² linear wedge of primarily open space and waterways that follows the River Lea from the Thames in the heart of East London northward into the countryside. It hosts over seven million visitors a year, is composed of a diverse variety of urban green spaces and offers a wide array of outdoor activities (for detailed information about the LVRP, see leevalleypark.org.uk and visitlee valley.org.uk). This research focused on the Southern portion of the LVRP. My rationale for selecting the lower LVRP was twofold. First, the surrounding areas contain some of the highest levels of ethnic diversity in the UK (Office for National Statistics, 2018). Second, the lower LVRP contained SSSIs and parks located in close proximity to one another, with residents having easy geographic access to both. This ethnic and landscape diversity identified the LVRP as a suitable context for this research. I focused on three parks (Millfields Park, the Queen Elizabeth Olympic Park [QEOP], and Springfield Park) and two SSSIs (Walthamstow Marshes and Walthamstow Wetland) (Figure 3.1). All five sampling sites were free to access, adjacent to a residential area, and within a ten-minute walk of a station on the London Underground Network.

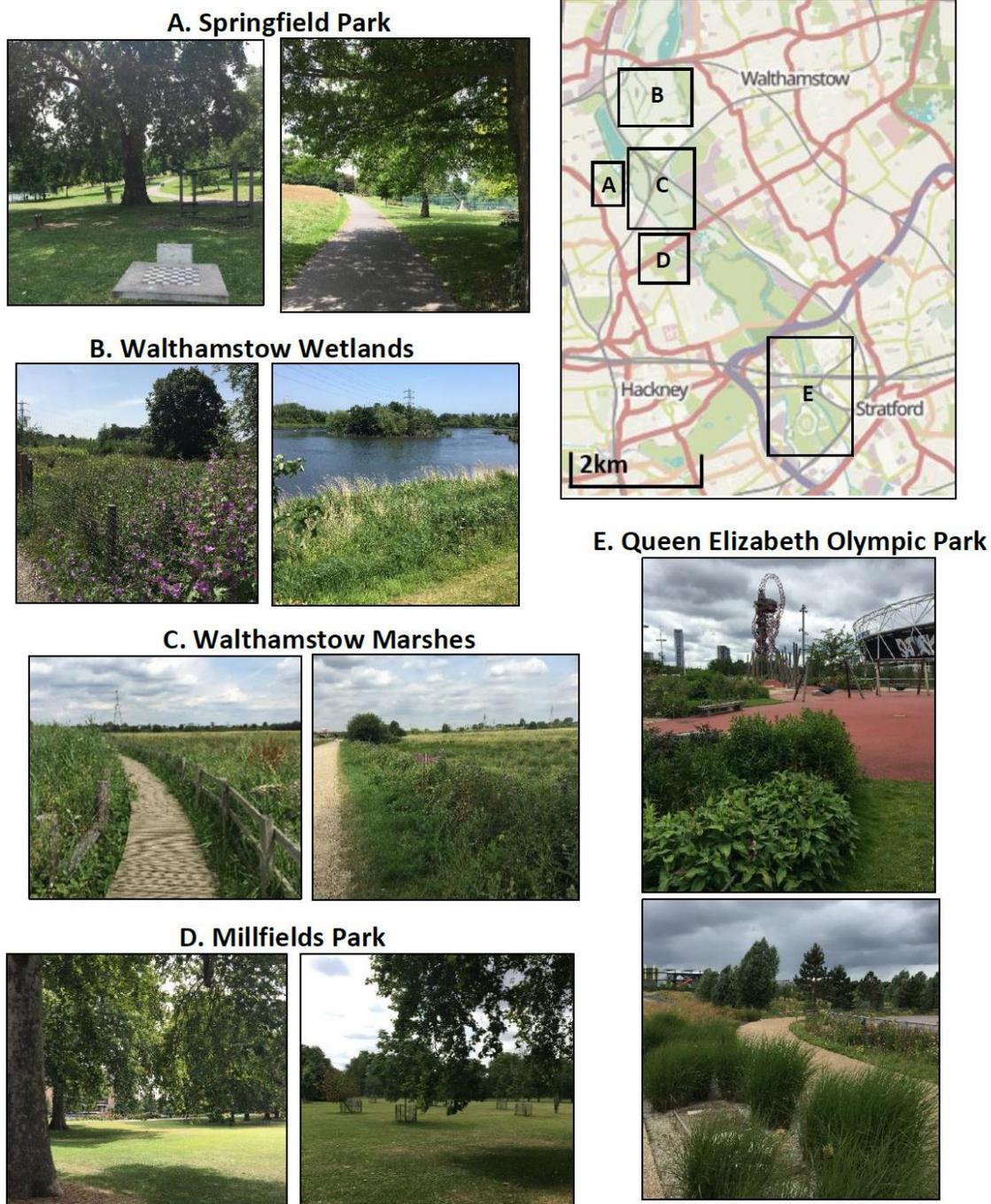


Figure 3.1: Map and photographs of the five study sites in the Lee Valley Regional Park. Base map was obtained from openstreetmap.org with credit to ©OpenStreetMap contributors.

The Southernmost sampling site was the QEOP. It was the center of the 2012 Olympic Games, containing several large leisure facilities, playgrounds, cafes, sports pitches, outdoor gyms, and

other amenities. The southern end of the QEOP is dominated by this built infrastructure, interspersed with pockets of vegetation, while the northern portion contains more open green space, including wildflower meadows and small wooded areas. The QEOP is a widely promoted and well-known space within east London, voted one of the most popular parks to have received a Green Flag status in 2019 (Keep Britain Tidy, 2020). Waterways run throughout the QEOP. Millfields Park is composed of three large open green spaces dominated by lawn and framed with mature trees, with paths and small clusters of vegetation throughout. To the North is Springfield Park in which habitats included a duck pond, woodland, and acid grassland. Both Springfield and Millfields Park contain amenities such as playgrounds, sports pitches, and tennis courts, with Springfield Park also containing two cafes.

The SSSI Walthamstow Marshes connects Springfield and Millfields Park, running parallel to the River Lea. It consists primarily of semi-natural marshland interspersed with small copses of trees and shrubs. Its main amenities are a variety of paths and small picnic areas. Finally, my Northernmost sampling site was Walthamstow Wetlands. It is composed of ten reservoirs with interconnecting paths lined with vegetation and contained bird hides, a café, and a small picnic area. It is listed on Ramsar's List of Wetlands of International Importance. Since opening to the public in 2017, Walthamstow Wetlands has been widely promoted by high profile news outlets, including the BBC.

3.2.5 Sampling strategy and interview protocol

Data collection consisting of intercept semi-structured interviews took place from June to August 2019 over twenty-three sampling days (16 weekdays and 7 weekends) between 10am and 3pm. Intercept surveys are one of the most commonly applied data collection techniques in research on green space use and perceptions (Ordóñez-Barona, 2017). Furthermore, as previous studies have shown, I felt that asking the participants to describe CEB in situ, while those benefits were being experienced, would assist them in identifying and describing emotional aspects of the human-nature relationship (Klain et al., 2014). In SSSIs which had a lower visitor density, and in parks when usage was low, I asked every individual I encountered to take part in the study. On busier days in parks, I aimed to capture a roughly proportionate sample of individuals engaged in distinct activities. For example, if many people were walking and a small number were using an

outdoor gym, I would interview more of the former. Given that park users typically engage in several activities within the space, gaining an exact proportional sample was not deemed necessary.

In parks when usage was high, I also applied a heterogeneous purposive sampling technique (Robinson, 2014) to obtain a demographically diverse selection of BAME and white participants in terms of age and gender. Furthermore, within SSSIs, I observed that usage by BAME communities was significantly lower than usage by those from white backgrounds. Therefore, I reached data saturation among white participants, and subsequently ceased sampling, prior to completing my sample of BAME participants. Both cases required me to make judgements about demographic factors prior to approaching potential participants. Although I ultimately confirmed demographic details as part of the interview, this could have contributed to a bias if I did not approach some users because of misidentification of their age/gender/ethnicity (most notably ethnicity as I am white). Other studies involving intercept methods in green spaces have, however, employed similar targeted participant selection related to ethnicity, particularly when ethnic minorities are underrepresented within a space (Gobster, 2002; Jay and Schraml, 2014; Metcalf et al., 2013). Given the qualitative nature of this study, employing this method was necessary for feasibility reasons.

I explored green space preferences through first asking participants to select all those activities in which they routinely participated from a predetermined list (see Appendix C for a full template of interview questions). Although I provided participants the opportunity to add activities to this list, very few did so, indicating that the list holistically captured all routine leisure pursuits. Second, preferred green space characteristics were identified by qualitatively asking participants to describe their ideal green space in terms of its built and natural features and characteristics.

To explore CEB, participants were asked to describe why they chose to undertake their preferred leisure activities in a green space rather than elsewhere. By framing the question in this way, I directed them to express benefits related to the space rather than the activities and I was able to determine the value added by nature to these experiences. As some participants found it hard to verbalize a response, I also provided them the opportunity to indicate, either verbally or in

writing, the primary reasons why they valued green space. This qualitative methodology allowed participants to express these benefits in their own words and through the lens of their own worldview. I avoided using a pre-existing list of CEB to embrace cultural plurality, which was deemed particularly important in this research given my focus on ethnicity and the fact that CES categorizations have emerged largely in Western contexts.

As an additional indicator of participants' relationship to nature, I also measured connection to nature (CTN), defined by Zylstra et al. (2014) as "a stable state of consciousness comprising symbiotic cognitive, affective, and experiential dimensions that reflect a realization of the interrelatedness between one's self and the rest of nature" (p. 126). Participants completed Pasca, Aragonés, and Coello's (2017) Connectedness to Nature 7 Scale, a set of seven statements rated on a five-point Likert scale from "*strongly disagree*" to "*strongly agree*". Participants were also asked a closed-ended question about how frequently they used a green space. Finally, I asked demographic questions concerning ethnic background, country(ies) where they were raised, parents' country of birth, gender, age category, occupation, and partner's occupation.

In total, I conducted one hundred interviews across my five sample sites. Thirty participants from BAME communities and seventeen from a white ethnic background were interviewed in parks. My SSSI sample consisted of twenty-four and twenty-seven participants from BAME and white ethnic backgrounds, respectively. These sample sizes exceed the minimum recommended size to reach thematic data saturation (Guest et al., 2006) and, indeed, I stopped sampling when I reached saturation for each group with regards to CEB. These sample sizes are consistent with other qualitative research focusing on ethnicity and outdoor recreation (Jay and Schraml, 2009; Kloek et al., 2017).

Eighty-nine of the interviews, lasting an average of fifteen minutes (range: 8-32 min), were audio recorded. These interviews were transcribed by hand. Eleven participants did not want their interviews to be recorded, so I took handwritten notes.

3.2.6 Analysis

I used Microsoft Excel to analyze quantitative data and Dedoose analysis software (Version 8.3.43, 2021, Los Angeles, CA, www.dedoose.com) for qualitative data. Participants were first categorized as BAME or white based on their response to the question on ethnic background. Mixed-BAME participants were classified as BAME as those of mixed ethnic background are typically included under the BAME umbrella term (Law Society of England and Wales, 2020). A demographic overview of BAME and white participants from parks and SSSIs was produced based on five variables: ethnicity, age, gender, immigration generation, and income. To approximate immigration generation, I determined the number of participants 1) raised outside the UK, 2) raised all or partially in the UK with both parents born outside the UK, and 3) raised all or partially in the UK with at least one parent born in the UK. I used the UK's tiered Standard Occupational Classification System (SOC) to place participants into socio-economic categories as an approximate measure of income. Green space visitation frequencies within each category were also incorporated into my participant overview.

Two green space preference variables were calculated: routine activities and preferred features/characteristics. I calculated the percentage of participants from each of my four user categories who participated in each leisure activity from my preidentified list. Qualitative data was used to assess preferred green space features and characteristics for each user category. I initially coded the data for every distinct feature/characteristic identified (e.g., the presences of a playground, spacious). I then completed a second review of the data and grouped codes if two features or characteristics were highly similar (e.g., football pitches and outdoor gyms were grouped as the single code "exercise facilities"). Finally, the percent of participants from each user category who identified each feature/characteristic was calculated. Mean CTN was also calculated for all four user categories.

To investigate CEB, I applied thematic analysis to explore all related qualitative data (Braun and Clarke, 2006; White and Marsh, 2006). Prior to reading the transcripts, I conducted a thorough review of the CES literature to obtain a list of potential CEB. However, I applied an inductive coding approach, and this list was only used to assist me in identifying potentially important words and phrases. This inductive approach was applied for the same reasons as my qualitative methodology: to avoid analyzing potentially divergent worldviews through a CES and CEB lens

drawn from Western perspectives. Half of the transcripts were initially reviewed to attain a broad sense of the data and to determine a preliminary list of codes/benefits. Coding itself was not performed at this stage. All transcripts were then read and coded, with codes being added to the initial list as new benefits were identified. I then performed a second review of all transcripts to further edit and group codes/benefits (see Table 3.1 for example quotes representing the final CEB codes). A third review of the transcripts was undertaken to explore relationships among CEB. I then determined the percent of participants from each user category who identified each CEB.

Table 3.1: Quotes highlighting the Cultural Ecosystem Benefits derived from green spaces.

Peace and Relaxation

“The tranquility. The greenery gives you nourishment. Green space nourishes the soul.”
“For me, studying and being at work, you’re a bit tired and what not. Then you have everything going on in your head. When I come over here, I literally let everything go.”

Escapism

“Just the feeling of space. Because obviously living in a densely populated part of London, just the feeling of being out of London without having to travel out of London. Escapism.”
“The fact that you can look around and there’s nothing really that obstructs your view. So you get that sense of size and expanse so you feel not claustrophobic, there’s room to relax and have a walk.”

Experience nature (sights, sounds, scents)

“I just think it reminds us of who we are. When it pours down with rain and there’s thunder and lightning, you know you just feel that sense of where you stand in the whole world really.”
“We went in June for dawn chorus listening to the birds coming up. Even just walking along there. It was 5 o’clock in the morning and the mist coming off the river. It was beautiful. Absolutely beautiful.”

Physical health

“You don’t feel like you’re breathing in all the horrible fumes and stuff.”
“It’s like you can calm your mind whilst your body is being active.”

Benefit to others

“I think she’s young and she needs to be outside exploring. I think they learn more through play, especially at this age. I prefer it to be child lead. Her building her imagination. [...] Just everything development. Her fine motor skills, her cognitive development. Just everything. The outdoors is what she needs right now...”

Connection to nature

“I think it’s the ability to connect with nature and the changing seasons.”

Connection to past

“My grandparents were agrarians. They were farm workers. And we’ve still got the land and grow grapes on it. It’s the memories from years ago.”

Enhanced social interaction

“when you come across other people, you’re more likely to interact and ‘oh hi, how are you, good morning...’”

3.3 Results

3.3.1 Overview of participants

Of my 100 interviews, 49 were conducted in parks and 51 in SSSIs (Table 3.2). Most of the 56 BAME participants were from an Asian (mainly Indian, Bangladeshi, and Pakistani), Black (African or Caribbean), or mixed Asian or black and white ethnic background (Table 3.2). This reflects the dominant BAME communities surrounding the LVRP (Office for National Statistics,

2018). Eighty-two percent of BAME participants were raised in the UK. Sixty-four percent of white participants identified themselves as having UK heritage and the majority (77%) were raised in the UK and had at least one parent born in the UK. The gender ratio was approximately even in all four user categories. Three quarters of BAME participants were between 30 and 60, with 23% being between 18 and 30. Only one BAME participant was over 60. A greater number of white participants interviewed were over 60 (n = 9, 20%), but most were also between 30 and 60 (66%). Most BAME and white participants had a highest household occupational class of 1 or 2 (80% and 86% respectively). All but five participants indicated that they visited green spaces at least once a week.

Table 3.2: Overall participant profile. *Immigration generation: 1 = raised outside the U.K., 2 = raised in the UK; parents born outside the UK, 3 = raised in the UK; at least one parent born in the UK **Standard Occupational Classification System (SOC) classes: 1 = Higher managerial, administrative and professional occupations, 2 = Intermediate occupations, 3 = Routine and manual occupations, 4 = student or unemployed

| | BAME Park Users (n = 32) | BAME SSSI Users (n = 24) | White Park Users (n = 17) | White SSSI Users (n = 27) |
|---|---|---|---|--|
| Ethnicity | Asian = 14 Black = 9 Mixed Asian/white = 1 Mixed black/white = 5 Other minority = 3 | Asian = 11 Black = 4 Mixed Asian/white = 2 Mixed black/white = 4 Other minority = 3 | European = 5 UK = 10 Other white background = 2 | European = 4 UK = 18 Other white background = 5 |
| Immigration generation* | 1st = 4 2nd = 19 3rd + = 9 | 1st = 6 2nd = 10 3rd + = 8 | 1st = 4 2nd = 0 3rd + = 13 | 1st = 4 2nd = 2 3rd + = 21 |
| Gender | Female = 15 Male = 17 | Female = 13 Male = 11 | Female = 9 Male = 8 | Female = 12 Male = 15 |
| Age | Under 30 = 8 30-40 = 14 41-60 = 10 Over 60 = 0 | Under 30 = 5 30-40 = 12 41-60 = 6 Over 60 = 1 | Under 30 = 3 30-40 = 9 41-60 = 3 Over 60 = 2 | Under 30 = 3 30-40 = 7 41-60 = 10 Over 60 = 7 |
| Highest household income class** | 1 = 14 2 = 11 3 = 6 4 = 0 No answer = 1 | 1 = 13 2 = 7 3 = 1 4 = 2 No answer = 1 | 1 = 12 2 = 4 3 = 1 4 = 0 No answer = 0 | 1 = 18 2 = 4 3 = 5 4 = 0 No answer = 0 |
| Green space visitation frequency | At least 2/week = 27 Once a week = 5 | At least 2/week = 14 Once a week = 6 2-3 times per month = 4 | At least 2/week = 15 Once a week = 2 | At least 2/week = 22 Once a week = 4 2-3 times per month = 1 |

3.3.2 Green space preferences

A few notable differences were observed between the green space use patterns and preferences of visitors to parks and SSSIs (Table 3.3). However, these use patterns and preferences were similar across white and BAME visitors to the same type of green space. In terms of routine outdoor recreation activities, wildlife viewing was only among the most common five activities for visitors to SSSIs (58% and 48% of BAME and white participants respectively participated in wildlife viewing). Conversely, games/sports were only among the most common five activities of visitors to parks (50% and 41% of BAME and white participants respectively participated in this activity). The remaining four most common activities (walking, passive activities [e.g.,

reading, sitting on a bench], picnicking, and visiting an outdoor facility) were shared across the four user categories. Visiting an outdoor facility such as a playground or café, however, was more popular among the visitors to parks. The mean CTN was similarly high across all four categories.

Table 3.3: A comparison of green space preferences, Connection to Nature (CTN), and Cultural Ecosystem Benefits (CEB) derived through outdoor recreation across four participant categories.

| | BAME/mixed BAME Parks (n = 32) | BAME/mixed BAME SSSIs (n = 24) | White Parks (n = 17) | White SSSIs (n = 27) |
|---|---|--|---|--|
| Preferred green space activities (%) | Passive activities = 88 Walking = 65 Outdoor facility = 63 Picnicking = 53 Games/sports = 50 | Walking = 88 Passive activities = 58 Wildlife viewing = 58 Picnicking = 38 Outdoor facility = 38 | Walking = 76 Outdoor facility = 65 Passive activities = 65 Picnicking = 53 Games/sports = 41 | Walking = 89 Passive activities = 59 Wildlife viewing = 48 Outdoor facility = 41 Picnicking = 41 |
| Preferred green space features (%) | Exercise facilities = 41 Play structures = 41 Vegetation rich = 41 Water body = 34 Spray parks/outdoor pools = 28 | Water body = 54 Wildlife = 50 Naturalized = 33 Vegetation rich = 33 Play structures = 25 | Exercise facilities = 41 Diverse design = 35 Play structures = 35 Spacious = 35 Vegetation rich = 35 | Water body = 59 Wildlife = 41 Vegetation rich = 37 Naturalized = 33 Public access = 30 |
| Mean CTN | 4.4 | 4.5 | 4.2 | 4.4 |
| Cultural Ecosystem Benefits (%) | Peace/relaxation = 69 Escape = 66 Experience nature = 47 Physical health = 47 Benefit to others = 38 Social capital = 31 Connection to nature = 16 | Peace/relaxation = 79 Escape = 75 Experience nature = 58 Physical health = 50 Benefit to others = 33 Connection to nature = 21 Social capital = 21 Spirituality = 17 | Peace/relaxation = 82 Escape = 76 Experience nature = 66 Physical health = 47 Benefit to others = 41 Social capital = 29 Connection to nature = 18 | Peace/relaxation = 88 Escape = 70 Experience nature = 63 Physical health = 44 Connection to past = 30 Connection to nature = 22 Benefit to others = 22 Environmental knowledge = 19 |

Like routine activities, preferred green space features and characteristics differed between visitors to parks and SSSIs, but were similar for BAME and white visitors to the same space type (Table 3.3). Visitors to parks tended to prioritize built features, with exercise facilities (especially sports pitches and outdoor gyms) and children’s playgrounds being among the five most preferred features for both BAME (exercise facilities = 41%, play structures = 41%) and white

(exercise facilities = 41%, play structures = 35%) participants. Natural features were preferred by BAME and white visitors to SSSIs, with four out of the five preferred features in both categories being natural: a water body, rich vegetation (including trees, flowers, and shrubbery), an abundance of animal life, and a naturalized design. It should be noted, however, that rich vegetation was a primary preferred feature across all user categories.

These use pattern and preference results align with the large body of CES literature demonstrating that spaces with different attributes produce distinct CES bundles (i.e., outdoor recreation experiences) (Ament et al., 2017; Clements and Cumming, 2017; Oteros-Rozas et al., 2018; Plieninger et al., 2013). This literature has indicated, for example, that social CES are frequently linked to urbanized spaces with more amenities and that there is often a trade-off between different CES bundles. My use pattern and preference data indicate that my samples of park and SSSI users desire distinct CES bundles across which I could compare to CEB.

3.3.3 Cultural ecosystem benefits

In contrast to green space preferences, the CEB derived from green spaces were highly similar across white and BAME visitors to parks and SSSIs (Table 3.3), with the four most frequently identified CEB being shared across all categories: peace and relaxation, escaping urban life, enjoyment of nature, and improved physical health.

The peace and relaxation experienced while recreating in green spaces was the most commonly identified CEB for all categories. A wide variety of words were used to describe this benefit, including references to green spaces being calming, de-stressing, refreshing, uplifting, therapeutic, and tranquil. A white British woman in Walthamstow Marshes expressed the relaxing properties of nature when she said: *“In July, the flowers were glorious, and that beauty fills your mind and it goes through your eyes and fills your head. It’s free and it’s much more calming than doing anything else in the built-up spaces.”* Several participants indicated that they were aware of the mental health benefits of nature.

Escapism was the second most often identified CEB across all categories. Not only were green spaces described as an escape from built-up space, but also as a break from crowds, traffic, noise,

technology, and busyness in general. A man from a Caribbean background exemplified this benefit in describing Walthamstow Marshes: *“It’s just a completely different environment which I enjoy, from the concrete jungle I live in. So it’s nice to get away from that. That’s absolutely number one.”* Many participants described green spaces as “freeing”.

Receiving enjoyment and a sense of awe from experiencing the sights, sounds, and smells of nature was the third most frequently identified CEB across all categories. The experiences described varied widely, including simply enjoying the beauty and sounds of nature, watching birds and other wildlife, picking blackberries, and experiencing sunsets and thunderstorms. One experience that was described particularly often was watching the seasons and associated changes in wildlife. A woman of Asian heritage in Walthamstow Marshes described how she appreciated these natural changes when she said: *“We see the whole seasons, all the different seasons, from September when it becomes Autumny. We just saw the babies, like the swans, they had their babies and now they’re quite big.”*

The benefits of peace and relaxation, escapism, and experiencing nature were often described as being interconnected. Many natural features were linked to peace and relaxation experienced in green spaces, including the colors, the view, trees, and animal life. For example, a white woman from a mixed European background in Springfield Park spoke about how the natural elements of green spaces fostered relaxation: *“The Japanese have a word for it, Forest bathing, just being around green things, growing things. Just stress relief automatically.”* Escapism was also linked to the peace and relaxation experienced in green spaces. A woman of African heritage in the QEOP described both experiencing nature and escapism as contributing to relaxation: *“I think a green space is really good for your mental health in terms of having trees because immediately you feel like you’re calmed. In comparison to say the pavement or in a shopping centre where it’s a lot more hectic.”* Similarly, a Bangladeshi woman in QEOP described the contrast between green spaces and the built environment when she said: *“With stretches of water, with green, with colors. I think it does make a difference. I think if something is really pleasing to the eye visually, it’s enticing. And I do think it makes a difference than being surrounded by concrete.”* These statements exemplify how experiencing nature and escapism were mutually reinforcing benefits.

Improved physical health was the fourth most identified benefit in all ethnicity categories. In particular, participants stressed the improved air quality in green spaces and how both the natural and built dimensions of the green spaces promoted physical activity. A few individuals also identified specific health conditions that green spaces helped to alleviate including migraines, dyslexia, and asthma.

The benefits that green spaces provide to others was also identified as a reason for green spaces being valued in all categories, although it was identified less often by white visitors to SSSIs. The benefits for one's children was often mentioned. For example, a Bangladeshi man in the QEOP stated: *"Let [children] wonder around. Because they want to feel that freedom. They want to be free rather than us holding their hands making sure they're safe."* By watching their children benefit from the space, such participants themselves could be conceptualized as receiving an altruistic benefit.

Enhanced social interaction in green spaces was also mentioned by several participants in all categories apart from white visitors to SSSIs. These participants indicated that people tend to be friendlier and more approachable in green spaces due to the relaxing natural environment. Others mentioned that green spaces enhanced socialization with their children because the spaces were safer and less hectic than other options and, therefore, more relaxing. Finally, a few participants mentioned that green spaces facilitated social interaction through bringing the community together. As such, enhanced social interaction was found to be a factor of both natural (reflecting a CEB) and built/spatial attributes of green spaces.

3.4 Discussion

White and BAME visitors to parks displayed distinct green space activity and design preferences to users of SSSIs (both white and BAME). Visitors to parks prioritized more built features (most notably exercise facilities and children's play structures) while visitors to SSSIs more often prioritized natural features. These design preferences are consistent with the preferred activities of my participants, with games and sports being common for visitors to parks and wildlife viewing being more popular among visitors to SSSIs. In contrast to these divergent preferences,

the primary CEB derived from urban green spaces were similar across BAME and white visitors to both SSSIs and parks. Peace and relaxation were primary CEB drawn from green space, with both nature experiences, and their contrast to the urban environment, contributing to these perceived mental health benefits. CTN was also similar across BAME and white visitors to both types of green space. Furthermore, no participant exclusively described the spatial or built attributes as their reasoning for undertaking their preferred activities in green spaces (e.g., recreating in green spaces primarily because they support large social gatherings or contain specific amenities). These results indicate that urban nature contributes similarly to wellbeing across ethnic groups regardless of their preferred recreational experiences.

Previous research on outdoor recreation and ethnicity has primarily focused on urban green space preferences (Ordóñez-Barona, 2017) and motivations (desired benefits) underlying activity participation (Whiting et al., 2017). This research has largely failed to distinguish the benefits obtained through nature from those gained through leisure activities. A lack of consideration for nature's contribution to wellbeing is particularly prevalent in the case of minority ethnic communities who less often choose nature as the focal point of their activities (Buijs et al., 2009; Jay and Schraml, 2009). As Ordóñez-Barona (2017) observes, in the context of urban forests, "the infrastructure of natural areas, such as lack of benches or picnic tables [...], limits the ability of non-European, non-White people to carry out their activities and to feel strongly identified with urban natural spaces in European or North-American landscapes [...]. It is yet unclear, however, if these preferences are directed towards the natural or the social environment of these spaces" (p. 73). My findings address this literature gap, indicating that although social interaction might be the primary motivator underlying participation in many green space activities, it is the CEB that are the main factors influencing the choice of location rather than the presence of social infrastructure. For example, although someone might desire picnic tables and cafés to undertake their preferred activities, my results suggest that it is the relaxing properties of nature that ultimately lead them to select a green space for these social pursuits. Furthermore, regardless of whether an individual enjoys boisterous family picnics or solitary reflective activities, my findings indicate that nature delivers similar wellbeing benefits.

3.4.1 Broadening conceptualizations of nature-based recreation beyond Westernized narratives

As previously described, the literature on ethnicity and outdoor recreation indicates that minority ethnic communities tend to prefer green spaces with built leisure infrastructure (Buijs et al., 2009) and that social motivations often drive their participation in outdoor recreation (Kloek et al., 2013). A large body of work has also identified many green space access barriers experienced by minority ethnic communities (e.g., lack of inclusive information, discrimination) (Morris et al., 2011; Rigolon, 2016; Stodolska, 2015). A lack of opportunity to participate in desired social activities presents one such barrier (Gobster, 2002). For example, J. Davis (2019) explored how restrictions placed on traditional African American fishing practices in Congaree National Park, South Carolina, led to displacement and feelings of alienation. Similarly, in the present study, the number of BAME users of SSSIs was proportionally very low when compared to the demographics of park visitors. Particularly given the close proximity of parks and SSSIs in the LVRP, this underrepresentation of BAME visitors to Walthamstow Wetlands and Marshes suggests that a lack of preferred activities is likely to be acting as a barrier. In addition, it suggests that the preferences of BAME communities in the LVRP are proportionally more aligned with those of my park sample than my SSSI sample.

A deficiency of programs and amenities that accommodate the culturally preferred activities of minority ethnic communities in PAs stems largely from the fact that these spaces are still often managed under Western ideologies of “pristine wilderness” where humans are viewed as separate from nature (Byrne and Wolch, 2009; Ho and Chang, 2021; Suckall et al., 2009). Similarly, the preferences of minority ethnic communities are often presented as conflicting with Western principles of nature conservation (Buijs et al., 2009; Fraser and Kenney, 2000). This dualistic perspective has been widely criticized by a growing body of work which calls for more inclusive conceptualizations of the human-nature relationship that are not rooted in exclusively Western thought (Beery, 2014).

In this study, I found that regardless of preferred outdoor recreation experiences, green space visitors perceived and valued highly similar CEB in urban nature. This result directly contradicts stereotypic assumptions that participation in Anglo-normative activities reflects a higher

perceived value for nature. Conversely, I found that that nature does not have to be the focal point of outdoor recreation to contribute to wellbeing, but rather, even as a backdrop to sports and cultural activities, it benefits and is valued by green space users. Therefore, I add my voice to calls for nature organizations to advance beyond using, as J. Davis (2019) stated in the context of African Americans, “white outdoor culture as the standard for determining the extent and depth of African American environmental relationships” (p. 90).

Adopting a more inclusive conceptualization of nature-recreation aligns with the growing body of literature advocating for conservation organizations to embrace a broader definition of the term nature itself (e.g., M. Davis, 2019; Marris, 2013). Experiencing nature was a primary CEB obtained from green spaces across my participant categories regardless of the green space they visited. For many, this valued nature included features such as manicured flower beds, duck ponds, and ring-necked parakeets (an established alien species) that might not be considered desirable in traditional conservation. A strict definition of nature does not accommodate these values and may exclude consideration for the experiences of minority ethnic communities in decision making about conservation and green space management, particularly within PAs.

3.4.2 Conclusions

In light of my findings, I suggest that leisure researchers need to explicitly distinguish between green space preferences, benefits obtained through recreational activities, and benefits obtained from nature. Ensuring such conceptual clarity is necessary to avoid oversimplifying the human-nature relationship and perpetuating damaging stereotypes that nature is of minimal wellbeing value to communities who less frequently participate in what are considered “nature-based” activities in traditional Western narratives. My results directly contradict this notion through demonstrating the similar benefits associated with nature across diverse green space users. In the context of CES theory and application, my findings highlight the importance of distinguishing CES from CEB. Despite the variation in desired recreational experiences (CES) observed in my study, CEB remained highly consistent. Avoiding the conflation of these terms is necessary to understand the many distinct aspects of the human-nature relationship and, more broadly, to ensure concept clarity and consistency across CES research.

Linked to these conceptual insights, several considerations for the equitable planning and management of green spaces can also be drawn from my findings. First, to align with the primary CEB obtained from green space, I suggest using the wellbeing benefits of peace and relaxation, escapism, and experiencing nature (in a broad sense) to promote the use of all types of green space. Not only would this approach appeal to a wide audience, but it would also enlighten culturally diverse user groups to the shared benefits they associate with nature, despite interacting with green spaces in differing ways. This could help overcome perceived differences and cultural divides among green space users. Second, reducing the conceptual divide between sport and leisure and nature-based recreation could also lead to positive environmental and social outcomes. I suggest that environmental organizations should link a more diverse range of activities and settings to CTN, including those which are traditionally associated with sport and leisure. For example, when identifying activities through which people can “connect with nature”, they could consider activities such as playing football with friends, having a family barbeque, and listening to music outdoors.

Thirdly, I suggest that PA authorities could diversify their programming and design to include activities directly focused on social interaction and physical health. For example, these governing bodies could include more amenities that support social gatherings and sport, engage further with the health sector (e.g., through green prescribing), and offer programming with the primary aim of building social connections. I suggest that through creativity, mixed-design, and effective community engagement, green space planners can move beyond traditional Anglocentric management approaches in a way that more equitably meets the needs of surrounding communities while maintaining the ecological integrity of natural spaces. Implementing these recommendations would signify the explicit recognition by PA management bodies of the value of nature to non-(Western) traditional outdoor pursuits. The acknowledgement of this value by trusted environmental bodies would contribute to overcoming ethnic stereotypes and instances of discrimination. These steps are also necessary to ensure the benefits provided by all types of urban green space equitably benefit surrounding communities.

One limitation of the study was the underrepresentation of participants of lower economic standing and older adults from BAME communities. My own observations and discussions with

participants suggest that these demographics were not well represented within my sampling sites. As such, further studies in this area may need to specifically focus on these groups. Furthermore, to gain a more detailed understanding of the benefits arising from nature in urban green space, I suggest that future research should go beyond broad classifications of ethnicity to explore the diversity of ways through which humans relate to nature within distinct ethnic communities (Kloek et al., 2017). Such research could also investigate socio-cultural factors underlying the receipt of specific benefits (e.g., past experiences, religion).

My findings indicate that the natural attributes of urban green space contribute similarly to wellbeing across ethnically diverse communities having divergent recreational preferences. As one of the first studies focused on CEB and ethnicity, my results serve as groundwork for both larger scale quantitative surveys and more detailed examinations of CEB variation within cultural groups. Ultimately, this research demonstrated how integrating in-depth information on CEB with data on green space preferences can aid green space management bodies in recognizing the value of nature across outdoor recreational experiences and assist in designing green spaces that equitably meet the needs of multi-cultural communities.

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Chapter 4:

The significance of belonging: Exploring the socio-cultural barriers and opportunities that contribute to the accessibility of protected areas for Muslim communities in the United Kingdom

4.1 Introduction

Alongside a mounting body of evidence linking green space use to wellbeing, governing institutions are increasingly recognizing that significant demographic disparities exist in the use of protected areas (PAs) within Europe and North America (Jay et al. 2012; Alberta Parks 2014; Boyd et al. 2018). Minority ethnic groups, in particular, are often underrepresented within these natural spaces (Suckall et al. 2009). When individuals from minority ethnic backgrounds do access nature, they disproportionately choose parks with built leisure infrastructure over more biodiverse spaces such as PAs (Whiting et al. 2017; Chavez and Olson 2009). The literature has also revealed a plethora of PA access barriers experienced by minority ethnic groups including inadequate amenities, economic constraints, safety concerns, and insufficient information (Kloek et al. 2013; Gobster 2002; Stodolska 2015). A growing body of work has sought to combine these findings on access and leisure patterns to provide explanations for the underrepresentation of minority communities in PAs, and green spaces more broadly. Such research, however, often overlooks the diversity of lived experiences that exist within and among minority ethnic groups. I address this literature gap through exploring the underrepresentation of Muslim communities within PAs in the UK. I aim to advance existing theory on minority ethnic underrepresentation within PAs through exploring the impact of non-spatial, socio-cultural barriers on access for Muslim communities. I use an in-depth, qualitative approach to investigate these barriers and their cumulative effect on deeper levels of exclusion.

Three dominant hypotheses have emerged to explain minority ethnic underrepresentation within green space: the ethnicity hypothesis, the marginality hypothesis, and the discrimination hypothesis (Krymkowski, Manning, and Valliere 2014). The ethnicity or subcultural values hypothesis suggests that socio-cultural factors give rise to a preference for more functional parks over PAs among minority ethnic groups (Washburne 1978; Stodolska 2015). For example,

minority ethnic groups are often motivated to visit green spaces by social interaction which is better facilitated in space with built leisure infrastructure such as large picnic areas and opportunity for organized sport (Ordóñez-Barona 2017). The marginality hypothesis, on the other hand, postulates that socio-economic inequalities create barriers for minority communities such as high entrance costs, the need for car ownership, and a lack of information (Washburne 1978; Metcalf, Burns, and Graefe 2013). Finally, the discrimination hypothesis suggests that institutionalized and experienced discrimination act as barriers to the use of PAs for minority communities (Livengood and Stodolska 2004; Davis 2019). Research has emerged in support of all three hypotheses (although the discrimination hypothesis has received comparatively less attention) (Krymkowski, Manning, and Valliere 2014), but most of this work has focused on minority ethnic communities as a collective cultural group (Kloek et al. 2013; Public Health England 2020). The homogenization of minority ethnic groups in outdoor recreation research has been criticized as it obscures the substantial differences in lived experiences within and among these distinct communities (Kloek et al. 2017).

Islam is one of the fastest growing religions in Europe and North America, with the majority of adherents belonging to minority ethnic communities (Pew Research Center 2017; Mohamed 2018), representing important stakeholder groups to consider in the planning of green space. In the UK, most Muslim communities are concentrated in (post)industrial towns and cities (Muslim Council of Britain 2015). Muslims often experience some of the highest levels of deprivation and are frequently among the lowest ranked in terms of their participation in leisure and physical activity, subsequently linked to a variety of health concerns (Snape and Binks 2008; Amara and Henry 2010; Stevenson et al. 2017). Little prior academic research has explored the experiences of Muslims within PAs and their preferences relating to green spaces (but see Buijs, Elands, and Langers 2009; Yazdani 2019). Although Muslim communities have much in common with other minority ethnic and/or migrant groups in terms of the inequalities they experience, their unique cultures and religion are likely to bring about notable differences. Improving our understanding of barriers experienced by Muslims in relation to PA use is thus critical to addressing the inequalities and social exclusion experienced by these communities. With this study, I address this literature gap through exploring socio-cultural drivers of green space leisure choices for those of the Islamic faith.

Although little research has examined green space use patterns of Muslim communities, literature on related subjects can be drawn upon to formulate initial predictions. Firstly, the literature has thoroughly explored Muslim participation in sport and leisure more generally. Factors that have been identified as impacting Muslim participation include physical and cultural safety, a sense of place, and the need for women's spaces (Snape and Binks 2008; Nayak 2017; Laar et al. 2019). It is possible that some of these barriers to leisure participation are exacerbated in the context of PAs such as an extreme lack of visible representation and high levels of seclusion reducing perceived safety. Second, another useful area of research focuses on the depiction of nature in the Islamic faith. This literature suggests that the Qur'an presents a primarily functional, anthropocentric image of nature compared to the more Arcadian image depicted in Christian culture (Buijs, Elands, and Langers 2009). This difference in how nature is conceptualized could contribute to a preference for more highly managed space. Finally, I hypothesize that the Western management practices and nature-based traditions (e.g., rambling, bird watching) that have historically informed recreational programming within PAs (Zylstra et al. 2014) stand to exclude other types of connection to nature (e.g., spiritual) and ways of interacting with and appreciating the environment. For example, in the context of the UK seaside, Burdsey (2011) showed that the domination of neo-Colonial design and stereotypical imagery, along with Western entertainment traditions, contributed to a sense of exclusion for minority groups.

Within the UK, promoting equity of access to nature has become a matter of national importance (Jay et al. 2012; Morris et al. 2011). Data from Natural England's annually conducted survey, People and Nature (formally the Monitor of Engagement with the Natural Environment survey), indicates that several groups are significantly underrepresented as users of the natural environment, including those of lower socioeconomic status and from minority ethnic backgrounds (Boyd et al. 2018). In response, steps have been taken to inform and mandate the equitable planning and management of green space. For example, the Department for Environment, Food & Rural Affairs launched *Outdoors for All*, a diversity action plan that aims to improve opportunities for accessing nature, particularly for those from underrepresented

groups (Natural England 2015). Statutory organizations are also legally required to promote equity through policies such as the Equality Act 2010.

In addition to the national priority the UK assigns to promoting equitable access to nature, there are also over three million Muslims residing in the country, denoting Islam the second largest religious affiliation behind Christianity (Office for National Statistics 2018a). For these reasons, I selected the UK as the context for this research. Through in-depth interviews with leaders from Muslim communities in the UK, the objective of this study was to advance existing theory on minority ethnic underrepresentation in PAs in the context of Muslim communities. My research question was as follows: What socio-cultural barriers and opportunities contribute to the accessibility of PAs for Muslim communities in the UK? In the context of this research question, I also examined how the human-nature relationship is depicted in Islam to identify potential opportunities for fostering Muslim use of PAs. Based on these theoretical advancements, I also explore implications for management action. Finally, I recognize the significant diversity that exists within and among Muslim communities and sought to gain a broad understanding of how this variation relates to experienced barriers and opportunities. I discuss my findings in relation to existing research on green space access and leisure patterns and shed light on the relevance of the marginality, ethnicity, and discrimination hypotheses for Muslim communities. Therefore, the study will expand on current conceptualizations of accessibility and aid in the management of PAs to promote higher levels of user diversity.

4.2 Methods

This study involved in-depth, semi-structured interviews with leaders from Muslim communities in the UK to identify socio-cultural barriers and opportunities that impact Muslim use of PAs. The detail gained through qualitative inquiry was desired given that this research presents one of the first studies to explore Muslim communities and PAs. Detailed insight on Muslim lived experiences in relation to nature and green space was necessary to understand the complexity surrounding their underrepresentation in PAs. I chose to interview leaders within Muslim communities as they could provide a broad perspective of their community, and variation within their community, rather than speaking exclusively from their own life experiences. In this way,

they offered a form of expert knowledge (Bennett 2016). I aimed to ensure that my sample of Muslim leaders contained a high proportion of women given the underrepresentation of female voices in research on Muslims and leisure, and the tendency for women to be marginalized from broader community leadership roles. As Samie (2013) describes, prior research in this area often presents “a monolithic Orientalist narrative that sensationalises the veil, and asserts the oppression of Islamic thinking on gender equality and female sexuality” (p. 57).

As part of the interview process, I gathered participants’ critiques of a specific urban PA: Walthamstow Wetlands, London. Providing an example through which to ground responses was thought to aid participants in identifying barriers and opportunities specifically relevant to PAs as well as trigger ideas and inspire discussion. Furthermore, exploring the inclusiveness of a green space that is representative of many PAs in Western countries in terms of design, programming, and marketing would increase the generalization of my findings.

Research on green space accessibility has predominantly focused on objective, spatial-physical dimensions such as park proximity rather than subjective and socio-cultural dimensions (Wang, Mateo-Babiano, and Brown 2013). As Wang, Brown, and Liu (2015) describe, such spatial-physical variables “do not address the complexity of the concept, excluding a more authentic and comprehensive representation that includes perceived access to parks” (p. 54). Indeed, perceived access is often found to be a better predictor of park use than geographic access (Jones, Hillsdon, and Coombes 2009). In this study, I focus on subjectively measured perceived access to PAs as experienced by Muslim communities. As such, geographic dimensions of access such as proximity and transport, which have received substantial prior research attention, were not explored.

4.2.1 Study Site

The case study for this research was Walthamstow Wetlands, a free to access PA in North-East London. Walthamstow Wetlands is situated in the heart of the Lee Valley Regional Park (LVRP) a short walk from a major station on the London Underground Network (for more information visit <https://www.wildlondon.org.uk/nature-reserves/walthamstow-wetlands>). It opened to the public in 2017 and, at 211-hectares, is Europe’s largest urban wetland nature reserve. Waltham

Wetlands is managed in partnership by the London Wildlife Trust, Thames Water, and London Borough of Waltham Forest. The site is listed on Ramsar's List of Wetlands of International Importance and includes the Walthamstow Reservoirs Site of Special Scientific Interest.

Walthamstow Wetlands is comprised of ten reservoirs surrounded by a series of interconnecting paths bordered by dense patches of shrubs and trees (Figure 4.1). The site also contains wildflower meadows. The main path through Walthamstow Wetlands is paved and accessible to wheelchairs and buggies, while the remainder of paths are dirt tracks where accessibility is dependent on the weather. The site also contains a small picnic area and a Victorian-era Engine House which hosts a visitor center, café, toilets, and a small gift shop. The wetlands particularly cater to bird watchers and anglers, containing several bird hides, docks bordering the reservoirs, and is the largest recreational fishery in London. It also runs a range of nature-based events and activities, primarily focused on environmental education.

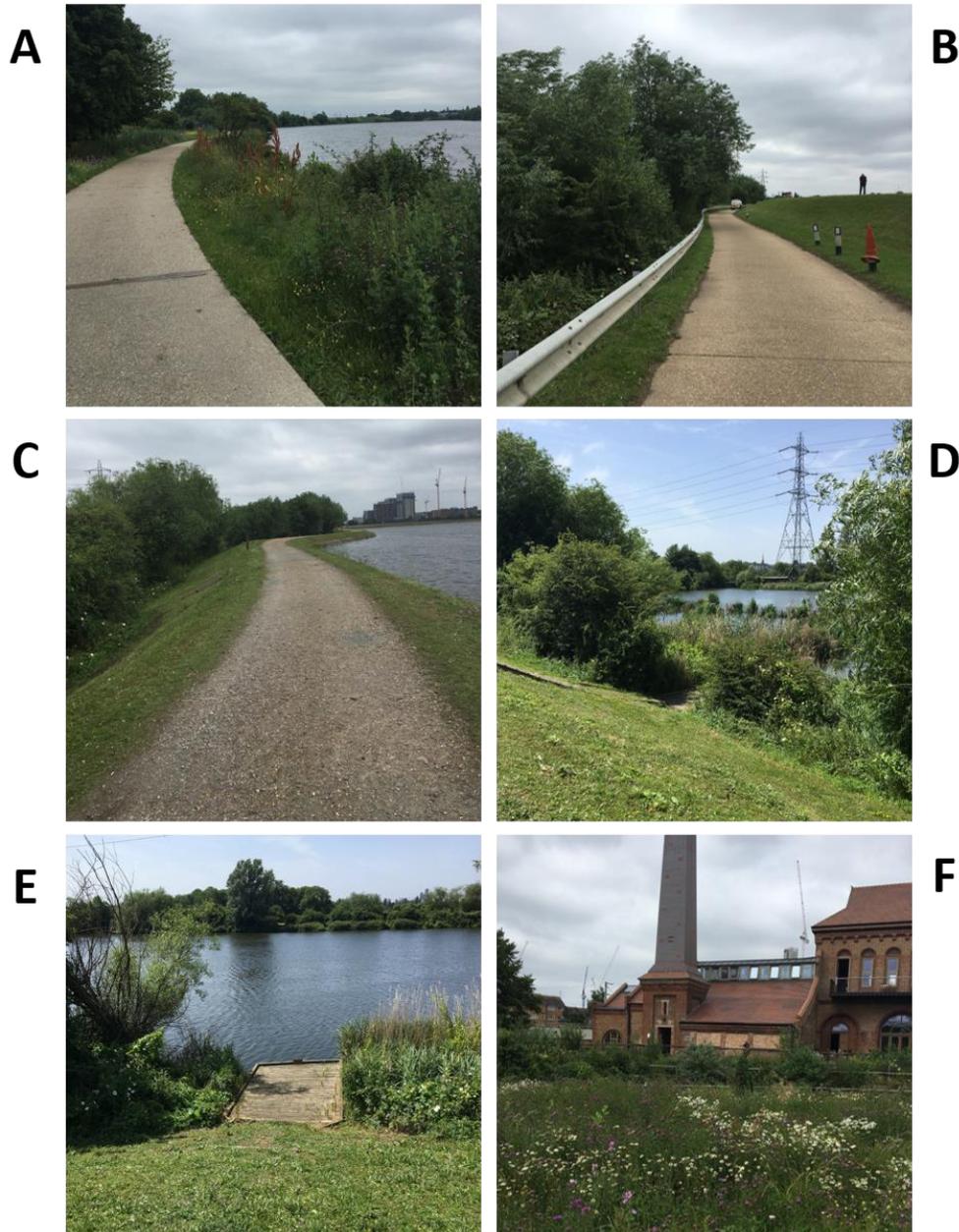


Figure 4.1: Representative images of Walthamstow Wetlands. A and B) The main paved path through the site. C) The dirt track running through most of the wetlands. D) A view of the reservoir from the path. E) One of the docks looking out over the reservoir. F) A wildflower meadow and the Victorian-Era Engine House containing a wetlands center, café, toilets, and a small gift shop.

The London boroughs surrounding the LVRP contain some of the highest levels of ethnic diversity in the UK. In Waltham Forest, the borough in which Walthamstow Wetlands is situated, nearly twenty-five percent of residents identify as Muslim (Office for National Statistics

2018b). Through prior research I have undertaken in the area, as well as discussions with Walthamstow Wetlands staff, I identified that the usage of this nature reserve by minority ethnic groups is low in comparison to their proportional representation in the surrounding communities. I also informally observed this ethnic diversity in Walthamstow Wetlands to be much lower than nearby managed parks. Given that 1) the types of outdoor recreation infrastructure (e.g., bird hides, an interpretive center) and programming (e.g., pond dipping, bird identification) within Walthamstow Wetlands are characteristic of PAs in the UK and other Western countries, 2) the underrepresentation of minority ethnic groups in Walthamstow Wetlands, and 3) the large Muslim communities in surrounding areas, Walthamstow Wetlands was deemed a suitable case study for this research.

4.2.2 Recruitment and interview protocol

Prior to recruitment, I piloted my interview script with a woman and man who both identified as members of Muslim communities. I identified an initial list of potential participants through an internet search of 1) mosques and community centers surrounding the LVPR, and 2) UK faith-based organizations and organizations focused on ethnicity and sport, leisure, nature, and/or inclusion. These organizations and institutions were then contacted via email. If specific individuals were listed on organizational websites, I directly contacted the person(s) most relevant to the study. If this information was unavailable, I contacted the general organization email. In both cases, I indicated that I was looking for leaders within Muslim communities who could offer a broad perspective of Muslim cultures and leisure choices. I also applied snowball sampling, asking each participant to identify others who would be useful to speak with for this study (Robinson 2014). I stopped sampling when I reached data saturation (i.e., when additional interviews provide no new substantive information) (Guest, Bunce, and Johnson 2006).

Interviews took place from July 2020 to January 2021. All interviews were in English and were undertaken online through Zoom. Online interviews allowed me to speak with participants across the UK but were also necessary due to the COVID-19 pandemic that was ongoing during the time of this research. Prior to beginning interviews, I informed participants of the anonymity of their responses and requested their consent to the use of an audio recorder.

Wang, Brown, and Liu (2015) have constructed a conceptual model for explaining the physical and non-physical factors influencing park accessibility. I used the socio-cultural dimensions of this model as a starting point in the design of my semi-structured interview guide. These dimensions consisted of knowledge (e.g., information about the PA), social (e.g., safety, appeal of activities, discrimination, shared identity with other users), and personal (e.g., financial affordability, health).

The first portion of my interviews consisted of a discussion of Muslim communities and green space use in a general sense (see Appendix D for a full template of interview questions). Participants were asked to discuss the activities that they observed to be popular within Muslim communities and to identify features/characteristics within green spaces that would accommodate these activities. I also asked participants to identify any green space features or characteristics that would be welcomed by Muslim communities from a religious perspective. I then asked participants to describe whether being one of the only visible minorities within a green space would be a deterrent for many Muslims. Finally, I asked participants to describe the relationship between Islam and nature and the human-nature relationship.

For the second portion of the interview, I asked participants to view Walthamstow Wetlands' website and to identify any potential factors that would encourage or deter someone who is Muslim from visiting the space. I followed up with several more specific questions relating to the access dimensions listed above if these topics were not brought up by participants; for example, "Would the activities offered hold wide appeal within Muslim communities?", "Were the language and images inclusive?". Most participants, however, brought up such discussions without me asking these more detailed questions. Since the time of interviews, Walthamstow Wetlands' website has been absorbed into the webpage of its management organization, the London Wildlife Trust. It is, therefore, no longer available in the form used as part of this research. However, the objective of the study was not to provide a critique of Walthamstow Wetlands, but rather to use this PA as an example to ground participant responses. Therefore, I do not consider this change in the website to be a limitation of the study.

If there was time, participants were then shown a virtual tour of Walthamstow Wetlands using images of the space on Microsoft PowerPoint. They were asked similar questions to those following their review of the website. Nine participants were given this tour. Throughout all my questions, participants were encouraged to discuss variation within Muslim communities.

The final section of my interviews consisted of several demographic questions: ethnicity, country in which participants were raised, parents' birth countries, gender, age, and religious identity.

In total I conducted fourteen interviews with leaders of Muslim communities in the UK. This sample size is consistent with similar in-depth, qualitative research with Muslim communities (Nayak 2017; Tirone and Pedlar 2000; Sijtsma 2011). All but one of the interviews were audio recorded, lasting an average of 53 minutes (range: 42-64 minutes) and transcribed by hand. Handwritten notes were taken for the participant who did not want their interview to be recorded.

4.2.3 Analysis

I applied an inductive thematic analysis approach to explore my data in which barriers and opportunities were not pre-defined, but rather identified and grouped through repeated explorations of the transcripts. I followed the flexible thematic analysis guidelines identified by Braun and Clarke (2006). Prior to coding, I reviewed all transcripts in their entirety and created a preliminary list of potential codes. I then coded all data, beginning with this initial list and adding and grouping codes as I examined the transcripts. Dedoose analysis software was used for the coding process (Version 8.3.43, 2021, Los Angeles, CA, www.dedoose.com). As I coded the data, I arranged codes into themes in relation to overarching access barriers and opportunities. For example, a lack of *halal* food options and deficiency of large seating areas both contributed to an overall perception that Walthamstow Wetlands gave little consideration to Muslim cultures, leading to feelings of exclusion. I then extracted and separated the data by theme into Microsoft Word and performed a final review. At this stage, I checked each excerpt for accuracy as it pertained to its identified code, performed corrections, and grouped similar codes into sub-themes. Codes which were not grouped became sub themes in and of themselves.

4.3 Results

4.3.1 Demographics

The fourteen participants in this study were community leaders in a wide range of formal and informal capacities including volunteers and leaders with faith-based organizations, educators and coaches, organizers of community groups, leaders from sport and leisure organizations, and a student researching Islam and nature. All but two participants identified as Muslim. Of the two participants who were not Muslim themselves, one came from a Muslim family and the other worked very closely with Muslim communities as the founder of a charitable organization. These two participants were not asked the question on the relationship between Islam and nature. Most participants identified as female (N = 10), two as male, one as non-binary, and one chose not to answer. Half of the participants were between 30 and 50 (N = 7), with two being under 30, and three over 50 (two chose not to answer). Most participants were raised in the UK (N = 12) (one chose not to answer). Most participants identified as being from an Asian ethnic background (N = 10) (Indian, Pakistani, Bangladeshi, or Palestinian), with seven of these participants also identifying as British. Two participants identified as Black British African and one as mixed. One participant did not answer the ethnicity question.

4.3.2 Overview of results

Participants identified a wide variety of socio-cultural barriers and opportunities that could contribute to the accessibility of PAs for Muslim communities and discussed related management implications (Table 4.1). These results suggest that many interlinked and cumulative factors can inhibit or foster accessibility. Participants indicated that a lack of inclusive imagery within marketing content (a main critique of Walthamstow Wetlands' website) was a primary barrier inhibiting Muslims' use of PAs. Other barriers and opportunities identified related to 1) inclusive design and management, 2) safety, and 3) confidence in using the PA. The role of humans as stewards of nature that is emphasized within the Islamic faith was identified as a valuable opportunity. Although rigorous exploration of the relative importance of each barrier and opportunity was outside the scope of this research, the emphasis that participants placed on each factor provided an indication of their significance. Most barriers identified were generally

not portrayed as deciding obstacles to the use of a PA. Rather, these barriers were discussed as deterrents and their cumulative presence resulted in several layers of deeper exclusion.

Table 4.1: The barriers and opportunities contributing to the accessibility of protected areas (PAs) for Muslim communities in the UK. Barriers and opportunities are sorted by their corresponding theme.

| | |
|--|--------|
| Foster a sense of belonging | |
| A lack of diversity within promotional imagery engenders a feeling of exclusion | n = 10 |
| A lack of images showing diverse leisure pursuits contributes to a sense that the PA does not accommodate community activity | n = 8 |
| Foster a sense of inclusion through demonstrating an understanding of Muslim cultures, faith, and the inequalities they experience | |
| Muslims would welcome a multi-faith quiet area for prayer | n = 11 |
| Clean facilities where ablutions can be performed are desired | n = 6 |
| Offering and publicizing <i>halal</i> food options would allow Muslim's to use café facilities | n = 9 |
| The presence of dogs, particularly when off lead, can be a deterrent | n = 5 |
| Providing infrastructure for social gatherings, and offering activities centred around socializing, growing, and sharing food, aligns with social culture of Muslims | n = 14 |
| A lack of language options prevents some Muslims from accessing information about PAs | n = 10 |
| A failure to consider accessibility within PAs can inhibit use of a space for Muslims with lower fitness abilities or mobility constraints | n = 7 |
| Programming focused on health improvement and social exercise would be welcomed | n = 6 |
| Expensive fees would limit many Muslims from using a PA | n = 6 |
| Foster a sense of safety from discrimination and attack | |
| A lack of visible diversity among staff and other users would detract from a sense of safety | n = 12 |
| Programs run by trusted hosting groups would allow new users to access the PA in a safe setting and build confidence | n = 6 |
| Rangers stationed throughout a PA would foster a sense of safety | n = 5 |
| Sufficient lighting in PAs which are open at night would lead to a sense of safety | n = 4 |
| Clear maps and help-points throughout a PA would promote a sense of security | n = 3 |
| Secluded areas can lead to fears of attack and Islamophobic encounters | n = 3 |
| Foster a sense of confidence in interacting with the PA | |
| Insufficient information about a PA can detract from the ability to confidently plan for a visit | n = 7 |
| Insufficient information about available leisure activities can limit use of PAs | n = 5 |
| Environmental education would be welcomed | n = 11 |
| Ensure Muslim communities are aware of PAs | |
| Widespread community engagement through a variety of channels is necessary | n = 10 |
| Utilize the stewardship relationship between humans and nature as depicted within Islam | |
| Volunteering opportunities and charitable events would appeal to Muslim communities | n = 8 |
| Celebrating the Muslim faith through religious and inter-faith events leads to perceptions that Islam is accepted and valued | n = 9 |

During my interviews, participants highlighted the variation that existed within Muslim communities in relation to the relevance of barriers and opportunities. They identified several demographic and other factors that are likely to impact the relevance of each barrier and opportunity at the individual level including age, gender, immigration generation, interpretation of the faith, and simply individual interests.

4.3.3 Barriers and opportunities

4.3.3.1 Perceptions of Walthamstow Wetlands: “*Do I see myself represented?*”

Over half the participants (n = 9) indicated that, from viewing Walthamstow Wetlands’ website, Muslim communities would not feel a sense of belonging, nor feel welcomed. One woman described this in saying: “*I don't think I would feel, as a Muslim, any sense of ownership or link with this particular area.*”. Similarly, another woman indicated that “*it feels like it's just a bird watching for older white people. [...] It's not really giving me that community spirit*”. The feelings of exclusion did not appear to be linked to the type of nature within Walthamstow Wetlands, which most participants perceived to be beautiful. Rather, concerns were linked to how human interaction with the space was portrayed.

Many participants (n = 10) pointed out that the people shown in photos were predominantly white, and that they had to search to find themselves represented. One participant described how this lack of representation “*inadvertently, unconsciously, dictates that this is not somewhere for them*”. Participants emphasized how diverse imagery is necessary to foster a sense of belonging among potential visitors. A participant described this in saying how “*when you look at a website, it says a lot. It tells a story. And it tells a story about the type of people you want to attract. So, if you're not able to represent that story, to tell that story to get the people in, then that's your problem there*”. Several participants also (n = 6) spoke about how a welcome sign in multiple languages would improve this sense of belonging. A participant described such a sign as “*a universal representation of 'yes, it's safe here'*”.

Many participants (n = 8) also described the need for the website to include more photos of people interacting with the space in diverse ways rather than primarily depicting images of

nature (e.g., scenery, birds). Some of these participants indicated that the activities highlighted on the website are not widely undertaken within Muslim communities. *“You get the initial impression about there's a certain type of person or people who would come to this. For example, angling and bird watching. I don't know many people from my community who can relate to that”* indicated one participant. Including photos of people engaged in a wide range of activities was thought to inform the viewer of the different ways in which the space could be used and reflect a sense of community spirit. *“I want to see mixture. I want to see kids having fun. I want to see smiling faces. I want to see families at picnics, kids running around. I want to see people. There's no people. There are white people, but there's no people besides that”* described one participant. A few participants suggested integrating the current images on the website with more diverse photos in a moving slide show featured on the homepage and having videos and testimonials from people to highlight the many ways one could interact with the space.

Despite these critiques, various positive aspects of the website were highlighted, although there was little consistency across participants in this regard. Furthermore, although the barriers described above were commonly expressed, they were not shared by all participants, highlighting variation in how a PA could be perceived within Muslim communities. For example, two participants viewed an emphasis on bird watching as a positive. This variation emphasizes that those seeking to make a space inclusive must acknowledge and explore community heterogeneity. Finally, several participants (n = 6) highlighted how first impressions are important with regards to an organization's website and, therefore, inclusive imagery and important information must be displayed in a prominent place.

4.3.3.2 Inclusive design and management: *“Are my faith, culture, and the inequalities I experience, considered within this space?”*

Many of the barriers and opportunities described by participants related to the extent to which the PA demonstrated an understanding of, and accounted for, Muslim religion, cultures, and the inequalities they experience. A failure to consider these factors was described as both affecting a Muslim person's ability to interact with the PA and influencing perceptions of inclusion. A lack of consideration for these factors was emphasized by several participants as being particularly

problematic in areas where a large proportion of the surrounding population is Muslim, such as Walthamstow Wetlands.

Several potential barriers and opportunities were described relating to the Islamic faith. Most participants (n = 11) indicated that many Muslims would welcome a quiet, secluded area for prayer. For Muslims who are not comfortable praying in the open, the lack of a place for prayer could inhibit them from using the space for extended periods of time. Participants stressed that this area should be multi-use and multi-faith. Secondly, several participants (n = 6) indicated that clean facilities where Muslims can perform their ablutions (e.g., shower jets, spacious sinks, running fountains with potable water), a ritual washing performed before prayer, would also be welcomed. Third, many participants (n = 9) stressed the need to have *halal* food options available. A participant highlighted how a lack of *halal* options can reduce Muslim families' sense of inclusivity: *"unless they prepare a picnic, [a meal is] part of the experience that they miss out on and that, again, reinforces that inherent belief that that's a space that's not for them"*. Another factor that was described as affecting many Muslims' experiences within a PA was the presence of dogs (n = 5). Participants described how many Muslim people are anxious around dogs and that, for some, dog saliva is thought to break their state of purity, requiring them to repeat their ablutions before prayer. Some participants suggested dog free areas while others spoke about the importance of education and enforcement in areas where dogs are supposed to be kept on a lead.

Several factors were also discussed that relate to Muslim cultures. All participants (n = 14) described how Muslim use of green spaces tends to revolve around family, children, and social activity. *"I think families always come first for the Muslim community"* said one participant. Participants indicated that such social activity was often centered on food. In describing how her Muslim students interact with green spaces, one participant said: *"if it's a park that allows you to have a little barbecue, there'll be kebabs coming off and hot fried breads and things like that. They're sitting in big groups and they really know how to picnic properly, and they're not inhibited in any way"*. As such, many participants discussed the need for infrastructure to support large gatherings (e.g., large eating areas, benches, picnic tables). One participant who often brings large groups of Muslim people into the countryside described how infrastructure in PAs is

often inadequate: “picnic benches are small, separated out, so only four people, five people can sit on the bench, but there's 15 people coming and where are they going to sit?”. The lack of sufficient infrastructure was described as leading to feelings of exclusion due to Muslim family and social culture not being considered within the design of a space. Other social infrastructure that would be welcomed in a green space included sports pitches and playgrounds. Participants also described activities that could be offered that would appeal to the social culture of Muslim communities including children’s activities and activities centered around cooking and growing.

Finally, participants also identified several factors that relate to the socio-economic inequalities often experienced by Muslim communities (e.g., health concerns, poverty). The most identified factor in this regard was language barriers and the need to ensure that signage and information was inclusive (n = 10). Particularly for older Muslims and new migrants, participants described the benefits associated with having the website and signage available in multiple languages. Second, many participants (n = 7) described the need for green spaces that are accessible to those with mobility constraints and/or of lower fitness abilities. Suggestions that were offered included ensuring paths were smooth, having lots of benches, and offering walking routes of varying lengths. Several participants (n = 6) recommended exercise classes or walking groups, particularly for women, focused on health, wellbeing, and social interaction. Finally, a number of participants (n = 6) identified the need for facilities and activities to be free.

4.3.3.3 Safety: “Do I feel secure in this space and safe to express my culture and religion?”

Many participants (N = 11) spoke about the necessity for PAs to foster a sense of safety and acceptance. They discussed how this will generate trust that the PA is a place where Muslim communities can express their religion and culture, and simply be present, without fear of discrimination. Several of these participants spoke about the apprehension Muslim people often feel about how they will be perceived in unfamiliar spaces. A woman spoke about her own experience in this regard when she leaves London: “I've noticed that you have to make the effort to say hello first and to smile and make it seem like you're not dangerous immediately. Because if they get a sense that you're dangerous then they report you or they question why you're there and they watch you”. Another participant who often took groups of Muslim people into the

countryside spoke about several racist and Islamophobic instances that people in his group have experienced. Participants spoke about several actions that can be taken within PAs to contribute to the creation of a safe space.

Related to the identified importance of diverse imagery, most participants (n = 12) spoke about how a lack of visible user diversity can be a barrier to Muslim use of a space as this reduces the sense of safety and belonging. A participant spoke about this in the context of the countryside when she said: *“the countryside is really, really white, and you really do notice that, and people tend to feel safer if they're in their own group”*. The importance of seeing ethnic diversity within a space was not limited to users, but also the staff and volunteers. *“Look at all your staff, look at all your volunteers. When people come in [...], do they see themselves reflected back?”* said one participant. Another suggestion that was offered was to allow trusted hosting organizations (e.g., faith groups) to run organized activity within the space. Participants discussed how entering unfamiliar spaces as part of a group can build confidence and foster a sense of security.

Several management features were also mentioned in the context of safety. Five participants mentioned having rangers/volunteers present throughout a green space, four identified the importance of good lighting to foster a sense of safety, and three participants spoke about the need for clear maps and help points throughout an area. A few participants (n = 3) discussed how Muslim people often do not feel safe in wooded or highly secluded areas for fear of attack from other people. Fear of wild animals was not widely emphasized as a barrier.

One way to foster perceptions that the Muslim faith is not only accepted within a space, but celebrated and valued, is religious and inter-faith events. Nine participants pointed out the inter-faith week on Walthamstow Wetlands' website, discussing how it was positive for attracting Muslim communities. Many participants recommended holding Eid and other religious celebrations. One participant was critical of the fact that often only Christian holidays are celebrated: *“there don't appear to be things for the Hindu community, for Diwali, and the Jewish community and Hanukkah, and then for the Muslim community”*. Others mentioned subtle design features that would celebrate Muslim cultures and foster a sense of belonging such as pointing out the direction of Mecca and incorporating Eastern architectural features within the space.

4.3.3.4 Confidence: *“Do I feel confident in my ability to plan and interact with this space?”*

Participants also described several factors related to information that contribute to a sense of confidence in planning and interacting with the space. They stressed that pre-existing knowledge should not be assumed. Several participants (n = 7) discussed the importance of clearly publicizing information about the PA (e.g., permitted activities, amenities, cost) to allow potential users to adequately plan for their visit. Participants proposed a variety of ideas for how to make this information accessible including clearly marked signage, maps, and information on the website, as well as volunteer welcomers who could introduce new users to a space and what it offers.

Participants also emphasized the need to provide clear information on different ways in which visitors could interact with the PA (n = 5). This guidance is particularly necessary for those less familiar with PA environments. For example, a participant described how *“if you were to put an inner-city kid into a nature reserve, he's going to be like, ‘okay what am I going to do here?’ . There needs to be some form of transition into it”*. Given the underrepresentation of minority ethnic groups within PAs, and the concentration of Muslim communities within urban environments, it is likely that many Muslims will be new to PAs. Another participant described how, for people who are new to PAs, *“they just need a little bit of help in terms of getting creative and knowing that they could just go out there and just immerse themselves in that environment”*. Once again, this information should be made clear on a website, informational signage, and/or through on-site volunteers.

Finally, most participants (n = 11) described the value of environmental education so those who are less familiar with the space could learn about the flora and fauna. Many examples were provided including activity sheets, interactive signage, and guided activities. Participants described the benefits of making the PA an interactive learning space, with many purposeful activities. In the context of parents, one participant described the importance of these activities when she said: *“These parents are not going to have the knowledge to be able to enjoy the experience and make a learning experience necessarily for their children”*. Without this activity,

one participant indicated that *“Otherwise you’re just wandering around the reservoir”*. Such activity would promote confidence in using the space for those who are less familiar with nature. One participant described this well when he said: *“it’s about progression. If they can go to Walthamstow Wetlands and they enjoy that, then they might want to explore further and feel more confident”*.

4.3.3.5 Community engagement

In addition to ensuring a PA offers an inclusive environment, many participants (n = 10) also described the importance of ensuring Muslim communities are made aware of the PA’s existence. These participants described the importance of community engagement through a wide variety of channels including community leaders, mosques, faith groups and community centers, WhatsApp groups, schools, and social media. The value of using many channels was emphasized given the diversity that exists within and among Muslim communities. Word of mouth was described by several participants as being particularly important within Muslim communities.

4.3.3.6 Nature and Islam

The twelve participants who identified as Muslim indicated that nature held a prominent place within Islam, with many verses in the Qur’an speaking about different aspects of the natural world. Two prominent themes were described of the relationship between Islam and nature. First, many participants (n = 9) discussed how nature was created by God and, therefore, viewed as proof of God’s existence and power. A participant described this relationship in saying *“God is the creator of everything, and nature is one of the signs of God's power, and just a sign of the proof of God, basically. That is repeated over and over again, like, look at the mountains, look at the sky, look at the rain.”* Participants spoke about how Muslims are encouraged to observe and experience the natural world as a way of connecting to God through the wonder of his creation.

In line with the theme of connecting to God through nature, several participants spoke about praying and practicing other aspects of their spirituality in the outdoors (n = 12). Many of these participants described that Muslims are encouraged to undertake their Eid congregational prayers outdoors. Opportunities for such spiritual activities within PAs could, therefore, present an

opportunity to encourage use of the space by Muslim communities. *“I think any space is more beloved if you have had profound experiences in it, so if you can create opportunities for those experiences, it's wonderful”* described one participant. She went on to say: *“we want the natural space to be our cathedrals, our churches, our mosques, our synagogues, we want that because that is already made for us by God”*. Such spiritual events within PAs could introduce new users to the space as part of a trusted group as well as signal that the space is welcoming to those of the Islamic faith.

A second theme identified by participants was the relationship between humans and nature as depicted in Islam. Most participants (n = 11) spoke about how Islam portrays humans as caretakers of the planet. A participant described this relationship in saying *“We are told in the Qur'an that we are stewards, or guardians, on this Earth and every one of us have been put in a position where we are responsible for something”*. Participants discussed how humans have a duty to respect nature. Cutting down trees and being wasteful with resources, for example, were described as being frowned upon within Islam.

Harnessing this stewardship role within marketing and programming could present an avenue to attract Muslim communities to green spaces. For example, a participant described this opportunity in saying: *“It's all linked back to the faith and putting it back to the faith. It's our duty to look after our environment, not only for ourselves, but for the future. So, it's about using that to engage”*. Indeed, several participants (n = 8) discussed how charitable events and volunteering activities in green spaces would hold wide appeal with Muslim communities. Activities mentioned included litter picks, sponsored charity hikes, and tree planting. Two participants, however, spoke about how the relationship between humans and nature as described within Islam is not always well recognized among Muslim communities. For example, a participant said: *“we've got a direct instruction from the Prophet that says that we need to preserve the earth because it is our mother. I'm not sure that is at the forefront of most Muslims' minds”*. These participants, therefore, described how engaging Muslim people in stewardship would present an opportunity to highlight this link between their faith and nature.

4.3.4 Diversity within Muslim communities

Although a detailed exploration of variation that exists within and among Muslim communities was outside the scope of this paper, I acknowledge this diversity and recognize that it will affect the barriers and opportunities experienced at the individual level. When discussing barriers and opportunities underlying the use of PAs, participants often identified this diversity. Ethnic background, for example, was emphasized as differentiating Muslim communities. One participant described this in saying “*Somalis are very different to Bangladeshis who are very different to Iraqis, to Lebanese. They have some similarities in between, but they're still different*”. Other factors identified as affecting the relevance of each identified barrier and opportunities included gender, immigration generation, interpretation of the faith, age, and simply individual preferences. Barriers that were described as varying in the extent to which they would impede someone from visiting a green space included a lack of visible representation within a PA, the presence of dogs, and the lack of a prayer space. Despite this variation, however, participants indicated that the aforementioned barriers and opportunities are likely to be widely significant across Muslim communities as a whole.

One factor that was strongly emphasized as differentiating Muslims in terms of the barriers they experience was immigration generation, or, indeed, those that were born in the UK. Language barriers, for example, were described as more relevant to individuals who were new to the country. For those who were raised in the UK, the combination of family heritage and a UK upbringing was both discussed as contributing to their identity. As a result, a few participants suggested that some younger Muslims are less traditional in their interpretation of the faith. For example, a woman described how praying later than the recommended time would not bother her and, therefore, the absence of a space to pray would not present a barrier. She contrasted this to her mother who is more traditional in her interpretation of the religion. Immigration generation was also discussed in relation to comfort levels in nature. A few participants indicated how first-generation migrants could be more comfortable around nature than those brought up in UK cities given that many grew up on farms and/or surrounded by wildlife. Some participants suggested that the urban upbringing of younger Muslims could lead to lower levels of comfort in nature.

4.4 Discussion

This research presents one of the first studies to explore barriers contributing to the underrepresentation of Muslims in UK PAs. My results indicate that a wide variety of interlinked and cumulative factors act as barriers or opportunities to the use of PAs by Muslim communities. Many of the barriers exist at a functional level. For example, the lack of a prayer space could prevent Muslims from using a PA for long periods of time and insufficient seating facilities could inhibit a Muslim family from undertaking their preferred activities. Individually, however, each functional barrier was not typically identified as a deciding obstacle that would inhibit use of a PA. Rather, many barriers cumulatively led to deeper levels of perceived exclusion. I found that through a combination of these barriers, a PA could fail to foster a sense of safety, confidence, and/or inclusivity. Overall, this can lead to a perception that a PA is not a place where Muslim communities are welcomed. I also identified many opportunities that could be used to address these barriers and improve the sense of belonging experienced by Muslims within PAs. These included using the central role of nature within Islam, such as the role of humans as guardians of nature, within programming and marketing to draw Muslim communities to a PA. This central place of nature in the Islamic faith has been explored in prior research (Makhzoumi 2002). Participants indicated that even subtle changes and acknowledgement of Muslim faith and cultures would make a considerable difference to perceived inclusion.

Most of the barriers and opportunities identified in this study align with the literature on Muslim participation in sport and leisure. For example, in their qualitative study exploring the influence of religion on the leisure practices of Muslims in the US, Stodolska and Livengood (2006) found that the family oriented and collectivist Muslim cultures were a primary driver of leisure behavior. Similarly, all participants in my research identified that preferred leisure pursuits revolved around families and social gathering. My findings relating to the need to foster a sense of safety and demonstrate cultural understanding also align with research on Muslims and leisure. In an in-depth case study of a UK leisure center, Snape and Binks (2008) found that perceived safety and cultural recognition were primary factors underlying the appeal of the space for Muslims. Their findings also aligned with my research in that the presence of staff from Muslim communities and an emphasis on health over competition were identified as being critical to the center's success. As with my study, prior research has identified fear of

discrimination as a factor affecting Muslim use of green space (Pitt 2019). Finally, aligning with my recommendation to hold religious events within PAs, Yazdani (2019) found that for Iranian migrants “The interweaving of social and cultural dimensions of [cultural celebrations] is highly significant as a source of collective affirmation and identity in conditions of migration, and can also foster a sense of familiarity and belonging to the physical environment” (p. 6).

The overlap of barriers and opportunities identified in this research with those described within leisure studies suggests that many of these factors would apply in all types of green space (e.g., language and economic barriers, lack of *halal* food options). However, several of these barriers would likely be exacerbated within PAs, in particular, the lack of infrastructure to undertake preferred social leisure activities, safety concerns deriving from the secluded nature of many PAs, insufficient seating and paths for those with mobility constraints, and a lack of visible cultural diversity. Furthermore, a focus on traditional Anglo-Western activities (e.g., bird watching), and assumptions surrounding levels of priority experience and confidence in nature, are also likely to be more prominent in PAs than highly managed parks.

One factor that prior research has hypothesized as contributing to the underrepresentation of Muslim communities in PAs is that such communities have a different perception of natural beauty than the wilderness ideal or “Romantic gaze” often held by those from a white background (Suckall et al. 2009). In their comparison of landscape preferences between “native Dutch people” and Islamic migrants, Buijs, Elands, and Langers (2009) suggested that the migrants had “low preferences for wild and unmanaged landscapes” (p. 113) due to their more functional conceptualization of nature. In contrast, I did not detect a strong influence of the type of natural environment on the leisure choices of Muslims, with most participants perceiving the natural elements of Walthamstow Wetlands as highly attractive and the “wildness” of the space did not emerge as a prominent barrier. This finding suggests that the type of nature within a space does not strongly influence green space preferences for Muslim communities. Rather, their choices are influenced by how humans are able to interact with the space, along with other factors such as prior instances of discrimination, the perceived “whiteness” of a space, and unfamiliarity. When exploring use of a large urban park in Australia by Iranian migrants, Yazdani (2019) similarly found that the natural features, many of which were similar to

Walthamstow Wetlands, were perceived as peaceful, but that a lack of prior experience and “unfamiliarity with design references” (p. 12) led to a feeling of otherness. In fact, UK green spaces such as those with mountains and hills have been found to evoke recollections of ancestral homelands (Tolia-Kelly 2006).

Many of the socio-cultural barriers identified in this research stem in part from principles of “white environmentalism” that are embedded across many aspects of Walthamstow Wetlands’ design and management (Ho and Chang 2021). White environmentalism, or a wilderness ideology, in PA management conceptualizes humans as separate from nature and PAs as places to visit for escape and solitude in search of transcendent experiences (Drennig 2013). In Walthamstow Wetlands, this ideology is reflected, for example, in the lack of photos depicting human-nature interaction and the lack of facilities for large social gatherings. I contend that management must move beyond white environmentalist approaches which limit management creativity through strictly defining what does and does not belong within a PA. If we are to create more inclusive PAs, alternative worldviews relating to the human-nature relationship must be valued and integrated within marketing, design, and management such as through celebrating human-nature interactions.

4.4.1 Ethnicity and green space access: Reframing the discussion

This research provides support for the ethnicity, marginality, and discrimination hypotheses in explaining minority ethnic selection of managed parks over more biodiverse spaces. My finding that desired leisure activities revolve around Muslim social cultures aligns with the large body of research suggesting that minority ethnic groups tend to prefer social activities over Anglo-traditional nature-based pursuits (Ordóñez-Barona 2017; Gobster 2002; Jay and Schraml 2014). This result provides support for the ethnicity hypothesis. In line with the marginality hypothesis are barriers such as the lack of infrastructure within PAs to support those with health and mobility constraints, which tend to be more prominent within minority communities, as well as a lack of widespread information about PAs. Finally, barriers including fear of potential Islamophobic discrimination supports the discrimination hypothesis.

Although my findings provide support for the ethnicity hypothesis in that the desire for social infrastructure leads Muslims to select managed parks over PAs, I contend that a lack of social infrastructure or programming is, in itself, discriminatory and marginalizing. As described earlier, this barrier stems from white environmentalism which has dominated PA management approaches. Therefore, I suggest that rather than describing ethnic differences in leisure choices as being determined by a preference for spaces that support social activity, this barrier should be framed as a deficiency in provisioning for social cultures within PAs. This places responsibility for ensuring a PA meets the needs of its surrounding communities on management bodies. In the UK, PAs have a legal requirement to ensure equity in the management of the space. I contend that this goes beyond making a space economically and physically accessible. It must also be culturally accessible and meet the recreational needs of its stakeholders.

4.4.2 Conclusions: Future research and management implications

This study advances existing theory on minority ethnic underrepresentation within PAs but avoids the homogenization of minority ethnic groups (Kloek et al. 2017) through focusing specifically on Muslim communities. Through my female majority sample, I strongly captured the perspective of women leaders of the Islamic faith, a group that is often underrepresented in research on Muslims and leisure. I identified a wide range of factors that have the potential to hinder or facilitate Muslim access to PAs. Although I did capture some data on how the impact of these barriers and opportunities will vary within and among Muslim communities based on factors such as gender and age, I did not explore such variation in detail. Immigration generation was identified as being particularly influential to the relevance of identified barriers and opportunities. Muslim cultures are not static, and surrounding cultural contexts are likely to influence identities and, subsequently, perceptions and preferences related to leisure. Indeed, a large body of research has applied concepts such as acculturation and integration to explore leisure choices and green space access (Gentin et al. 2019; Stodolska and Livengood 2006). Building off this literature and the present study, I suggest that further in-depth exploration is needed on Muslim communities and intersectionality as it relates to PA access.

Several of the opportunities I discussed require only subtle changes within PAs but could have a significant impact on perceived inclusion. Ensuring images are inclusive would be particularly

effective in this regard. Holistic community engagement strategies were also identified as being highly important for fostering inclusivity. Many of the engagement channels identified by participants (e.g., WhatsApp groups, schools) would likely also offer useful avenues for participant recruitment for future research involving Muslim communities. Many of the barriers and opportunities I described are likely to be relevant in the context of other minority ethnic groups. For example, insufficient information (Metcalf, Burns, and Graefe 2013), a lack of diverse imagery (Kloek, Elands, and Schouten 2017), and insufficient social infrastructure (Suckall et al. 2009) have all been identified as barriers to accessing more biodiverse spaces experienced by minority ethnic groups in a general sense. Other barriers, however, such as Islamophobic encounters, are primarily experienced by Muslims, especially Muslim women, and are particularly associated with the countryside (Sijtsma 2011).

I expect that some of the management actions needed to improve PA access for Muslim communities would be met with barriers at the institutional level. Offering opportunities for large social gatherings, allowing barbeques, and sport related activities might be perceived as conflicting, both by managers and other users, with the white environmentalist ideology embedded within the management of many PAs (Fraser and Kenney 2000; Suckall et al. 2009). Therefore, careful stakeholder management and dialogue are needed to overcome such potential conflict. Many PAs already contain areas with significant social infrastructure. Therefore, PAs could simply ensure such opportunities are publicized more widely rather than adding additional infrastructure. Perceptions that PAs are catering to religious needs could also bring about criticism from those who believe PA should be under exclusively secular management. Such conflict could arise, for example, if dog free areas were established on religious grounds. The literature has already identified some of these constraints in relation to sport, for example, when certain Muslim requirements (e.g., no gender mixing) are perceived as contrasting to Western belief systems (Amara and Henry 2010; Lenneis and Agergaard 2018). Although some of these issues present complex ideological conflicts, many of the religiously associated barriers and opportunities I identified could easily be met without any form of exclusion or religious bias. For example, many PAs already have rules in relation to dogs at certain locations (e.g., bird sanctuaries). Therefore, widely publicizing these areas as such would promote Muslim use of the space. Furthermore, many Christian holidays are already marked by events within PAs.

Therefore, providing opportunities to celebrate Islamic and other religious holidays would serve create an equitable events calendar.

Within this research I have described the need for more diverse programming, meaning the activities, events, and opportunities offered by the PA. However, to holistically embrace the diversity of values associated with nature and human-nature interactions, PAs should also acknowledge and embed this diversity within their overarching policies, such as their management plan or strategy which outlines the vision and future direction of the PA and guides management decisions. Such recognition within overarching management policy would provide a clear mandate for embracing diverse values within all aspects of PA management, presently and in the future.

The qualitative approach adopted in this research allowed me to go beyond identifying functional access barriers and explore deeper levels of perceived exclusion experienced by Muslim communities. It also facilitated an exploration of the relationship between these barriers and allowed me to distinguish their cumulative effect on access. Prior research on green space access suggests that perceived access is influenced more by physical and geographic factors than by socio-cultural variables (Wang, Brown, and Liu 2015). Although I did not include geographic variables within this study, the degree to which participants described socio-cultural barriers as limiting access leads me to suggest that such dimensions can be equally influential. Future research could build off my results and explore the barriers and opportunities I identified in the context of other socio-cultural groups. Such research would provide a more detailed understanding of how the factors underlying PA access vary within and among different underrepresented communities. Qualitative research with PA managers would also be useful to explore the feasibility of the identified management actions and to identify any potential factors that could aid or inhibit their implementation.

4.5 References

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Chapter 5: Conclusion

5.1 Summary of findings

The objective of this research was to advance our understanding of the disparities between current protected area (PA) management planning practices and access barriers experienced by minority ethnic communities in the UK. This research contributes to theory on the institutionalization of white environmentalism within the PA planning process and the resulting implications for outdoor recreation provisioning. In this way, it adds to the literature on PA access barriers experienced by minority ethnic communities from a management planning perspective. My results have several implications for improving equity in PA management planning practice.

In Chapter 2, I explored how user diversity is accounted for within outdoor recreation planning and programming for UK PAs through a document analysis and survey of PA managers. I sought to understand which access barriers experienced by minority ethnic communities are perpetuated at an institutional level and why. I found that although managers are largely aware of national diversity concerns and objectives, these priorities are not widely engrained in overarching management plans of PAs. Furthermore, minority ethnic communities were seldom identified within the context of addressing barriers or targeted programming. Of those barriers identified and addressed, physical and geographic access barriers were the most common. Priority was assigned to fostering environmental knowledge, which was most often identified as being linked to environmentally responsible behavior (ERB). In contrast, social motivations for outdoor recreation participation were rarely targeted.

The overarching aim of Chapter 3 was to explore ethnic variation in outdoor recreational preferences and the related experience of Cultural Ecosystem Benefits (CEB). This was accomplished through one hundred in-situ semi-structured interviews in parks and PAs within the Lee Valley Regional Park, London, UK. I found that the CEB were highly consistent across green space users having divergent recreational preferences, with peace and relaxation being the most frequently perceived benefit across all groups. Both nature interaction and its contrast to the urban environment contributed to this peace and relaxation. These results suggest that nature

contributes similarly to wellbeing across ethnic groups regardless of their preferred recreational experiences. Therefore, conceptualizations of nature-based recreation and connecting with nature should reflect a wide range of outdoor recreation experiences beyond traditional Anglo-Western pursuits.

Finally, the objective of Chapter 4 was to identify the socio-cultural barriers and opportunities that contribute to the accessibility of PAs for Muslim communities in the UK. I undertook fourteen in-depth interviews with leaders from Muslim communities in the UK. My results provide evidence for the strength of non-spatial barriers to outdoor recreation accessibility. I identified barriers in support of the marginality, ethnicity, and discrimination hypotheses and found that layers of many diverse barriers cumulatively lead to deeper levels of perceived exclusion. My results also suggest that the type of nature within a green space does not strongly influence access for Muslim communities. However, several other outdoor recreation barriers are exacerbated within PAs including how users can interact with the space, prior instances of discrimination, the perceived “whiteness” of PAs, and unfamiliarity.

5.2 Implications for protected area management planning theory

This thesis contributes to the advancement of theory on PA access and ethnicity through exploring the misalignment of institutionalized ideologies within the management planning process and the lived experiences of minority ethnic communities. Through a combined examination of findings from my three articles, I explore these disparities at three central steps within the PA management planning process: assessing the current state of the PA (*where are we now?*), defining the PA vision and objectives (*where do we want to be?*), and deciding upon management actions to achieve desired objectives (*how do we get there?*). My findings reveal several disparities between how these questions are addressed in practice, and the needs, experiences, and values of minority ethnic communities. Prior research on minority ethnic access to outdoor recreation has focused predominately on the ethnicity and marginality hypotheses, largely failing to explore institutionalized discrimination. This thesis highlights how PA access is significantly impacted by the white environmentalist ideology which is deeply ingrained within current PA decision making and manifests at each step of the management planning process. In this way, I go beyond the three-hypotheses conceptualization of access to identify underlying

contributory factors within the planning system. I present these theoretical advancements through a conceptual framework which highlights the relationship between PA management planning and access for minority ethnic communities (Figure 5.1).

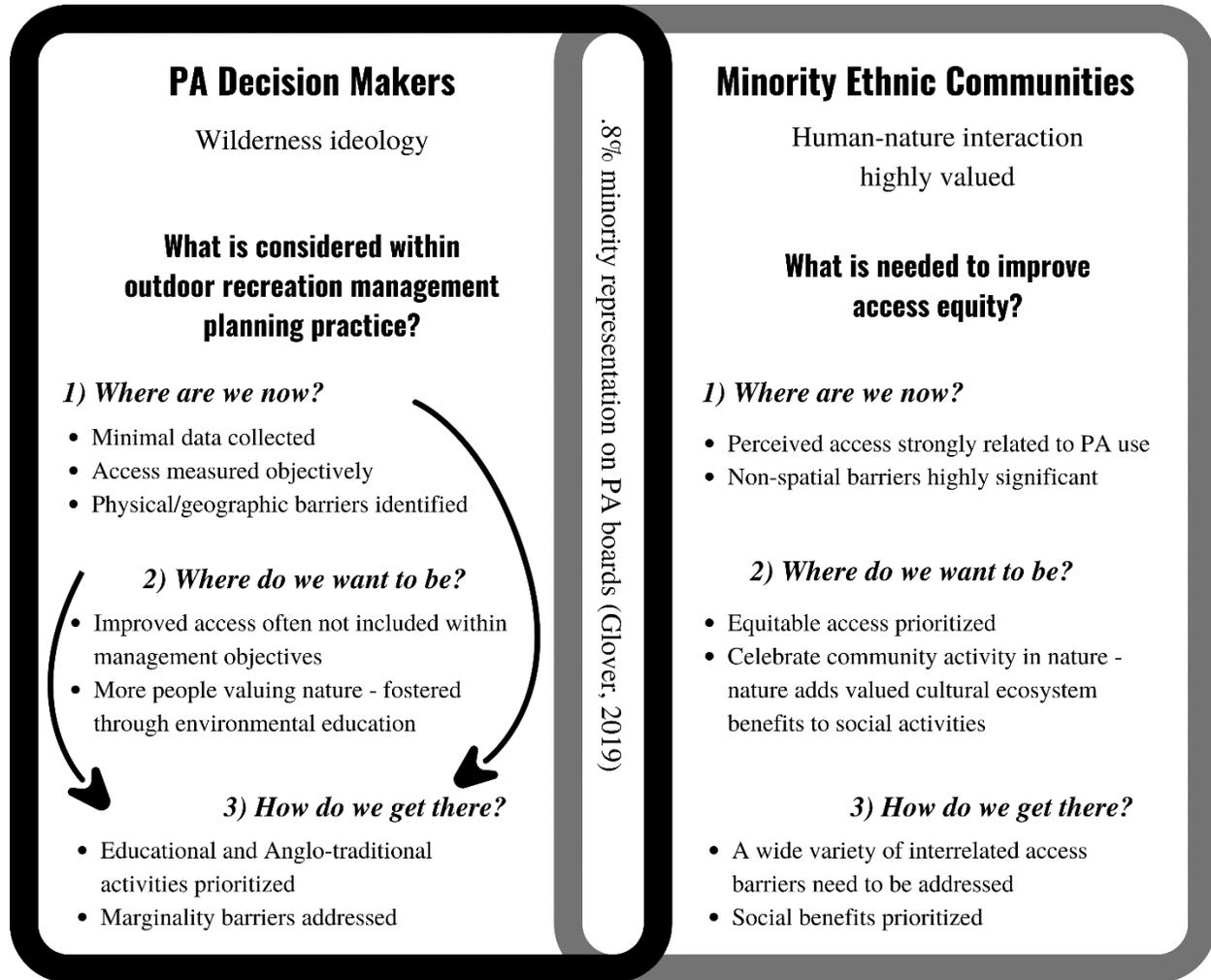


Figure 5.1: A framework conceptualizing the protected area (PA) access barriers experienced by minority ethnic communities through a management planning lens. This framework highlights how institutionalized ideologies and assumptions within protected area management planning hinder access due to their misalignment with the experiences, values, and needs of minority ethnic communities.

Central to the disparities that I identified between PA management planning practice and the lived experiences of minority ethnic communities is the extent to which white environmentalism remains embedded within PA governance in the UK. As explored within my introductory chapter, this ideology conceptualizes humans as distinct from pristine nature and outdoor

recreation as an individualized pursuit leading to sublime and transcendent experiences (Drennig, 2013). This ideology has been perpetuated by the white middle class who have historically governed PAs. The romantic gaze has been contrasted to the collective gazer who celebrates human-nature interaction and sees outdoor recreation as a community experience (Urry, 1990). The collective gaze is thought to be more reflective of minority ethnic communities (Suckall et al., 2009). Glover's (2019) *Landscape Review* revealed an extreme lack of minority ethnic representation within PA governing bodies. This lack of representation creates a power imbalance by which the management planning process is guided by a much narrower ideological perspective than that which is held by publics which it is meant to serve. My results indicate that the dominance of the wilderness ideology or the white environmentalist perspective within PA governance has implications across multiple steps within PA management planning, leading to the misalignment of PA management decisions and the steps that are actually needed to address inequitable access to PAs.

One of the primary steps within PA management planning is to determine the current state of the PA. In relation to access, this step involves monitoring user demographics to determine levels of representation and identifying access barriers. At this step, an initial issue with current planning is a lack of baseline data. The results of Chapter 2 suggest that only one quarter of PAs collect any data on user diversity. A second shortcoming during this step is a disparity between how access is conceptualized by decision makers, and how it is subjectively experienced by minority ethnic communities. I found that PA organizations did not widely recognize barriers related to the discrimination and ethnicity hypotheses. These findings align with current open space planning models which tend to rely on quantitative measures of access (Wang et al., 2013). This narrow conceptualization of access fails to capture the many nuanced barriers identified by participants in Chapter 4 who described a wide range of non-spatial barriers that can cumulatively affect access. For example, participants identified a lack of opportunity to participate in preferred social activities and a lack of detailed information about the PA as primary barriers. I suggest that a failure of PA organizations to widely recognize such non-spatial barriers is partly due to the white environmentalist ideologies and rational-comprehensive approaches that are embedded across PA management bodies and researchers.

A second essential step within PA management planning is determining the vision and objectives for the space. As already described, PAs in the UK have a legal requirement to ensure equity in access to outdoor recreation through the Equality Act 2010 (Jay et al., 2012). Unfortunately, Chapter 2 suggests that such requirements are not holistically integrated within PA management plans. Chapter 2 also indicates that, among the benefits of outdoor recreation, connecting more people to nature and environmental education objectives are regularly featured within the overarching aims of PAs. I contend that this prioritization is, in part, due to the perceived links between these benefits and ERB. These assumptions about which benefits foster a connection with and value for nature align with the wilderness ideology that relates meaningful outdoor recreation experiences to solitude, quiet, and an escape from modernity (Drennig, 2013). Providing opportunities for lively social activities which do not align with white environmentalism were almost never identified within the aims and vision for PAs. Conversely, such activity was often described negatively as conflicting with desired conservation objectives, both within management plans and by PA managers.

Significant disparities exist when comparing the assumed links between outdoor recreation and ERB that are embedded within PA management planning to the human-nature relationship explored within Chapters 3 and 4. In Chapter 4, I found that Muslim communities valued social pursuits in nature. They also celebrated in seeing communities interacting with the natural environment. In addition, the results of Chapter 3 indicate that the perceived CEB obtained from nature, in particular peace and relaxation, are highly similar across individuals with divergent outdoor recreation preferences. This result suggests that outdoor recreation will foster a connection to and value for nature regardless of the type of preferred leisure pursuit. Similarly, both Whiting et al. (2017) and Grill et al. (2020) found that relaxation motivations were related to all types of green space settings. When identifying PA objectives, a failure to recognize the valued CEB obtained through social pursuits acts as an ideological barrier to equitable access within the PA management planning process.

Finally, both aforementioned steps of the PA planning process have implications for PA management decisions. First, aligning with the assumed link between environmental knowledge and ERB, Chapter 2 suggests that environmental education and traditional Anglo-western

activities are prioritized within outdoor recreation provisioning. Social benefits, on the other hand, were almost never prioritized. This limits the ability of minority ethnic communities to undertake their preferred activities within PAs. Second, Chapter 2 suggests that management decisions targeting improvements in access tend to relate to marginality variables and overlook constraints related to the discrimination and ethnicity hypotheses. This prioritization of barriers relates back to step 1 and how access is conceptualized.

This discussion reveals how white environmentalism manifests at each step of the PA management planning process and highlights the resulting disparities between management practices and the lived experiences of minority ethnic communities. This misalignment not only fails to comprehensively address access constraints, but such institutionalized ideologies and assumptions also contribute to many of these barriers. These findings provide evidence for the impact of institutionalized discrimination on PA access for minority ethnic communities, thereby supporting the discrimination hypothesis. However, discriminatory assumptions within PA management planning can also be conceptualized as contributing to barriers related to marginality and ethnicity. For example, the discriminatory failure to recognize the value of nature to social leisure pursuits (discrimination hypothesis) contributes to a lack of opportunity for minority ethnic communities to participate in such activities (ethnicity hypothesis).

5.3 Towards the equitable distribution of power in protected area governance: A rationale for co-management

PA management has historically been dominated by technocratic approaches whereby objective, reductionist methods and concepts such as carrying capacity are used to guide decision making in a “hierarchical, technologically based, and linear fashion” (Plummer & Fennell, 2009, p. 150; Pretty & Pimbert, 1995). Gradually, however, there have been increasing calls for more bottom-up participatory approaches to, among other aims, minimize conflict, embrace complexity, foster equity, and uphold Indigenous rights (Blahna et al., 2020; Fedreheim & Blanco, 2017).

Stakeholder participation is one avenue through which PAs can start to address the institutionalized barriers discussed above. Indeed, public participation is ubiquitously presented as an essential step of the PA management planning process (Alexander, 2013; Thomas & Middleton, 2003). Lane (2001) describes how this shift from top-down to participatory

approaches in PA governance mirrors a similar movement in urban and regional planning theory in which dominant theoretical perspectives have shifted away from rational-comprehensive planning to more participatory and decentralized approaches such as transactive and communicative planning. Lane (2001) goes on to suggest that, given the diversity of PA contexts in which different management approaches have been applied, PAs have provided a testing ground for many traditional planning theories.

Given the lack of representation from minority ethnic communities within PA governance structures, and the extent to which white environmentalism is embedded within PA management planning, I contend that conventional participatory approaches such as surveys and requests for comment on management plans will be insufficient to bring about equity in outdoor recreation provisioning. Plummer and Fennell (2009, p. 151) called PAs “representative entities of th[e] disproportionate power equation” between government and local people, highlighting the need to reduce existing power divides within management planning frameworks. As such, I add my voice to calls for the adoption of co-management (cooperative management) approaches which aim to reduce this power differential through framing decision making as a collaborative process between PA governing bodies and local stakeholders. Co-management has been defined as a process of “shared decision making between local resource claimants and formally trained resource managers on policies guiding the use of [PAs]” (Rao & Geisler, 1990, p. 19). Through this decentralization of power, co-management facilitates shared responsibility for PA governance, including decisions related to outdoor recreation (Lane, 2001). This process thus has the potential, when implemented effectively, to ensure the values and worldviews of minority ethnic communities are equitably represented within all steps of PA management planning. Indeed, a growing number of successful case studies in which co-management has been applied provide evidence for its potential value (De Pourcq et al., 2015; Oldekop, Holmes, Harris, & Evans, 2016; Vokou et al., 2014).

At a conceptual level, co-management holds significant promise as a PA management planning approach. However, it is also necessary to consider the challenges potentially limiting its effective implementation. For example, given the discrimination and repeated marginalization of minority ethnic voices, a significant amount of initial community engagement would likely be

required to build trust. Building strong relational foundations would be a gradual process and could be limited by resources and existing skill sets within PA management bodies. Another challenge that could arise is resistance within PA institutions to relinquish some of their power and embrace an alternative management approach. Given the extent to which the rational-comprehensive strategies have been embedded within PA governance, such resistance could stem from a belief in the superiority of such objective approaches. Finally, even if co-management was instituted effectively, there remains a need to ensure that minority ethnic communities are also represented within PA governing bodies (e.g., as trustees, planners, and managers). For this to happen, PA organizations need to adopt equitable hiring and volunteer recruitment policies. For example, recruitment must take place through a wide range of channels and PA organizations should be held accountable for ensuring that their internal ethnic diversity is reflective of surrounding communities.

5.4 Implications for protected area planning practice

Emerging from the theoretical contributions of this research, this section will focus on several recommendations for PA management planning practice and research. Within my articles, I have provided a wide range of detailed recommendations for improving inclusivity in PA planning, management, and design. In this section, I focus on broader underlying recommendations for planning practice that would mobilize and enable practitioners to apply the many suggestions from my articles. Following a discussion of these broad recommendations, I will identify factors that have the potential to constrain their implementation.

As described earlier, one of the key steps within PA management planning is measuring current levels of access and related barriers. Open space planning has tended to focus on objective, spatial dimensions of access (Wang et al., 2013). When more subjective approaches are used, they are often quantitative and broadly compare the impact of several access barriers (Metcalf et al., 2013; Wang et al., 2015). These methods do not allow for an exploration of the interaction of access barriers which, as I found in Chapter 4, has the potential to significantly reduce perceived access through impacting factors such as belonging and confidence. My participants indicated that individually, many of these barriers would not present deciding obstacles to their use of a PA. Rather, the cumulative effect on these barriers led to overall perceptions of exclusion and

determined leisure behavior (i.e., choice of whether to visit the PA). Therefore, measuring several potential constraints individually might not provide an accurate representation of perceived access. As such, I recommend that, when investigating access, researchers and practitioners should focus on gaining a qualitative understanding of the broader dimensions of perceived access such as confidence, safety, inclusion, and belonging. One could then work backwards to identify which specific actions could have the greatest impact on improving these perceived dimensions of access.

Second, my results indicate that white environmentalism manifests and has implications for access at each step of the management planning process. These results support existing research suggesting that wilderness ideologies are deeply embedded within PA management and related fields such as environmental education (Cole, 2007; Ho & Chang, 2021; Pretty & Pimbert, 1995; Youdelis et al., 2020). Therefore, I have advocated for co-management to ensure more diverse voices are represented within decision making. However, I also recommend that PA planners and managers should seek to gain a better understanding of alternative worldviews relating to human-nature relationships. Learning about the perspectives of nature held by all stakeholder groups, in particular minority ethnic communities, would hopefully contribute to breaking down cultural divides (Stodolska, 2015). This sharing of worldviews could be taken further through integrating and celebrating multi-cultural perspectives within interpretive materials and programming. For example, a Muslim leader from Chapter 4 described how Walthamstow Wetlands could improve its inclusivity through incorporating:

“a celebration of what the East has given to the West in the same way that in an Eastern garden you'd want a celebration of what the West had given to the east, to recognize that gift of knowledge, of beauty, of art, to have something that not only speaks to it in the visual form, but possibly something which is dedicated to it. [A] dedication of what Islam has brought to the gardens or [...] the Babylonian ideals have brought to Western society and the Renaissance. And I think knowing that connectivity exists and doesn't have to have a duality, that the flow of knowledge and beauty and heritage is a human thing. It doesn't belong to the east or the West.”

In addition to fostering intercultural understanding of the human-nature relationship, PA planners and managers also have a responsibility to study the racialized history of PA formation and how the political ecology which has shaped PAs contributes to the present access barriers experienced by minority ethnic communities. For those of us who have been privileged through the racial injustices embedded in the historical context of PAs, taking the opportunity to listen and gain a sense of how the injustices shape the lived experiences of minority ethnic communities is essential and will help each of us actively contribute to the decolonialization of these spaces. In turn, training to promote an understanding of the intersection between environmental justice and PA management planning is also needed. In 2012, Jennings et al. (2012, 3) described how such training was, at present, “[an] unaddressed component of environmental justice strategies”.

Positively, environmental organizations are becoming increasingly aware of the importance of representing more diverse cultural perspectives, and of their role in combatting racism. Subsequently, such organizations have begun offering a range of professional development and learning opportunities on the intersection of diversity and inclusion and the environmental sector. For example, the National Park Service in the US has a dedicated webpage to educate on the relationship between the National Parks and African American heritage titled *Places of Struggle, Community and Triumph* (www.nps.gov/subjects/africanamericanheritage). In the UK, many minority-led organizations provide learning resources for addressing racism and embracing diversity from an environmental perspective including the Black Environmental Network (www.ben-network.org.uk) and Land in Our Names (<https://landinournames.community/>). Many more resources exist on the topic of diversity and inclusion in a general sense and employers should prioritize such training as an essential component of professional development.

Finally, although I provided a wide range of recommendations within my articles, I also recognize that they are contextually dependent and should not be implemented without first gaining an understanding of the diverse lived experiences among and within different minority ethnic communities surrounding a PA. As Morris et al. (2011) describe, “[t]his variation weakens any argument for a ‘one-size-fits-all’ approach to bringing about equality of access and strengthens the case for targeted interventions that are tailored to the specific needs of individuals and groups” (p. 391). I concur with this need for highly targeted strategies which will

be particularly important for those who are currently non-users of PAs. For example, in their evaluation of five woodland projects that were part of the Active England program, O'Brien and Morris (2009) found that "facilitated access", where groups were brought to the site and provided with guided taster activities was essential for engaging non-users from minority ethnic communities. I advocate for the use of facilitated access and other such targeted interventions as an essential component of the PA management toolkit.

5.5 Constraints to fostering equitable access to protected areas

There exist many constraints to the implementation of recommendations presented in this thesis. In this section, I discuss three of these constraints that I have identified, from the literature and through my own experience with PA management organizations, as presenting a particular challenge.

First, I note that many of the recommendations presented in this thesis relate to non-spatial aspects of management (e.g., ensuring information and images are inclusive, offering a wide range of activities, ensuring volunteers are representative of surrounding communities). The effective design and implementation of such non-spatial interventions requires a strong understanding of the needs of surrounding communities (Stodolska, 2015). Unfortunately, research in support of the *Outdoors for All* strategy suggests that one of the major barriers for engaging with minority ethnic communities from the perspective of environmental organizations is a "lack of knowledge and experience of working with [these] communities" (Evison et al., 2013, p. 6). Furthermore, non-spatial interventions are not traditionally part of outdoor recreation planning and management strategies which have focused on physical access, design, and managing trade-offs between outdoor recreation and ecological integrity (Morris et al., 2011). Therefore, to ensure that management bodies are equipped with the skills needed to effectively design and implement non-spatial interventions, additional positions might be needed, for example, in communications and community engagement.

Second, but related to the need for additional skill sets to be added on PA management bodies, resource constraints have the potential to act as a particularly critical challenge to improving equity in access. In Chapter 2, survey respondents often described resource constraints as

underlying their inability to collect data on user diversity. Declining government funding was also identified as a primary challenge within most of the management plans that I consulted for Chapter 2. Inadequate funding has also been identified as a primary barrier to improving green space access within much academic and public sector research in the UK (Curry et al., 2001; Evison et al., 2013; Glover, 2019; Public Health England, 2020). When available, funding also tends to be for short-term projects, limiting their potential legacy and effectiveness. Most of the recommendations I present in this dissertation require at least a minor injection of resources, be it in the form of infrastructure, time, or additional staffing requirements. As a result of the ongoing COVID-19 pandemic, attaining public sector funding is expected to be increasingly more competitive. Therefore, PA management bodies will need to become highly flexible and creative in their fundraising strategies, combining several objectives within applications to address multiple funding priorities. Positively, there exist a wide variety of funding opportunities for projects that address health and wellbeing objectives, as well for initiatives which target groups that have been the most impacted by COVID-19 which includes minority ethnic communities. Therefore, linking activity to such objectives presents a valuable funding opportunity to address access barriers.

Finally, I expect that some of my recommendations would be met with skepticism and opposition from decision makers and current PA user groups due to discriminatory stereotyping and/or given perceptions that they threaten wilderness “ideals” (Ordóñez-Barona, 2017). For example, Panelli et al. (2009) found that white managers often believed a lack of visitation by minority ethnic communities was due to disinterest. In their review of Northwest European research on immigrants’ use and perceptions of nature, Kloek et al. (2013) termed the failure to recognize the access barriers experienced by minority ethnic groups as an “indifference to difference”, describing how “[s]taff members often perceived nature as open to all and did not (want to) promote it to special, under-represented groups” (130). The preferences of minority ethnic communities are also perceived by some as conflicting with established conservation principles (Buijs et al., 2009; Fraser & Kenney, 2000). Suckall et al. (2009) describe, for example, how permitting a wider range of activities in PAs could be met with opposition for this reason: “whilst deregulation of the park may attract a more diverse range of visitors, it may also create discontent among the ‘Romantics’” (1202). Such dichotomous thinking is characteristic of

white environmentalism which limits creativity in how a space could be planned and managed for the benefit of nature and all surrounding communities. Overcoming such barriers will not be easy and will require advocates for equity and environmental justice to champion new ideas and challenge established norms and ideologies.

5.6 Embracing plurality in protected area governance: Reflections for planning theory and practice

Throughout this thesis, I highlight the power and value imbalances that currently exist within UK PA governance and how this contributes to accessibility barriers experience by minority ethnic communities. I provide evidence in support of PA management planning that takes better account of the diversity of values, motivations, and interests that are embedded within communities. I also outline how engraining inclusive participatory processes within PA governance is necessary to embed such plurality within decision making. However, as described in the previous section, there exist many constraints that could impede the effective implementation of such participatory approaches. Considering these barriers, and the many complex and often contrasting perceptions of stakeholders, how can equitable consideration of diverse interests be legitimately integrated within PA planning processes? In this section, I explore how two planning theories, advocacy planning and communicative planning, can be drawn upon to guide the development of equitable PA governance. Both theories dispel the notion that planning is a value free process, recognizing and seeking to diminish power differentials within the planning system.

Advocacy planning theory revolves around reducing power differentials between governing institutions and citizens by framing the planner as an advocate for marginalized communities within the planning process (Davidoff, 1965; Reardon & Raciti, 2019). Proponents of this theory contend that the planner should take an active role in advancing the interests of those who have traditionally been overlooked within decision-making (Benner & Pastor, 2015). Theorists suggest that the planner's role involves translating stakeholder perspectives into the technical language applied within planning (Davidoff, 1965). However, advocacy planning also involves mobilizing marginalized citizens and aiding them in building capacity (Harwood, 2003).

Advocacy planning theory could be drawn upon to inform the design of a more equitable PA

governance approach that does not marginalize the interests of minority ethnic communities and other underrepresented groups. I suggest that the PA management body should include a dedicated engagement officer to advocate for marginalized voices. This representative would go beyond gathering the perceptions of these communities; they would also support these communities in engaging with participatory processes. Ideally, this officer would be recruited from within these communities as this would contribute to the establishment of trust and ensure a high degree of local knowledge. Although adding such an engagement position has the potential to contribute to greater planning equity, the officer, and the communities whom they represent and support, must also be afforded a meaningful degree of decision-making power to overcome the potential for their voices to be overlooked in favor of the status quo.

Although the advocacy planning movement has had significant influence over planning practice, it been subject to criticism. Among other reasons, the theory has been critiqued for perpetuating the superiority of expert, scientific knowledge through the need to translate community values and worldviews into the technical language of planners (Mäntysalo, 2005). This process can obscure alternative knowledge systems and overlook opportunities to build intercultural understanding through effective communication and knowledge sharing. In the case of PAs, translating diverse worldviews relating to the human-nature relationship into the technocratic approaches typically applied within PA governance would delegitimize the value of these alternative perspectives. Therefore, I suggest that communicative planning theory could also be applied to PA governance to reduce tensions among stakeholders and foster collaboration.

Communicative theory frames planning as a process of constructive communication across stakeholders with the aim of consensus building and furthering inter-community understanding (Habermas, 1984; Healey, 1997). Stakeholders are brought into the decision-making process and a high level of understanding is achieved through respectful and rationale dialog in which actors are encouraged to clearly communicate their values and worldviews (Mäntysalo, 2005; Perera, 2019). Language is paramount and planners are framed as facilitators of dialog who assist stakeholders in achieving this clarity and reaching a consensus (Fainstein, 2000). In this thesis I identified that despite variation in outdoor recreation motivations, preferences, and worldviews relating to the human nature relationship, green space visitors derived highly similar benefits

from nature. PA management bodies and stakeholders would be well served by an understanding of both these shared benefits, as well as the varied ways in which stakeholders conceptualize the human-nature relationship. Given the substantial differences between collectivist and romantic conceptions, fostering intercultural understanding is likely to require a high degree of communicative clarity, time, and trust. I suggest, however, that the opportunity for clear dialog across communities would significantly contribute to outdoor recreation management that better meets the needs of all. Such communication could highlight shared values and provide greater clarity on actions that could improve access which, as I have previously discussed, are often relatively simple (e.g., greater diversity in website imagery, re-focusing a walking group to address loneliness). Therefore, drawing on communicative theory could assist PA staff and stakeholders in overcoming stereotypes and assumptions relating to access and values.

Although drawing on communicative planning theory could contribute to greater intercultural understanding, one of the main critiques of this theory as it originated has been that it does not give sufficient consideration to existing power differentials (Perera, 2019). Indeed, given the significant inequality in power relations within PA governance, it would be naive to assume that even highly effective dialog would be enough to bring about adequate consideration of alternative worldviews. Power imbalances have existed since the formation of most PAs and decentralizing this authority will likely be a gradual and incremental process. Therefore, I suggest that communicative processes should be combined with support and advocacy for the voices of marginalized communities. Drawing on and combining aspects of communicative and advocacy planning theory could prove highly beneficial to PAs endeavoring to institute some form of co-management. It should not be assumed, however, that PA managers and staff have the experience and capabilities necessary to effectively apply the tools drawn from these planning theories. Indeed, I suggest that a shift in governance structure must be accompanied by the identification of knowledge gaps and related training programs and opportunities.

Engaging in planning processes constitute the primary functions of PA managers (e.g., stakeholder engagement, guiding the long-term vision and management of the PA), even though these processes might not always be referred to as “planning”. Despite this fact, planning theory, including advocacy and communicative theory, is rarely taught within university programs from

which PA management staff tend to emerge (e.g., natural resource management, conservation). I suggest that this is largely because the field of PA management is, as Lane (2001) describes, “largely unrelated to the theorizing of urban and regional planners” (662). Similar theories of community engagement have, however, developed within the PA literature and the two fields have largely converged on similar theoretical perspectives (Lane, 2001). Nevertheless, I contend that university departments training potential PA management staff could benefit from engaging in planning theory, particularly that related to community engagement and participation. Equity in conservation and environmental decision making is increasingly a core learning component of environmental science programs. However, such programs typically remain embedded within rational-comprehensive foundations and the “soft” skills and theory fundamental to effective community engagement and equitable governance such as mediation and the establishment of trust are often not explored or taught in a comprehensive way. Particularly considering the interdisciplinary tasks typically expected of PA staff, I suggest that environmental departments must shift to more meaningfully embrace the social sciences and engaging with planning theory could prove particularly beneficial in this regard.

Finally, reflecting upon the many uses and values associated with PAs, I was reminded of one of the first planning theorists I studied in this doctoral program: Jane Jacobs and her influential diatribe, *The Death and Life of Great American Cities* (2016). Jacobs criticized expert driven, top-down planning traditions for simplifying the lived experience of those in “disadvantaged” neighborhoods and overlooking the cultural vibrancy and history that contributed positively to community connectivity and wellbeing in these settings. Drawing on Jacobs critiques, I suggest that we must be careful when broadly labelling a community as “underrepresented” within a PA. Although it is critical that we identify and address accessibility barriers experienced by minority ethnic groups, PA organizations should also seek to understand how these communities already interact with and value PAs. Assumptions should not be made about the level of connection or value a community associates with a PA based on their level of usership. Despite rarely having the opportunity to interact with a PA, the space might still form a valued component of identify and community culture. Failing to explore and acknowledge such existing connections between PAs and “underrepresented” communities could lead PA organizations to repeating the same

errors identified by Jacobs and these organizations would also lose the valued opportunity to build on existing cultures, histories, and relationships in actions targeting improved accessibility.

5.7 Limitations and recommendations for future research

The three articles within this thesis were each subject to their own set of limitations. As these are outlined within the articles themselves, I focus this section on aspects of the thesis as a whole that limit its conceptual and theoretical scope. I also describe several recommendations for future research that would address these gaps, building off the contributions of this thesis.

First, none of the articles within this thesis allowed for a detailed understanding of intra-ethnic variation in perceived access to PAs. Chapter 4 provided a general understanding of this variation within Muslim communities, but this was not the primary purpose of the study. Similarly, I did not explore intersectionality in detail as it relates to green space access, again aside from a brief discussion in Chapter 4. Ethnicity is, of course, only one aspect of identity that will affect the lived experiences of green space users. For example, Powers et al. (2020) showed that park use was lowest among people of color, the elderly, and individuals with less education, with visitation being lower still for those who fell into more than one of these demographic groups. I recommend, therefore, that future in-depth, qualitative research should explore intersectionality and perceived access to PAs, particularly within minority ethnic communities. Such detailed exploration could go beyond objective variables such as age and income to provide an understanding of the relationship between more complex dimensions of identity and perceived access to PAs.

Second, although this thesis delivered valuable insight into the minority ethnic access barriers that are perpetuated at an institutional level, the methods did not allow for an in-depth exploration of the reasons underlying these barriers (e.g., what institutional factors limit the holistic integration of diversity and inclusion objectives?). As mentioned earlier, prior research suggests that systematic indifference to ethnic inequalities has contributed to the continued exclusion of minority ethnic communities (Agyeman, 2001). However, more qualitative study is needed to explore ethnicity and outdoor recreation from the perspective of PA staff. Such

research would provide a more detailed understanding of their perceptions of equitable access and potential solutions and barriers.

As described within my positionality statement, another limitation of this research is the fact that none of my articles involved participants in the process of study design. Therefore, although this dissertation applied qualitative, flexible methods, it was not participatory. I recommend that future research in the field of ethnicity and outdoor recreation should integrate more in-depth, participatory methods in which minority ethnic communities (and other underrepresented groups) are included in every stage of the research process. Detailed case studies in which researchers worked closely with underrepresented groups and PA managers, from an initial evaluation of inclusion and diversity through to the implementation of recommendations, would be a particularly valuable addition to the literature on outdoor recreation and ethnicity in PAs.

Finally, both articles within this thesis that explored green space access from the perspective of users (Chapters 3 and 4) focused predominantly on urban PAs. While this focus does address a gap with the cultural ecosystem service literature which has largely been undertaken in rural contexts (Kosanic & Petzold, 2020), most European research on access to ethnicity and green space use has similarly been undertaken in urban environments (Kloek et al., 2013). Therefore, although most of the access barriers identified are likely to be present in both urban and rural PAs, I expect that some of them will be exacerbated within the countryside. For example, some participants in Chapter 4 described experiences of racism as barriers to accessing the countryside. Such rural racism is well documented within the literature (Chakraborti & Garland, 2004; Garland & Chakraborti, 2006). More research is thus needed to explore ethnicity, CEB, and perceived access to rural PAs in Western countries. A comparison of perceived access between rural and urban PAs would be particularly useful as it would assist PA planners and managers in making more efficient, context specific use of their resources targeting diversity and inclusion.

5.8 Conclusion

Through three distinct articles, this research contributed to theory on ethnicity and perceived access to PAs from the perspective of PA management planning. Most notably, I demonstrated

how the ways in which access is addressed within the PA management planning process is ill aligned with the needs, experiences, and values of minority ethnic communities. These disparities reflect institutionalized discrimination with PA management, largely brought about by the white environmentalist ideologies that are embedded within the management planning process. In addition to these theoretical advances, I suggest a wide variety of broad and more detailed actions that would contribute to the more equitable design, management, and planning of PAs in the UK and beyond.

This research adds evidence to the growing body of literature revealing the critical role of non-spatial variables to perceived access and suggests that subjective measurements of access are necessary to explore equity in outdoor recreation provisioning. Indeed, subjectivity is inherent to many non-spatial dimensions of access such as confidence and belonging which are shaped by factors including cultural background and prior experiences. This thesis also highlights the many decisions made within the PA management planning process that are shaped through implicit assumptions about the human-nature relationship and the type of user to whom the space belongs. Most notably, PA organizations largely hold a dualistic view of humans and nature and this worldview is reflected across many aspects of space design and management, from the images selected for promotion to the types of activities perceived to foster a connection to nature. I add my voice to calls for PAs to move beyond the wilderness ideology which continues to be deeply embedded within all aspects of their planning and management. Until power is more equitably distributed within the decision-making process, PAs in the UK will remain exclusive spaces, far from representing the country which they are meant to serve.

On several occasions within this thesis, I discussed the need to avoid ethnically homogenizing communities. Reflecting upon my research, however, it has occurred to me that the term “white environmentalism” is flawed in this very way through allocating belonging of a particular worldview to those who are white. This is problematic on two counts. First, it homogenizes white communities through uniformly assigning them to a Romantic conceptualization of nature. Second, the terminology excludes those from a non-white background who hold such Romantic perceptions. Of course, in using this term I was not implying that all individuals of a certain background inherently prescribe to a particular worldview, but rather that ethnicity is

proportionally reflected in the White environmentalist - collectivist distinction. However, as I have come to greatly appreciate over the course of this thesis, language matters. Therefore, I suggest that future research should adopt more inclusive terminology for describing human-nature relationships and environmental worldviews. For example, conceptualizing these worldviews on a spectrum from romantic to collectivist would both acknowledge the diversity of values associated with nature and human-nature interactions, as well as avoid the ethnic positioning that is reflected in the term “white environmentalism”.

PAs provide many valued benefits that greatly contribute our mental, physical, and social health and wellbeing. From an environmental justice perspective, these benefits should be equitably distributed throughout our communities. Unfortunately, this research suggests that PAs in the UK fall considerably short of ensuring equitable access for all, despite being legally obligated to do so. In pursuit of this objective, many questions have been considered in academia and the public sector: *Is this a safe space? Is this an enjoyable space? Is this an inclusive space?* These questions cannot be holistically answered through objective measurement. What this thesis and a growing body of literature has demonstrated is that the meaning of safety, enjoyment, and inclusivity is ascribed through individual perception, a reflection of our many varied and unique lived experiences.

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Appendices

Appendix A

The survey instrument used in Chapter 2, administered through the software Qualtrics (Version April 2019 – August 2020, Provo, UT, USA., www.qualtrics.com).

Section 1: Participant Information

Question 1.1: What is the statutory designation of the protected area(s) for which you play a role in outdoor recreation planning and programming? (check all that apply) (multiple choice – select multiple)

- a. AONB
- b. National Park
- c. National Nature Reserve (NNR)
- d. Local Nature Reserve (LNR)
- e. Ramsar Wetland
- f. Special Area of Conservation (SAC)
- g. Site of Special Scientific Interest (SSSI)
- h. Special Protection Area (SPA)
- i. Biosphere Reserve
- j. Other

Question 1.2: If you selected 'other', please indicate all other designations below: (open-ended)

Question 1.3: What is your general title within your organization and what role do you play in the design of outdoor recreation plans and programs? (open-ended)

Section 2: Outdoor Recreation

Instructions (this definition was also provided in the survey introductory information):

As a reminder [this definition was also provided in the survey introductory information], please apply the following scope for the term outdoor recreation:

Outdoor recreation refers to activities taking place in open spaces protected for their natural heritage by a statutory designation. These activities can fall into any of the following 10 categories (list adapted from a report for Natural England's outdoor recreation strategy, 2005):

1) Just being outdoors; 2) Creative activities; 3) Health or relaxation; 4) Physically active commuting (e.g., walking, cycling); 5) Informal games and play; 6) High adrenaline activities; 7) Commercially run activities; 8) Study of the natural environment; 9) Educational activities and programs; 10) Conservation volunteering

Question 2.1: Please fill in the blank. Providing opportunities for outdoor recreation to the public is _____ to the success of conservation efforts? (multiple choice – select one)

- a. Not important
- b. Minimally important
- c. Moderately important
- d. Highly important
- e. Extremely important

Question 2.2: Please describe how you think providing outdoor recreational opportunities to the public could impact conservation success. (leave blank if you checked 'not important' in the question above) (open-ended)

Question 2.3: The literature indicates that recreating outdoors can deliver all of the following benefits to people (listed on the left below)*. From this list, please select and rank the 4 benefits you aim to deliver to the public most often when designing outdoor recreation plans and programs. (select and rank four) (the order that these were shown was randomized for each survey)

- Facilitate social interaction
- Provide a stimulus for inspiration & creativity
- Deliver aesthetic pleasure
- Improve physical health
- Reduce stress & anxiety
- Provide spiritual enrichment
- Provide a sense of heritage & place
- Improve cognitive ability & functioning
- Increase environmental knowledge
- Provide a sense of fun & excitement
- Increase confidence in nature-based settings
- Provide a sense of oneness with nature

*Keniger, L. E., Gaston, K. J., Irvine, K. N., & Fuller, R. A. (2013). What are the benefits of interacting with nature? *International journal of environmental research and public health*, 10(3), 913-935.

Question 2.4: Now, please describe why you consider the benefit you ranked as #1 above most often when designing outdoor recreation plans and programs? (open-ended)

Question 2.5: Of the benefits that you did not select in the previous question, are there any benefits that you rarely or never consider in the design of outdoor recreation plans and programs? (multiple choice – select multiple)

When designing outdoor recreation plans and programs, I rarely or never aim to _____.
(check all that apply) (only those options that weren't selected in Q 2.3 will appear here)

- Facilitate social interaction
- Provide a stimulus for inspiration & creativity
- Deliver aesthetic pleasure
- Improve physical health
- Reduce stress & anxiety
- Provide spiritual enrichment
- Provide a sense of heritage & place
- Improve cognitive ability & functioning
- Increase environmental knowledge
- Provide a sense of fun & excitement
- Increase confidence in nature-based settings
- Provide a sense of oneness with nature

Section 3: Outdoor Recreation and Diversity

Instructions:

Questions in this section relate to the socio-cultural diversity of protected area users. When thinking about the concept of diversity, please consider the term in its broadest sense (i.e., including all types of diversity: gender, cultural, age, socio-economic, etc.).

Question 3.1: How often are your organization's recreation plans and programs targeted at specific socio-cultural groups (e.g., children, older adults, families, recent immigrants, ethnic minorities)? (multiple choice – select one)

- Never
- Rarely
- Sometimes
- Often
- Almost always

Question 3.2: Are you concerned about the level of socio-cultural diversity associated with users of your organization's protected area(s)? (multiple choice – select one)

- Not Concerned
- Minimally Concerned
- Moderately Concerned
- Highly Concerned

Extremely Concerned

Question 3.3: Is your organization undertaking any steps/actions to increase the socio-cultural diversity of users who engage in outdoor recreation within your protected area(s)? (Y/N)

Yes

No

Question 3.4: Is any data collected within your protected area(s) related to the socio-cultural diversity of recreational users? (Y/N)

Yes

No

Instructions (these instructions were added to motivate the participant to complete the survey):

Thank you for your contribution to my research thus far. I understand you are busy and greatly appreciate your time and insight. Below is a final, optional, section that asks you to expand on answers relating to diversity that you provided on the previous page. I would be grateful if you could take 5min to complete it, but if you would prefer to end the survey now, simply click next at the bottom right of the page.

Question 3.5: Please describe your concerns related to the socio-cultural diversity of your organization's protected area users: (open-ended) (did not appear if participant selected 'Not Concerned' to Question 3.2)

Question 3.6: Please describe the steps/actions undertaken by your organization aimed at increasing the socio-cultural diversity of users who engage in outdoor recreation within your protected area(s): (open-ended) (did not appear if participant selected 'No' to Question 3.3)

Question 3.7: Please describe what type of data is collected related to socio-cultural diversity of protected area users. If publicly available, please provide details on how it can be accessed. (open-ended) (did not appear if participant selected 'No' to Question 3.4)

Appendix B

All protected area management documents analyzed in Chapter 2.

| Protected Area | Document type and link to access |
|--|--|
| Arnside and Silverdale AONB | Management Plan 2019 – 2024 https://www.arnsidesilverdaleaonb.org.uk/what-we-do/the-management-plan/ |
| Binevenagh AONB | Management Plan 2010 – 2020 https://ccght.org/publications/Management_Plan/Binevenagh_Management_Plan_06.10.pdf |
| Cannock Chase AONB | Management Plan 2019 – 2024 https://www.cannock-chase.co.uk/publications/aonb-management-plan/ |
| Causeway Coast AONB | Management Plan 2013 – 2023 https://causewaycoastaonb.ccgght.org/publications-library/ |
| Chilterns AONB | Management Plan 2019 – 2024 https://www.chilternsaonb.org/conservation-board/management-plan.html |
| Cornwall AONB | Management Plan 2016-2021 https://www.cornwall-aonb.gov.uk/management-plan |
| Dedham Vale AONB | Management Plan 2016-2021 https://www.dedhamvalestourvalley.org/managing/about/what-we-do/how-we-work/ |
| East Devon AONB | Partnership Plan https://www.eastdevonaonb.org.uk/about/aonb-management-plan |
| Forest of Bowland AONB | Management Plan 2019-2024 https://www.forestofbowland.com/management-plan |
| Lincolnshire Wolds AONB | Management Plan 2018-2023 https://www.lincswolds.org.uk/looking-after/lincolnshire-wolds-aonb-management-plan |
| Mendip Hills AONB | Management Plan 2019-2024 https://www.mendiphillsaonb.org.uk/caring-about-the-aonb/management-plan/ |
| Nidderdale AONB | Management Plan 2019-2024 https://nidderdaleaonb.org.uk/2019/07/26/2019-2024-management-plan/ |
| Ring of Gullion AONB | Management Action Plan 2017-2022 https://www.ringofgullion.org/about-us/ring-of-gullion-management-action-plan/ |
| Surrey Hills AONB | Management Plan 2020-2025 https://www.surreyhills.org/board/our-management-plan/ |
| Brighton and Lewes Downs Biosphere Reserve | Management Strategy 2014-2019 https://thelivingcoast.org.uk/about/publications |
| North Devon Biosphere Reserve | Strategy 2014-2024 https://www.northdevonbiosphere.org.uk/biospherestrategy.html |
| Broads National Park | Plan 2017 https://www.broads-authority.gov.uk/about-us/how-we-work/strategy |
| Northumberland National Park | Management Plan 2016-2021 https://www.northumberlandnationalpark.org.uk/about-us/committees-and-plans/management-plan/ |

| | |
|---|---|
| Peak District National Park | Management Plan 2018-2023 https://www.peakdistrict.gov.uk/looking-after/strategies-and-policies/national-park-management-plan |
| Brecon Beacons National Park | Management Plan 2015-2020 https://www.beacons-npa.gov.uk/the-authority/who-we-are/npmp/ |
| South Downs National Park | Partnership Management Plan 2020-2025 https://www.southdowns.gov.uk/partnership-management-plan/ |
| Alderney Wildlife Trust | Strategic Management Plan 2018-2023 https://www.alderneywildlife.org/about_the_trust |
| Cheshire Wildlife Trust | Strategy 2015-2020 No longer available online |
| Hampshire & Isle of Wight Wildlife Trust | Strategy: Wilder 2030 https://www.hiwwt.org.uk/our-strategy |
| Herefordshire Wildlife Trust | Vision 2020 https://www.herefordshirewt.org/what-we-do/2020-vision-wildlife |
| Herts and Middlesex Wildlife Trust | 5-Year Plan 2016-2021 https://www.hertswildlifetrust.org.uk/whatwedoabout-trust/news-and-publications |
| Leicestershire and Rutland Wildlife Trust | Strategy 2015-2020 https://www.lrwt.org.uk/how-were-run |
| London Wildlife Trust | Strategic Plan 2015-2020 https://www.wildlondon.org.uk/strategy |
| Norfolk Wildlife Trust | Business Strategy https://www.norfolkwildlifetrust.org.uk/about-and-contact/business-strategy |
| Scottish Wildlife Trust | Five-Year Plan 2017-2022 https://scottishwildlifetrust.org.uk/about-us/our-publications/ |
| Staffordshire Wildlife Trust | Strategy 2017-2020 https://www.staffs-wildlife.org.uk/sites/default/files/2018-11/Strategy%202017-2020%20-%20updated%20branding.pdf |
| Ulster Wildlife Trust | Corporate Strategy 2013-2020 https://www.ulsterwildlife.org/what-we-do/publications |
| Wildlife Trust for Birmingham and the Black Country | Strategy 2017-2022 https://www.bbcwildlife.org.uk/mission |
| Wiltshire Wildlife Trust | Strategy 2015-2020 https://www.wiltshirewildlife.org/what-we-do |
| Worcestershire Wildlife Trust | Development Strategy 2017-2022 https://www.worcswildlifetrust.co.uk/about-us |

Appendix C

Chapter 3 semi-structured interview questionnaire.

Section 1: Green Use Patterns and Preferences

Questions 1.1: During the summer, about how often do you recreate in green spaces? (check the answer that most closely applies)

- | | | |
|---|---|--|
| <input type="checkbox"/> Almost every day | <input type="checkbox"/> 2-3 X per week | <input type="checkbox"/> Once a week |
| <input type="checkbox"/> 2-3 X a month | <input type="checkbox"/> Once a month | <input type="checkbox"/> 1-2 X during the summer |

Question 1.2: What types of activities do you **routinely** spend time doing in green spaces?

| | |
|---|--------------------------|
| Walking | <input type="checkbox"/> |
| Jogging/Running | <input type="checkbox"/> |
| Cycling | <input type="checkbox"/> |
| Games or sports (e.g., football) | <input type="checkbox"/> |
| High adrenaline sports (e.g., kayaking) | <input type="checkbox"/> |
| Fishing | <input type="checkbox"/> |
| Dog walking | <input type="checkbox"/> |
| Visiting an outdoor facility (e.g., playground) | <input type="checkbox"/> |
| Artistic activities (e.g., painting) | <input type="checkbox"/> |
| Wildlife Viewing (e.g., bird watching) | <input type="checkbox"/> |
| Picnicking | <input type="checkbox"/> |
| Just relaxing | <input type="checkbox"/> |
| Volunteering | <input type="checkbox"/> |
| Other: | <input type="checkbox"/> |

Question 1.3: If you were to design your ideal green space, what natural and/or built features and characteristics would you include?

Section 2: Relationship to Nature

Question 2.1: Why do you choose to spend your leisure time in a green space opposed to somewhere else? What makes the activities you mentioned above better in a green space?

Question 2.2: Could you please list (verbally or in writing) the top three reasons why you **value or appreciate nature**?

Question 2.3: Please rate each of the following 7 statements based on *the way you generally feel*. There are no right or wrong answers.

| | 1 Strongly Disagree | 2 Somewhat Disagree | 3 Neutral | 4 Somewhat Agree | 5 Strongly Agree |
|---|------------------------------------|------------------------------------|--------------------------|---------------------------------|---------------------------------|
| I think of the natural world as a community to which I belong | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| When I think of my life, I imagine myself to be part of a larger cyclical process of living | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I often feel a kinship with animals and plants | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel as though I belong to the Earth as equally as it belongs to me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I often feel part of the web of life | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel that all inhabitants of Earth, human, and nonhuman, share a common 'life force' | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Like a tree can be part of a forest, I feel embedded within the broader natural world | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Section 3: Demographic Information

Question 3.1: Please select the **ethnic group(s) that you identify with** from the list below (check all that apply):

Asian/Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background

Black/African/Caribbean/Black British

- African
- Caribbean
- Any other Black/African/Caribbean background

White

- English/Welsh/Scottish/Northern Irish/British
- Irish
- Any other white background

Mixed/Multiple ethnic groups

- White and Black
- White and Asian
- Any other Mixed ethnic background

Other Ethnic Group

- Arab

Any other ethnic group

Question 3.2: If you selected 'other', please identify any other **ethnic group(s)** you identify with below:

_____ ; _____ ; _____

Question 3.3: Which country(ies) were you **brought up** in?

Question 3.4: Which country was your **mother born** in?

Question 3.5: Which country was your **father born** in?

Question 3.6: Please indicate which **gender(s)** you identify with:

Question 3.7: Please select your **age category**:

Under 30 30-40 41-60 Over 60

Question 3.8: Please describe your **occupation** and your **spouse/partner's occupation** (if applicable):

My occupation: _____

Spouse/partner's occupation (If applicable): _____

Appendix D

Template semi-structured interview questions for Chapter 4.

Section 1: Motivations for visiting green spaces and relationship to nature

1. When people from your Muslim community do visit green spaces, what types of activities do they commonly participate in? From what you've perceived, do the activities differ between genders? What about age groups or people who were born in different countries? What about Muslim people with different interpretations of the faith? Why do you think this is?
2. What features/characteristics within a green space would accommodate these activities?
3. Are there any other features or characteristics that are desirable for someone who is Muslim (example, be welcomed from a cultural or religious perspective)?
4. Finally, would you feel uncomfortable if there weren't many others from your community or who shared your faith or your interpretation of the faith in a green space? Do you think other Muslims would be comfortable? Do you think there would be any age or gender differences?
5. Could you describe how nature is described in Islam? What about people's relationship to nature?

Section 2: Website review – Identifying barriers and opportunities

Participants are sent website links for Walthamstow Wetlands.

1. I would first just like to hear your general thoughts. Is there anything that you noticed on the website that would hinder or help someone who is Muslim from wanting to use the space?
2. Ask if not brought up by participant in Q1: Was there anything you didn't understand on the website? Do you think the language used was inclusive? Why or why not? How could this be changed to be more inclusive?
3. Ask if not brought up by participant in Q1: If we turn to the *programs/news* section of the website, are these things that you think would appeal to the Muslim community or certain groups within the Muslim community? What types of activities do you think could be added that would appeal to Muslims?
4. Ask if not brought up by participant in Q1: Is there anything on the website that you think would make someone who is Muslim feel excluded? How do you think the website could be changed to make a Muslim person feel more welcomed and included?
5. Ask if not brought up by participant in Q1: Were there any specific aspects of the website that you thought would attract people who are Muslim?

Section 3: Virtual tour of Walthamstow Wetlands - Identifying barriers and opportunities

Participants are given a virtual tour of Walthamstow wetlands using photos through Power Point.

1. Like before, I would first just like to hear your thoughts. Is there anything that you noticed in the space or café that would help or hinder someone who is Muslim from wanting to use the space?
2. Ask if not brought up by participant in Q1: Earlier you brought up several activities that people who are Muslim really like to do in green spaces. Do you think that this space facilitates those activities? Why or why not? What do you think they could change about it to better accommodate these activities?
3. Ask if not brought up by participant in Q1: Earlier you also listed a few features/characteristics (cultural and religious needs) that were desired by the Muslim community. Do you think this space

has enough of these features/characteristics? Why or why not? What do you think they could add/take away to better accommodate/welcome people who are Muslim?

4. Ask if not brought up by participant in Q1: Do the physical surroundings (features and layout) make you feel safe? Do you think that other Muslims would feel safe/unsafe? Why or why not? How do you think the space could be changed to make Muslim people feel safer?
5. Ask if not brought up by participant in Q1: Looking at the terminology presented on the signage, do you think its inclusive? Why or why not? How could this be changed to be more inclusive?
6. Ask if not brought up by participant in Q1: Is there anything specific you've noticed that you think would make someone who is Muslim feel excluded or included? How could this be changed to be more inclusive?

Section 4: Demographic Information

1. Which ethnic group(s) do you identify with:

_____ ; _____ ;

2. Which country(ies) were you brought up in? _____ ; _____

3. Which country was your mother born in? _____

4. Which country was your father born in? _____

5. What is your gender? _____

6. Which of the following age categories do you belong to?

30 or under 31-40 41-50 51-60 61-70 Over 70

7. Could you describe your religious identify?

8. Would you like to add anything to your previous responses or go back to any questions? Do you have anything else you'd like to add before finishing the interview?

9. Finally, do you know of anyone else who might be interested in participating in this study? If so, would you be able to, with their permission, provide an email introduction or pass me their email?