

## **A(nother) time for nature? Situating nonhuman nature experiences within the emotional transitions of sight loss**

**Authors:** Sarah L Bell<sup>a\*</sup> and Ronan Foley<sup>b</sup>

\* Corresponding author

<sup>a</sup> European Centre for Environment and Human Health, University of Exeter Medical School, Knowledge Spa, Treliske, Truro, Cornwall, TR1 3HD, UK. Email: [Sarah.Bell@exeter.ac.uk](mailto:Sarah.Bell@exeter.ac.uk).

<sup>b</sup> Department of Geography, Maynooth University, Ireland.

### **Highlights:**

- Disabling life course norms can exacerbate feelings of loss with sight impairment
- Care is needed in generalising benefits of nature through transitions of sight loss
- Social scaffolding and creativity can enable supportive nonhuman encounters
- A more inclusive identity politics is needed in nature-wellbeing policy & practice

**Abstract:** Sight impairment is experienced by approximately 253 million people worldwide, including people of all generations, at all life course stages. Caught between past and present embodiments of the world, people often express feelings of loss with the onset of sight impairment. This paper examines the role of nonhuman nature encounters as a contingent resource amongst individuals navigating these emotional transitions. It responds to recent calls to attend to the life course in both critical disability studies and the growing body of work linking

nonhuman nature relations to human wellbeing. The paper draws on findings from a qualitative study that combined in-depth narrative interviews with in situ go-along interviews to explore how 31 people with sight impairment in England describe and experience a sense of wellbeing (or otherwise) with nature across their everyday lives and life trajectories. The data were analysed using inductive narrative thematic analysis. While nonhuman nature encounters were valued by many participants in promoting a sense of freedom, relatedness, pleasurable sensory immersion, opportunities for exploration and 'skilling up', this paper cautions against generalised or overly Romantic tropes of what nonhuman nature can 'do' through key sight loss junctures, and for whom. It highlights the value of providing timely and sensitive social scaffolding and nurturing creativity to open up meaningful opportunities to engage with nonhuman nature and to counter feelings of loss exacerbated by identity-limiting life course narratives and disability stereotypes. Informed by the stories shared by participants to chart and situate their experiences of sight loss, we call for a new identity politics within and beyond the growing movement to 'connect' people to nonhuman nature for wellbeing; a politics that affirms diverse forms of more-than-human embodiment, recognising how and why such relations may weave into – and indeed out of – people's varied, interdependent life course trajectories.

**Key words:** England, sight impairment, nonhuman nature, emotion, disability, life course, narrative inquiry.

## 1. Introduction

Sight impairment is experienced by approximately 253 million people worldwide (Bourne et al., 2017), including people of all generations and at all stages of the life course. Some people are born with a sight condition. Their use (or not) of visual perception may remain relatively stable through

the life course, or further changes may ensue, for example with the onset of new or progressive conditions. Other individuals experience sight impairment later in life, developing for example with age, through injury or through linked conditions such as diabetes. People experiencing these changes often express feelings of loss (Nyman et al., 2012), caught between past and present embodiments of the world (Macpherson, 2009). Such shifts require continuous and dynamic forms of adjustment (Murray, McKay & Nieuwoudt, 2010), often entailing significant emotional 'work' (Marquès-Brocksopp, 2011).

In this paper, we examine the role of nonhuman nature encounters in supporting individuals through emotional transitions of sight loss. More-than-human nature settings (e.g. parks, gardens, woodlands, rivers, coastlines etc.) are politically and culturally celebrated in many Western contexts for their potential benefits to human wellbeing (Frumkin et al., 2017), including the promotion of physical activity, social interaction, cognitive restoration and emotional support (Hartig et al., 2014). Although implicit rather than explicit, ableism is embedded within much of this research (Bell, 2019a; Kafer, 2017), informed by a 'cultural imaginary associated with self-sufficiency, autonomy and independence' (Goodley et al., 2019, p.986). Ableism is particularly resonant within recent efforts to identify and distil an 'optimal' or 'healthy dose' of nature (Cox et al., 2017; Shanahan et al., 2016); a dose that risks standardising or 'normalising' people's rich and varied nonhuman nature encounters, in lieu of making space for a plurality of experiences situated within the embodied and relational priorities of people's everyday lives and life trajectories (Sumner et al., In press).

Countering these homogenising tendencies, we suggest value in understanding how and why nonhuman nature (material or imagined) can wane in and out of people's lives as relational configurations change in line with shifting embodiments, life stage norms and transitions. Focusing on people experiencing sight loss, we respond to recent calls to examine how critical junctures or

turning points can influence opportunities for – and the emotional significance of – such nonhuman nature encounters through the life course (Douglas, Lennon & Scott, 2017; Pearce, 2018). We draw on the findings of an in-depth qualitative study that examined how people with sight impairment in the UK describe and experience a sense of wellbeing (or otherwise) with varied forms of everyday nature. Of the 31 participants who took part, 28 had experienced stages of sight *loss* through their lives (three participants were fully blind from birth).

We start by discussing the emotional shifts that can occur at critical junctures of sight loss, and the social, physical and embodied dimensions that contribute to these, before reflecting on the potential for nonhuman nature to support people through such shifts. We then introduce the Sensing Nature study, before examining how and why feelings of loss can unfold with the onset or progression of sight impairment, and the varying influence of nonhuman nature as a supportive resource through these transitions.

### ***Sight impairment, loss and critical geographies of disability***

As noted by prominent disability activist, researcher and writer, Eli Clare (2017, p.252):

*“For many disabled and chronically ill people, there is a time before our particular bodily impairments, differences, dysfunctions existed. What we remember about our bodies is seductive. We yearn; we wish; we regret; we make deals”.*

Such yearning amongst people with sight impairment may stem in part from the challenge of learning how to negotiate a sight-dominant world in ways that do not rely on sight (Saerberg, 2010), keeping a foot in each world without ‘belonging’ to either (Michalko, 1999). For many people, sight loss is not a linear journey, but rather ‘a series of changes and challenges’ (RNIB,

2015, p.5), which require constant and repeated adjustment and adaptation. A pervasive sense of fear can dominate during the early stages of sight loss (Rudman & Durdle, 2008). This may include a fear of embodied harm through not being able to 'read' everyday environments in non-visual ways, and a fear of 'not being able to interact in their world in ways that supported personally valued qualities associated with one's sense of self and lifestyle' (2008, pp.111-112).

Qualities of worldly interaction that are *personally* valued are often shaped by *collective* social norms and cultural values that reinforce sighted modes of perception as a desirable 'standard', with deviations from this standard framed as somehow inferior or inadequate (Bolt, 2019). Feelings of loss with the onset of sight impairment, and a reluctance to accept a 'devalued identity of being blind' (Nyman et al., 2012, p.975), demonstrate the 'ontological damage done to disabled people whilst living in a society that veers from not recognising disabled people as valued members of society to conceptualising disability solely in terms of deficit and lack' (Goodley, Liddiard & Runswick-Cole, 2018, p.208). Dominant social and cultural norms can 'affectively box people in' (2018, p.200), internalising negative understandings of what they can be and do through life with sight impairment (Reeve, 2002). Barriers to *doing* include the disabling physical and social qualities of everyday contexts, as well as entrenched barriers to *being*; that is, barriers that foreclose or delimit perceptions of 'a life worth living' (Fritsch, 2015, p.51).

Biomedical models of disability typically lodge the 'emotional distress' of disability in individual body-minds (Clare, 2015), while social models foreground the disabling (and emotionally debilitating) role of exclusionary environments, social norms, policies and practices (Thomas, 2007). Both approaches emphasise the *collective* experiences of disabled people in society, albeit in different ways (Priestley, 2014). Yet there are risks in over-coding or over-simplifying this collective experience given the varied ways in which people come to be affected by impairment and by disabling societies (Priestley, 2003). Instead, there is a need to witness how

‘different personal histories come tangling into our collective one’ (Clare, 2015, p.117). In particular, to explore how shifting temporal and socio-spatial geographies of impairment onset and progression through the life course may shape experiences of disability, emotionally and practically.

Informed by linear life course norms perpetuated by the ‘unmarked human subject’, disabled lives are often deemed ‘out of time’ (Rice et al., 2017, p.216). Narratives that centralise disabled lives can ‘reclaim and redefine the concept of an ordinary life, and of normality in the life course progression’ (Priestly, 2001, p.247), foregrounding the ‘vagaries and volatilities of human lives, embodiments and relationships’ (Rice et al., 2017, p.223). They can encourage a move beyond able/disabled binaries to understand how bodily capacities are always contingent and emplaced, shaped in and through relationships forged with other people, technology, material resources, and nonhuman life (Hall & Wilton, 2017). We explore such narratives in this paper in the context of people’s shifting encounters with nonhuman nature through the onset/progression of sight impairment.

### ***Emotion, nature and sight impairment***

The potential for time spent with nonhuman nature to promote positive emotional, psychological and physiological transitions has been the focus of cross-disciplinary research for many years (Frumkin et al., 2017). However, as noted by Brown (2017, p.307), ‘the bodies of green space users are often invoked in environment-health studies as little more than vessels for eyes that look effortlessly across outdoor spaces in ways that seem to lead to psychological wellbeing’. As such, there is growing interest in the role of more sensuous nonhuman nature encounters in nurturing positive emotional transformations, tracing new ways of feeling and emphasising the affective importance of haptic experience and the whole-body tactility of moving through diverse outdoor

terrains (Spinney, 2006). For example, the sensorial pleasures of immersion whilst swimming and scuba diving (Phoenix & Orr, 2014; Straughan, 2012) have been described as a 'daily hard reset' from the emotional demands of everyday life (Throsby, 2013, p.15). Similarly, a 'quest to feel' underpinned the mobile encounters described by mountain bikers and walkers in Brown's (2017) study in Scotland. These participants discussed a sense of pleasurable renewal as the sensory hierarchies of the body shifted from visual to haptic, with the unpredictable upland and lowland terrains allowing them to 'play' with their kinaesthetic, proprioceptive and vestibular senses, feeling alive as they 'feel with' the material environment. Brown (2017, p.310) suggests the bodily jolts encountered whilst negotiating this rugged terrain both interrupt and reset detrimental bodily rhythms such as 'the constant looping of negative thoughts', precluding unwanted cognitive intrusion as consciousness forcibly shifts from mind to body.

Opportunities for these experiences can shift over time as the body learns new technical skills and sensory capacities, negotiating ever more complex, multi-textured and lively terrains and rhythms (Brown, 2017; Throsby, 2013). Reflecting such layerings, Foley (2017, p.48) examines how repeated engagement in open-air swimming practices can foster an embodied and emotional 'therapeutic accretion'. A relatively small but growing body of literature examining nonhuman nature experiences amongst people with sight impairment (Macpherson, 2008, 2009; Petty, 2016) suggests the onset of impairment may reconfigure such experiences; prompting a sense of loss and/or a potential re-layering of skills and sensory attunements as alternative sensations and meanings come to resonate in the context of altered life circumstances. On the one hand, an enhanced sense of embodied vulnerability and fear of injury can create patterns of spatio-temporal avoidance within wider moves towards physical and emotional safekeeping. This response was articulated by a visually impaired participant within Burns, Watson & Paterson's (2013, p.1067) study of disability and forest access: 'being outside is a challenge to your

confidence, it takes a brass neck to put yourself in that position'. Similarly, visually impaired participants in Griffin's (2015) study of physical activity in later life explained how obstacles such as tree branches, roots, unanticipated steps and slopes led to facial injuries, jarred backs and diminished bodily confidence, ultimately resulting in withdrawal from nature-based settings altogether. Concerns of these textural obstacles, together with stiles and uneven ground, were echoed in Macpherson's (2008, 2009) study of visually impaired walkers in the Peak and Lake Districts. Participants highlighted how visual impairment forces a heightened sensory awareness of the body in space – a necessary privileging of the haptic – as attention is directed to the placing of the feet in space rather than more relaxing forms of aesthetic landscape immersion.

On the other hand, Macpherson's study also demonstrates positive emotional transformations amongst walkers as shared sensory experiences evoked infectious affective atmospheres characterised by laughter and companionship. The humour and imagination of the group, made possible by their affective dispositions to each other and to their specific sensory worlds, transformed potentially anxiety-fuelled nature encounters into opportunities for positive intercorporeal connection (Macpherson, 2008). Building on this work, Bell (2019a, b; 2020) demonstrates how sensitive nature encounters can promote feelings of freedom from ableism amongst people with sight impairment, alongside opportunities for curiosity and exploration, for pleasurable sensory immersion, positive more-than-human relatedness, and 'skilling up'. A shift in focus from what cannot be seen to the cultivation of new sensory knowledges, changing the details one pays attention to (Petty, 2016), can help to maintain meaningful connections with nonhuman nature in the context of sight loss, developing new strategies of perception and navigation in line with one's shifting worldly embodiments (Cella, 2017).

Although Macpherson (2009, p.1049) recognises the role of people's 'embodied past' in shaping their 'embodied present', studies in this area have yet to situate people's experiences of



nonhuman nature within their sight loss (or wider life) trajectories. Recognising the importance of better attending to dis/ableist life course norms and expectations within critical disability studies (Priestley, 2001, 2003, 2014), this paper foregrounds the varying significance of nonhuman nature encounters through key life course junctures, including diverse temporalities of sight loss transition. It asks, for example, at what life course stages might nonhuman nature support or ease the emotional work involved in transitions of sight loss? When is nature's unpredictability or unevenness too daunting, overwhelming or 'out of time' in relation to life's wider demands and activities? Such insights are important if we are to maximise the transformative potential of nonhuman nature, moving beyond generalised 'doses' of nature that do not necessarily align with people's life circumstances or biographical experiences.

## **2. Sensing Nature: Methods**

This paper draws on the findings of an in-depth qualitative study, Sensing Nature, which examined how people with sight impairment in the UK describe and experience a sense of wellbeing (or otherwise) with diverse types of nature during the life course. The study was guided by four research questions: (a) What is 'nature' to people with diverse forms of sight impairment? (b) What types of encounters promote a sense of wellbeing and meaningful connection with nature? (c) To what extent, if at all, do people feel impaired with varied forms of nature and how might this change over time? (d) What could we learn from these ways of sensing and making sense of nature? This paper responds, in particular (though not exclusively), to the third research question. Throughout the study, participants were encouraged and supported to describe and contextualise their experiences in their own terms, facilitating greater understanding of the myriad pleasures, adventures and complexities of life with sight impairment (Duckett & Pratt, 2001). Full ethical

approval for the study was secured through the University of Exeter Medical School Research Ethics Committee (Approval Reference Dec16/B/108).

From February to December 2017, lead author, Sarah Bell, instigated two overlapping phases of fieldwork, keeping a field diary throughout to capture relevant reflections and participant discussions after each day in the field. Phase 1 involved participating in sight loss awareness and sighted guiding training, before volunteering with activity groups around the UK, including walking, social, gardening and rifle shooting clubs. As a researcher without sight impairment, joining in with over 15 full day activity sessions during this period helped to identify and confront personal misperceptions and assumptions about sight impairment. Participants taking part in Phase I activities referred to their visual perception in varied ways, for example, 'blind', 'sight impaired', 'visually impaired', 'vision impaired', 'VIPs', 'partially sighted'. Each participant's preferred language was prioritised throughout the fieldwork.

In Phase 2, 31 people were recruited from across England to participate in an in-depth, one-to-one interview, with assistance from the Royal National Institute of the Blind 'RNIB Connect' magazine, the Thomas Pocklington Trust, Blind Veterans UK, the Macular Society, and several local sight support organisations who raised awareness of the study through their member networks. Purposive sampling (Patton, 1990) allowed individuals at different life stages, and with diverse forms of sight impairment, to contribute 'information rich' views to the study (Flyvbjerg, 2006), moving beyond 'average' or 'aggregated' views of disability, blindness or nature (Morgan, 2001). The sample included: 15 men, 16 women; aging from mid-20s to mid-80s; living in rural areas, towns and cities; seven participants in full or part time employment, 14 retired, 10 unemployed, and 18 engaged in volunteering. Participants described varied conditions influencing their field and clarity of vision, including colour, light, depth and object perception (details included in Bell, 2019a). Amongst the participants, 28 were registered severely sight impaired or sight impaired,

and three were contemplating registration. Fifteen participants were born with at least one eye condition, including 12 people who had experienced further sight changes later in life. Sixteen were born without an eye condition. In this paper, we focus on the experiences of the 28 participants who explicitly described experiences of sight loss at some stage in the life course.

While characterising the study sample in this way offers an indication of participant embodiments and life circumstances at the time of the fieldwork, we are wary of the 'slippage between embodied experiences and rigid identity categories' (Rice et al., 2017, p.219). Mindful of such tensions and the risks of 'categorical violence' in diminishing human experience (Bondi & Davidson, 2011, p.595), we are reluctant to define people solely or primarily by medical diagnoses, and seek to foreground participants' varying histories and fluid identities throughout the paper. Despite proactively opening up participation and study recruitment through varied channels across the country, we also acknowledge an important limitation of the sample; its relative homogeneity in terms of race, ethnicity and cultural background, with 29 White British interview participants and two Asian British participants. With growing literature demonstrating the detrimental impacts of ethno-racial exclusion from nature in varied forms and settings (Bryne, 2012), this is an important limitation to address in future work.

All 31 participants took part in an initial narrative interview (Riessman, 2008), lasting between one and three hours. As noted by Garland-Thomson (2011, p.595), 'embodied life has a narrative, storied quality; the shifting of our shapes knits one moment to the next and one place to another'. In seeking to engage fully with the temporality of participants' nonhuman nature encounters, the initial narrative interview was crafted as a nature-themed (or 'place-led') life history interview. Rather than foregrounding sight impairment or disability in the interview, participants were encouraged to reflect on what nature is to them, how and where they experience it in day-to-day life, changes through key life transitions and 'chapters' of their lives,

and their perceptions about existing efforts to foster more inclusive multisensory nature encounters. These interviews offered valuable insights into how people's dynamic life circumstances, trajectories and transitions (including but not limited to those relating to experiences of sight loss) had influenced their nature conceptions, experiences and embodiments. Morgan (2001) discusses the value of narrative interviews in understanding how individuals interpret and negotiate their reality, while also providing an analytical lens through which to interrogate the influence of broader social, spatial and cultural structures (Priestley, 2001).

Twenty-five of the 31 participants took part in a second 'go-along' interview (Carpiano, 2009) within a setting they appreciated for encountering nature. Interview locations included participant gardens, local residential road/path networks, urban parks, woodland, coastal and countryside areas, with interviews lasting from twenty minutes to four hours according to participant preference. In these interviews, the participants and Sarah were guiding each other, often foregrounding safety and navigational information over biographical discussion in line with the unfolding demands and presences of diverse, more-than-human 'participants' en route (Bell and Bush, 2020). As such, this paper primarily draws on the biographical detail of the initial narrative interviews, with the more fleeting qualities of participant encounter described elsewhere (Bell 2019a, b; Bell et al., 2019; Bell, 2020).

Each interview was audio recorded and transcribed verbatim. All transcripts were anonymised (with pseudonyms used throughout this paper) and annotated to capture expressions of emotion. Organising the data using Nvivo 10 (qualitative data management software), the Phase 1 and 2 field diary entries and Phase 2 interview transcripts were subject to in-depth inductive analysis. During this process, multiple lenses (macro, meso, micro, interactional, temporal and spatial) were applied to the data in order to situate participants' nature experiences in the personal, social, cultural and physical contexts of their day-to-day lives and life trajectories

(Pamphilon, 1999). This analytical process, alongside iterative participant and stakeholder discussions around identified themes and data interpretations (for example, at events initiated as part of the project and wider events organised by sight support groups around the country), emphasised the importance of carefully situating people's nature encounters within the life course and diverse sight loss trajectories. On the one hand, this approach helped to counter homogenised, stereotypical conceptions of life with sight impairment. On the other, it offered valuable insights into when, if at all, different nature encounters (material, digital and/or imagined) might play a role within formal or informal rehabilitation processes during transitions of sight loss, avoiding overly simplistic or Romanticised notions of what nature can do, and for whom, in the context of complex, interconnected lives and life histories. Social norms and expectations around three critical life course junctures were mentioned as particularly challenging by our participants; transitioning through school, and then into – and for some, prematurely out of – paid employment. While these transitions were discussed by many of our participants in the context of their wider sight loss trajectories, we focus our findings and discussion here primarily on the narratives of three information-rich cases: Viv – transitioning through school; Sahil – transitioning into work; and Flo – transitioning prematurely into retirement. We do this to demonstrate in detail how dynamic temporal, socio-spatial and imagined geographies of impairment and disability can shape people's nonhuman nature experiences through the life course.

### **3. Findings and Discussion**

As noted by prominent disability scholar, Alison Kafer (2017, p.218):

*“Loss is a topic disabled people are typically reluctant to discuss, and for good reason.*

*Disability is all too often read exclusively in such terms, with bitterness, pity and tragedy being the dominant registers through which contemporary US culture understands the experiences of disabled people”.*

Kafer continues, calling for disability studies that ‘reckon’ with loss and limitation in and with nonhuman nature, whilst bringing a critical perspective to that loss; recognising the role of disabling norms, narratives, historical and contemporary structures in shaping such experiences, and affirming ‘disability experiences and human limitations as essential, not marginal or tangential, to questions about nature’ (2017, p.233). In sharing the detailed narratives of three participants with varied circumstances and timing of impairment onset – Viv, Sahil and Flo – we illustrate the importance of attending to linked lives (Grenier, 2012) and dominant life course norms to understand why feelings of loss can develop in the context of sight impairment, and to foreground variations in people’s opportunities and interest in seeking out nonhuman nature (imagined and material) during diverse sight loss transitions.

***Sight loss, scaffolding and childhood: “It’s a loss, it’s a bereavement”***

The first participant to introduce is Viv. At the time of the study, Viv was in her forties. She was born partially sighted and experienced two retinal detachments at the ages of 9 and 12, growing up with variable light perception. Viv explained that she had *“always been animal mad... I think just handling an animal and touching it, it just makes you feel better”*. She recounted early childhood adventures in fields and haystacks close to home; collecting snails, frogs, ‘tiddlers’ and minnows with a friend who she described as *“a good friend to me, in the sense that it didn’t bother her when I lost my sight - a lot of my other friends fell away when I lost my sight, but she stood by me”*.

She also described more recent nature encounters through her travels with a specialist travel agency, for example exploring rich world heritage and archaeological sites, coastlines and wildlife parks with sighted guides.

However, for a long period of Viv's life, from the time of her second retinal detachment and through a challenging period navigating secondary school and a turbulent first marriage, life felt too overwhelming to foreground nature:

*"The school for the blind, where I went for a year [after the second retinal detachment], that was quite nice because the school was actually in its own grounds. And, there were trees and stuff around. But, to be honest, I don't think I took a lot of notice because it was too exciting going away to school. And I had so many other things to get used to, because I could no longer read print, I could no longer get around without some sort of aid, and stuff. So, I had a lot to learn about having to deal with learning to be blind, basically (laughs). And I don't think I really took a lot of notice of the nature round there. That was for a year. And then I moved to an integration unit, at one of the secondary schools... I went away to school for that. But, to be honest, being in a secondary school with two thousand children, when you've only lost your sight a year or so before, was probably the most unspeakable experience of my life. And I think I was so depressed, and so unhappy, that I don't think anything really sort of sank in. I don't think I really took a lot of notice of anything"*

Viv continued to explain the challenge of being expected to '*deal with things the way the other blind children did*' despite losing much of her sight later in childhood than the other children; an effort that necessarily sidelined her earlier nature interests. Receiving limited support to navigate her personal

circumstances of transition and little understanding from other children, Viv expressed a sense of 'misfitting' (Garland-Thomson, 2011). Despite physical co-presence, Viv remained segregated in the school, experiencing barriers to 'being' that lingered into adulthood (Worth, 2013). Reflecting back on the emotional resonances of that time, Viv explained that it was only when her father died during her early 40s that she recognised her experiences of childhood sight loss as a form of grief or bereavement, yet had not been granted the space, time or recognition to process this grief as a teenager:

*"I mean it's difficult enough being a teenager in the first place. But to have that [retinal detachment] on top of it. And for people to keep cajoling you to be happy when you weren't, instead of actually sort of giving me some level of understanding. I think I failed to understand the grieving process then. You know, it's only as an adult I've come to realise that it's quite normal to spend about five years getting over the death of somebody, you know? And it's the same. You've lost a faculty, it's a loss, it's a bereavement, in the same way as losing a loved one. And I don't think anybody ever explained that to me".*

Murray et al. (2010, p.79) also liken the initial emotions of sight loss to those of grief, as people lose their 'secure and stable worlds, producing uncertainty and insecurity'. Reflecting Viv's experiences, they note how a lack of understanding from others can exacerbate such feelings. They distinguish 'resolvable' grief, which is time-bound, linear and sequential, from 'episodic' grief, which is recurrent, cyclical and more intense at critical times in the life course. Viv was not given the time or support needed to process the grief she was experiencing during her teenage years, such that these feelings recurred as a form of episodic grief later in adulthood; for example when feeling hyper-visible in her efforts to use a mobility cane, when forced to move away from her support networks during her first marriage, when facing the repercussions of significant debt run up by her husband, and subsequently in



navigating the emotional work of a turbulent divorce. Through these periods, nature did not feature consciously for Viv; *“to a certain extent, you need sighted assistance to engage with nature, up to a point, and if that sighted assistance isn’t there, you’re not going to get the opportunities”*. Other participants linked the desire to secure that assistance with stages of sight loss acceptance. As noted by Quinn, a participant in his 60s with a progressive condition:

*“There comes a time when you’ve got to acknowledge that it [sight] is gone. And a lot of people’s problem is getting to that point without it overwhelming them ... And I mean, at that stage, the last thing you want to be bothered about is nature and all the rest of it. But once you’ve got through that stage, you start looking for other things”*.

Together, these narratives demonstrate the importance of social ‘scaffolding’ (Braithwaite, 2004) in negotiating the emotional transitions of sight loss and for maintaining a sense of more-than-human connection during more turbulent life stages. Yet there are also subtle tensions between supportive, person-centred scaffolding rooted in awareness and respect, and that compromised by hyper-vigilance and homogenised assumptions of risk and vulnerability (discussed further in Bell, 2019a and Bell 2020). Viv lacked the necessary support to develop emotional or practical ‘self-scaffolding’ during her teenage years (or her subsequent marriage) when forced to negotiate so many other significant and challenging life changes alone. It was only through moving back to her familiar childhood village after the divorce, being partnered with a guide dog, accessing the pleasures of overseas travel with a specialist travel agency, and meeting a more supportive partner, that opportunities re-opened to engage with nonhuman nature (including but not limited to her guide dog) in meaningful and manageable ways.

***Sight loss, employment and life course expectations: “In a category of nowhere”***

The second participant to introduce is Sahil. At the time of the study, Sahil was in his late twenties. He had experienced the onset of sight impairment during his teenage years, leaving him with some colour and light perception within high contrast environments. Growing up in a large UK city, Sahil recalled fond childhood nature memories at or close to home. These included feeding his grandparents' parrots and pigeons, planting and watching kidney beans grow from seed, and feeding the ducks in a nearby park with his parents. Reflecting on memories of the latter, he said, *"they just kind of put their head up and like grab it (laughs), and it was like really lovely impression"*. But he continued to explain that *"now I, I, I can't because, I'm struggling to find, to go to those places"*. He was also hesitant about getting involved in planting or gardening because: *"I scared now. I mean when I was sighted I didn't bother because I could see insects or something if that hurts me. But now, even if you offer me a flower, I'm going to scare if something is inside it"*. In this way, the challenge of navigating, orientating to and perceiving risk in and with nonhuman nature had minimised such interactions for Sahil in more recent years.

When asked about meaningful forms of support for re-connecting with those activities or settings, he explained the challenge in persuading family or friends to accompany him. He indicated limited interest in such nature encounters amongst his immediate social networks, and a sense that these networks had to some extent contracted following the onset of sight loss due to a lack of awareness:

*"I must ask someone, actually. A buddy or friend or somebody... But, in this busy life, I don't know, it's really tough to get someone. Because if it's your friend, they're happy to spend time with you on an evening, or maybe sometimes go on a theatre trip, or maybe cinema, or something like that. But if you prefer parks, I mean, it's not like a 'No! Big No!' But, really, hardly, it's rare... It's one of the toughest things to get somebody to go to, to be*

*honest, a park, because everybody isn't really enjoying that (laughs)... And everyone is not like kind or nice. I think I, I feel in my last couple of years' experience, people can change really quickly... If they can't use you, or if you can't help them, they kind of just make the gap or (hesitates), it's really tough to explain, but I hope you know what I mean. It's, it's like they just go, go away and they don't bother ... or maybe some people show sympathy, but actually... I don't need sympathy, I don't need empathy... I just prefer what you know me from before, just do it that way. Some people think, I lose my vision. But, of course, I've got my mind and my body, I'm still the same".*

Sahil emphasises a personal sense of body-self continuity prior to and since sight loss, and laments the unnecessary sense of difference and therefore distance created by friends and family; a response he later explained finding more disabling and more reminiscent of loss than the direct physical manifestations of sight impairment. In this way, Sahil demonstrates a 'push and pull' (Worth, 2013, p.108) between his self-conceptions and those of others. Detrimental identity-limiting social responses may be particularly disabling at Sahil's life stage given the extensive identity work often undertaken by such young people to develop 'a sense of who they are and how they fit into the world' (Worth, 2013, p.104).

Later in the interview, we discussed opportunities for accessing nature through the activities of local sight support organisations and activity groups. Other participants in their 50s and 60s had, for example, described their local sight impaired walking groups as 'lifelines' during the isolation they had initially felt with the onset of sight loss. One participant explained that the desire to meet like-minded people through joining such a group had motivated her to seek out long cane training to navigate the meeting points of the walks. However, Sahil explained that for

someone of his age, accessing nature was not the primary remit or priority of local sight loss or rehabilitation organisations:

*“I don’t think they do anything with nature because they are quite different. First thing, for example, most of the charities, they support the young, or maybe they support the old. They are for children or maybe for elderly people. So I’m in a category of nowhere (laughs). I think I’m in a category of ‘working age’, so they expect me to work. Not going in a garden”.*

While Sahil’s city does have a sight impaired walking group, he would be significantly younger than most people in the group, and he expressed a sense of pressure, given his age, to use the time, energy and resources he has to find paid work and/or to volunteer in initiatives that aim to promote more awareness, access and inclusion amongst people with sight impairment.

Mapping the narratives shared by individuals to chart and situate their experiences of sight loss in relation to wider transitions and relationships (Priestley, 2001) offers a ‘route to interrogating the disabling assumptions, expectations, and institutional arrangements as these shape day-to-day lives and livelihoods’ (Irwin, 2001, p.18). For Sahil, prominent cultural life course ideals around adulthood, and the imperative to be economically productive upon transitioning into ‘working age’, have undermined his individual sense of entitlement to participate in leisure pursuits (nature-related or otherwise), despite the potential emotional gains from doing so. As noted by Marquès-Brocksopp (2011, p.54), greater efforts are therefore needed to support ‘conditions which create good, flourishing lives’, recognising that these conditions may lie both within *and beyond* the workplace, necessitating a flexible and meaningful balance across diverse

everyday spheres of activity. In particular, such efforts need to recognise the risk of encountering a cliff edge at the age of 18, with no place to land until retirement.

***Sight loss, imagination and retirement: “It’s like floating in the air to me”***

The third participant to introduce is Flo. At the time of the study, Flo was in her sixties. She was partially sighted from birth, with three initial sight conditions shaping her visual field and acuity (though the extent of these conditions was not fully understood until she was already at school). Following medical interventions that caused further complications, Flo described an almost continual process of adaptation throughout her childhood, and again in adulthood following retinal bleeds and detachments. Flo enjoyed a rewarding career (until having to retire early) and family life, featuring nonhuman nature in various ways, including time spent gardening, cycling, hiking and travelling.

After her first retinal bleed in her 40s, Flo developed a passion for sea swimming. She likened the sensation to the freedom of ‘floating in the air’; a physical and emotional transformation (akin to those identified by Foley, 2017; Phoenix & Orr, 2014; Straughan, 2012) that was increasingly important to her as other passions – hiking, gardening and her career – became harder to perform after a second retinal bleed a few years later.

*“When I’m out in the sea, it really is just the freedom it gives to me. It allows me to - whereas on the land, I have to watch I don’t trip, I don’t walk into something, I can’t tell when a step’s a step easily, so I’m hesitant, I probably bend over more, in an effort to try and see - whereas, when I’m out in the sea, I just walk in, I know there’ll be nobody in my way like there would be in a swimming pool. And, you know, the odd seal might come up to me and (laughs), and jellyfish, and sting me all over my arms. But it’s just the freedom there really, that I don’t have to worry, as long as I swim parallel to the shore and I make*

*sure I can still touch the bottom, I do feel completely free. It's like floating in the air to me.... So yes, it's a very important part of my life, really, which probably wouldn't have been so, had I not had this continual loss of vision. But it, it becomes more important because it's this freedom. And at the end of the swim, I lie like a star with my arms and my legs out, and I float on my back. And it's as if something is just holding you up by threads. And the sea, I mean this is obviously on fairly calm days, but the sea just lifts you up and drops you back, and lifts you up and drops you back. And that is quite a magical feeling, it really is.... very enlivening and uplifting, de-stressing and (pause) just beautiful, just really, really beautiful”.*

Swimming out on calm days, Flo uses her residual vision – alongside tactile clues and, where necessary, verbal prompts from her husband on the beach – for orientation, remaining parallel to the shoreline. Later in the interview, she explained how the process of systematically honing – or acclimatising – what she referred to as her ‘*mind-body team*’ to move fluidly through the cold seawater was integral to her sense of freedom. She noted the accumulation of ‘brown fat’ across her shoulders and down her spine over time; a therapeutic ‘accretion’ (Foley, 2017) that allowed her to generate sufficient heat despite temperatures below 9°C, deterring the cold from seeping through her gliding, swimming, floating body. This cold water resistance was one of three new ‘brain centres’ that she described nurturing through her sight loss transitions, alongside her ‘poetry and singing centres’. Reflecting on her varied stages of, and responses to, sight loss, Flo attributed her resourcefulness to creativity, recognising myriad dimensions and expressions of creativity and maximising these as a form of ‘felt empowerment’ (Britton and Foley, 2020) over time:

*“My sight deterioration over my life has had a big, big, the biggest impact on me. Being creative, in a way, I thought of it as a curse because I wanted to do fine sewing and fine woodwork and fine painting (pause). But I now think, actually, it wasn’t such a curse, in that some people who lose vision just don’t want to do very much at all. But my creative side is forcing me to do something... it has sort of empowered me”.*

Such creativity – in the form of imagery and poetry – became particularly important for Flo in negotiating the challenging emotional experiences of immobility following the medical injection of a gas bubble after a retinal detachment the year before we met for the research:

*“I had to lay face down for seven days with this gas bubble in my eye, to keep my retina flat. And I really did think I was going to go completely mad. But then I suddenly thought about doing poetry... and that was my saviour, really... and when I was doing this imagery, I was shutting my eyes, and I was going through the gas bubble, and I was going down into the sea, and then I was swimming. And I suddenly realised my breathing had changed to my breathing when I swim. So I really was there, swimming. And, you know, I could sort of feel my arms and my legs were moving and, well, they weren’t, but in my mind they were... So that was good”.*

As noted by Kearns, O’Brien, Foley & Regan (2015, p.159), ‘geographical awareness and the imaginative impulse are sibling domains of human experience’. Building on Macpherson’s (2009) work on the role of *visual* memories in co-constituting intercorporeal landscape emergence, Flo’s narratives emphasise the interwoven *multisensory* qualities of embodied personal histories, creativity and imagination. The swimming memories and imagery conjured by Flo through the gas

bubble transition demonstrate the value of imagination for expanding worlds at times of potential contraction, and the intermingling of place and personal histories in shaping the scope and bounds of our individual and collective imagination. Further reflecting the creative potential of sensory memories (Bates et al., 2020), other participants described similar use of imagery and digital nature – via poetry, nature CDs or radio programmes – at times when physically getting out into nonhuman nature became more daunting or overwhelming. One participant in her 60s, Trish, likened listening to the rich place descriptions provided in Claire Balding’s ‘Ramblings’ radio programme to the sensation of *“slipping an overcoat round me... going through these paths with all these wild brambles and vegetation... I just wanted to be there, you know? She described it so well and I thought I could just be there and I’d be enveloped in all this”*.

Kearns et al. (2015, p.175) suggest that ‘to be fully human is to imagine not only what places can be but also the possibilities for our place within them’. The narratives shared by our participants call for a re-imagining of our potential places with(in) nature. They ask us to question the merits of pursuing efforts to identify a generalised ‘healthy dose’ of nature given the rich and varied more-than-human relations that weave into and out of people’s lives with shifting embodiments, interests and priorities. More broadly, these narratives demonstrate the emotional value of transforming our individual and collective imaginations of what life with sight impairment is or could be; challenging the detrimental social responses and stereotypes that often translate the onset of impairment into deep-seated feelings of loss and deficit. As argued by Garland-Thomson (2011), a more positive identity politics that broadens societal understandings of disability is well overdue; from ‘undesirable’ biomedical deviations or oppressive social relationships to be ‘feared’, to an expected form of human variation, affirmed in ways that ‘neither reinforce nor reify normative standards’ (Bolt, 2019, p.7). Indeed, as indicated by Flo’s narratives, these aspects of variation can foster greater adaptability, resourcefulness and



attentiveness to one's more-than-human embodiment and emplacement in the ever-changing environments of day-to-day life (Cella, 2017; Garland-Thomson, 2011); a fluidity that should be better recognised and respected within growing moves to 'connect' people with nonhuman nature (Cleary et al., 2017).

#### 4. Concluding Remarks

Critical disability studies encourage us 'to start with disability but never end with it: disability is the space from which to think through a host of political, theoretical and practical issues that are relevant to all' (Goodley, 2016, p.157). In this paper, we have started with the disabling societal norms and relations that can shape feelings of loss with the onset and progression of sight impairment (Kafer, 2017). Foregrounding the detailed narratives of three illustrative, information-rich study participants, our paper demonstrates how a sense of loss can emerge in the form of 'episodic grief' while re-negotiating new worldly embodiments without support, and in the context of contracting social networks and the imposition of normative life course expectations framed by the limits of the ableist imagination (Fritsch, 2015). It also explores how such limits may undermine opportunities to participate in the growing drive to 'connect' people with nonhuman nature in the pursuit of enhanced wellbeing (Cleary et al., 2017).

Many participants deeply valued nonhuman nature encounters in promoting a sense of freedom from ableism, alongside opportunities for curiosity and exploration, pleasurable sensory immersion, 'skilling up', and feelings of positive more-than-human relatedness (Bell, 2019a, b; Bell et al., 2019; Bell, 2020; Bell and Bush, 2020). However, in foregrounding the complex biographical temporalities of such experiences, this paper cautions against overly simplistic or Romantic tropes of what nonhuman nature can *do* for happiness and emotional wellbeing and for whom. It cautions against the growing drive to identify and prescribe a generalised 'healthy dose' of nature

of specific duration, frequency and type (Shanahan et al., 2016); a drive that implicitly frames wellbeing as an almost predictable 'entity that can be acquired, accumulated and retained' (Atkinson & Scott, 2015, p.77), placing responsibility for attaining it on in the apparently self-sufficient, autonomous and independent individual. Instead, our participant narratives highlight wellbeing as an emergent quality of shifting relationships – with human/nonhuman others as well memories, imaginaries and societal norms and discourses.

Placing responsibility on individuals to seek out and secure their healthy dose of nature does little to address inequalities in access, nor the ableism embedded within the physical fabric, interpretation and social/behavioural 'codes' that characterise many nature-based settings (Bell, 2019a; Kafer, 2017). To genuinely support relationships of wellbeing, we need to make space (and time) for a plurality of nonhuman nature experiences; in part through more inclusive approaches to the design, management and interpretation of such settings, but also through ensuring timely, person-centred scaffolding to forge such more-than-human relationships during more turbulent life stages.

Our findings emphasise the need to foster a more positive identity politics in opening up socially inclusive opportunities to engage with nonhuman nature and in countering feelings of loss with sight impairment; a politics that marks the 'profound difference between a complex valuing of disability as cultural and ecological diversity and a persistent devaluing of disability entirely as damage' (Clare, 2017, p.259). Such a politics would affirm varied forms of more-than-human embodiment, recognising how and why such relations weave into – and indeed out of – interdependent life course trajectories. It would harness people's creativity and skills to counter disability stereotypes, to re-imagine our 'future natures' (Kafer, 2017, p.204), and raise awareness of embodied human diversity as a site for alternative values and sensory knowledges rather than an additional access 'need'.

If we are to recruit nonhuman nature within Rice et al.'s (2017, p.223) ambition to 'enact, even fleetingly, liveable spaces for disability and difference', future studies need to build on this work, particularly as societies race to keep pace with ever-faster rates of climate and environmental change. To genuinely 'open up new avenues of understanding ourselves in relationship to nonhuman nature' (Kafer, 2017, p.229), such efforts need to engage with the full 'maze' of embodied human diversity that shapes experiences of and responses to nonhuman nature (e.g. with age, gender, disability, sexuality, race, ethnicity, class – Clare, 2015), alongside longstanding and contested intersectional histories of more-than-human belonging and citizenship.

### **Acknowledgements**

Many thanks go to the brilliant study participants for sharing their time and their experiences; to the environmental and sight support sector organisations who have shaped the study; to the Economic and Social Research Council for funding the Sensing Nature study through their Future Research Leaders fellowship scheme (Grant Number ES/N015851/1); to Dr Sarah Bell's fellowship mentor, Professor Catherine Leyshon for all her support throughout; and to the peer reviewers for their valuable feedback on earlier drafts of this paper.

### **References**

Bell, S.L. (2019a). Experiencing nature with sight impairment: seeking freedom from ableism.

*Environment and Planning E: Nature and Space*, 2(2), 304-322.

Bell, S.L. (2019b). Nurturing sociality with birdlife in the context of life with sight impairment: a role for nonhuman charisma. *Social and Cultural Geography*, early view.

Bell, S.L., Leyshon, C. and Phoenix, C. (2019). Negotiating nature's weather worlds in the context of life with sight impairment. *Transactions of the Institute of British Geographers*, 44(2), 270-283.

Bell, S.L. (2020). Sensing Nature: Unravelling metanarratives of nature and blindness. In: S. Atkinson and R. Hunt. (Eds) *Geohumanities and Health* (Chapter 6, pp. 85-98). Switzerland: Springer Nature.

Bell, S.L. and Bush, T.N. (2020). "Never mind the bullocks": Animating the go-along interview through creative nonfiction. *Mobilities*, early view.

Atkinson, S., and Scott, K. (2015). Stable and destabilised states of subjective wellbeing: dance and movement as catalysts of transition. *Social and Cultural Geography*, 16(1), 75-94.

Bates, V., Hickman, C., Manchester, H., Prior, J., and Singer, S. (2020). Beyond landscape's visible realm: Recorded sound, nature and wellbeing. *Health and Place*, early view.

Bolt, D. (2019). *Cultural Disability Studies in Education*. Abingdon: Routledge.

Bondi, L., and Davidson, J. (2011). Commentary: Lost in translation. *Transactions of the Institute of British Geographers*, 36, 595-598.

Bourne, R.R.A., Flaxman, S.R., Braithwaite, T., Cicinelli, M.V., Das, A., Jonas, J.B., et al. (2017). Magnitude, temporal trends, and projections of the global prevalence of blindness and distance

and near vision impairment: a systematic review and meta-analysis. *Lancet Global Health*, 5(9), e888–897.

Braithwaite, V. (2004). Collective Hope. *The Annals of the American Academy of Political and Social Science*, 592, 6-15.

Britton, E. and Foley, R. (2020). Sensing Water: Uncovering Health and Well-Being in the Sea and Surf. *Journal of Sport and Social Issues*, early view.

Brown, K.M. (2017). The haptic pleasures of ground-feel: The role of textured terrain in motivating regular exercise. *Health and Place*, 46, 307-314.

Burns, N., Watson, N., and Paterson, K. (2013). Risky bodies in risky spaces: disabled people's pursuit of outdoor leisure. *Disability and Society*, 28(8), 1059-1073.

Byrne, J. (2012). When green is White: The cultural politics of race, nature and social exclusion in a Los Angeles urban national park. *Geoforum*, 43, 595-611.

Carpiano, R. (2009). Come take a walk with me: the 'Go-Along' interview as a novel method for studying the implications of place for health and wellbeing. *Health and Place*, 15, 263-272.

Cella, M.J.C. (2017). Retrofitting rurality: Embodiment and emplacement in disability narratives. *Journal of Rural Studies*, 51, 284-294.

Clare, E. (2015). *Exile and Pride: Disability, Queerness, and Liberation*. Durham: Duke University Press.

Clare, E. (2017). Notes on Natural Worlds, Disabled Bodies, and Politics of Cure. In: S.J. Ray, and J. Sibara (Eds.) *Disability Studies and the Environmental Humanities. Toward an Eco-Crip Theory* (Chapter 7, pp. 242-265). Nebraska: Board of Regents of the University of Nebraska.

Cleary, A., Fielding, K.S., Bell, S.L., Murray Z., and Roiko, A. (2017). Perspective Essay: Nature connection and eudaimonic wellbeing: Exploring potential mechanisms. *Landscape and Urban Planning, 158*, 119-128.

Cox, D.T.C., Shanahan, D.F., Hudson, H.L., Fuller, R.A., Anderson, K., Hancock, S., and Gaston, K.J. (2017). Doses of nearby nature simultaneously associated with multiple health benefits. *International Journal of Environmental Research and Public Health, 14*, 172-185.

Douglas, O., Lennon, M., and Scott, M. (2017). Green space benefits for health and well-being: A life-course approach for urban planning, design and management. *Cities, 66*, 53-62.

Duckett, P.S., and Pratt, R. (2001). The Researched Opinions on Research: Visually impaired people and visual impairment research. *Disability and Society, 16*, 815-835.

Flyvbjerg, B. (2006). Five misunderstandings about case study research. *Qualitative Inquiry, 12*, 219-245.

Foley, R. (2017). Swimming as an accretive practice in healthy blue space. *Emotion, Space & Society*, 22, 43-51.

Fritsch, K. (2015). Desiring Disability Differently: Neoliberalism, Heterotopic Imagination and Intra-corporeal Reconfigurations. *Foucault Studies*, 19, 43-66.

Frumkin, H., Bratman, G.N., Breslow, S.J., Cochran, B., Kahn Jr, P.H., Lawler, J.J., et al. (2017). Nature Contact and Human Health: A Research Agenda. *Environmental Health Perspectives*, 125(7), 075001-1 – 075001-18.

Garland-Thomson, R. (2011). Misfits: A Feminist Materialist Disability Concept. *Hypatia*, 26(3), 591-609.

Goodley, D. (2016). *Disability Studies: An Interdisciplinary Introduction*. 2nd Edition. London: Sage.

Goodley, D., Liddiard, K., and Runswick-Cole, K. (2018). Feeling disability: theories of affect and critical disability studies. *Disability and Society*, 33(2), 197-217.

Goodley, D., Lawthorn, R., Liddiard, K., and Runswick-Cole, K. (2019). Provocations for Critical Disability Studies. *Disability and Society*, 34(6), 972-997.

Grenier, A. (2012). *Transitions and the Lifecourse: Challenging the Constructions of 'Growing Old'*. Bristol: The Policy Press.

Griffin, M. (2015). Physical Activity among Older Adults with Visual Impairment: Considerations for Ageing Well with Sight Loss. In: E. Tulle and C. Phoenix (Eds) *Physical Activity and Sport in Later Life: Critical Perspectives* (Chapter 15, pp. 161-174). Basingstoke: Palgrave Macmillan.

Hall, E., and Wilton, R. (2017). Towards a relational geography of disability. *Progress in Human Geography*, 41, 727-744.

Hartig, T., Mitchell, R., de Vries, S., and Frumkin, H. (2014). Nature and Health. *Annual Review of Public Health*, 35, 207-228.

Irwin, S. (2001). Repositioning disability and the life course: a social claiming perspective. In: M. Priestley (Ed) *Disability and the Life Course: Global Perspectives* (Chapter 2, pp. 15-25). Cambridge: Cambridge University Press.

Kearns, R.A., O'Brien, G., Foley, R., and Regen, N. (2015). Four windows into geography and imagination(s). *New Zealand Geographer*, 71(3), 159-176.

Macpherson, H. (2008). "I don't know why they call it the Lake District they might as well call it the rock district!" The workings of humour and laughter in research with members of visually impaired walking groups. *Environment and Planning D: Society and Space*, 26, 1080-1095.

Macpherson, H. (2009). The intercorporeal emergence of landscape: negotiating sight, blindness, and ideas of landscape in the British countryside. *Environment and Planning A*, 41, 1042-1054.



Marquès-Brocksopp, L. (2011). The broad reach of the wellbeing debate: Emotional wellbeing and vision loss. *The British Journal of Visual Impairment*, 30, 50-55.

Michalko, R. (1999). *The Two in One Walking with Smokie, Walking with Blindness*. Philadelphia: Temple University Press.

Morgan, R. (2001). Using life story narratives to understand disability and identity in South Africa. In: M. Priestley (Ed) *Disability and the Life Course: Global Perspectives* (Chapter 8, pp. 89-100). Cambridge: Cambridge University Press.

Murray, S.A., McKay, R.C. and Nieuwoudt, J.M. (2010). Grief and needs of adults with acquired visual impairments. *The British Journal of Visual Impairment*, 28, 78-89.

Nyman, S.R., Dibb, B., Victor, C.R., and Gosney, M.A. (2012). Emotional well-being and adjustment to vision loss in later life: a meta-synthesis of qualitative studies. *Disability & Rehabilitation*, 34, 971-981.

Pamphilon, B. (1999). The Zoom Model: A dynamic framework for the analysis of life histories. *Qualitative inquiry*, 5, 393-410.

Patton, M. (1990). *Qualitative evaluation and research methods*. Beverly Hills: Sage Publications Ltd.

Pearce, J.R. (2018). Complexity and Uncertainty in Geography of Health Research: Incorporating Life-Course Perspectives. *Annals of the American Association of Geographers*, 108(6), 1491-1498.

Petty, K. (2016). Walking Through the Woodlands: Learning to Listen with Companions Who Have Impaired Vision. In: M. Bull and L. Back (Eds) *The Auditory Culture Reader, 2<sup>nd</sup> Edition* (Chapter 13, pp. 173-184). London: Bloomsbury Publishing Plc.

Phoenix, C., and Orr, N. (2014). Pleasure: A forgotten dimension of physical activity in older age. *Social Science and Medicine*, 115, 94-102.

Priestley, M. (2001). Epilogue. In: M. Priestley (Ed) *Disability and the Life Course: Global Perspectives* (Chapter 20, pp. 240-248). Cambridge: Cambridge University Press.

Priestley, M. (2003). *Disability: A Life Course Approach*. Cambridge: Polity Press.

Priestley, M. (2014). Generating Debates: Why We Need a Life-Course Approach to Disability Issues. In: J. Swain, S. French, C. Barnes, and C. Thomas (Eds) *Disabling Barriers – Enabling Environments* (Chapter 14, pp. 99-106). London: SAGE Publications.

Reeve, D. (2002). Negotiating psycho-emotional dimensions of disability and their influence on identity constructions, disability and society. *Disability & Society*, 17(5), 493-508.

Rice, C., Chandler, E., Rinaldi, J., Changfoot, N., Liddiard, K., Mykitiuk, R., and Mündel, I. (2017). Imagining Disability Futurities. *Hypatia*, 32(2), 213-229.

Riessman, C.K. (2008). *Narrative Methods for the Human Sciences*. London: SAGE Publications Ltd.

RNIB. (2015). *My Voice 2015: The views and experiences of blind and partially sighted people in the UK*. Accessed 1 February 2020. <http://www.rnib.org.uk/knowledge-and-research-hub-research-reports-general-research/my-voice>

Rudman, D.L., and Durdle, M. (2008). Living with Fear: The Lived Experience of Community Mobility Among Older Adults with Low Vision. *Journal of Ageing and Physical Activity*, 17, 106-122.

Saerberg, S. (2010). "Just go straight ahead". *The Senses and Society*, 5(3), 364-381.

Shanahan, D.F., Bush, R., Gaston, K.J., Lin, B.B., Dean, J., Barber, E., and Fuller, R.A. (2016). Health benefits from nature experiences depend on dose. *Scientific Reports*, 6, 1-10.

Spinney, J. (2006). A place of sense: a kinaesthetic ethnography of cyclists on Mont Ventoux. *Environment and Planning D: Society and Space*, 24, 709-732.

Straughan, E. (2012). Touched by water: The body in scuba diving. *Emotion, Space and Society*, 5, 19-26.

Sumner, R. C., Cassarino, M., Setti, A., Dockray, S., and Prof, D. C. (In Press). Determining the right dose: Dynamic multidimensional perspectives on the nature and health relationship.

<https://doi.org/10.31234/osf.io/knw3e>

Thomas, C. (2007). *Sociologies of disability and illness*. Basingstoke: Palgrave.

Throsby, K. (2013). 'If I go in like a cranky sea lion, I come out like a smiling dolphin': marathon swimming and the unexpected pleasures of being a body in water. *Feminist Review*, 103, 5-22.

Worth, N. (2013). Making friends and fitting in: a social-relational understanding of disability at school. *Social and Cultural Geography*, 14(1), 103-123.

PREPRINT