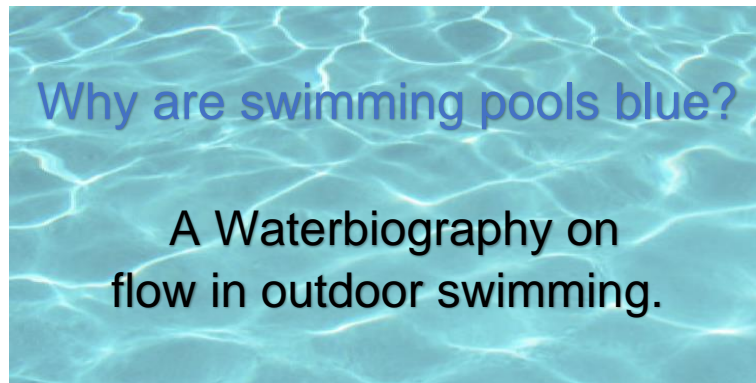


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Statement of Originality

I confirm that I have fully acknowledged all sources of information and help received and that where such acknowledgement is not made the work is my own.

Signed: Julie Maurer Dated: 27th July 2023

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On a personal note, thank you to my parents for introducing me to water at a young age, and to Alan and Caroline for providing me with a place to live by the Afon Gwy. Last, but by no means least, the enduring 'big man' who has listened to my crazy thoughts, clarifying ideas with swimming, hot chocolate, and TLC.

Abstract

This research is an autoethnographical account reflecting the lived experience of the researcher, as an outdoor swimmer. A nexus has been identified between outdoor swimming and well-being; however, such research ignores freshwater. Data was gathered via material memoirs, and reflected on using a new-materialist framework, foregrounding the more-than-human. Outcomes suggest the need for a cultural shift, away from Western post-colonial capitalist thought, that constructs water as a commodity; to one acknowledging water as a living entity. UK government policy and practice needs to change; allowing water and humans to correspond in familiar ways. Consideration of the aesthetic, as a flow condition, tentatively shows how material actants influence nature connection, further exploration is required as to how such pathways are developed. Outdoor swimming foregrounds interdependence, this has potential to develop biocentric action, benefiting the health and well-being of all involved.

Project Aims

Outdoor swimming has become fundamental to improving my well-being, creating a strong connection to nature. This account is an autoethnographic flow incorporating the “emotion, feeling, and action” (Humberstone & Nicol, 2019, p. 112), of my own water journeys over the past half century. I reflect on socio-cultural beliefs and practices, within a political and historical framework, that impact my swims (Douglas & Carless, 2013; Sparkes, 2020; Adams & Herrmann, 2020; Leather, 2019a; Méndez, 2013). This inquiry considers what it is that makes me want to dip into outdoor water; and how understanding this could aid well-being, to ultimately develop pro-environmental behaviour. The discussion is not offered as conclusive or generalisable but allows insight into the melee between the more-than-human and myself.

Background and Justification

My connection to water undoubtedly started from early childhood experiences. The opportunity for water to be my experiential facilitator, learning through play in rivers and the sea, continues to this day. From a young age, I was aware of cyclical water patterns, particularly those surrounding the ocean tides, impacting appearance of sandbanks, fishing trips, and seashore foraging. This personal experience is explored through my perception and relationship with water, a form of waterbiography (Landreth, 2017) or waterlog (Deakin, 2000), so it might inform future practice. Such experiences of the world have been shown to improve well-being (Kotera et al., 2022; Miyazaki, 2021), emerging theories consider the nexus between involvement and connection (Annerstedt et al., 2013; Britton, 2023; Guttorm, 2021; Howell et al., 2011; Lumber et

al., 2017a; Mann et al., 2021; Mayer & Frantz, 2004; Natural England, 2016; Pritchard et al., 2020; Richardson, 2023; Richardson et al., 2021; Sharma-Brymer & Brymer, 2021); however, further evidence is essential (Natural England, 2016). Early indications show that exposure to nature, at a young age, leads to pro-environmental behaviour (Mayer & Frantz, 2004, Chawla 1998). To develop connection, aesthetic pathways require stimulation (Aked et al., 2008; Health Council of the Netherlands & Dutch Advisory Council for Research on Spatial Planning [HCND], 2004; Lumber et al., 2017; Richardson et al., 2021). Immersion in outdoor water is an aesthetic experience, one which my body “recognises as ... home” (Miyazaki, 2021, p. 9), the water drifts within me creating a state of flow (Csikszentmihalyi, 1990, 1997; T. Liu & Csikszentmihalyi, 2020; Tse et al., 2022). Current research on *outdoor swimming* emphasises salt water (McDougall et al., 2022); my love for water is rooted in slow flowing meandering rivers, as it is with many artists, poets, and writers (S. Atkinson, 2019; Burnett, 2017; Deakin, 2000; Parr, 2011). This waterbiography therefore addresses the literature gap by focusing on freshwater. Swann et al. (2011) assert that flow research needs to move beyond description to explanation; the connection between flow and outdoor swimming will be explored to clarify how it can impact well-being through NCT.

Summary of Content

Can the way I correspond with water (Ingold, 2000, 2017, 2022), reveal a pathway to connect with the more-than-human (Humberstone, 2009)? Informing practice by progressing demand for a pro-environmental social justice pedagogy (S. Atkinson, 2019; Breunig & Rylander, 2016); acknowledging the more-than-human as the oppressed and myself as the oppressor?

Literature Review

The literature review of this paper considers what is meant by outdoor research and the concept of flow. It deliberates possible associations between outdoor swimming and the constructs of well-being and nature connection, within a socio-political context. I reflect using the post-structuralist perspective of new-materialism to challenge existing relations of power (MacNaughton, 2005) between water and myself. This will inform the text portrayed in an effort to fracture embedded views, spotlighting material actants, responding to Delamont (2007) plea that autoethnography cannot make the familiar strange.

Outdoor Research

The 'outdoors' is a contested label (Comley & Mackintosh, 2014; Leather & Porter, 2006; Potter & Dymont, 2016) integrating various disciplines with different ontological and epistemological positions. Disputed ideas and muddled theorization (Humberstone et al., 2003; Pleasants & Stewart, 2019) create variation in research approach, and amalgamation between contending paradigms (Humberstone, 2000). It embraces an array of content from climbing to camping (Greenaway, 2005), which varies in process between contexts, sometimes for commercial gain rather than educational goals (Leather, 2018b). *Outdoor* practice evolved long before the application of theory, it therefore "defies definition" (Nicol, 2002, p. 32). In this inquiry the 'outdoors' will refer to as any space outside, be it in an urban or rural location, taking place for recreational, educational, financial or competitive reasons. The arguments for promoting *outdoor* education (OE) as a discipline are extensive (Potter & Dymont, 2016); however, these appear targeted at increasing the status of OE, rather than embracing the freedom offered where no disciplinary boundaries exist.

Outdoor research explores water-based activities, such as sailing and surfing (Couper, 2018; Evers, 2015; Gascon et al., 2017; Hignett et al., 2018), outdoor swimming is underrepresented in *outdoor* research literature, often limited to geographical and health texts (Bauman et al., 1999; Denton & Aranda, 2020; Depledge & Bird, 2009; Foley, 2015; Knechtle et al., 2020; Massey et al., 2020; White et al., 2020; Wood et al., 2022). Such issues of publication are due to a number of factors. Participation is often considered recreational, rather than a sport or outdoor activity (OA) leading to oversight in the literature; there has also been a rapid growth of involvement (Outdoor Swimming Society, 2022), with no governing body to guide recognition. Establishment of research centres, (Centre for Blue Governance), and conferences (Blue Mind Gathering) also focus on outdoor participants as the research subject, rather than the researcher. The *outdoors* is able to seek answers where others may not venture, due to concerns of congruence between different systems of thought (Coates et al, 2016); such possibility could generate findings for wider audiences and move thinking forward.

Outdoor Swimming

Different descriptions of 'outdoor swimming' exist, as they do for the *outdoors*, creating a site of possible confusion. Activities include individual distance swimming, competitions, and community dips (Mental Health Swims, 2022); to assist understanding a dictionary of terms has been collated (Rew, 2022). There is no definitive governing body covering all outdoor swimming, this leads to it being overlooked and under-represented at the decision-making level. However, it avoids issues that arise from standardisation, such as regulation (Leather, 2018a), allowing minimal costs and maximum membership. Popularisation of seaside bathing in the UK occurred in the 18th century (Harper, 2022; Parr, 2011; Wood et al., 2022); swayed,

like the *outdoors*, by the movements of romanticism, and leisure (Leather & Porter, 2006; Parr, 2011). The historical relationship of women and swimming emphasises how female interaction with water is suppressed, portrayed as evil or risky (Landreth, 2017). Sirens, mermaids, frailty, witchcraft and modesty are all reasons women stayed out of the water until the late 19th century, leading to drowning. *Outdoor swimming* will be used throughout this paper to include any immersion in *outdoor* blue space, be it dips, drifts, dooks, blumbels, floundering, bathing or swimming, if it takes place *outdoors*, in water, it is in.

Blue Space

'Blue Space' is a contemporary concept (Britton et al., 2020) with different understandings for the term. This inquiry will use Foley & Kistemann (2015) definition, that blue space is "health-enabling places and spaces, where water is at the centre ...with identifiable potential for the promotion of human well-being" (p.157). Previous *blue space* research has been considered under the umbrella term of green space (Gascon et al., 2015), often focusing on the effects of being near water, rather than immersion in it (Bailey, 2020; BlueHealth Project, 2020; Gascon et al., 2015, 2017; Hart, 2019; Völker & Kistemann, 2011; White et al., 2010, 2016, 2020). Where dipping is considered, as previously discussed, there is often a salt-water bias (Evers, 2015; Foley, 2015; Hignett et al., 2018; Throsby, 2013, 2015).

Flow

The psychological concept of flow was introduced by Csikszentmihalyi (1990). It describes a subjective experience outlined by nine dimensions (appendix 1); which are subdivided into flow conditions and flow characteristics. These dimensions allow us to consider why someone participates in an activity and what that experience produces.

Subdivision makes it possible to differentiate between subjective experience and prerequisite conditions, raising the question of how material surroundings can affect flow. Flow is described as an amalgamation of action and awareness, total absorption, full attention, control, loss of self-awareness, and distortion of time (Kappan, 2020; Tse et al., 2022), a state I enter whilst *outdoor swimming*. An autotelic personality is also thought to exist, whereby someone actively pursues experience of flow for intrinsic reward.

Outdoor research has embraced the concept of flow, particularly in OA recreation and 'extreme sports' (Boniface, 2006; Boudreau et al., 2020; Hardie-Bick & Bonner, 2016), with higher incidences of flow being noted during recreational activity, than competition (Swann et al., 2011). A flow-state is not limited to OA, individuals experience flow in different contexts (Csikszentmihalyi, 1997); the initial concept was formed whilst studying artists and their artworks (Chilton, 2013). Research has also shown that elite athletes and swimmers report feelings, during flow, that 'do not fit' within the 9 dimensions (Swann et al., 2011, p. 16). External factors have also been identified that facilitate flow (Rautio, 2013; Rautio et al., 2020; Swann et al., 2011; Throsby, 2013); this highlights a possible association, between *outdoor swimming*, as an authentic experience (Atkinson, 2019), and flow state.

Physical Effects of *Outdoor Swimming*

More-than-human

Water is elemental, it covers 71% of the earth's surface. We are over 60% water, but cannot exist within, or without it. The UK Environment Agency (2016) acknowledge wastewater pollution in the Severn River basin; England has 15,000 storm overflows, approximately 13,350 released untreated sewage into rivers in 2021 (House of Lords UK, 2022). Water on earth flows through a system, negotiating the surfaces of land

and air during its journey, one of which we are a part. Currently water is considered a commodity requiring mastery and technical processes of management (Sharp, 2017); not respecting it as a more-than-human actant (Britton, 2023). Water quality is a current issue (BBC, 2023b; Bowen, 2023; Lankia et al., 2019); mainly because its abuse is affecting humans (S. Atkinson, 2019; Monbiot, 2021). Our current, almost hidden, water sewage system means we adopt an out of sight out of mind approach to water (Sharp, 2017); we have become disconnected. Levels of oestrogens (from humans) and cleaning products, in treated sewage, correlate with sexual disruption in fish causing intersexuality. This occurs where dilution is a particular issue (Jobling et al., 2006); foregrounding current UK abstraction policy (DEFRA, 2021), and treatment process (The New Forest Catchment Partnership [NFCP], 2023). Phosphates in rivers, combined with raised water temperatures, increase incidence of algal blooms. Phosphate pollution has many causes (Withers et al., 2022), currently UK water companies add phosphate to drinking water to neutralise the effect of lead pipes (Environment Agency [EA], 2012, 2019; EA & Natural England, 2014). The phosphates found in river water are not harmful to humans, who are often the cause through cleaning products such as toothpaste (appendix 3). In the Afon Gwy levels are below that of tap water (Davies et al., 2014; Wye Salmon Association, 2023), however they create an imbalance in plant life, with decomposing algal blooms draining rivers of oxygen. Rivers are drying up due to demand for water, cost-effective abstraction plans are being formulated (DEFRA, 2021) however, these often do not consider the rivers and ecosystems needs. Dry riverbeds, amplified flooding, erosion, high rainfall events, disappearing glaciers, increased sea levels, raised water temperatures, acidification of oceans, droughts, acid rain; our blue planet has been telling us it's plight not through words but action. Large corporations still develop products considering profit, not impact, with humans ignoring what can be seen.

Rieh, (2020) argues that *outdoor* water should be considered a place rather than nature; water found on Earth has existed for all time. We cannot create more; what I drink has passed through the fish in the river, it is alive reflecting its journey. Nature is a hyper-real environment (Leather and Gass, 2019), this description could be afforded to *outdoor* water, reduced through management practices (Sharp, 2017) such as reservoirs, and pollution. Attempts to exert power and control are undermined by the lively body. The sea is reclaiming Waikiki beach in Hawaii (Britton, 2023), UK homes in Norfolk have been collapsing into the sea, and currently the UK is undergoing a marine heatwave (BBC, 2023).

Human

Our lives are formed in fluid, emerging into the world with aquatic reflexes, possible evolutionary relics of a previous water-life (Morgan, 2017; Rhys-Evans, 2019). In the book 'Vibrant Matter' Bennett (2010) reminds us how artisan knowledge developed long before scientific discovery, we often know how to do something long before understanding why it happens. This resonates with the 'how' of post-qualitative inquiry, and the process of experiential learning advocated in OE (Asfeldt & Beames, 2017; Ord & Leather, 2011; Quay, 2019), it is the way most people recall learning to swim (Britton, 2023; Landreth, 2017). *Outdoor swimmers* often refer to this as a sense of being (Deakin, 2000; Denton & Aranda, 2020; Foley, 2015; Throsby, 2013), or "dwelling" (Ingold, 2000, p. 57) in water. From a new-materialist standpoint this could be seen as correspondence, whereby all things respond to one another with distinctive consequences (Ingold, 2017). The action of water on the human body has been understood throughout history (Foley & Kistemann, 2015; Parr, 2011); empirical science is only now able to investigate the physiological effects of swimming on humans (Foley, 2015; Harper, 2022; Knechtle et al., 2020; Leonard et al., 2018;

Massey et al., 2020; McDougall et al., 2022b). Innovation is allowing complex data to be gathered, reinforcing swimmers existing notions (Nichols, 2014); neural pathways stimulated in water activate reward systems, releasing endorphins (Nichols, 2014). Physiologically cold-water immersion (CWI), water <15 degrees centigrade, causes shock; emitting adrenaline and noradrenalin, training us to react to stressful conditions. Engaging the sympathetic and parasympathetic nervous system achieves equilibrium, changes occur in blood pressure, heart rate, and breathing (Harper, 2022; Knechtle et al., 2020, p. 6). Specific adaptations have been identified in people who have spent their lives in the ocean; these include development of larger spleens releasing more oxygen rich red blood cells, lower heart rates, less arterial stiffness, and hearing loss. Less frequent immersion has been shown to develop beige fat, increased immunity, reduced pain, tension, and fatigue (Tsui, 2021). *Outdoor swimming* also brings about socio-cultural change, campaigns proliferate (Jones, 2022; Surfers Against Sewage, 2022; We Swim Wild, 2022). Practice is also being shaped by legislation, policy, and steering groups (Outdoor Swimming Society, 2022; River Access for All; Sagar, 2022; The Bluetits Chill Swimmers, 2022; We Swim Wild, 2022).

The effects of water and immersion are not always beneficial. This is highlighted by the 50 year Teflon scandal in the US (Liu et al., 2021), research into antibiotic-resistant E.coli in UK surfers (Leonard et al., 2018), sun exposure (Collins & Kearns, 2017), and micro-plastics in fish and human blood (Campanale et al., 2020; We Swim Wild, 2022). Associated risks exist (appendix 4, and 5), CWI can cause hyperventilation, dyspnoea and activation of the sympathetic nervous system, this may lead to tachycardia and ultimately drowning (Tipton et al., 2017; Tipton & Bradford, 2014). As with all recreational activities there are positive and negative effects which ultimately need to be balanced, in order to benefit all those involved, including the-more-than-human.

Well-being

'Well-being' is a "concept or abstraction" with no definitive meaning (Wheeler et al., 2014, p. 4), referring to anything being evaluated in a person's life situation. It is comprised of two forms, hedonic and eudaimonic well-being. Hedonic well-being has short-term benefits (Pritchard et al., 2020). It involves the balance between positive and negative emotions (the affective); and how we consider our life is going (the cognitive) (Vik & Carlquist, 2018, p. 2). Eudaimonic well-being has long-term benefits (Pritchard et al., 2020); and involves how a person is functioning (Howell et al., 2011, p. 167).

Outdoor swimming has the ability to affect individual health through both hedonic and eudaimonic pathways. The relationship between *blue-space*, health and *well-being* is provided in appendix 7 (White et al., 2020), highlighting factors affecting this relationship. Further consideration is needed, of the mechanisms, exposure routes and effect modifiers of activities, to include experiences such as flow; and further understand how they can develop better health outcomes. Kaplan and Kaplan, (1989) theorize that nature allows attention to reset. Involuntary attention is active outdoors, allowing direct attention time to rest, thus creating a sensation of *well-being*. Studies highlight that participation in *outdoor swimming*, improves a sense of *well-being* (S. Atkinson, 2019; Denton & Aranda, 2020; Foley, 2015; Massey et al., 2020; McDougall et al., 2022; Throsby, 2015; Wood et al., 2022). However, these studies reflect different understandings of *well-being*, affecting trustworthiness of results and comparability (Natural England, 2016).

Nature Connectedness

Contact with nature has been shown to have many health benefits (Cervinka et al., 2012; Frumkin et al., 2017; Louv, 2003; Mann et al., 2021; Mayer et al., 2009a; Mayer

& Frantz, 2004a; Miyazaki, 2021; Sharma-Brymer & Brymer, 2021). Nature connectedness (NCT) is a “subjective personality construct” (Capaldi et al., 2014, p. 976); developed from the theory of Biophilia (Wilson, 1984), whereby, an evolutionary foundation is thought to exist between nature and a person’s health (Howell et al., 2011). This association is reliant on distinctive indicators (Lumber et al., 2017, p. 11), existing on a distinct continuum (Howell et al., 2011; Mayer & Frantz, 2004b). Five key factors affecting NCT have been identified (appendix 6), which includes exercise and therefore swimming. Studies show how *outdoor swimmers* report increased “closeness to nature” (McDougall et al., 2022), and “heightened body-awareness” (Swann et al., 2011). Current UK policy is to “encourage more people to spend time in blue space” (HM Government, 2018, p. 72), with the outdoor sector being highlighted as a potential area of growth (Sport England, 2016, 2021). Whether this will allow immersion is not stated but needs consideration. England and Wales prevent use of most inland *outdoor* waters through access laws (Hayes, 2022; Countryside and Rights of Way Act 2000, 2000; Sagar, 2022; Shrubsole, 2019); in Scotland access is open (Land Reform (Scotland) Act 2003, 2003). The Scottish government is actively researching how *outdoor swimming*, can improve health and *well-being* (McDougall et al., 2022; McGregor, 2022).

New-Materialism

New-Materialism considers political implication. It questions Western binaries, material actants and actions influencing relationships, considering we are one with our surroundings. Integration of a new-materialist framework “re-orientates thought” (St. Pierre, 2021, p. 4); bringing balance to a human centred account. The aim is to be “surprised by what we see” (Bennett, 2010, p.5), considering water, and the body as

one alive material, a collective correspondence (Barad, 2007; Bennett, 2010; Pyry, 2020; Rautio et al., 2020; Taguchi & Eriksson, 2021).

Plato's concept, of the mind being superior to the body in generating knowledge, is highlighted as a possible cause of nature-disconnection (Richardson, 2023). Thus, considering the mind and body as one, viewed within a new-materialist onto-epistemological framework, may reveal alternative ideas and challenge existing relationships.

Methodology

Autoethnography often emerges from a juxtaposition. Muncey, (2010) explains the need to undertake autoethnography comes from a disconnection arising between the shared narrative and own experience. Research within a social justice pedagogy focuses on emancipation, the researcher decides what and how thoughts are portrayed, exerting power. The views of *outdoor swimmers*, and the freshwater they dwell in, are not being heard, they are suppressed by corporate and political bodies who do not understand the correspondence between water and swimmer. This account provides a platform to express my standpoint, as a freshwater swimmer, rather than allowing somebody else to objectify it.

Overview of Autoethnography

Autoethnography, refers to the self 'auto', being used to make meaning of interactions 'ethno', which are then represented 'graphy'. As a methodology it allows development of understanding beyond the self (Porter & Couper, 2023). It has emerged amid concerns of how a researcher portrays the intricacies of human life, and the ability to express the voice of others legitimately (Humberstone & Nicol, 2019); acknowledging these difficulties foregrounds them in the research process. The reader is allowed to connect with the life world of the author, becoming aware of their thoughts and actions, within a cultural and social context, developing cultural competency (Breunig & Rylander, 2016). It is not possible to predict how a reader will interpret a text; however, a window is provided through which to view life. An autoethnographic account is reflexive, moving like the tide between wider societal issues and the self (C. Ellis & Bochner, 2000; Humberstone, 2011). It collaboratively creates insight (Richards, 2008), in this instance trying to move past reflexion to a point of diffraction (Barad, 2007; Fenwick & Doyle, 2016). Rich data is produced, issues of gatekeepers, gender,

and rapport, that often affect access, have less impact on the research process. Insider status and involvement are accepted (Merton, 1972); permitting identification of practices, that might otherwise be overlooked, by a researcher who has no knowledge of the subject matter (Bridgens, 2007).

Methodological disagreement exists within the field. Evocative autoethnographies “lean ...toward art” (Ngunjiri et al., 2010, p. 3), criticising analytical autoethnography as being void of feeling; due to its objective representation (Ellis & Bochner, 2006) and more recognisable as inquiry (Anderson, 2006; Atkinson, 1997). There are proponents who advocate a form of autoethnography whereby the researcher situates themselves on a continuum, between the dichotomy of evocative and analytic approaches (Sparkes, 2020), this allows the researcher to consider the most appropriate method “that moves collective thinking forward” (Stahlke Wall, 2016, p. 7).

Outdoor Research and Autoethnography

Outdoor research has embraced autoethnography (Humberstone & Nicol, 2019; Mcphie, 2021; Nicol, 2013; Sparkes, 2020 Lynch, 2019; Mcphie & Clarke, 2019). A synergy exists between *outdoor* practice, experiences in the *outdoors* (Martin et al., 2004), and autoethnography (Brandy, 2014; Porter & Couper, 2023). The experiential nature of *OE* affords itself to autoethnography, with the pedagogical focus of “process over content” also based on involvement (Quay, 2019, p. 71). There is a need for practitioners to comprehend the individual nature of experience, to further the knowledge base from which to understand practice and move thinking forward. Autoethnography accepts the researcher to be part of the inquiry, to have a personal connection and voice, it encourages reflexivity “what it feels like to be alive and the implications for others” (Bochner & Ellis, 2022, p. 9). To be considered

autoethnographic issues central to society should be deliberated (Sparkes, 2020), and used to inform future practice (Humberstone & Nicol, 2019).

Researcher Positionality

Within research it is important to be aware of our own philosophical position, the way in which we view the world (ontology) and how we generate meaning (epistemology). New-materialism challenges this dichotomy arguing that knowing cannot be separated from being, thus a “knowing-in-being” onto-epistemology exists (Taguchi, 2012, p. 277). As an individual entering into the research process, I am still evolving my positionality. The realist belief that a truth/lie binary exists, is contrary to the subjective interpretative paradigm in which autoethnographic research is situated. It has become my belief that data is excluded in the research process when not deemed objective, referred to as rhetoric or anecdotal. Complex experiences get lost amongst the countless data (Muncey, 2010). Qualitative research enforces parameters through application of rigid human-centric methodology, viewing a concept in the same way through application of the same method will reveal the same result, establishing hegemonic norms. An autobiographical dimension always exists in research (Denzin, 1997; Leather, 2019a), our perception, and therefore interpretation, is in a state of fluidity, constantly changing due to experience. Douglas & Carless, (2013, p. 84) affirm this stating that “there can be no one definitive telling of any story”, the past is constantly being rewritten as new perspectives, and therefore understandings, emerge.

This inquiry utilises the framework of new-materialism, providing freedom to explore ideas and acknowledge the complex entanglement of life. It is however struggling with conventional methodology, particularly how to understand and represent findings, due in part to new-materialisms origins within post-modernism (St Pierre, 2014; St. Pierre,

2021). Autoethnography is a form of qualitative research and human-centric, it sits at odds with post-modernism; however, by interweaving these two different perspectives I hope to view the world otherwise. When considering data autoethnographically I should recognise, and acknowledge, my cultural identity; conversely, in doing so, I reinforce hegemonic patterns of beliefs and risk fixing them through process (Taguchi, 2012). Accepting this post-qualitative thought, I will not list my cultural and social heritage, although it is probably evident within the story told.

Academic research of water activities often involves expensive equipment in exotic locations. This creates a selective sample by demographic, reduced to higher income earners (Atkinson, 2019). *Outdoor swimming* could fall into this trap with activities such as sea or long-distance swimming, requiring wetsuits and support. Freshwater outdoor swimming can take place with minimal equipment, challenging such views of participation, it therefore provides an opportunity to consider different demographic perspectives, and challenging dominant representation.

Method

Considering this inquiry using a post-qualitative lens (Bennett, 2010; Clarke & Mcphie, 2020; Mannion, 2020), highlights concern with humanist qualitative methodologies; and their need to display familiar process. Such practice can lead to formalization, restricting the scope of findings (St Pierre, 2014; St Pierre, 2021).

Qualitative methodologies usually explore the concept of flow from a humanist perspective (Humberstone, 2011), using interviews and experience sampling (Kappan, 2020), to establish whether a state of flow has been achieved (Chilton, 2013). The Flow State Scale (FSS) (appendix 2), identifies levels of flow; it was developed to bridge the gap between phenomenological experience and the empirical need to measure (Jackson & Marsh, 1996). Utilising FSS as a tool, allows numerical representation of dimensions of experience. This provides easier concise synthesis (Swann et al., 2011), across different contexts, and people (Nakamura & Csikszentmihalyi, 2009). Nevertheless, this also places individual responses into distinct categories; whereby an experience maybe more nuanced, stinting evolution of theories (Swann et al., 2011), reducing the concept of flow to a disembodied experience confined to the thinking mind. The FSS is a 36-item instrument reflecting characteristics of flow, limiting consideration of material and “bodily experience. It hides the affective, embodied sensations within nature” (Humberstone, 2011, p. 501), affirming the cartesian divide. Incorporating new-materialism into the study design allows us to shape knowledge with regards to flows of effect (Masny, 2013); with relationships influenced by material actants and our actions. Ingold (2017, p78) advocates participating in a creative process to enhance thinking, or an “art of inquiry”. The transitional nature and sensorial immediacy of *outdoor swimming* varies from body to body, highlighted by the myriad of autobiographical accounts available (Britton, 2023; Deakin, 2000; Landreth, 2017; Parr, 2011; Runcie, 2019; Tsui, 2021). Feelings

escape language (Masny & Cole, 2020), which involves understanding social convention, meaning and norms (Derrida, 1978). Many *outdoor swimmers* express their connection through different methods of depiction (Barclay, 2023; Brooks, 2015; Burnett, 2017; Green, 2009; Shapton, 2012), unable to express in words how it makes them feel. Use of language alone does not reveal effect. No specific way exists to represent autoethnography; therefore, the researcher is able to create innovative methods to consider human and non-human interactions, with and without language. *Outdoor* research embraces such mobile research methods. It allows researchers to generate ways to capture, elicit and portray what they discover, in the ever changing and challenging environment (Nicol, 2013), in this instance through material memoirs.

Material Memoirs

Journaling is part of the reflexive process, encouraged by experiential learning and the foundation of *outdoor* studies (Porter & Couper, 2023). It includes non-textual methods that “lend themselves...as a metaphorical means of creativity explaining subtle or challenging aspects of personal experience” (Savin-Baden & Major, 2010, p. 87); encouraging a deep understanding of our embodied knowledge and values (Wigglesworth, 2018). Water does not speak in words it interacts through movement, creating corporeal responses; representation in written form would therefore be difficult. The tool, in this instance the researcher, needs to reflect this matter. Such introspection could transform my own future beliefs, values and actions (Anderson, 2006, p. 382). Words derive meaning through our use and experience of them (Savin-Baden & Major, 2010). As the research tool I need to consider these issues, and how this dominance can be disrupted when communicating my thoughts. Ingold reminds us that “Interdisciplinarity ...is a colonial idea that lays exclusive claim to knowledge” (Spencer & Ingold, 2020, p. 209). By surpassing such ideas, we can re-conceptualize

knowledge-production (Taguchi & Eriksson, 2021); creating a melting pot of curiosity to explore. Humberstone (2011, p. 497) highlights the call to “bring the body back into research [specifically] ...sensing sensual corporeality”. With this in mind I have chosen to produce material memoirs, emerging from the idea of transcorporeality (Kuznetski & Alaimo, 2020). This is a two-way process of interaction (Alaimo, 2010). The researcher uses their senses, becoming attentive to corporeal responses during the research process. It goes beyond thinking and understanding, considering “Faculties that register smell, touch, level, temperature, pressure, tension and force, ...interconnections emerging between different matter, matter and discourse” Taguchi (2012, p.267). The interaction of the body, material and social, normalized through culture, assist in creating authentic understanding. Perceptions of bodily experience are set within a socio-historical context (Savin-Baden & Major, 2010), hence although I have not disclosed my socio-cultural identity, it will emerge.

To inform this inquiry, I will create a material memoir focused on intra-action between outdoor water and myself. This will including an autobiographical account depicting how my interest has evolved. Sensorial moments reveal themselves serendipitously during my swims (Asfeldt & Beames, 2017; Barry & Ensoll, 2016; Krouwel, 2005); therefore, I will employ use of a mobile waterproof recording device, to capture thoughts as voice notes, photographs, videos, and soundscapes. A journal will record any additional insights, once on dry land, explored through images, film, drawings, collections, ink making, poetry and texts. Such creative ways of inquiry allow non-linear reimagining, freeing us to be attentive to ideas we might otherwise overlook and not count as data (Sidebottom, 2019). In post-qualitative research nature-connectiveness is a process of reciprocation, humans and the environment subsist as assemblages (Duhn et al., 2020; Pyyry, 2020; Rautio et al., 2020); this permits space for ideas to form and entangle. In order to make sense of the records collected, this

inquiry will move like the tide, across the material memoirs, sensing what surfaces and submerges through rising patterns (Fenwick & Doyle, 2016).

Ethical Considerations

Ethical concerns exist, due to the inability to disguise others within the research process. Reflecting on my own life events, could create issues of consent. Prompts adapted from Sikes (2015) have offered a way to “negotiate such incidents” (Porter & Couper, 2023, p. 30). Authors also note finding themselves writing “in the third, rather than [the] first person to [try to] distance [themselves]” from the research (Denzin, 1997, p. 317), and uncomfortable feelings of involvement (Méndez, 2013). Production of vignettes has assisted in addressing this issue, photographs, video, and soundscapes will focus on the researcher and the more-than-human to avoid ethical concerns of obtaining human consent.

Research Quality

Research quality is often referred to using language stemming from a positivist epistemology and therefore may not be appropriate when considering post-qualitative or relativist research. In qualitative research, the trustworthiness of the piece pertains to whether the research is judged as credible (Major & Savin-Baden, 2012). An assumption exists in research, that participants speak the truth. By gathering information, via interview or questionnaire, for example, the researcher can interpret what is happening, however this may mean relevant observations and data are missed, not presented due to reductionism, omission or untruths being told.

In autoethnography, as with autobiography, personal accounts are the foundations of the research. It is important that the stories are portrayed with transparency so connections between the material, body, social, and cultural can unfold (Ellis &

Bochner, 2000; Humberstone, 2011). As pointed out by Merchant, (2011) perception is personal, nothing is identical, everybody is different, with past experiences informing current practice. What is being sensed by me may be different to that felt by someone else (Sparkes & Smith, 2012).

Opponents to autoethnography argue it is narcissistic, emphasising that the researcher should not forget the 'other' and 'ethno' within the research process (P. Atkinson, 1997; Delamont, 2007; Roth, 2009). A fear tactic also suggests it could adversely affect an author's career (Poulos 2010) and abolish the data-collection phase of the research process. I would argue that in this inquiry it has challenged the researcher to consider new and innovative ways to collect and consider data, rather than to conform to hegemonic research norms.

'Insider' status is when a researcher is part of the culture they are researching, this can create taboo subjects, which an outsider may not be aware of and therefore limited by. Assumptions of familiarity also mean that basic information is not always shared, as the *insider* is considered already aware of these by the participant. Such criticisms are important as they highlight how autoethnographic studies are perceived by others and where issues may arise in the research process. It is also interesting to note that Delamont (2016), has chosen to include autoethnography, in a subsequent edition, due to its fashionable popularity, although still highlighting the same apprehensions. Studying research has often felt like a process of normalization. How we engage in and negotiate the production of legitimate knowledge can exclude ways of being, deciding whose voice should be heard and how to portray it. Post qualitative research addresses this unease, allowing new ways to represent exchanges that I cannot express in words (Østern et al., 2023). Existing method and methodology are refused, as well as humanist perspectives, aiming to look at things differently (St. Pierre, 2021); contributing further ideas to theoretical foundations. Posthuman research reminds us

of how traditional research methodologies can perpetuate existing hegemonic values, such as inequality and performativity, through “research-informed practice suggest[ing] a desire for certainty” (Sidebottom, 2019, para. 3). It advocates releasing the old and welcoming in the new, acknowledging that findings are “limited by time, space, and individual selection” (Sidebottom, 2019, para. 5) effecting what is presented.

Results

Autobiography

This section is an autobiographical account of my connection with water. Researchers are often participants within the outdoor practice they research (Brown & Humberstone, 2015; Couper, 2018; Foley, 2015; Leather, 2019b; Mannion & Lynch, 2016). Possessing *insider* knowledge, familiarity with language, and a desire, which creates questions. “Building blocks of personal memories” (Nicol, 2013, p. 6) can uncover understanding (Greenaway, 2008). This study is a realization of my hydrophilic attraction; its responsibility for a connection to nature, and the way it meanders through my very existence without realisation of its significance and affect. My earliest memories involve water, bathing in the sink of the servant’s quarters at Burghley House, the taste of salt on my tongue and a sting in my eye from the olive murk of the Solent. I was introduced to water at a young age, collecting winkles with my nan from the local lock, fishing with my dad in his boat, raking cockles, and battling the relentless taste of bile, aged 9, to obtain a 2-mile-long distance swimming award. So important was the ability to swim in the 1970’s that my parents fundraised to build an open-air pool at our local authority run middle school. The frozen concrete changing room floor now obsolete, along with the school playing fields, today a housing estate. Summer involved picnics by local chalk streams, floating in giant rubber inner tubes, building dams, and wading under bridges. Our holidays were spent at the same campsite in the New Forest. I would abscond at dawn, with my fishing rod, free to be by the pond to see the mirrored sun rise. I was not aware that these were cost-effective measures to occupy us as children, and supplement food. The competition to find the roundest pebble, holey stones, and sea glass, were games we played for free, as was the food we foraged for and the water we swam in. As long as I can remember I have

been attracted to water and it somehow to me, a symbiotic relationship. Having lived by the sea all my life I chose the wrong university, leaving due to its land-locked location. My time between universities, in 1990, involved working for the Royal Navy. This serendipitously led to afternoons on Horsea Island, allowing me to swim in the lake with the jelly fish, whilst WRENS first trained to go to sea. *Outdoor freshwater swimming* grew into my life when I moved next to the Afon Gwy (River Wye). I first encountered the river with my parents, aged 15, on a camping holiday, recalling a naked woman sitting on a rock, down in the valley by the dark evergreen water. After a failed attempt at a waterbirth, I chose to immerse my son in water at any opportunity. He still describes how the clear Verdigris water of the west coast of Scotland masks its temperature! Locals refer to the river as a lifeblood, until I moved away I did not understand the energy it created within me, a conduit feeding my soul. During a dip senses are supercharged, I feel part of the river, as if I am journeying through the veins of the earth. Skin is the largest human organ, it detects changes in temperature, composition of water, hardness, and softness. Wearing a wetsuit is not an option, I need to feel the water and let it feel me.

As I have aged, I have become increasingly aware of inequality. Once called a “drain on society” by an ex-landlord, I chose to move to a nomadic way of life, no longer able to see the purpose of paying rent for others gain. This account reflects my views on the value people place on things, and how neo-liberal agendas and commodification can create untold damage (Bates, 2014; Monbiot, 2021). Within the UK water industry privatisation has shown how profit before environment can impact the health of water, and ourselves (Kollewe & Wearden, 2023; NFCP, 2023). Recently there has been a change in conversation on the Afon Gwy. People paddling past, whilst I swim, often say “you wouldn’t catch me in there”, not because it is April and cold but because of water quality. Media highlight the ‘Death of the River’ (BBC, 2023; BBC Wales, 2022;

Jones, 2022; Wales Online, 2022), this could also cause the demise of *outdoor swimming* and its ability to connect people to nature through living water.

My swimming is solitary, I choose times and places to avoid others. I have a kinship with the river, where it flows through and over me; I am at ease, drifting where taken.

Outdoor swimmers often do not feel safe to go swimming on their own (S. Atkinson, 2019; Outdoor Swimming Society, 2022). Risk is a “social construct” (Leather, 2018, p9), with perceived risk one of the key factors preventing participation (Outdoor Swimming Society, 2022; Wood et al., 2022). CWI harm exists, fatalities from drowning are publicised. The National Water Safety Forum [WAID], (2022) indicates, that out of 277 people who drowned in the UK, only 61 were swimming (Radford, 2022). More people drowned from walking and running by water (WAID, 2022).

As a river swimmer my vista is different, no vast infinite blue yonder, I am secreted in the forested valley hugged by the steep slopes, the black reflective water vanishing as it journeys to the sea. Throughout this inquiry I have been troubled by the question why are swimming pools blue? It seems far removed from the experience I encounter when *outdoor swimming*. Bridges often feature in my swim spots, rather than being a focus they are a consequence of easy access.

Outdoor swimming has created a cultural shift within me, crystallising a belief that we are nature, not separate from it. Such a symbiotic relationship should be nurtured. This principle creates contention, during one employment I decided to organise an *outdoor* wild swim. This was met with enthusiasm from students I had previously caught skinny dipping in a plunge pool in the Black Mountains, but horror from colleagues. I found myself justifying the activity as a health and safety exercise, the effects of CWI. All I really wanted was to iterate my connection to water, the freedom and sense of belonging it provides. Unfortunately, I did not consider this a good enough reason; unable to articulate my feelings, and afraid others would ridicule such

thoughts. Whilst on school camp in my teens we walked in rivers and swam in ponds, This was packaged as character building, and therefore acceptable. One occasion, at 6am, we found a forestry commission van at our swim site; obviously there to send a message, we ran on by missing our daily dip! *Outdoor swimming* is now becoming normalised (Atkinson, 2019; Rew, 2022); although I suspect such activity from 100 teenagers would still draw attention!

I have chosen to include a number of vignettes to describe thoughts on days I dip, and those when I dip-out; to try and further understand how the relationship between outdoor water and myself occurs through *outdoor swimming*.

Vignette 1

“A glorious spring day, the bluebells are emerging, as the sun shines down the river I approach its bank, my swim is not going to happen today. The river runs reddish brown, two ducks pass at speed, facing upstream trying to counter the oncoming flow, a bench is next. The Lower Wye escaped the recent snow, however there is a lag in rising water levels along its meandering journey, acquiring run-off from farmland upstream, and discharge from ‘overworked’ combined sewage overflows (CSOs), this changes the colour of the river from a mysterious reflective velvet dark green to a form of absorbent ‘shit’ soup. My usual access point is somewhere people can’t ‘bother me’, near the water’s edge I become acutely aware of the unseen beneath, recent media reports fill my mind, excessive phosphates, sewage, and fatal slips. A flash of blue and orange streaks past and a kingfisher lands on a nearby branch, time halts as I savour its beauty, thanking the river for drawing me there at that moment and providing such a reward. My thoughts return to my disappointment, no swim or dip on such a glorious day, contemplating the water level I realise it will have washed away the decaying sheep carcass that has haunted my egress for the last month. They say

knowledge is king, too much can also be an issue, I long for my naïve younger years swimming uninhibited and unknowledgeable in the river. I live with a skin infection gained seven years ago, one winter off the coast of Cornwall, I have encountered swimmers itch from the ‘cleanest lake in Europe’, yet still I long to be in the water, I miss it’s soft silky embrace, how it envelopes me, weightlessly entering another world, it numbs both body and brain allowing me to be present in the moment, surrendering to the essence of the cool water, and its movement on my body as it flows over me.”



Figure 1 Friendly advice to swimmers, Monmouth Rowing club 2023

Vignette 2

A recent sign emerged at one of my swim spots (figure 1), as a consequence I purchased a pink inflatable buoy, often I walk out upstream and swim back, on one occasion I was drifting down the river, towing my buoy, when...

“Shouts came from the bank on the far side, a fisherman had spotted me and called to his colleague ‘swimmer, swimmer’ pointing in my direction. I had seen them when walking out and made sure I was now on the opposite bank to keep out of their way. He asked if I realised I was ‘swimming below a sewage plant and that there were algal

blooms reported in the river?’ I was aware and nodded, wondering to myself whether he was really concerned for my safety or just trying to intimidate my river access? There was an irony to this conversation, with him fishing downstream from a sewage plant, I wondered whether he was planning to eat any fish caught, or whether the same discussion would take place in a swimming pool, with all its chemicals and urine?”

Vignette 3

“Frustrating weeks of high-water levels on the river, I am itching for a dip, I divert to a local well, surrounded by ancient beech and oak trees yet to bud, the water is crystal clear, about 3 foot deep. Some steps lead invitingly down to the bottom of the pool, over excited I grab my partners shorts from the van for a spontaneous dip, gently walking down savouring each step as the water absorbs me, it starts to rain, and the water sprites begin to dance (Deakin, 2000), so do I, mimicking their joy. The water is cool, numbing, idyllic, I am reminded of a line from *The Swimmer*, Cheever (1964, p. 1) “Being embraced and sustained by the light-green water seemed not as much a pleasure as the resumption of a natural condition.” The sun emerges, creating an element of calm on the water surface, there is a sense of isolation, I am water, and it is me, I wonder how old the well is, where else the water has been during its timeless life, and who else has swum here? A chance encounter, where we parked, leads to a lady recounting her own skinny-dipping adventures in the well some 40 years before. My skin and hair feel soft, my body invigorated, aches and pains vanish.”

Outdoor swimming is free and available 24/7. I currently live by a river where access is easy, as part of my material memoir I created a montage of photographs from places I have swum, Figure 2.



Figure 2 collection of signage swimmers encounter

Data Analysis

In the above autobiographical account, I explore my experience of being with *outdoor* water; the affect my presence has on it and how it touches me. I relate to Alaimos' (2010) idea of trans-corporeality, where interchanges and movement occur across bodies and non-human nature. Moving beyond reflection and reflexivity, new materialism considers we should avoid explanatory questions, such as why? Instead asking "how does it work? and what does this text or data produce?" (Taguchi, 2012, p. 268) Reflexivity mirrors fixed positions, Barad (2007, p. 185) suggests that "we do not obtain knowledge by standing outside the world; we know because we are the world. We are part of the world and it's differential becoming." Diffraction trusts us to find novel ways to deliberate the data through difference. Our material bodies interact with the environment and others developing understanding (Kuntz, 2010, Chapter 15). The perception of the researcher is as important as the knowledge produced (Østern et al.,2021; Taguchi & Eriksson,2021). The vignettes have undergone a process of editing before reaching the page; shaped by my experiences and positionality, these assumptions are also revealed in the methods chosen to record ideas.

The material memoirs show how water intra-acts with me, sometimes allowing a state of flow to occur (vignette 3). I have noted that most of the photograph and videos taken relate to water; showing its colour, play of light, reflection, refraction and texture. The 'soft silky embrace' felt through the skin, causes changes of water flow within me. I often gauge the temperature of the water by how quickly it causes diuresis (Harper, 2022), sounds of running water have the same affect. Being a dipper, rather than a plunger, I take my time to acclimatise, my whole body attunes to the water as I enter. Once past my waist, urination occurs, almost instantaneously below 10 degrees. No

two swims are the same, change occurs every time, speed, direction, colour, the water and I are in a constant state of flux (Ingold, 2022).

The unknown draws me to swim in *outdoor* water. Constituents pass through my body, phosphates, plastics, sewage, oestrogens, parasites, the unseen infiltrates, azure seas, 'clean' lakes and 'shit soup', cannot stop me. Such practice is echoed in the writings of Tsui, (2021), Britton (2023) and Throsby (2013), who highlight the dangers of swims. They are still compelled to enter, my immersion is not a survival challenge, or to achieve mastery, but a form of surrender. They identify how training increases the ability to enter a flow state, gliding into auto-pilot. Flow occurs at a point of total submission; when I 'dance to her tune' (Nichols, 2014), gauging resistance as my feet leave the riverbed. It is a merging of action and awareness (Csikszentmihalyi M.,1990), occurring frequently when I swim at familiar spots.

Looking at the world with a child's eyes, considering my material memoir, highlights the excitement and disgust material surroundings have on my body, or enchantment (Bennett, 2010). The interplay of light on water, reflection, absorption, refraction, turbidity, colour, movement, are all felt through my being. This creates feelings of excitement (vignette 3), disgust and intrigue; dead carcasses (vignette 1), plastics, rubbish, phosphates, and associated smells, enchantment is a joyous and frightening experience. Olfactory senses are heightened near water, smells include washing powder, death, sewage, they vary with season and weather. My nose senses rain, humidity, composition, fresh or salt water and temperature. My body is the apparatus, reacting through sensorial awareness (Humberstone, 2011). Primary contact with the environment is through haptic knowledge, interacting with the water and surfaces of the river. There is no physical constant, it is "mutually constituted" (Ingold, 2022, p. 16), my actions cause a reaction and vice versa, a form of ambiguous feedback. I prefer to swim with as much skin exposed to the water as possible, creating a

distinctive aesthetic experience, making me instantly alive. Extremities are simultaneously stabbed with a thousand needles, overloading the body-system, particularly in Winter. Roger Deakin (2000) describes the effect of wearing a wetsuit as encapsulating himself in a giant condom. I propose that for me, there is an altered state achieved without a wetsuit, through stimulation of aesthetic pathways.

Whilst undertaking this inquiry I became aware of kit burden (vignette 2); longing for 'naïve younger years'. Plastic has been found in human blood (Campanale et al., 2020). I am increasingly aware of its permanence and wonder how I have succumbed to another dogma, overcomplicating the simple joy of swimming without consideration for the river. Figure 1 suggests you swim towards rowers, who are travelling backwards; my buoy is not going to be of much use, unless they have eyes in the back of their head! My pink float bobs alongside me, sometimes taunting me; occasionally I grab hold of it and push it under the water, drowning it out of sight. The irony of such action haunts me, how can we care for a river, yet ultimately destroy it through our action? Such biocentric thoughts have led to ecocide (Tremblay & Swarbrick, 2021), outdoor swimming could be causing the destruction of the very thing it values most, and that brings it into being.

Figure 1 and 2, highlight the difficulty *outdoor swimmers* face, particularly when trying to access freshwater. The bank is clear of balsam and thistles where I enter, worn by movement, of myself and grazing sheep. The river is void of water crowfoot, blanket weed and algae cling to the rocks. There is a subversive element of excitement about being somewhere I should not be, stepping out of the norm. It creates adventure, which amplifies focus (vignette 3) rebelling against societal rules. A hierarchy of river user and misogyny surfaces. Superiority is afforded to those who have paid, commodification providing perceived river domination. The fisherman who calls out is male, their colleague female. I wonder if such a conversation would have happened if

our roles had been reversed, and whether such users consider their emancipation of the river through practice?

Discussion

Swimming has been my refuge from injury and aging, which can affect the ability of the researcher to research (Walford, 2007). Outdoor swimming has replaced OA, which I have participated in since my teens, although the activity has altered, the dimensions of flow experience persist (Freire, 2021). There is an element of heightened risk, no life-guard, the unknown, potential hypothermia, trespass, developing skills; participation may be due to age and injury (McDougall et al., 2022), a desire to maintain flow through self-reinforcing experiences (Tse et al., 2022), or an autotelic personality.

The role of attention in flow and well-being

The theoretical model of flow emphasises the role of attention in perception. Attention is the most important factor in producing quality experience; however, this is often overlooked with very few inquiries addressing such the concept (Kappan, 2020). A lack of research in OA is due to the subjectivity of aesthetic experience informing perception. Inquiries are “descriptive rather than explanatory” (Boudreau et al., 2020), dealing with individual insight, therefore conclusions are considered limited due to sample size. Control of attention is linked to “positive functioning and well-being” (Freire & Tavares, 2016, p. 78); with flow state characterised by total concentration (Boudreau et al., 2020), requiring perceived control. Kaplan and Kaplan, (1989) suggest in their attention restoration theory (ART), that directed voluntary attention is reset by being in nature. Involuntary attention, which is active *outdoors*, refuels directed voluntary attention creating a feeling of well-being. McDougall et al., (2022, p. 8) propose that the concept of being away is central to ART; leading to “cognitive restoration and recovery from attention fatigue [they emphasise how] ...views and sounds of water are perceived as highly restorative environmental characteristics”. Outdoor swimmers are constantly aware of their environment (Gooley, 2017;

McDougall et al., 2022), negotiating the flux of water. Survival makes you hyper-attentive to surroundings through directed voluntary attention, therefore both voluntary and involuntary attention are active whilst *outdoor swimming*, creating a merging of action-awareness. This occurs when I swim at familiar spots. Further exploration is needed as to whether lower levels of perceived risk, due to familiarity, allow reduced voluntary attention and greater involuntary attention. In his book *Blue Mind* Nichols, (2014) discusses the different neural networks that focus on things outside and inside us. Discoveries have shown that it is possible to experience both states of attention at the same time, creating a sense of nonduality between self and environment, or oneness. “Senses are sharpened ... There’s a sense of timelessness, or time seems to slow to a crawl” (Nichols, 2014, p. 232), this mirrors the transformation of time suggested in the concept of flow. Engagement of all our senses during an *outdoor swim* permits soft fascination (Nichols, 2014), allowing directed attention to reset. This fashions the ability to drift, a form of autotelic pleasure, as described by Throsby, (2013, 2015). These different forms of attention appear to occur on a sliding scale, with one relinquishing to the other, heightening experiences of flow.

Sensory perception and aesthetic pathways

Kandel, (2016) proposes we take in the world through an interplay of our senses and cognition, our perception, resulting in an aesthetic experience unique to each of us. Haptic engagement may run along the pathways of vision as well as touch, “optical touch as well as haptic vision” (Ingold, 2007, 2022, p. 133). Sensory pathways are interwoven, aesthetic appreciation relies on individual perception, as well as motor and reward systems (Kirsch et al., 2016). This ability of the senses to intertwine is highlighted by synaesthesia (Carpenter, 2001) and allows consideration of immersion as a form of aesthetic pathway. Photographs from my material memoirs do not portray

the original aesthetic feel of a place. Colours appear less vivid, reflections not as dazzling, smells, tastes, reminders of humidity and temperature, all missed; viewed merely as a scene, relying only on the ocular-centric stimulation of a photograph.

Senses do not have a definite character, cultural differences exist, whereby “interoceptive and proprioceptive sensation is often overlooked in euro-american societies” (Humberstone, 2011, p. 508). Outdoor swimming brings these senses to the foreground, bodily responses are intense and immediate (interoception); with proprioception tested by the riverbed and water flow. The water provides unambiguous feedback, as an outdoor swimmer I am constantly adapting to changes and challenge, as highlighted in Csikszentmihalyi (1990) flow dimensions. Stimulation of aesthetic pathways has been shown to develop a connection to nature (HCND, 2004)

Nature Connection

Research of *outdoor* extreme sport, has emphasised that a connection to nature (NCT) develops over time. A form of “dance” occurs, between participant and the more-than-human, within “emotional, spiritual and physical realms” (Brymer et al., 2021, p. 3). This *dance* could be a merging of flow dimensions or an autotelic process. Egocentric (hedonic) flow characteristics are heightened by biocentric (eudaimonic) flow conditions, creating a correspondence between us and nature, stimulated through aesthetic pathways. Spending time in nature allows us to become aware of changes. My flow experiences are often linked to places I know, and that know me. I can see differences in water quality over short stretches of river, moving from egocentric to biocentric thoughts, loving the river. To “move any relationship from separate to intimate...we need love” (Nichols, 2014, p. 251). I have formed a very close bond to the Afon Gwy, which in turn has generated strong NCT and pro-environmental behaviours.

Spirituality, oneness, and enchantment

It has been suggested that encounters, such as peak experiences, are better read through the idea of “spirituality”, allowing consideration of the “embodied affective” (Humberstone, 2011, p. 508). Research often looks at flow characteristics, missing opportunities to expand social evaluation. This spiritual connection to the environment is also echoed by Nichols, (2014) who suggests that perceived beauty may enhance such a relationship, a form of aesthetic stimulation or possible enchantment. The temporary freezing of time, in flow, also resonates with the thought of enchantment (Bennett, 2001), which is described as a “simultaneous immersion and disconnect with the world” (Pyyry, 2020, p. 5), a suspension of movement and time progressing. Flow is a relationship between body, mind and environment, in order to achieve a state of flow, we need to “acknowledge that we are about to enter into a relationship with the aliveness of the world” (Britton, 2023, p. 50). Such concepts form an assemblage of theories that correspond with one another to produce similarity and difference about time, connection, action, and place; through the aesthetic, NCT, flow, and *outdoor swimming*. The solitary nature of swimming amplifies my ability to lose myself in the moment; encountering the more-than-human through serendipity, a ‘flash of blue’, enhances the experience. Water clears my thoughts creating an “internal quiet” (Tsui, 2021, p. 232), providing space to just be, allowing profound thoughts to enter my mind, as shown in my autobiography. When swimming in the Afon Gwy there is a connection to my son, recalling times we spent together in this water; his soul is here with me, his laughter and joy at playing.

Flow experience has largely neglected embodiment, predominant to the *outdoor* recreation experience (Thorpe & Rinehart, 2010). It is accused of “covering up” (Humberstone, 2011, p. 501) the role of the aesthetic, sensing body’ (Humberstone,

2009; Thorpe & Rinehart, 2010; Wheaton, 2010), in favour of the thinking mind. Issues have arisen from the proliferation of research, and development of methodological tools such as the FSS, which focus on specific dimensions of flow. These perpetuate existing channels of thinking, rather than examining the concept as a whole. Csikszentmihalyi (1990) suggested that:

We must learn how to reunite ourselves with other entities around us, ...it makes no sense to impose our dreams and desires on nature without taking them into account. ...The individual's purpose should merge with universal flow. (p. 9)

Such ideas are highly subjective, and therefore hard to record over large samples. Autoethnography provides a route to uncover individual nuances, considering changes that occur in perception; constantly forming knowledge, as we move fluidly through water (Humberstone, 2011; Ingold, 2000).

Use of water to improve health is not a new idea, development of spas occurred throughout Western cultures (Foley & Kistemann, 2015; Parr, 2011). The popularisation of seaside bathing occurred in the 18th century, (Harper, 2022; Wood et al., 2022); influenced by movements such as romanticism, and leisure (Leather & Porter, 2006; Parr, 2011). *Outdoor swimming* is a social construct gaining popularity (Atkinson, 2019; Rew, 2022); impacting the environment through popularisation and commodification (Manchester Metropolitan University & Sport and recreation Alliance, 2017; Smessaert et al., 2020). Research has led to the belief that nature benefits human *well-being* through belonging to nature. Current Western cultural practice is destroying this association, affecting our health (Mayer et al., 2009; Pritchard et al., 2020). "Well-being emerges within the assemblage of embodied material and emotional components" (Atkinson, 2019, p. 163), and therefore needs to be

considered holistically. Water bodies are connected to people through what we put in them, as well as religious and spiritual practices. For Indigenous cultures, it can be where the spiritual world reveals itself, “the seen and unseen” (Andersson et al., 2021, p. 8), bodies are part of nature, not separate from it (Andersson et al., 2021; Britton, 2023; Cultural flows research project, 2014; Guttorm, 2021). It is important to be wary when trying to interpret indigenous practice, as often no cultural parallels exist (Guttorm 2021). This biocentric perspective is advocated by (Nichols, 2014), moving from our needs first, to recognise that we are participating in a *dance* of interdependence with the planet. Suggestions subsist within our own cultural setting that need to be reawakened. We must allow autotelic practices to emerge through encounters, acknowledging “aesthetic-affective openness” with the material world (Rautio, 2013, p. 7). A new-materialist perspective shifts attention to include the material environment, and intra-action. The more-than-human actant assists us to see flow as a linked experience, one that highlights that our connection to nature is alive and well, just under used (Rautio, 2013). Pickering (1995) suggests that using interdependence, in post-humanist analysis, allows opportunities to consider life as a whole; removing the contested divide created between natural sciences and social science. This can create a heterogeneous assemblage configured from human and non-human agency; avoiding analysis of “objects/things/matter or people/meanings” (Rautio et al., 2020. ch.2p.4), creating a linked relationship, or oneness. Research on the concept of flow is humancentric, focusing on internal states and flow characteristics (Swann et al., 2012). Environmental factors and context are considered important for occurrence of flow experience (Kappan, 2020), although frequently neglected, our interdependence with water needs further consideration for the health of all involved.

Conclusion

I have worked in the outdoors for over 30 years, sharing time and space with children as they explore the world through play, displaying an “aesthetic-affective openness towards material surroundings” (Bennett, 2010). They are drawn to the sensual feel of non-human forces, giving agency to things through experiential encounters (Bennett, 2001). Stimulation of aesthetic pathways are considered essential for development of NCT (Aked et al., 2008; HCND, 2004; Lumber et al., 2017; Richardson et al., 2021); such as those highlighted when *outdoor swimming*. This aligns with the initial sensory nature of *outdoor* experiences prior to processing (Quay, 2013). Through combining these experiences and allowing a sense of play (Bennett, 2001), we can enhance our own enchantments; inviting awe and wonder at our waters, rather than disdain. This could connect future generations, continuing the journey to restoration (Nichols, 2014). Research has demonstrated that flow experience is an intrinsically motivated state (Kappan, 2020); however, it is not always associated with high levels of intrinsic motivation and autonomy; “openness to experience [and] extraversion” were two factors found to forecast the incidence of flow experience in teenage girls (Kappan, 2020, p. 218). Being open to our material surroundings and how they are experienced through intra-action may assist in achieving flow, improving *well-being*. Participation in *outdoor swimming* stimulates aesthetic pathways and therefore could develop NCT, leading to biocentric action. It provides an opportunity to interact with lively bodies, and an endless correspondence between human and more-than-human entities in a state of openness allowing flow or nonduality.

The lack of accounts from freshwater swimmers may in part be due to current legislation, in England and Wales, that fails to allow access to rivers, lakes and ponds (Countryside and Rights of Way Act 2000, 2000; Land Reform (Scotland) Act 2003,

2003; UK Parliament, 2022); or address issues of bathing water quality (DEFRA, 2021; Department for Environment Food and Rural Affairs, 2021; EA, 2012, 2016, 2019; HM Government, 2017, 2018; The Bathing Water Regulations, 2013; The Environment Act, 2022; Monbiot, 2021). Use of *outdoor swimming* could also aid the current crisis in mental health services, through blue social prescribing, (Bagnall et al., 2019; Bailey, 2020; Harper, 2022; Mental Health Swims, 2022); if issues surrounding funding distribution can be resolved. The BlueHealth Project (2020) identifies the benefits that blue space bring, including development of practical skills, such as swimming, and increased exercise. Within the scope of this project only accessible blue spaces were examined; thus, changing UK access laws, would further benefit society, particularly for those who live in rural and non-coastal areas. These barriers need to be removed to allow people, from different socio-economic groups and cultural backgrounds, to access freshwater and develop NCT, thus benefitting the well-being of everyone, not just those who can afford to live by blue space.

According to Delamont (2007), autoethnography is “antithetical to the progress of social science” (p. 3), highlighting that it is not possible to combat familiarity. I hope that this account may resonate with others, bringing actants to the foreground, challenging this idea; rather than being considered a narcissistic, self-absorbed narrative (Anderson, 2006; Delamont, 2007). Further, may it highlight the importance of flow and evoke an understanding of how such experience can improve *well-being* and promote pro-environmental behaviours.

Conclusions drawn from autoethnographic research have been highlighted as limited due to their sample size, however autoethnography goes beyond the individual. "If culture circulates through all of us, how can autoethnography be free of connection to a world beyond the self?" (Bochner & Ellis, 1996, p. 24).

Research Summary

This inquiry has discussed autoethnography, outdoor practice, and *outdoor swimming*; explored in relation to understanding the nexus between flow, NCT, and *well-being*. It has identified socio-political barriers that affect *outdoor swimming*, and how these prevent participation. Further exploration is needed as to how flow conditions aid flow state, through stimulation of aesthetic pathways. Such research could assist in identifying ways to enable NCT, improve associated *well-being*, and ultimately aid pro-environmental behaviours.

Concluding Comments

Autoethnography is becoming an increasingly prevalent methodology (Sparkes, 2020). Creating accessible stories, and drawing these together, may assist in creating an awareness of how we are linked to water, through experiences of *outdoor swimming*, allowing development of a biocentric viewpoint. We need to understand how our own decisions impact water; and how the actions we take can improve its health and ultimately our well-being. As Nichols, (2014, p. 275) suggests “our neurons and water need each other to live.” Western socio-cultural living is undermining our sense of belonging to nature, and thus affecting our *well-being* (Pritchard et al., 2020).

Future exploration needs to address the socio-economic inequalities that exist (BlueHealth Project, 2020; McDougall et al., 2022b) in order to achieve NCT. Removing access barriers (UK Parliament, 2022, appendix 8) and improving water quality, will continue the growth of *outdoor swimming*. Through greater availability of recreational *blue space* and encouragement to dip in, we can release potential flow, benefiting the health of all on our blue planet.

As with Thoreau’s thoughts on fishing it appears that swimming is way down the list of reasons to go *outdoor swimming*.

References

- Adams, T. E., & Herrmann, A. F. (2020). Expanding Our Autoethnographic Future. In *Journal of Autoethnography* (Vol. 1, Issue 1, pp. 1–8). University of California Press. <https://doi.org/10.1525/joae.2020.1.1.1>
- Aked, J., Marks, N., Cordon, C., & Thompson, S. (2008). *A report presented to the Foresight Project on communicating the evidence base for improving people's well-being*.
- Alaimo, S. (2010). *Bodily Natures*. Indiana University Press.
- Anderson, L. (2006). Analytic autoethnography. In *Journal of Contemporary Ethnography* (Vol. 35, Issue 4, pp. 373–395). <https://doi.org/10.1177/0891241605280449>
- Andersson, R.-H., Cothran, B., & Kekki, S. (2021). *Bridging Cultural Concepts of Nature: Indigenous People and Protected Spaces of Nature* (S. Kekki, B. Cothran, & R.-H. Andersson, Eds.). Helsinki University Press. <https://www.jstor.org/stable/j.ctv26qjj3b>
- Annerstedt, M., Jönsson, P., Wallergård, M., Johansson, G., Karlson, B., Grahn, P., Hansen, Å. M., & Währborg, P. (2013). Inducing physiological stress recovery with sounds of nature in a virtual reality forest - Results from a pilot study. *Physiology and Behavior*, 118, 240–250. <https://doi.org/10.1016/J.PHYSBEH.2013.05.023>
- Asfeldt, M., & Beames, S. (2017). Trusting the journey: Embracing the unpredictable and Difficult to Measure Nature of Wilderness Educational Expeditions. *Journal of Experiential Education*, 40(1), 72–86.
- Atkinson, P. (1997). Narrative Turn or Blind Alley? *Qualitative Health Research.*, 7(3), 325–344.
- Atkinson, S. (2019). Wellbeing and the Wild, Blue 21st Century Citizen. In R. Foley, R. Kearns, T. Kisterman, & B. Wheeler (Eds.), *Blue Space Health and Wellbeing: Hydrophilia Unbounded* (1st ed.). Routledge.
- Bagnall, A., Brymer, E., Freeman, C., & Southby, K. (2019). *SROI Report FINAL - DIGITAL prescribing nature*.
- Bailey, P. (2020). *The social benefits of Blue Space: a systematic review*. The Environment Agency. <http://www.gov.uk/government/organisations/environment>
- Barad, K. (2007). *Meeting the Universe Halfway*. Duke University Press. <https://ereader.perlego.com/1/book/1466308/24>
- Barclay, L. (2023). *Biosphere Soundscapes*. leahbarclay.com
- Barry, M., & Ensoll, R. (2016). Searching for Serendipity. *Horizons No.75*, 20–22.
- Bates, J. (2014). The strategic importance of information policy for the contemporary neoliberal state: The case of Open Government Data in the United Kingdom. *Government Information Quarterly*, 31(3), 388–395. <https://doi.org/10.1016/j.giq.2014.02.009>
- Bauman, A., Smith, B., Stoker, L., Bellew, B., & Booth, M. (1999). Geographical influences upon physical activity participation: evidence of a 'coastal effect.' *Australia and New Zealand Journal of Public Health*, 23(3), 322–324. <https://doi.org/10.1111/j.1467-842x.1999.tb01265.x>
- BBC. (2023a, March 5). *Our Troubled Rivers: Paul Whitehouse*. BBC. <https://www.bbc.co.uk/programmes/m001jw74>

- BBC. (2023b, May 22). *Why is raw sewage pumped into rivers and the sea?* <https://www.bbc.co.uk/news/explainers-62631320>.
- BBC. (2023c, June 19). *Climate change: Sudden heat increase in seas around UK and Ireland.* <https://www.bbc.co.uk/news/science-environment-65948544>
- BBC Wales. (2022). *Whats Killing Our Rivers?* In *BBC Wales Investigates*. BBC. <https://www.bbc.co.uk/iplayer/episode/m001cmj3/bbc-wales-investigates-whats-killing-our-rivers>
- Bennett, J. (2001). *The enchantment of modern life: attachments, crossings, and ethics*. Princeton University Press.
- Bennett, J. (2010). *Vibrant Matter*. Duke University Press.
- BlueHealth Project. (2020). *Using urban blue spaces to benefit health and wellbeing*.
- Bochner, A. P., & Ellis, C. (1996). *Composing Ethnography: Alternative Forms of Qualitative Writing* (C. Ellis & A. P. Bochner, Eds.). Alta Mira Press.
- Bochner, A. P., & Ellis, C. (2022). Why Autoethnography? *Social Work & Social Sciences Review*, 23(2), 8–18.
- Boniface, M. (2006). The meaning of adventurous activities for ‘women in the outdoors.’ *Journal of Adventure Education & Outdoor Learning*, 6(1), 9-24.
- Boudreau, P., Mackenzie, S. H., & Hodge, K. (2020). Flow states in adventure recreation: A systematic review and thematic synthesis. In *Psychology of Sport and Exercise* (Vol. 46). Elsevier Ltd. <https://doi.org/10.1016/j.psychsport.2019.101611>
- Bowen, F. (2023, May 30). *Comedians back campaign against Lake Windermere sewage pollution*. The Independent.
- Brandy, E. (2014). Thoughts on a writing journey: Autoethnography in outdoor education research and practice. *The Ontario Journal of Outdoor Education*, 26(2), 31–34.
- Breunig, M., & Rylander, E. (2016). *Beyond training for tolerance in outdoor experiential education More than just leadership*. <https://www.ebsco.com/terms-of-use>
- Bridgens, R. (2007). Autoethnography and untold stories. *Qualitative Researcher*, 4, 4–5.
- Britton, E. (2023). *Ebb and Flow* (1st ed.). Watkins Media Ltd.
- Britton, E., Kindermann, G., Domegan, C., & Carlin, C. (2020). Blue care: a systematic review of blue space interventions for health and wellbeing. *Health Promotion International*, 35, 50–69. <https://doi.org/10.1093/heapro/day103>
- Brooks, N. (2015). *Blue Hue*. <https://bluehues.co.uk/video/>
- Brown, M., & Humberstone, B. (2015). Seascapes. In M. Brown & B. Humberstone (Eds.), *Seascapes* (pp. 1–18). Taylor and Francis.
- Burnett, E. J. (2017). *Swims*. Pinned in the margins.
- Campanale, C., Massarelli, C., Savino, I., Locaputo, V., & Uricchio, V. F. (2020). A detailed review study on potential effects of microplastics and additives of concern on human health. In *International Journal of Environmental Research and Public Health* (Vol. 17, Issue 4). MDPI AG. <https://doi.org/10.3390/ijerph17041212>
- Capaldi, Colin A., Dopko L., Raelyne L., Zelenski, & John M. (2014). The relationship between nature connectedness and happiness: A meta-analysis. *Frontiers in Psychology*, 5(AUG). <https://doi.org/10.3389/fpsyg.2014.00976>
- Carpenter, S. (2001). Everyday fantasia: The world of synesthesia. *Monitor on Psychology*, 32(3).

- Cervinka, R., Röderer, K., & Hefler, E. (2012). Are nature lovers happy? on various indicators of well-being and connectedness with nature. *Journal of Health Psychology, 17*(3), 379–388. <https://doi.org/10.1177/1359105311416873>
- Cheever, J. (1964, July 18). The Swimmer. *The New Yorker*. <https://www.newyorker.com/magazine/1964/07/18/the-swimmer>
- Chilton, G. (2013). Art therapy and flow: A review of the literature and applications. In *Art Therapy* (Vol. 30, Issue 2, pp. 64–70). <https://doi.org/10.1080/07421656.2013.787211>
- Clarke, D. A. G., & Mcphie, J. (2020). Tensions, knots, and lines of flight: themes and directions of travel for new materialisms and environmental education. *Environmental Education Research, 26*(9–10), 1231–1254. <https://doi.org/10.1080/13504622.2020.1825631>
- Collins, D., & Kearns, R. (2007). Ambiguous Landscapes: Sun, Risk and Recreation on New Zealand Beaches. In A. Williams (Ed.), *Therapeutic Landscapes*. Routledge. <https://doi.org/10.4324/9781315551166>
- Comley, V., & Mackintosh, C. (2014). *The Economic Impact of Outdoor Recreation in the UK: The Evidence*.
- Couper, P. R. (2018). The embodied spatialities of being in nature: Encountering the nature/culture binary in green/blue space. *Cultural Geographies, 25*(2), 285–299. <https://doi.org/10.1177/1474474017732978>
- Csikszentmihalyi, M. (1990). *Flow: the psychology of optimal experience*. Harper & Row.
- Csikszentmihalyi, M. (1997). Finding Flow: The Psychology of Engagement With Everyday Life Flow-Identity (Positive Psychology) View project “LEADERSHIP AND FLOW”: A RESEARCH PROGRAM (Chapter10) View project. *Psychology Today Publication*. <https://www.researchgate.net/publication/200026151>
- Cultural flows research project. (2014). *Cultural flows Literature review*.
- Davies, C. L., Surridge, B. W. J., & Gooddy, D. C. (2014). Phosphate oxygen isotopes within aquatic ecosystems: Global data synthesis and future research priorities. *Science of The Total Environment, 496*, 563–575. <https://doi.org/10.1016/j.scitotenv.2014.07.057>
- Deakin, R. (2000). *Waterlog: A Swimmer's Journey Through Britain*. Vintage.
- DEFRA. (2021). *At a glance: summary of targets in our 25-year environment plan*. <https://www.gov.uk/government/publications/25-year-environment-plan/25-year-environment-plan-our-targets-at-a-glance>
- Delamont, S. (2007). Arguments against Auto-Ethnography. *Qualitative Researcher, 4*, 2–3.
- Delamont, S. (2016). *Fieldwork in Educational Settings* (3rd ed.). Taylor and Francis.
- Denton, H., & Aranda, K. (2020). The wellbeing benefits of sea swimming. Is it time to revisit the sea cure? *Qualitative Research in Sport, Exercise and Health, 12*(5), 647–663. <https://doi.org/10.1080/2159676X.2019.1649714>
- Denzin, N. K. (1997). *Interpretive ethnography: Ethnographic practices for the 21st century*. Sage.
- Department for Environment Food and Rural Affairs. (2021). *Policy paper Water abstraction plan*. <https://www.gov.uk/government/publications/water-abstraction-plan-2017/water-abstraction-plan>

- Depledge, M. H., & Bird, W. J. (2009). The Blue Gym: health and wellbeing from our coasts. *Marine Pollution Bulletin*, 58(7), 947–948. <https://doi.org/10.1016/j.marpolbul.2009.04.019>
- Derrida, J. (1978). *The retrait of Metaphor*. The John Hopkins Press.
- Douglas, K., & Carless, D. (2013). *A History of Autoethnographic Inquiry*. <https://doi.org/10.4324/9781315427812.ch2>
- Duhn, I., Malone, K., & Tesar, M. (2020). Urban Nature and childhoods. In *Environmental Education Research* (1st ed., Issue 10). Routledge.
- Ellis, C., & Bochner, A. (2000). Autoethnography, personal narrative, reflexivity: Researcher as subject. In Denzin & Lincoln (Eds.), *The SAGE handbook of qualitative research* (2nd ed., pp. 733–768). SAGE.
- Ellis, C. S., & Bochner, A. P. (2006). Analyzing analytic autoethnography: An autopsy. In *Journal of Contemporary Ethnography* (Vol. 35, Issue 4, pp. 429–449). <https://doi.org/10.1177/0891241606286979>
- Environment Agency. (2012, December 10). *Freshwater eutrophication*.
- Environment Agency. (2016). *Water for life and livelihoods Part 1: Severn river basin district River basin management plan*. www.gov.uk/environment-agency
- Environment Agency. (2019). *Phosphorus and Freshwater Eutrophication Pressure Narrative*.
- Environment Agency, & Natural England. (2014). *River Wye SAC Nutrient Management Plan Evidence base and options appraisal*.
- Evers, C. (2015). Researching action sport with a GoPro™ camera An embodied and emotional mobile video tale of the sea, masculinity and men-who-surf. In I. Wellard (Ed.), *Researching Embodied Sport. Exploring movement cultures* (1st ed.). Routledge.
- Fenwick, T., & Doyle, S. (2016). *When Methods Meet: Socio-material approaches: Actor-network theory and Karen Barad's diffractive methodology*. www.socsciscotland.ac.uk.
- Foley, R. (2015). Swimming in Ireland: Immersions in therapeutic blue space. *Health and Place*, 35, 218–225. <https://doi.org/10.1016/j.healthplace.2014.09.015>
- Foley, R., & Kistemann, T. (2015). Blue space geographies: Enabling health in place. *Health and Place*, 35, 157–165. <https://doi.org/10.1016/J.HEALTHPLACE.2015.07.003>
- Freire, T. (2021). From flow to optimal experience: (Re)searching the quality of subjective experience throughout daily life and life span. *The European Flow Researchers Network*, 1–27.
- Freire, T., & Tavares, D. (2016). Flow experience, attentional control, and emotion regulation: Contributions for a positive development in adolescents. In *PSICOLOGIA* (Vol. 30, Issue 2, pp. 77–94). Associacao Portuguesa de Psicologia. <https://doi.org/10.17575/rpsicol.v30i2.1119>
- Frumkin, H., Bratman, G. N., Breslow, S. J., Cochran, B., Kahn, P. H., Lawler, J. J., Levin, P. S., Tandon, P. S., Varanasi, U., Wolf, K. L., & Wood, S. A. (2017). Nature contact and human health: A research agenda. *Environmental Health Perspectives*, 125(7). <https://doi.org/10.1289/EHP1663>
- Gascon, M., Mas, M. T., Martínez, D., Dadvand, P., Forn, J., Plasència, A., & Nieuwenhuijsen, M. J. (2015). Mental health benefits of long-term exposure to

- residential green and blue spaces: A systematic review. *International Journal of Environmental Research and Public Health*, 12(4), 4354–4379. <https://doi.org/10.3390/IJERPH120404354>
- Gascon, M., Zijlema, W., Vert, C., White, M. P., & Nieuwenhuijsen, M. J. (2017). Outdoor blue spaces, human health and well-being: A systematic review of quantitative studies. *International Journal of Hygiene and Environmental Health*, 220(8), 1207–1221. <https://doi.org/10.1016/J.IJHEH.2017.08.004>
- Gooley, T. (2017). *How To Read Water: Clues & Patterns from Puddles to the Sea* (1st ed.). Sceptre.
- Green, R. (2009). Robson Green's Wild Swimming Adventure. In *ITV*. <https://www.imdb.com/title/tt1831365/>
- Greenaway R. (2005). *What is outdoor learning?*
- Greenaway, R. (2008). A View into the Future: The Value of Other Ways of Learning and Development. In P. Becker & J. Schirp (Eds.), *Other Ways of Learning* (pp. 347–367).
- Guttorm, H. E. (2021). Becoming Earth: Rethinking and (Re-)Connecting with the Earth, Sámi Lands, and Relations. In *Bridging Cultural Concepts of Nature: Indigenous People and Protected Spaces of Nature* (pp. 229–258). Helsinki University Press. <https://doi.org/10.33134/ahead-1-8>
- Hardie-Bick, J., & Bonner, P. (2016). Experiencing flow, enjoyment and risk in skydiving and climbing. *Ethnography*, 17(3), 369–387.
- Harper, M. (2022). *Chill: The Cold-Water Swim Cure—A Transformative Guide to Renew Your Body and Mind*. Chronicle Prism Books.
- Hart, J. (2019). Blue Space: How Being near Water Benefits Health. *Alternative and Complementary Therapies*, 25(4), 208–210. <https://doi.org/10.1089/ACT.2019.29228.JHA>
- Hayes, N. (2022). *The Trespasser's Companion*. Bloomsbury Publishing.
- Health Council of the Netherlands and Dutch Advisory Council for Research on Spatial Planning Nature and the Environment. (2004). *Nature and Health. The influence of nature on social, psychological and physical well-being*. (2004/09E; NrA02ae).
- Hignett, A., White, M. P., Pahl, S., Jenkin, R., & Froy, M. Le. (2018). Evaluation of a surfing programme designed to increase personal well-being and connectedness to the natural environment among 'at risk' young people. *Journal of Adventure Education and Outdoor Learning*, 18(1), 53–69. <https://doi.org/10.1080/14729679.2017.1326829>
- Countryside and Rights of Way Act 2000, (2000). <https://www.legislation.gov.uk/ukpga/2000/37/contents>
- Land Reform (Scotland) Act 2003, (2003). <https://www.legislation.gov.uk/asp/2003/2/contents>
- The Bathing Water Regulations, (2013). <https://www.legislation.gov.uk/uksi/2013/1675/regulation/4/made>
- HM Government. (2017). *The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017*. <https://www.legislation.gov.uk/uksi/2017/407/regulation/29>
- HM Government. (2018). *A Green Future: Our 25 Year Plan to Improve the Environment*.
- The Environment Act, (2022).

- House of Lords UK. (2022). *Storm overflows discharge reduction plan*. House of Lords Library. <https://lordslibrary.parliament.uk/storm-overflows-discharge-reduction-plan/#heading-4>
- Howell, A. J., Dopko, R. L., Passmore, H. A., & Buro, K. (2011). Nature connectedness: Associations with well-being and mindfulness. *Personality and Individual Differences*, *51*(2), 166–171. <https://doi.org/10.1016/j.paid.2011.03.037>
- Humberstone, B. (2000). The ‘outdoor industry’ as social and educational phenomena: Gender and outdoor adventure/education. *Journal of Adventure Education & Outdoor Learning*, *1*(1), 21–35. <https://doi.org/10.1080/14729670085200041>
- Humberstone, B. (2009). Sport management, gender and the ‘bigger picture.’ *Sport Management Review*, *12*(4), 255–262. <https://doi.org/10.1016/j.smr.2009.03.004>
- Humberstone, B. (2011a). Embodiment and social and environmental action in nature-based sport: Spiritual spaces. *Leisure Studies*, *30*(4), 495–512. <https://doi.org/10.1080/02614367.2011.602421>
- Humberstone, B. (2011b). Embodiment and social and environmental action in nature-based sport: Spiritual spaces. *Leisure Studies*, *30*(4), 495–512. <https://doi.org/10.1080/02614367.2011.602421>
- Humberstone, B., & Nicol, R. (2019). Autoethnography. In B. Humberstone & H. Prince (Eds.), *Research Methods in Outdoor Studies* (1st ed.). Routledge. <https://doi.org/10.4324/9780429199004>
- Humberstone, Barbara., Brown, H., & Richards, Kaye. (2003). *Whose journeys? : the outdoors and adventure as social and cultural phenomena : critical explorations of relations between individuals, “others” and the environment*. Institute for Outdoor Learning.
- Ingold, T. (2000). *The Perception of the Environment*.
- Ingold, T. (2007). *Lines: A Brief History*. Routledge.
- Ingold, T. (2017). *Correspondences*. University of Aberdeen.
- Ingold, T. (2022). *Being Alive: Essays on Movement, Knowledge and Description*. Routledge.
- Jackson, S. A., & Marsh, H. W. (1996). Development and Validation of a Scale to measure Optimal Experience: The Flow State Scale. *Journal of Sport and Exercise Psychology*, *18*, 17–35.
- Jobling, S., Williams, R., Johnson, A., Taylor, A., Gross-Sorokin, M., Nolan, M., Tyler, C. R., van Aerle, R., Santos, E., & Brighty, G. (2006). Predicted Exposures to Steroid Estrogens in U.K. Rivers Correlate with Widespread Sexual Disruption in Wild Fish Populations. *Environmental Health Perspectives*, *114*(Suppl 1), 32–39. <https://doi.org/10.1289/ehp.8050>
- Jones, A. (2022, October). *Environment - Respect and Protect*. <https://www.angelajonesswimwild.co.uk/environment>
- Kandel, E. (2016). *Reductionism in Art and Brain Science*. Columbia University Press. <https://doi.org/10.7312/kand17962>
- Kaplan, R., & Kaplan, S. (1989). *The experience of nature: a psychological perspective*.
- Kappan, E. (2020a). Personality predictors of flow. *Article in Indian Journal of Positive Psychology*, *11*(3), 218–226. <https://www.researchgate.net/publication/349277477>

- Kappan, E. (2020b). Personality predictors of flow Greta Thunberg Effect: A case analysis View project. In *Article in Indian Journal of Positive Psychology*. <https://www.researchgate.net/publication/349277477>
- Kirsch, L. P., Urgesi, C., & Cross, E. S. (2016). Shaping and reshaping the aesthetic brain: Emerging perspectives on the neurobiology of embodied aesthetics. In *Neuroscience and Biobehavioral Reviews* (Vol. 62, pp. 56–68). Elsevier Ltd. <https://doi.org/10.1016/j.neubiorev.2015.12.005>
- Knechtle, B., Waśkiewicz, Z., Sousa, C. V., Hill, L., & Nikolaidis, P. T. (2020). Cold Water Swimming. Benefits and Risks: A Narrative Review. *International Journal of Environmental Research and Public Health*, 1–20. <https://doi.org/10.3390/ijerph17238984>
- Kollewe, J., & Wearden, G. (2023, June 28). Contingency plans being drawn up for Thames Water collapse. *The Guardian*.
- Kotera, Y., Richardson, M., & Sheffield, D. (2022). Effects of Shinrin-Yoku (Forest Bathing) and Nature Therapy on Mental Health: a Systematic Review and Meta-analysis. *International Journal of Mental Health and Addiction*, 20(1), 337–361. <https://doi.org/10.1007/s11469-020-00363-4>
- Krouwel, Willem. (2005). The Value of Serendipitous Learning. *The Ontario Journal of Outdoor Learning*, 17(1).
- Kuntz, A. M. (2010). The politics of space in qualitative research. In M. Savin-Baden & C. H. Major (Eds.), *New approaches to qualitative research: wisdom and uncertainty* (pp. 1–181). Routledge.
- Kuznetski, J., & Alaimo, S. (2020). Transcorporeality: An interview with Stacy Alaimo. *Ecozon@: European Journal of Literature, Culture and Environment*, 11(2), 137–146. <https://doi.org/10.37536/ecozona.2020.11.2.3478>
- Landreth, J. (2017). *Swell: A Waterbiography*. Bloomsbury.
- Lankia, T., Neuvonen, M., & Pouta, E. (2019). Effects of water quality changes on the recreation benefits of swimming in Finland: Combined travel cost and contingent behavior model. *Water Resources and Economics*, 25, 2–12. <https://doi.org/10.1016/j.wre.2017.10.002>
- Leather, M. (2018a). A critique of “Forest School” or something lost in translation. *Journal of Outdoor and Environmental Education*, 21(1), 5–18. <https://doi.org/10.1007/s42322-017-0006-1>
- Leather, M. (2018b). *Outdoor education in the National Curriculum: the shifting sands in formal education Introduction: a line in the sand*.
- Leather, M. (2019a). FINDING MY PROFESSIONAL VOICE. In B. Humberstone & H. Prince (Eds.), *Research Methods in Outdoor Studies* (1st ed.). Routledge.
- Leather, M. (2019b). Finding my professional voice. *Research Methods in Outdoor Studies*, 130–139. <https://doi.org/10.4324/9780429199004-13/FINDING-PROFESSIONAL-VOICE-MARK-LEATHER>
- Leather, M. (2019c). Past and Presents. Living with the sea and making connections; a matter of a personal and professional. In K. Peters & M. Brown (Eds.), *Living with the Sea: Knowledge, Awareness and Action. Studies in Human Geography* (pp. 196-212.). Taylor & Francis.
- Leather, M., & Porter, S. (2006). “An Outdoor Evolution: Changing names, changing contexts, constant values.” In B. Humberstone & H. Brown (Eds.), *Shaping the*

- Outdoor Profession through Higher Education* (pp. 53–68). Institute for Outdoor Learning,.
- Leonard, A. F. C., Zhang, L., Balfour, A. J., Garside, R., Hawkey, P. M., Murray, A. K., Ukoumunne, O. C., & Gaze, W. H. (2018). Exposure to and colonisation by antibiotic-resistant *E. coli* in UK coastal water users: Environmental surveillance, exposure assessment, and epidemiological study (Beach Bum Survey). *Environment International*, *114*, 326–333. <https://doi.org/10.1016/j.envint.2017.11.003>
- Liu, T., & Csikszentmihalyi, M. (2020). Flow among introverts and extraverts in solitary and social activities. *Personality and Individual Differences*, *167*, 110197. <https://doi.org/10.1016/j.paid.2020.110197>
- Liu, Z., Li, X., & Shi, S. (2021). An Ethical Analysis Model to DuPont's PFOA Event Based on Consequentialism Perspective. *Advances in Economics, Business and Management Research*. <https://finance.yahoo.com/quote/DD?p=DD&.tsrc=fin->
- Louv, R. (2003). *Last Child in the Woods: Saving our Children from Nature Deficit Disorder* (1st ed.). Atlantic Book.
- Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PLoS ONE*, *12*(5). <https://doi.org/10.1371/journal.pone.0177186>
- MacNaughton, Glenda. (2005). *Doing Foucault in early childhood studies: applying poststructural ideas*. 244.
- Major, C. H., & Savin-Baden, M. (2012). *An Introduction to Qualitative Research Synthesis*. Routledge. <https://doi.org/10.4324/9780203497555>
- Manchester Metropolitan University, & Sport and recreation Alliance. (2017). *RECONOMICS PLUS The Economic, Health and Social Value of Outdoor Recreation*. <https://www.sportandrecreation.org.uk/pages/reconomics-plus>
- Mann, J., Gray, T., Truong, S., Sahlberg, P., Bentsen, P., Passy, R., Ho, S., Ward, K., & Cowper, R. (2021). A systematic review protocol to identify the key benefits and efficacy of nature-based learning in outdoor educational settings. *International Journal of Environmental Research and Public Health*, *18*(3), 1–10. <https://doi.org/10.3390/ijerph18031199>
- Mannion, G. (2020). Re-assembling environmental and sustainability education: orientations from New Materialism. *Environmental Education Research*, *26*(9–10), 1353–1372. <https://doi.org/10.1080/13504622.2018.1536926>
- Mannion, G., & Lynch, J. (2016). The primacy of place in education in outdoor settings. In B. Humberstone, H. Prince, & K. A. Henderson (Eds.), *International Handbook of Outdoor Studies* (pp. 85–94). Routledge.
- Martin, A., Zounková, D., & Franc, D. (2004). *Outdoor and Experiential Learning: An Holistic and Creative Approach*. Gower.
- Masny, D. (2013). Rhizoanalytic Pathways in Qualitative Research. *Qualitative Inquiry*, *19*(5), 339–348. <https://doi.org/10.1177/1077800413479559>
- Massey, H., Kandala, N., Davis, C., Harper, M., Gorczynski, P., & Denton, H. (2020). Mood and well-being of novice open water swimmers and controls during an introductory outdoor swimming programme: A feasibility study. *Lifestyle Medicine*, *1*(2). <https://doi.org/10.1002/lim2.12>

- Mayer, F. S., & Frantz, C. M. P. (2004a). The connectedness to nature scale: a measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503–515. <https://doi.org/10.1016/j.jenvp.2004.10.001>
- Mayer, F. S., & Frantz, C. M. P. (2004b). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503–515. <https://doi.org/10.1016/j.jenvp.2004.10.001>
- Mayer, F. S., Frantz, C. M. P., Bruehlman-Senecal, E., & Dolliver, K. (2009a). Why is nature beneficial?: The role of connectedness to nature. *Environment and Behavior*, 41(5), 607–643. <https://doi.org/10.1177/0013916508319745>
- Mayer, F. S., Frantz, C. M. P., Bruehlman-Senecal, E., & Dolliver, K. (2009b). Why is nature beneficial?: The role of connectedness to nature. *Environment and Behavior*, 41(5), 607–643. <https://doi.org/10.1177/0013916508319745>
- McDougall, C. W., Foley, R., Hanley, N., Quilliam, R. S., & Oliver, D. M. (2022a). Freshwater Wild Swimming, Health and Well-Being: Understanding the Importance of Place and Risk. *Sustainability*, 14(10), 6364. <https://doi.org/10.3390/su14106364>
- McDougall, C. W., Foley, R., Hanley, N., Quilliam, R. S., & Oliver, D. M. (2022b). Freshwater Wild Swimming, Health and Well-Being: Understanding the Importance of Place and Risk. *Sustainability (Switzerland)*, 14(10). <https://doi.org/10.3390/su14106364>
- McGregor, F. (2022). Wild Swimming Event. In *Meeting MSP Fulton McGregor benefits of outdoor swimming*. <https://www.youtube.com/watch?v=iYuJka3xEI0>
- Mcphie, J. (2021). Speculative fabulations in the ruins of colonial topographies: a (messy) review of 'developing place-responsive pedagogy in outdoor environmental education: a rhizomatic curriculum autobiography.' *Journal of Adventure Education and Outdoor Learning*, 21(2), 195–199. <https://doi.org/10.1080/14729679.2020.1819833>
- Méndez, M. (2013). *Autoethnography as a research method: Advantages, limitations and criticisms*.
- Mental Health Swims. (2022). *Dips Not Distance*. <https://www.mentalhealthswims.co.uk/>
- Merchant, S. (2011). The Body and the Senses: Visual Methods, Videography and the Submarine Sensorium. *Body & Society*, 17(1), 53–72. <https://doi.org/10.1177/1357034X10394670>
- Merton, R. K. (1972). Insiders and Outsiders: A Chapter in the Sociology of Knowledge. *American Journal of Sociology*, 78(1), 9–47.
- Miyazaki, Y. (2021). *Walking in the Woods - going back to nature with the Japanese way of shirin-yoku* (1st ed.). Octopus Publishing Group Ltd.
- Monbiot, G. (2021). Riverside - live documentary. In *Spanner Films*. You Tube.
- Morgan, E. (2017). *The Aquatic Ape Hypothesis*. Profile Books Ltd, Souvenir Press Ltd.
- Muncey, T. (2010). *Creating Autoethnographies* (1st ed.). Sage. <https://ereader.perlego.com/1/book/861982/8>
- Nakamura, J., & Csikszentmihalyi, M. (2009). Flow theory and research. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (pp. 195–206). Oxford University Press.
- National Water Safety Forum. (2022a). *waid-discovery-report-may-2020-1*.

- National Water Safety Forum. (2022b). *WAID - Published annual fatality reports for the UK*. <https://www.nationalwatersafety.org.uk/waid/annual-reports-and-data>
- Natural England. (2016). *Connection to Nature: evidence briefing Purpose of briefing*.
- Ngunjiri, F. W., Hernandez, K. C., & Chang, H. (2010). Living autoethnography: Connecting life and research. In *Canada Journal of Research Practice Page* (Vol. 6, Issue 1). AU Press. <http://jrp.icaap.org/index.php/jrp/article/view/241/186>
- Nichols, W. J. (2014). *Blue Mind*. Little, Brown Book Group.
- Nicol, R. (2002). Outdoor education: Research topic or universal value? Part one. *Journal of Adventure Education & Outdoor Learning*, 2(1), 29–41. <https://doi.org/10.1080/14729670285200141>
- Nicol, R. (2013). Returning to the richness of experience: is autoethnography a useful approach for outdoor educators in promoting pro-environmental behaviour? *Journal of Adventure Education and Outdoor Learning*, 13(1), 3–17.
- Ord, J., & Leather, M. (2011). The substance beneath the labels of experiential learning: The importance of John Dewey for outdoor educators. *Australian Journal of Outdoor Education*, 15(1), 13–23.
- Østern, T. P., Jusslin, S., Nødtvedt Knudsen, K., Maapalo, P., & Bjørkøy, I. (2021). A performative paradigm for post-qualitative inquiry. *Qualitative Research*. <https://doi.org/10.1177/146879412111027444>
- Østern, T. P., Jusslin, S., Nødtvedt Knudsen, K., Maapalo, P., & Bjørkøy, I. (2023). A performative paradigm for post-qualitative inquiry. *Qualitative Research*, 23(2), 272–289. <https://doi.org/10.1177/146879412111027444>
- Outdoor Swimming Society. (2022). *Home – Outdoor Swimming Society*. <https://www.outdoorswimmingsociety.com/>
- Parr, S. (2011). *The Story of Swimming*.
- Pleasants, K., & Stewart, A. (2019). Entangled philosophical and methodological dimensions of research in outdoor studies? *Research Methods in Outdoor Studies*, 9–20. <https://doi.org/10.4324/9780429199004-2/ENTANGLED-PHILOSOPHICAL-METHODOLOGICAL-DIMENSIONS-RESEARCH-OUTDOOR-STUDIES-KATHLEEN-PLEASANTS-ALISTAIR-STEWART>
- Porter, S., & Couper, P. (2023). Autoethnographic stories for self and environment: a reflective pedagogy to advance ‘environmental awareness’ in student outdoor practitioners. *Journal of Adventure Education and Outdoor Learning*, 23(1), 25–37. <https://doi.org/10.1080/14729679.2021.1935284>
- Potter, T. G., & Dymont, J. E. (2016). Is outdoor education a discipline? Insights, gaps and future directions. *Journal of Adventure Education and Outdoor Learning*, 16(2), 146–159. <https://doi.org/10.1080/14729679.2015.1121767>
- Pritchard, A., Richardson, M., Sheffield, D., & McEwan, K. (2020). The Relationship Between Nature Connectedness and Eudaimonic Well-Being: A Meta-analysis. In *Journal of Happiness Studies* (Vol. 21, Issue 3, pp. 1145–1167). Springer. <https://doi.org/10.1007/s10902-019-00118-6>
- Pyry, N. (2020). Thinking with broken glass: making pedagogical spaces of enchantment in the city. In Rautio P, Hohti R, Leinonen R, & Tammi T (Eds.), *Urban Nature and childhoods* (1st ed.). Routledge.

- Quay, J. (2013). More than relations between self, others and nature: Outdoor education and aesthetic experience. *Journal of Adventure Education and Outdoor Learning*, 13(2), 142–157. <https://doi.org/10.1080/14729679.2012.746846>
- Quay, J. (2019). John Dewey's conceptualisation of experience. In *Experiential Learning and Outdoor Education* (1st ed.). Routledge.
- Radford, I. (2022). *Understanding drowning statistics*. <https://www.outdoorswimmingsociety.com/drowning-statistics/>
- Rautio, P. (2013). Children who carry stones in their pockets: on autotelic material practices in everyday life. *Children's Geographies*, 11(4), 394–408. <https://doi.org/10.1080/14733285.2013.812278>
- Rautio, P., Hohti, R., Leinonen, R.-M., & Tammi, T. (2020). Reconfiguring urban environment education with “shitgull” and a “shop.” In Duhn I, Malone K, & Tesar M (Eds.), *Urban Nature and childhoods* (1st ed.). Routledge.
- Rew, K. (2022). *THE OUTDOOR SWIMMERS HANDBOOK*. Rider - Penguin Random House group.
- Rhys-Evans, P. (2019). *The Waterside Ape*. CRC Press. <https://doi.org/10.1201/9780429032271>
- Richards, R. (2008). Writing the Othered Self: Autoethnography and the Problem of Objectification in Writing About Illness and Disability. *Qualitative Health Research*, 18(12), 1717–1728. <https://doi.org/10.1177/1049732308325866>
- Richardson, M. (2023). *Reconnection: Fixing our Broken Relationship with Nature*. Pelagic Publishing.
- Richardson, M., Passmore, H. A., Lumber, R., Thomas, R., & Hunt, A. (2021). Moments, not minutes: The nature-wellbeing relationship. *International Journal of Wellbeing*, 11(1), 8–33. <https://doi.org/10.5502/ijw.v11i1.1267>
- Rieh, S.-Y. (2020). *Creating a sense of place in school environments: how young children construct place attachment*. Taylor and Francis.
- River Access for All. (n.d.). *River Access for All*. Retrieved October 23, 2022, from http://www.riveraccessforall.co.uk/what_is_the_issue.php#We
- Roth, W.-M. (2009). Auto/Ethnography and the Question of Ethics. *FORUM: QUALITATIVE SOCIAL RESEARCH*, 10(1). <http://www.qualitative-research.net/fqs/>
- Runcie, C. (2019). *Salt on your tongue. Women and the sea*. Canongate books Ltd.
- Sagar, L. (2022). *The 2022 Kinder Swim Trespass*. Outdoor Swimming Society. <https://www.outdoorswimmingsociety.com/kinder-swim-trespass-2022/>
- Savin-Baden, M., & Major, C. Howell. (2010a). *New approaches to qualitative research: wisdom and uncertainty*. Routledge.
- Savin-Baden, M., & Major, C. Howell. (2010b). *New approaches to qualitative research : wisdom and uncertainty*. Routledge.
- Shapton, L. (2012). *Swimming Studies*. Pearson.
- Sharma-Brymer, V., & Brymer, E. (2021). Norwegian Friluftsliv: a way of living and learning in nature. *Journal of Adventure Education and Outdoor Learning*, 21(1), 93–95. <https://doi.org/10.1080/14729679.2019.1697715>
- Sharp, L. (2017). *Reconnecting People and Water*. Routledge. <https://doi.org/10.4324/9781315851679>

- Shrubsole, G. (2019). *Who Owns England?: How We Lost Our Green and Pleasant Land, and How to Take It Back*. HarperCollins Publishers .
- Sidebottom, K. (2019, September 23). *Nomadic enquiry: Reimagining ethics for “posthuman” times*. British Educational Research Association. <https://www.bera.ac.uk/blog/nomadic-enquiry-reimagining-research-ethics-for-posthuman-times>
- Smessaert, J., Missemer, A., & Levrel, H. (2020). The commodification of nature, a review in social sciences. In *Ecological Economics* (Vol. 172). Elsevier B.V. <https://doi.org/10.1016/j.ecolecon.2020.106624>
- Sparkes, A. C. (2020). Autoethnography: accept, revise, reject? An evaluative self reflects. *Qualitative Research in Sport, Exercise and Health*, 12(2), 289–302. <https://doi.org/10.1080/2159676X.2020.1732453>
- Sparkes, A. C., & Smith, B. (2012). Embodied research methodologies and seeking the senses in sport and physical culture: A fleshing out of problems and possibilities. *Research in the Sociology of Sport*, 6, 167–190. [https://doi.org/10.1108/S1476-2854\(2012\)0000006011](https://doi.org/10.1108/S1476-2854(2012)0000006011)
- Sport England. (2016). *Towards an active nation*. <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/sport-england-towards-an-active-nation.pdf>
- Sport England. (2021). *Active Lives Adult Survey May 2020-21 Report (1)*.
- St Pierre. (2014). A Brief and Personal History of Post Qualitative Research Toward “Post Inquiry.” In *Journal of Curriculum Theorizing* ♦ (Vol. 30, Issue 2).
- St Pierre, E. A. (2021). Post Qualitative Inquiry, the Refusal of Method, and the Risk of the New. *Qualitative Inquiry*, 27(1), 3–9. <https://doi.org/10.1177/1077800419863005>
- St. Pierre, E. A. (2021). Post Qualitative Inquiry, the Refusal of Method, and the Risk of the New. *Qualitative Inquiry*, 27(1), 3–9. <https://doi.org/10.1177/1077800419863005>
- Stahlke Wall, S. (2016). Toward a moderate autoethnography. *International Journal of Qualitative Methods*, 15(1). <https://doi.org/10.1177/1609406916674966>
- Surfers Against Sewage. (2022). *Water Quality*. <https://www.sas.org.uk/water-quality/>
- Swann, C., Keegan, R. J., Piggott, D., & Crust, L. (2012). A systematic review of the experience, occurrence, and controllability of flow states in elite sport. *Psychology of Sport and Exercise*, 13(6), 807–819. <https://doi.org/10.1016/j.psychsport.2012.05.006>
- Swann, C., Keegan, R. J., Piggott, D. J. S., & Crust, L. (2011). *SYSTEMATIC REVIEW OF FLOW IN ELITE SPORT*.
- Taguchi, H. L. (2012a). A diffractive and Deleuzian approach to analysing interview data. *Feminist Theory*, 13(3), 265–281. <https://doi.org/10.1177/1464700112456001>
- Taguchi, H. L. (2012b). A diffractive and Deleuzian approach to analysing interview data. *Feminist Theory*, 13(3), 265–281. <https://doi.org/10.1177/1464700112456001>
- Taguchi, H. L., & Eriksson, C. (2021). Posthumanism/New Materialism: The child Childhood, and Education. In N. J. Yelland, L. Peters, N. Fairchild, M. Tesar, & M. S. Pérez (Eds.), *The SAGE Handbook of Global Childhoods*. Sage.
- The Bluetits Chill Swimmers. (2022). *The Bluetits Chill Swimmers | Cold Water Swimming Groups*. <https://thebluetits.co/>

- The New Forest Catchment Partnership. (2023). Phosphorus Leaflet. In *A clean home shouldn't mean a dirty river* (pp. 1–3). https://www.newforestnpa.gov.uk/app/uploads/2018/01/Phosphorus_Leaflet.pdf
- Thorpe, H., & Rinehart, R. (2010). Alternative sport and affect: non-representational theory examined. *Sport in Society*, 13(7–8), 1268–1291. <https://doi.org/10.1080/17430431003780278>
- 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(1), 5–22. <https://doi.org/10.1057/fr.2012.23>
- Throsby, K. (2015). Unlikely Becomings: Passion, Swimming and Learning to Love the Sea. In M. Brown & B. Humberstone (Eds.), *Seascapes*. Routledge.
- Tipton, & Bradford. (2014). Moving in extreme environments: Open water swimming in cold and warm water. In *Extreme Physiology and Medicine* (Vol. 3, Issue 1). BioMed Central Ltd. <https://doi.org/10.1186/2046-7648-3-12>
- Tipton, Collier, Massey, H., Corbett, J., & Harper, M. (2017). Cold water immersion: kill or cure? *Experimental Physiology*, 102(11), 1335–1355. <https://doi.org/10.1113/EP086283>
- Tremblay, J.-T., & Swarbrick, S. (2021). Destructive Environmentalism: The Queer Impossibility of First Reformed. *Discourse*, 43(1), 3–30. <https://doi.org/doi:10.13110/discourse.43.1.0003>.
- Tse, D. C. K., Nakamura, J., & Csikszentmihalyi, M. (2022). Flow Experiences Across Adulthood: Preliminary Findings on the Continuity Hypothesis. *Journal of Happiness Studies*. <https://doi.org/10.1007/s10902-022-00514-5>
- Tsui, B. (2021). *Why We Swim*. Penguin.
- UK Parliament. (2022). Right to roam EDM 1068. In *Early Day Motions*. <https://edm.parliament.uk/early-day-motion/59570>
- Vik, M. H., & Carlquist, E. (2018). Measuring subjective well-being for policy purposes: The example of well-being indicators in the WHO “Health 2020” framework. *Scandinavian Journal of Public Health*, 46(2), 279–286. <https://doi.org/10.1177/1403494817724952>
- Völker, S., & Kistemann, T. (2011). The impact of blue space on human health and well-being – salutogenic health effects of inland surface waters: a review. *International Journal of Hygiene and Environmental Health*, 214(6), 449–460. <https://doi.org/10.1016/j.ijheh.2011.05.001>
- Wales Online. (2022). The full list of beaches in Wales rated excellent for water quality. *Wales Online*. <https://www.walesonline.co.uk/whats-on/travel/full-list-beaches-wales-rated-25648805>
- Walford, G. (2007). Embodied ethnographic paractice. *Qualitative Researcher*, 4, 6–8.
- We Swim Wild. (2022). *Mapping Microplastics*. <https://Weswimwild.Org/Microplastics-1>. <https://weswimwild.org/microplastics-1>
- Wheaton, B. (2010). Introducing the consumption and representation of lifestyle sports. *Sport in Society*, 13(7–8), 1057–1081. <https://doi.org/10.1080/17430431003779965>
- White, M., Elliott, L. R., Gascon, M., Roberts, B., & Fleming, L. E. (2020). Blue space, health and well-being: A narrative overview and synthesis of potential benefits. In

- Environmental Research* (Vol. 191). Academic Press Inc.
<https://doi.org/10.1016/j.envres.2020.110169>
- White, M., Pahl, S., Wheeler, B. W., Fleming, L. E. F., & Depledge, M. H. (2016). The 'Blue Gym': What can blue space do for you and what can you do for blue space? *Journal of the Marine Biological Association of the United Kingdom*, 96(1), 5–12.
<https://doi.org/10.1017/S0025315415002209>
- White, M., Smith, A., Humphryes, K., Pahl, S., Snelling, D., & Depledge, M. (2010). Blue space: the importance of water for preference, affect and restorativeness ratings of natural and built scenes. *Journal of Environmental Psychology*, 30(4), 482–493.
<https://doi.org/10.1016/j.jenvp.2010.04.004>
- Wigglesworth, J. (2018). Writing Gendered Embodiment into Outdoor Learning Environments: Journaling for Critical Consciousness. In *The Palgrave International Handbook of Women and Outdoor Learning* (pp. 789–800). Springer International Publishing. https://doi.org/10.1007/978-3-319-53550-0_54
- Withers, P. J. A., Rothwell, S. A., Forber, K. J., & Lyon, C. (2022). *Re-focusing Phosphorus use in the Wye Catchment*.
- Wood, L. E., Vimercati, G., Ferrini, S., & Shackleton, R. T. (2022). Perceptions of ecosystem services and disservices associated with open water swimming. *Journal of Outdoor Recreation and Tourism*, 37.
<https://doi.org/10.1016/j.jort.2022.100491>
- Wye Salmon Association. (2023). *Addressing the River Wye Phosphate Pollution*. <https://www.wyesalmon.com/phosphate-sampling/>.

Appendices

Appendix 1 - 9 Dimensions of flow experience Adapted from Swann et al., (2011)

		Dimension of flow	Example
1	Condition	Challenge- skill balance	situations that are challenging but in which they are still able to meet the challenge by extending beyond their normal capabilities in order to accomplish the task.
2	Condition	Unambiguous feedback	inform progress towards goals, or how to adjust in order to do so.
3	Condition	Clear goals	inherent in the activity for the individual to strive towards
4	Characteristic	Action–awareness merging	total absorption or feeling at one with the activity.
5	Characteristic	Loss of self-consciousness	decreased awareness of self and social evaluation.
6	Characteristic	Total concentration	complete focus with no extraneous or distracting thoughts
7	Characteristic	Sense of control	Control over the performance or outcome of the activity
8	Characteristic	Transformation of time	the perception of time either speeding up or slowing down
9	Combination	Autotelic experience	combination of the eight dimensions above

Appendix 2 - Flow State Scale (FSS) Jackson and Marsh 1996

Appendix

Flow State Scale

Please answer the following questions in relation to your experience in the event you have just completed. These questions relate to the thoughts and feelings you may have experienced during the event. There are no right or wrong answers. Think about how you felt during the event and answer the questions using the rating scale below. Circle the number that best matches your experience from the options to the right of each question.

Rating Scale:

Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	
1. I was challenged, but I believed my skills would allow me to meet the challenge.	1	2	3	4	5
2. I made the correct movements without thinking about trying to do so.	1	2	3	4	5
3. I knew clearly what I wanted to do.	1	2	3	4	5
4. It was really clear to me that I was doing well.	1	2	3	4	5
5. My attention was focused entirely on what I was doing.	1	2	3	4	5
6. I felt in total control of what I was doing.	1	2	3	4	5
7. I was not concerned with what others may have been thinking of me.	1	2	3	4	5
8. Time seemed to alter (either slowed down or speeded up).	1	2	3	4	5
9. I really enjoyed the experience.	1	2	3	4	5
10. My abilities matched the high challenge of the situation.	1	2	3	4	5
11. Things just seemed to be happening automatically.	1	2	3	4	5
12. I had a strong sense of what I wanted to do.	1*	2	3	4	5
13. I was aware of how well I was performing.	1	2	3	4	5
14. It was no effort to keep my mind on what was happening.	1	2	3	4	5
15. I felt like I could control what I was doing.	1	2	3	4	5
16. I was not worried about my performance during the event.	1	2	3	4	5

Flow State Scale / 35

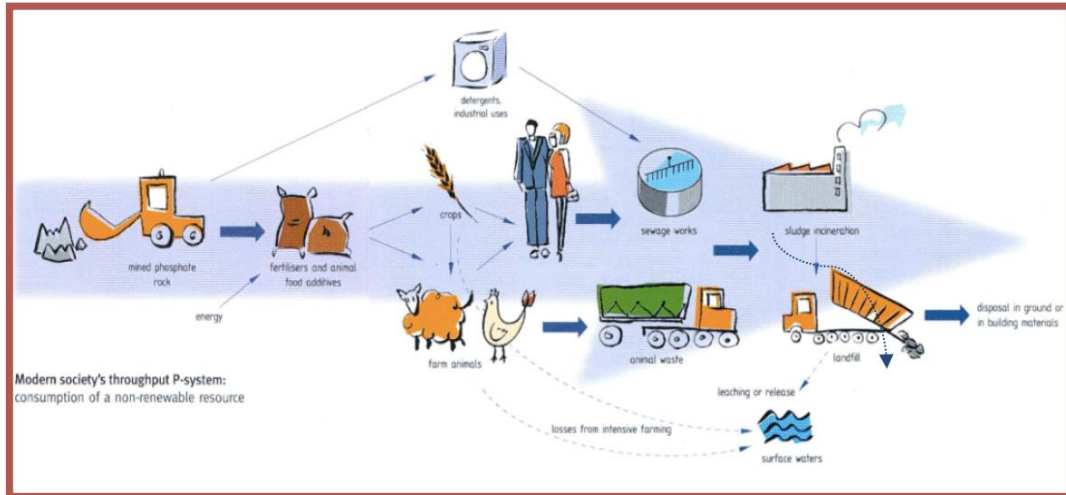
17. The way time passed seemed to be different from normal.	1	2	3	4	5
18. I loved the feeling of that performance and want to capture it again.	1	2	3	4	5
19. I felt I was competent enough to meet the high demands of the situation.	1	2	3	4	5
20. I performed automatically.	1	2	3	4	5
21. I knew what I wanted to achieve.	1	2	3	4	5
22. I had a good idea while I was performing about how well I was doing.	1	2	3	4	5
23. I had total concentration.	1	2	3	4	5
24. I had a feeling of total control.	1	2	3	4	5
25. I was not concerned with how I was presenting myself.	1	2	3	4	5
26. It felt like time stopped while I was performing.	1	2	3	4	5
27. The experience left me feeling great.	1	2	3	4	5
28. The challenge and my skills were at an equally high level.	1	2	3	4	5
29. I did things spontaneously and automatically without having to think.	1	2	3	4	5
30. My goals were clearly defined.	1	2	3	4	5
31. I could tell by the way I was performing how well I was doing.	1	2	3	4	5
32. I was completely focused on the task at hand.	1	2	3	4	5
33. I felt in total control of my body.	1	2	3	4	5
34. I was not worried about what others may have been thinking of me.	1	2	3	4	5
35. At times, it almost seemed like things were happening in slow motion.	1	2	3	4	5
36. I found the experience extremely rewarding.	1	2	3	4	5

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Appendix 3 - Phosphorous through-put system

(Environment Agency, 2019, p. 8)

Figure 1: Modern society's phosphorus through-put system



Source: CEEP with addition

Appendix 4- A contemporary view of the initial responses to immersion and submersion in cold water

(Tipton et al., 2017)

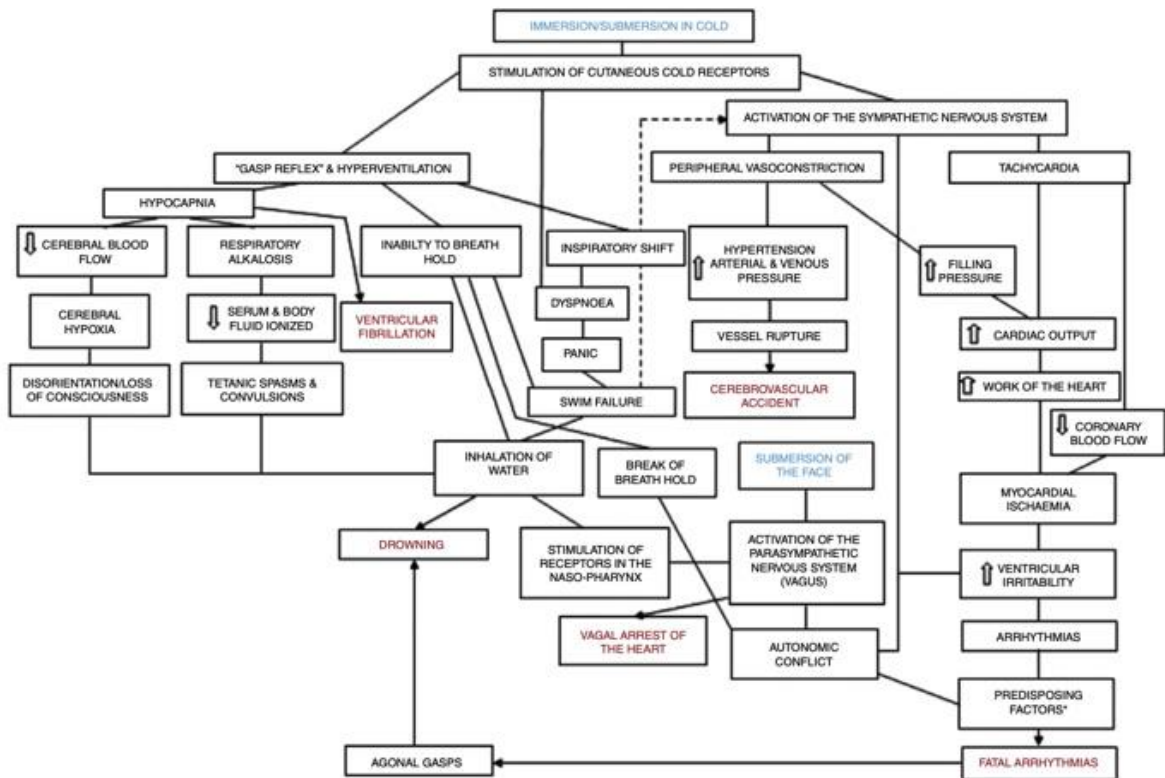


Figure 2. A contemporary view of the initial responses to immersion and submersion in cold water ('cold shock')
 Based on: Tipton (1989); Datta & Tipton (2006); Tipton et al. (2010); Shattock & Tipton (2012).
 *Predisposing factors include channelopathies, atherosclerosis, long QT syndrome, myocardial hypertrophy and ischaemic heart disease. Reproduced with permission, from Tipton (2016a).

Appendix 5- Summary of Effects of Cold-Water Immersion – kill or cure?

(Tipton et al., 2017)



- Cold Shock – Drowning ****
- Cold Shock – Cardiac arrest***
- Autonomic Conflict – Cardiac Arrest**
- Cold-induced neuromuscular incapacitation – Drowning ***
- Hypothermia ****
- Circum-Rescue Collapse ***
- Cold injury ***
- Blunted anabolic signalling & long-term gains in muscle mass & strength***



- Prolonged underwater survival (occurrence ****, mechanism**)
- Deliberate cooling for oxygen conservation and treatment of hyperthermia****
- Pre-cooling for improved performance in the heat***
- Improved recovery post-exercise **/*** (depending on exercise model/control)
- Treatment of inflammation-related conditions*
- Upregulation of immune function **

Level of evidence (Based on SIGN50 criteria)

- * Anecdotal
- ** Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not casual
- *** Case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal
- **** High quality systematic reviews of case control or cohort studies

Figure 6. Cold water immersion: kill or cure
The responses in each category, with a level of evidence assessment.

Appendix 6 - Schematic diagram of the five key factors affecting NCT.

(Health Council of the Netherlands and Dutch Advisory Council for Research on Spatial Planning Nature and the Environment, 2004)

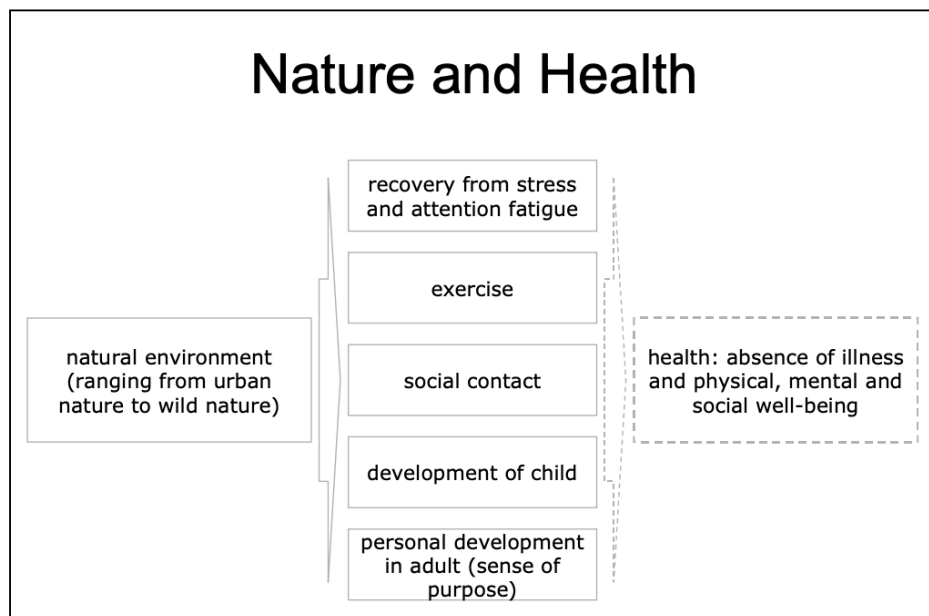


Figure 1 Schematic overview of the possible beneficial effects of nature on health.

Appendix 7- Relationships between blue Spaces and health and well-being.

(M. P. White et al., 2020)

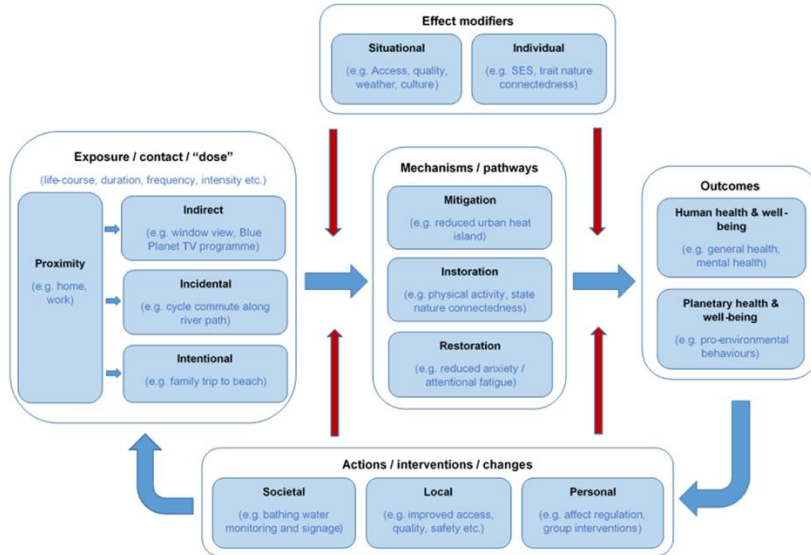


Fig. 1. A conceptual diagram of the relationships between blue spaces and health and well-being. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

That this House notes that 24 April marks the 90th anniversary of the mass trespass onto Kinder Scout; acknowledges that this trespass united the campaign for access to the countryside and eventually contributed to the establishment of the UK's first national parks through the National Parks and Access to the Countryside Act 1949; recognises the growing body of evidence demonstrating the importance of access to nature for health and wellbeing which has been highlighted by the covid-19 pandemic when use of parks and public green spaces increased; is concerned that people from ethnic minorities or with low incomes are less likely to live near green space and 2.7 million people in the UK have no publicly accessible green space within easy walking distance from their home; notes that the Countryside and Rights of Way Act 2000 only provides access to 8% per cent of English land, and that the public can only access 3 per cent of rivers in England and Wales; acknowledges that legislation in Scotland and European countries including Norway provides for a much greater right to roam; believes that extending the right to roam to cover more landscapes and recreational activities would improve the public's connection to nature whilst also delivering on the Government's commitment in the 25 Year Environment Plan to open up the mental and physical health benefits of the natural world; and calls on the Government to bring forward legislation to extend the Countryside and Rights of Way Act 2000 to include rivers, woods and Green Belt land.

(UK Parliament, 2022)

