

# Theorising therapeutic accretion: swimming as a health-enabling practice across the lifecourse

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**Abstract:** Drawing from an increased interest in blue spaces as settings for health and wellbeing, a range of new theoretical ideas have emerged from within that space. This is especially evident in wider research on therapeutic landscapes and assemblages of health from a range of different settings and practices, marine and inland. This paper documents one specific blue space practice, swimming, to develop a theoretical approach that documents embodied, emotional, and experiential dimensions of what is termed *therapeutic accretion*. Swimming across the lifecourse is built on multiple 'blue moments', both positive and negative. These emerge from a series of intimate immersions and exposures, in and around water that help promote wellbeing in its broadest sense. While swimming can be and is a risky practice, this is countered by its acknowledged benefits for physical, and increasingly, mental health and wellbeing. Therapeutic accretion specifically identifies positive exposures to places, spaces and communities that build assemblages of health and resilience across time and space. Based on both empirical research within Ireland and recent writing on swimming, the terms immersion and exposure are used to illustrate how therapeutic accretion develops over time, but also varies across the lifecourse. Identifying swimming as a process of therapeutic accretion within blue space adds to wider nature-based practices research that documents how such practices, individual and communal, act as health-enabling bonds between people and place.

**Keywords:** *swimming, assemblage, therapeutic accretion, blue space, wellbeing*

## Introduction: Nature-based practices and Blue Space

While the COVID-19 pandemic had and continues to have significant impacts on human health and wellbeing, two documented positive outcomes from the pandemic have been, a rediscovery of 'nearby nature' and an explosion in open-water swimming, both in Ireland and beyond (Foley, 2022). Taking outdoor blue space settings and swimming as starting points, both echo developing theoretical directions within human geography

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and especially, geographies of health and wellbeing (Andrews and Duff, 2019). There is a growing literature across multiple subjects on the value of being in nature associated with a range of different nature-based practices in green, blue and other spaces (Hartig *et al.*, 2014; White *et al.*, 2020). As one key example, swimming is enacted and experienced in turn, in, on, by and under the water, shaped by relational geographies and communal practices (Foley, 2017). Swimming as a subject, opens up space for how wellbeing might be understood in its spatial formation; more simply, how place enables wellbeing (Atkinson, 2021). Open-water swimming is an established blue space practice that promotes health and wellbeing, with proven associations with physical fitness, illness recovery, mental health and mindfulness (Foley, 2015; Britton and Foley, 2020). Research on swimming has exploded recently across both academic and public writing, documenting the different ways – playful and serious, active and passive, competitive or at leisure – in which swimming contributes to health and wellbeing (Denton and Aranda, 2019; Tsui, 2020). That research is cross-disciplinary, from sociology, anthropology, sports science, public health and architecture and encompasses both coastal and inland waters, the latter an understudied blue space (Throsby, 2013; Watson, 2017; Atkinson, 2021).

Blue space has been defined as, ‘health-enabling places and spaces, where water is at the centre of a range of environments with identifiable potential for the promotion of human wellbeing’ (Foley and Kistemann, 2015, 158). Across different blue spaces and practices, marine and inland, there are material and inhabited elements that connect with two significant theoretical strands within health geography, namely, therapeutic landscapes and assemblages of health (Bell *et al.*, 2018; Andrews and Duff, 2019, 2020). Recent therapeutic landscapes research identifies core dimensions – embodied, emotional and experiential – that enable health and wellbeing in place from within relational geographies and assemblages of practice (Bell *et al.*, 2018). Place, in all its complexity, matters to people’s health and wellbeing, echoing Andrews and Duff’s (2019) encouragement to, ‘... *follow the components of assemblages as they reveal themselves in the active contributions, they make to the processual course of humans becoming more or less healthy*’. Assemblages of health acknowledge explicitly relational ways in which individual and communal health is sustained, wherein recovery, repair, maintenance and power are all elements that ebb and flow across the lifecourse (Barron, 2021; Britton, 2023). An assemblage focus prioritises processes that produce emotional connections, evident in blue space as affective practice(s) in affective spaces with affective others (Weatherall, 2012). While the terms affect and emotion are used interchangeably in this paper, there are also lengthy critical discussions on their difference in the literature (Foley, 2011).

In developing these ideas, the concept of *therapeutic accretion* considers how to meaningfully understand active practices and their work in promoting health and wellbeing states – positive and negative – within blue space (Foley, 2017; Bell *et al.*, 2018, 2019). Therapeutic accretion can be defined as: *the accumulation of routine and intermittent social, material and affective encounters and practices that produce a health and wellbeing resilience in bodies over time*. Therapeutic accretion builds on Duff’s

(2014) writing on assemblages of health, to trace how emotional/emodied resilience emerges through mobile relations in different places and at different times. In explaining therapeutic accretion, it builds resilience through regular positive exposures to healthy places and practices and across time. Accretion is laid down externally and internally on the body, building as a conceptual protective crust; one that can break or crack, but is also durable/enduring. Recent clinical studies identify how repeated swimming in, and exposure to, cold water produces both measurable physiological changes and effective medical treatment (Dugue and Leppanen, 2000; Espeland *et al.*, 2022; van Tulleken *et al.*, 2018). These measurable elements of an embodied therapeutic accretion are discussed here alongside more critical writing from health geography. In tracing the social, material and affective power of repeated immersive engagement with the more-than-human world of water, we focus on how less immediately measurable health benefits, physical and mental, emerge in blue space; put differently, how practice makes (positive) affect.

This paper uses a specific practice, *open-water swimming*, to explain social, material and affective dimensions of therapeutic accretion more fully; within which immersion and exposure are two central processes. Those processes are illustrated in the paper in part from my own ongoing empirical research, that uses immersive methodological approaches including innovative in-situ place capture. The paper also describes how therapeutic accretion uses mobile methods to capture voices, sights, sounds, touches, smells and tastes from the water; all central to promoting a sensory wellbeing (Foley *et al.*, 2020; Bell, Hickman, and Houghton, 2023). Immersion and exposure are central to reframing swimmers as sensor-bodies (Britton and Foley, 2020), through which an accretion of therapeutic benefits, and occasional disbenefits, emerge across the lifecourse. The rest of the paper outlines these theoretical concepts in more detail, while building that theory from empirical work by the author in Ireland alongside wider swimming research.

### ***Therapeutic accretion: building from therapeutic landscapes and assemblages of health.***

Recent health geographies research discusses health and wellbeing from two specific theoretical starting points, therapeutic landscapes and assemblages of health perspectives. While each will be discussed briefly below, in terms of how they underpin our understanding of therapeutic accretion, both recognise how healing emerges in place in unpredictable ways that can be hard to measure (Bell *et al.*, 2019). They also mark a shift from approaches that focus on special or singular events, to an understanding that health and wellbeing emerge best in practices that immerse or expose people to everyday nature, in whatever form that takes, across lifecourses (Foley, 2020). From a policy perspective, terms such as everyday-nature, ecosystems services and natural capital are used in planning and urban design (Schröter *et al.*, 2014), while for psychologists, nature-connection, attention-restoration and place-fascination are terms employed to explain how nature enables human health and wellbeing in different ways (Hartig *et al.*, 2014). While this paper will not explore these psychological terms in detail, they

represent useful yet contested concepts and subjects that therapeutic accretion connects with and draws from.

Research on therapeutic landscapes trace their origins back to the work of Gesler (1992), who defined the term as a conceptual framework used to analyze physical, social, and symbolic environments as they contribute to physical and mental health and wellbeing in places (characterized as landscapes). From an original focus on special places, to later work on everyday spaces, the primary focus of recent research in this area is how certain types of spaces and places enable health and wellbeing. In therapeutic landscapes research, David Conradson's idea of relational imbrications; wherein non-guaranteed, differential and sometimes negative health outcomes also emerge, remains a central concept, especially when applied to risky outdoor swimming waters (Conradson, 2005). Most recently, the idea that therapeutic landscapes emerge through a set of embodied, emotional and experiential encounters, recognises how these act differently depending on the spaces and practices, but also how bodies, senses and emotions (individual and collective) relate in those spaces to produce identifiable wellbeing benefits (Bell *et al.*, 2018).

While some thinking on therapeutic assemblage has been developed in Irish research on holy wells (Foley, 2011), and on care-farms and the more-than-human by Gorman (2019), it has been most fully developed in the writing of Cameron Duff (2014) on assemblages of health, using theoretical writing from Deleuze and Guattari and his own empirical research on community mental health spaces in Australia (Duff, 2011). Drawing together relational thinking and sensory methods, the research identified how physical and especially mental health in place emerged within a web of flows (Duff, 2014; Pink, 2015). Those flows extended through bodies and emotions to provide affective circulations within and across the assemblage, that ebbed and flowed over time but were also central to holding the assemblage together (Andrews and Duff, 2019). In a more recent study of addiction recovery, Duff and Hill also identified how complex socio-material assemblages of care were built on, '*specific social, affective and material events, relations and practices that sustain wellbeing*' (Duff and Hill, 2022, 1). Those specific social, affective and material elements were linked in that study to supports that enabled recovery from treatment for mental health and addiction but as three core terms, can also be used to consider how wellbeing is sustained in more everyday settings.

In pulling together the connected ideas of therapeutic landscapes writing (emotions, bodies and experiences) with assemblages of health (social, material, affective), therapeutic accretion draws substantially from everyday mobilities across the lifecourse, reflecting recent writing on healthy mobilities (Bell and Cook, 2021). The concept was used in earlier research (Foley, 2017) in relation to Irish swimming spaces and bodies that accrete health and wellbeing in those settings. This earlier work is developed here to examine specific dimensions of immersion and exposure as central planks in how therapeutic accretion emerges from repeated encounters in and with blue space (Foley *et al.*, 2019). Incorporating mobilities also considers health as identifiably fluid and relational across spaces and lifecourses (Pearce *et al.*, 2016; Bell and Cook, 2021). I would argue that

therapeutic accretion develops the processes discussed in therapeutic landscapes and assemblage research, adding accretive possibilities that are embodied and emotional yet draw from everyday experience within blue space. In swimming, material performances and practices are central to a building up of strength and resilience as measures of health gain. Clinical studies of cold-water swimming identify direct therapeutic accretion from repeated exposure and building-up of physiological capacities that provide improvements in depressive, post-operative chronic pain, arthritic and other conditions (Van Tulleken et al, 2018; Tsui, 2020). Equally, those studies emphasise dangers (heart shock, hypothermia) inherent in cold water swimming as well. Considering therapeutic accretion more widely in terms of eudaimonic wellbeing (defined as including a sense of purpose, personal growth and flourishing) (Schwanen and Atkinson, 2015), requires an additional consideration of risk and inequality; recognising that those more critical narratives also shape immersion in and exposure to the water and to swimming places and communities (Conradson, 2005; Caudwell, 2020).

Finally, to better illuminate often complex theory, a number of *intimate sensing* methods are drawn on to uncover therapeutic accretions in-situ within blue space (Britton and Foley, 2021). Given this paper draws in part from innovative empirical swim-along interview methods, these are explicitly discussed to consider how therapeutic accretion can be identified in-situ, so as to better combine the empirical and theoretical. Swimming research, literally, requires both exposure and immersion as routes into the water; sub-consciously employing health and wellbeing ‘feelers’ (sensing-bodies) while doing so. Such intimate sensing uncovers affective bodily cues and responses; triggerable capacities that emphasises the fluidity and sharpness of interactions between human and non-human when they collide (Lea, 2008). For swimming bodies, this is exemplified in the importance of breath and touch, flows of water around and through the body, and the external ebbs and flows of tidal/riverine/lacustrine bodies in which immersions occur (Paterson, 2009; Nestor, 2020). Immersive instincts are shaped by affective capacities and advances and retreats in one’s own relational health and wellbeing states across the lifecourse from childhood to adulthood to old age. Immersions leave visceral traces, a shiver, a shriek, a gulp of unwanted seawater, blue and red skin. Exposure to elemental forces as ‘somato-markers’ is ever present in the blue experience and allows for an open flexible tracing of place affects and effects both on the body and in the water (Bell et al, 2019; Gould *et al.*, 2021).

‘Blue moments’ are identifiable across writing on blue space practices and form an essential building mortar for a therapeutic accretion in the water. These ‘blue moments’ emerge from intimate immersions that are deepened by their very literal embodiment, articulated through and held in the body to be re-experienced, laid down as affective layerings and embedded into personal and place memory. Intimate sensing also considers how specific swimming place assemblages enable resilience; or how emergent cracks in the process mean that therapeutic connections get damaged or broken. In recent empirical studies, discussed more fully below, it has been instructive to witness how important open-water swimming locations have become during the global COVID-19 pandemic

as sites of respite, refuge and repair; clarifying the crucial role nature plays in ongoing health maintenance. From a therapeutic accretion perspective, the empirical research has helped uncover new social spaces of recovery and empathy, but also identified material enablers, e.g. good entry and exit points, railings, lifesaving personnel and facilities, all enhanced by local knowledge and a shared care (Gould *et al.*, 2021). Finally, that shared care and the value of swimming groups to provide socialisation and emotional supports, also helps illustrate the affective/emotional power of swimming and swimming spaces.

### ***How Therapeutic Accretion emerges in blue space: Two Core Processes.***

The capture and articulation of 'blue moments' of immersion and exposure form the essence of a therapeutic accretion in the water. While not explicitly labelled as such, therapeutic accretion is evident in writing on; surfing (Britton, 2023; Britton and Foley, 2021; Evers, 2009, 2015), diving (Straughan, 2012; Merchant, 2016), kayaking (Foley *et al.*, 2020) and sailing (Couper, 2018; Brown, 2019; Broch, 2020). In Brown's (2019) autoethnographic sailing study, hauling ropes in rough seas produces a visceral blood red that is cauterised by the healing blue; a repeated pattern that builds bodily resilience. For Couper (2018) sailing recognises being a bubble on and in the water, an idea replicated in surfing research within the more-than-human wave; both providing health-enabling feelings of exhilaration with undercurrents of danger (Britton *et al.*, 2020; Evers, 2015). Couper's (2018) mention of *motility* is useful, representing a three-dimensional swim experience of being held in a literal out-of-body medium, governed by relational bathymetric elements, depth, tide, swell, temperature. The sections below utilise two linked terms, *immersion* and *exposure*, to explore how therapeutic accretion, shaped by bodies, senses and other communal place practices and emotions, works to enable physical and mental health and wellbeing. Material is drawn from both the wider literature on swimming as well as the author's own empirical research within Ireland (Foley, 2015, 2017, 2018, 2022) including some recent swim-along research (Foley, 2023).

## **Immersion**

To swim requires *immersion* in the water, from a swimming place, around other swimming bodies. The metaphor of immersion reflects ongoing research around place capture, intimate sensing and in-situ approaches (Bates and Moles, 2023; Foley *et al.*, 2020). In recent decades the voices and experiences of swimmers have emerged from different waters, communities, places and practices, to occupy a healthy space between academic, public and creative accounts (Hoare, 2013; Tsui, 2020; Deakin, 2021; Denton *et al.*, 2021). The extent of immersion in open-waters deepened during the core COVID-19 summers of 2020 and 2021. Ironically, after initially excluding people from swimming spaces (Jellard and Bell, 2021), many global lockdowns and place restrictions literally pushed people back (in)to the water; having time and space for swimming enhanced its appeal as a social and spatial practice and focused attention

on its potential health and wellbeing benefits at a time of public health need. From an empirical Irish study, that immersive shift was identified in several different blue spaces (Foley, 2023). One Lough Derg swimmer, who for years had bypassed the lake to go sea-swimming 30 minutes away, had been diverted by a 2-kilometre lockdown, to discover on her doorstep, unexpected pleasures in lake swimming. On a weir on the River Nore, a new swimming community emerged organically in a previously under-used setting. Elsewhere, during lockdowns, people flocked to the water in unprecedented numbers, finding there new and contingent spaces of fitness, socialisation and community (Foley, 2021). A friend described the 40 Foot, a crowded Dublin city swimming spot, as like, ‘a cross between Mass and the Pub’, given that allowances afforded outdoors and socially distanced meant a rare, shared immersion outside the home. That deepened volume and depth of swimmers in other blue spaces and places was a global phenomenon (Moles, 2021). While existing swimming groups continued as before, new communities emerged as ‘blue gentrification’, visually evident in dryrobes, mobile sauna’s, coffee vans and Instagram posts; perceived sometimes to displace older communities. Yet speaking to many swimming groups, an openness to genuine new swimmers and a recognition of the sea as an immersive blue commons, tempered more negative responses (Britton and Foley, 2020).

In-aqua immersions use equally immersive methods; typically performative, auto-ethnographic, collective, and emergent from communities of practice (Foley, 2017, 2023; Moles, 2021). For Denton and Aranda (2019), the use of specific swim-along methods is identified as valuable but complex, especially in cold-water environments. This is reflected in ongoing Irish research that, like Denton and Aranda, provides valuable immersive insights into how people describe the experience of swimming – while swimming (Foley, 2023). Swim-alongs work at two levels. Individually they open up thinking in ways that are affectively aquatic. Swimmers responded differently in the water and several identified that it opened up a clarity not evident or found out of the water; others specifically described a sense of enhanced noticing post-interview; of attention-restoration as direct positive outcome from the swim-along. In addition, in-situ questions on personal swimming histories tended to encourage swimmers to document a lifecourse account. In several locations, swimmers talked (reflecting the wider literature) of swimming a lot as children, losing touch with the water as adults, but rediscovering swimming as positive and health-enabling practice in later lives (Foley, 2015; Gould *et al.*, 2021; Moles, 2021). Here the swimming-in-place triggered emplaced, embodied and emotional memories that helped trace a relational route from the past to *this* place; a form of remembering-while-doing (Denton and Aranda, 2019). In collective interviews with swimming groups, being invited in to ‘their’ swimming place invoked an immediate affective register. Within swimming groups there is an autonomy in the water; some members paddle and bob, others do long-distance swims to distant yellow markers; but all start and finish together, with tea and biscuits after. From a therapeutic accretion perspective, in-situ immersive methods help illuminate emotional attunement in place, uncovering wellbeing benefits that are affectively deep, but made more visible in the

water. In this there are clear links to wider geo-narrative work in geographies of health and wellbeing, incorporating embodied technologies like GPS watches, accelerometers and even physiological measurement equipment (Bell *et al.*, 2015, Osborne and Jones, 2017).

Immersion also describes the mechanics of therapeutic accretion, a layering process both on and under the skin, in and out of the water. As an unenclosed material form, the human body is always open in immersion to flows of water through all bodily orifices; swimming is always an active co-creation between swimmers and the water. In research from Australia and the UK, immersive environments like beaches and riversides are representative settings for tracing affective capacities, that recognise the essential mutability of waters (Costello *et al.*, 2019; Gould *et al.*, 2021; Moles, 2021). In long-distance swimming endurance and resilience matter, shaped by shifts in visibility, flow and other humans and non-humans in the water (Throsby, 2013). For Gould *et al.* (2021), the exploratory nature of the group's swimming capacities and mobilities grew from an immersive curiosity made stronger in the water. For Moles, completing a competitive 10k river swim identified the different effects and affects experienced along a single stretch of river wherein her immersion was shaped by the river's variable flow, passing fellow-swimmers and a wider familial connection (Moles, 2021). For Irish swimmers, place effects were experienced through immersion; one lake swimmer in Lough Ramor described a sudden rain shower enclosing him in a hissing column while glimpsing the sunny lake beyond; an unexpected blue moment that was sensory and emotionally sustaining. Another sea-swimmer at Killiney described their small early-morning group with the name, 'System Reset'; days when they could not swim noted as a partial immersive loss, reducing the affective value of bodies-in-relation (Evers, 2009, 901). In therapeutic accretion terms, regular and even irregular swimming were identified in different ways – iterative but also non-linear – while the in-place capture recorded essential elements of fun, pleasure and a working through in the swim from an affective dread to an affective joy (Phoenix and Orr, 2014).

In swimming with others, many swimmers identified a communal identity that came from immersion with others, deepening their therapeutic accretion. Autobiographical accounts from Ireland talked about 'finding my tribe' after bereavement and loss (Fitzmaurice, 2017), while being part of a group was valuable for wider wellbeing, measurable in enhanced socialisation and mental health improvements (Costello *et al.*, 2019). This was noted especially by older people, evident beneficiaries of group swimming for health promotion and combatting loneliness and isolation (Atkinson, 2020). Blue space research with autistic young people and people with mental health issues, identifies a specific immersive power, an in-the-moment-in-the-place effect that helps as treatment and respite from everyday pressures (Britton *et al.*, 2020; Broch, 2020). For swimmers with disabilities, there is also an inclusiveness in that immersion. From the swim-along study, an enthusiastic member of the River Nore swimming group, with physical disabilities, drew encouragement from being part of the group, and valued the group support for getting in and out of the water in an otherwise inaccessible



swimming environment, something that happened during the interview. The importance of shared emotional support by swimming buddies was a common finding, identifying how swimming communities developed, almost by osmosis (as affective process), shared instincts and 'lookings-out' for others (Gould *et al.*, 2021; Moles, 2021). As swimming groups emerge from immersive inhabitations, they themselves become therapeutic assemblages in action, combining personal care and attention to embodied others but also the water(s).

Immersion is a core *becoming* process within therapeutic accretion, recognising the fleeting or occasional swim alongside the everyday (Barron, 2021; Foley, 2018). Yet despite such mobile settings and inhabitations, stability is laid down over time through place and therapeutic practice. Research on competitive swimming, embodied endurance and physiological capacities are more measurable components of an assemblage of health and wellbeing. Environmental psychologists measure significant health and wellbeing elements in wider green space, e.g., attention-restoration, stress-reduction and increased socialisation (Hartig *et al.*, 2014), that are equally identifiable elements in blue swimming spaces. Within psychotherapeutic geographies (Bondi, 2005; Lea, 2008), immersive events and trigger moments, set down deep patterns for the remainder of people's lives. That affective rippling out from specific spaces and times is mostly captured in a positive place/body memory, though risky and traumatic immersions also linger (Foley, 2018). In seeing immersion as a material practice with reverberations, then each 'blue moment' builds across multiple swims. While each swim can resonate deeply, they also build from affective micro-moments that accompany a swim: the active decision to go, the ongoing uncertainty of starting/completing the swim, the duration/direction of the swim itself, and its affective post-immersive after-glow (Gould *et al.*, 2021; Moles, 2021). Swimming communities often coalesce around blurred practice, identity and authenticity, yet blue spaces are generous, such that multiple 'us' emerge from immersions within the swimming assemblage, across a continuum of embodied selves from Olympians to bobbers in the water.

## Exposure

The term *exposure* is closely allied to the practice of immersion but differs in its operation within and beyond the body and place. It considers how therapeutic accretion develops and reflects other recent blue space writing that emphasises a more powerful benefit to being exposed to various forms of blue space (White *et al.*, 2020). It also represents additional aspects of swimming that are social/experiential, material/embodied, affective/emotional (Bell *et al.*, 2018; Duff and Hill, 2022). For material bodies in material spaces, swimming requires a bodily exposure both before, during and after immersion. That exposure is emotionally relational, attuned to affective possibilities, connecting bodies with emotions; a holistic expression of self and self-with-others (Gould *et al.*, 2021). Finally, in considering how exposure describes inhabitation and performance, Gould *et al.* (2021) consider swimmer's self-identity; a temporal and spatial journey

from lack of confidence and knowledge to enhanced mastery and competence; in which repeated exposure to water is essential, across the lifecourse. Materially, swimming usually requires undressing and literal public exposure, wherein the body can be proudly displayed or safely hidden. Wider research on swimming bodies by the water, attest to the social levelling that can occur with the removal of everyday markers of class and status (Foley, 2017), though this can be more complex for bodies of difference, or in swimming accessories ranging from dryrobes to thin towel in plastic bags (Foley, 2021).

This paper draws primarily from cold-water swimming, within which exposure has both material and embodied dimensions. In waters at sub-zero temperatures, the body can literally turn as blue as the liquid in which it is exposed/immersed; keeping warm post-swim is crucial to maintain bodily functions (Tsui, 2020). Moles (2020) describes the place ballet of dressing and undressing for outdoor swimming; more comfortable and desexualised around swimming groups and events. In addition, what you do/don't wear as an outdoor swimmer, does, as with surfing, provide a visual route to pre-cognitive judgement of identity; real swimmers swim in skins; newbies and wimps wear artificial ones (Evers, 2015). While such self-categorisations are not always helpful, they tend to dissolve once in the water (Foley, 2021). Moles (2020) describes swimming immersions as singularly productive, exposing body and mind to a dissolution of preoccupations and an ebbing of anxieties as one's active sensory focus comes into balance with the water. This shift from portrait (upright and static) to landscape (horizontal and active) bodily alignments, emerges in many swimmer's accounts (Ingold, 2011; lisahunter and Emerald, 2016). River swimmers in the River Nore describe being at the same level as animals, who notice human movement less when it aligns naturally with theirs. As bodies swim more, or longer into each swimming season, accretion builds in embodied advancement or even basic maintenance of bodily capacities (Britton, 2023).

In its exposure the swimming body opens up in different ways to being affected (Foley, 2017). Swimming in open water requires a form of surrender to the blue moment yet is equally shaped by an affectively formed survival instinct. While many swimmers move silently and purposefully through the water, others are more collectively engaged, chatting, diving or swimming gently together. Recent work on a related term, the exposome, focuses on exposure to environmental risk, measured in time and space using sensory technologies (Wild, 2012). Swimmers too expose themselves to risk in the unpredictable waters of seas, lakes, rivers and reservoirs, with the constant possibility of hypothermia, sunburn, coronary or entrapment in weeds. In contrast, therapeutic accretion describes a more positive exposome, building therapeutic gain through accretive embodied and emotional practices within, in this case, blue space. This more positive slant echoes work on hopeful geographies and swimming has been identified as an important activity enabling positivity and hope in recent COVID-19 years (Andrews, 2018). That exposome is complex and reflects recent debates on the 'correct' does of nature, shaped relationally by individuals and swimming groups within preferred swimming spaces (White *et al.*, 2019; Bell *et al.*, 2019); therapeutic accretion is contingent, variable and hard-to-quantify; but always a form of well-becoming (James and Kearns, 2020).

In deepening our understanding of elements of exposure, bodily capacities wax and wane over the lifecourse but are capable of rediscovery and reinvigoration at key moments. This connection to vital geographies places therapeutic accretion as emergent from matter and energy coalescing across relational assemblages; an intimately sensed life lived through repeated physical and sensory exposures (Andrews, 2020). Blue assemblages often differ; a river swim differs significantly from a sea swim; different water, different flows, different ecologies. But there is a commonality in the experience of exposure that clarifies productive dimensions within those assemblages. These include a sense of collective inclusion within a blue commons<sup>1</sup>; an inclusion only made possible by a willingness to be exposed in and to such space. Multiple accounts exist of the empowerment of swimming groups, and their crucial role in enabling shared appreciations of blue space, for a wide variety of health and wellbeing purposes (Britton, 2023). In psychological studies, socialisation is identified as a key element of mental wellbeing (Atkinson, 2020). They are collectives of variable but similar practice; whatever the stroke, weak or strong, the swimmer is always propelling themselves through the water in an intentional way. Swimming with older swimmers and swimmers with disabilities emphasises the power of swimming to transform capacities too; such that immobile bodies on land, become mobile in the water (Foley, 2015). For swimmers encountered within in-situ research within Ireland, in places from Greystones to the Guillemene, therapeutic accretion was evident in the traces of health emergent on bodies; new swimming muscles; the glow post-swim, the marks of browning on bodies from prolonged exposure to sun, wind, place, flow and water reflectivity (Foley, 2017; 2023). While always complex, attempts to capture swimming's immediacy and transformative possibilities for bodies, places and communities remains a valuable quest.

## Summary: Deeping understandings of therapeutic accretion as a blue bond

Regular swimmers express an affective affinity with the swim as a form of everyday wash. For therapeutic accretion that everyday (alternatively weekly or seasonal) wash is shared with others, socialisation and shared community key elements of the layering process. Recognising that multiple swimming identities emerge across time and space means that therapeutic accretion is always relationally produced; developing affective resilience through blue bonds created through social, material and affective encounters with/in the water. While resilience can atrophy or be chipped away, it is never entirely lost, and can be excavated from an affective history, even late into the lifecourse. Unlike most physical activities, older people can swim very late in life, crediting it for its role in sustained health and wellbeing (Denton and Aranda, 2019). Swimming research identifies an evident blue bond (both relationship and glue), that emerges for swimmers through managed risk alongside enhanced self-esteem and self-knowledge. The blue bond represents the literal human mortar that holds therapeutic assemblages in place: a plastic material hardened by its mix with sand and water and layered down through practice. In-situ intimate sensing

<sup>1</sup> A term also central to a forthcoming virtual special issue on outdoor swimming in the journal *Health & Place* due for publication in 2024.

provides methodological insights into the processes and forms of this affective excavation from specific immersions and exposures in the water; reflecting wider research on nature connections (Hartig *et al.*, 2014), made more precious against the constraints of the still-continuing COVID-19 crisis.

The contradictory idea of being grounded in water emerges from many accounts and speaks to an unexpected value of immersion and exposure within otherwise mobile spaces. Many health benefits associated with natural spaces: stress-reduction, attention-restoration and measurable physiological changes, are clearly identified in swimming as a health and wellbeing practice, but from a separate Irish study, also have an occupational health potential (Murray and Fox, 2021). Swimming practices create space for both respite and recovery, and a re-formation, bringing one back to oneself but always in a slightly altered form (Moles, 2021). Recurring narratives imagine a stressed and rocky self as somehow whole and grounded again in the mobile sea, emphasising the stability that place, perversely mobile, can provide. Drawing from parallel ideas in surfing geographies, we can envisage the waterscape architectural idea of the suture; a flexible connector between land and sea, human and more-than-human (Britton and Foley, 2021; Ryan, 2012). A suture is also a form of repair that leave a trace behind on the skin; a therapeutic accretion formed in an assemblage of healthy scars, practice-based traces and the after-mark of post-human immersions and exposures. The ripples and aftermaths of swimming also recognises Gould *et al.*'s (2021) reference to wayfinding, an embodied navigation that settles in our wake, but heals both ourselves and the sea. Many other blue space studies note that regular immersion and care/ful affective encounters in the water in turn encourage an enhanced attention to, and appreciation of, marine environments that recognises ecological distress and a shared vulnerability and wellness alongside the human (Olive and Wheaton, 2021).

Open-water swimming should be exactly that, open and accessible. Despite recent debates around ecosystems services and natural capital, there remains limited engagement with the deeper ways in which blue space practices work as health and wellbeing assets (Bullock *et al.*, 2018). This attention to valuing such spaces recognises it as a blue commons for all, irrespective of age, class, identity and bodily capacities. The complexity of swimming spots; safe beaches, rocky outcrops, rough riverbanks or shallow/deep lake, are substantial and the material spaces of access must be maintained alongside the social. Within public swimming spaces, there are always moments of contestation between groups, also a feature of other spaces during COVID-19 (Dashper and King, 2021). Swimming spots act as affective assets with no guarantees of exactly how they might work for different people (Conradson, 2005). Theoretically swimming and swimming places provide, in health and wellbeing terms, an uncertain but immanent relational outcome, based on their being public assets. Availability is linked to wider relational dimensions of accessibility, including geographical proximity but also aspects of accommodation, acceptability and affordability shaping where and how people can swim. Research on reduced historical access to swimming spaces for bodies of colour opens space for more considered research on swimming as shaped by gender, faith and sexuality (Lobo, 2014; Phoenix *et al.*, 2021). Different forms of bodily exposure can be both

celebrated and feared, depending on context, as identified in Caudwell's (2020) research on trans swimming groups, while Dickinson and Adams (2014), identify swimming as a key activity that provides resilience for LGBTQI+ mental health. Atkinson's (2020) call for attention to pluralities of wellbeing attest to the communal ways in which therapeutic accretion works. In describing immersion and exposure as two core processes, they reflect Marston et al's (2005) recognition of relational geographies as; 'the emergence of space folded into its own intimate relationalities'. For swimmer's, active in visceral folding and unfolding rhythms, Tsui (2020) considers the sea a playful space, a potential source of joy and pleasure and affective setting shaped by significant others; family, friends, teammates and passing acquaintances. As settings for incidental encounters, they reflect wider writing on the importance of significant leisure and memory, recalled in both positive and negative ways across the life course (Gammon and Jarret, 2019).

This paper utilises swimming as a specific practice to develop the idea of therapeutic accretion, especially its core dimensions of immersion and exposure, as ways to uncover health and wellbeing in blue space. While swimming provides the focus here, drawing from both Irish and international work, the idea of therapeutic accretion has a much broader potential. This applies not just to other blue space practices, from surfing to kayaking, but also to other blue spaces, coastal and inland. It can also be applied to green and various natural spaces. One can see real potential is suggesting walking, forest-bathing, cycling and other mobile encounters with nature as also requiring immersion and exposure. That that therapeutic encounter might accrete in very different ways; for differing bodily capacities and registers, in different types of spaces and for different practices, might be a useful focus for new research (Kenna, 2023). Bell, Hickman and Houghton (2023) provide an additional sensory route to therapeutic accretion, recognising new ways to carry out intimate sensing, but which feel as if they too might require specific forms of exposure and immersion. Finally, the lifecourse dimension of therapeutic accretion, while hinted at here, is under-explored, and has considerable potential given recent work on exposomes but more broadly on geographies of ageing and geographical gerontology. Swimming remains a rare practice that can be enjoyed by people from age 9 to 90, while the different levels of engagement with the water through people's lives, reflects wider healthy mobilities thinking and offers a further route into developing theoretical and empirical research on therapeutic accretion, within Ireland and beyond.

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