Biophilia and Biophobia: Diverse Experiences of Nature in Prison
Holly Dempsey

Abstract
This article focuses on the ways imprisoned men experience ‘nature’ - one of several broad terms used which allowed participants to freely associate interview questions with their own experiences. The concepts of biophilia (innate love of nature) and biophobia (innate dislike, discomfort or disregard of nature) are used to frame imprisoned interactions with and responses to nature. This approach acknowledges that relationships with nature are complex, layered and influenced by the built environment, prison regime, and individual differences. Imprisoned men, herein, had complicated relationships with nature. They were often denied access to desirable nature, whilst undesirable aspects - pests, uncomfortable temperatures, and sensory intrusions - were amplified by physical imprisonment and the design of carceral structures. Exposure to positive and negative aspects of nature may impact rehabilitation, desistance and re-entry into the community. It is, therefore, an important consideration in the exploration of both prison design and the harms of imprisonment.

Keywords: nature, imprisonment, carceral geography, wellbeing, rehabilitation

Introduction
The problems facing the English criminal justice system can seem overwhelming. The Prison Service has been repeatedly criticised for chronic overcrowding, a lack of meaningful activity, and escalating levels of self-harm, self-inflicted deaths and violence (Stephenson et al; 2021; CPT, 2020; MoJ, 2020). During the COVID-19 pandemic, prisoners have also faced near-permanent in-cell lockdowns, an additional pain in an already painful system (Suhomlinova, 2021; HMIP, 2021). Beyond these profound stressors, people in prison may also experience chronic, severe fatigue resultant of hypervigilance against danger and
overburdened attenuation due to a lack of facilities, inappropriate design and a lack of spaces for quiet contemplation (Nurse et al, 2003; Jewkes, 2018). Whilst people outside prisons may experience complex challenges, prisons also remove or restrict many ‘relievers’ relied upon to reduce stress, including cigarettes, television, socialisation and restorative spaces (Goffman, 1961:68, Brown et al, 2019).

When faced with a system in perpetual crisis, why is nature in prisons worthy of investigation? In short, because researchers have found that exposure to nature improves almost every aspect of the human lived experience. Nature can confer significant benefits for holistic wellbeing, which may be most powerful for vulnerable and marginalised groups – a category prisoners fit into because they are involuntarily confined, though many face additional challenges. Whilst time outside is recommended in the Prison Rules (1999:728.II,30), it is not mandated and relies on the beneficence of weather and maintenance of order. As such, natural spaces are often characterised as aesthetic niceties to be enjoyed when convenient rather than essential tools for wellbeing.

**Prisons and Nature**

Despite humanity’s origins as a nature-based species, industrialised people now spend upwards of 90% of their time indoors (Veitch, 2011). The removal of nature from people’s daily lives can result in stress, ill-health, and unhappiness. Interactions with nature have been found to reduce mental health problems, support positive emotions, and mitigate stress (WHO, 2016). Physically, they have been found to positively impact a wide range of medical conditions and improve patient experience and recovery (Sandifer et al., 2015; Ulrich, 1984). Nature has also been found to reduce aggression and violence whilst improving cognitive functioning, attention and trauma processing, encouraging social cohesion, community mindedness and pro-sociality (Nadkarni et al., 2017; Kuo and Sullivan, 2001a). Contact with nature also appears to mitigate some side-effects of urban living, providing biophysical ecosystem services by absorbing pollutants and reducing heat, flooding and noise pollution (WHO, 2017).

Whilst terms like ‘nature’ can be imprecise, the one element that binds natural experiences together is their multi-sensory quality. The peaceful engagement of multiple senses induces a state Kaplan (1995) calls ‘soft fascination’. In this peaceful, relaxed state, human attenuation, often over-stressed by city living, 24-hour news cycles, and hectic work lives, can find meaningful recovery and restoration. Such experiences are rare in prison environments and
provide insight into why nature, or the lack of it, may have relevant implications for people serving time in prison.

The evidence suggests that contact with nature is beneficial to human health. Still, it appears to have the most significant impact on those enduring hardships, such as poverty, illness or living in involuntary confinement (Hordyk et al., 2015). Many people arrive in prison with challenging ranges of personal problems (Halliday and Hewson, 2021; NAO, 2017). Prisoners are more likely than the general public to have experienced trauma, abuse, social exclusions, homelessness, drug and alcohol dependency, and complex mental health conditions (Tomaszewska et al, 2019; Bowler et al, 2018; SEO, 2002). The emotional and behavioural consequences of such experiences are heightened by exposure to the prison institution but also its environs (Mills and Kendal, 2018). The issues people may face, both individual and institutional, are compounded by the drear and stark environment (Söderland and Newman, 2017). Anglophone\(^1\) prisons have departed from their gothic origins and now resemble anodyne warehouses or abattoirs (Jewkes, 2018; Fiddler, 2007). An obsession with future-proofing, value-engineering and securitisation have discouraged creative thought, excluded nature and produced buildings, almost stunning in their sheer dullness (Hartman, 2015; Jewkes and Moran, 2017). When participants were asked about colour in prison, the answer was almost always ‘grey’. The colours of prisons are notoriously bland and uninspiring but have also been theorised as deliberate; “This dull colour scheme is intentional, reflecting managerial discourses on the nature of prisoners for whom the units are designed” (Shalev, 2009:117). Buildings communicate semiotically; their design sends messages about who and what a building is for (Clements-Croome, 2013). Poor quality or thoughtlessly designed prisons send the dehumanising message that they are “non-places for non-people” (Jewkes et al., 2017:293). One participant, Sam, described closed prisons as sounding:

> Industrial and mechanical, it sounds like a warehouse, like a factory, it doesn’t sound like a human place, though the atmosphere is punctuated with human noise, it doesn’t sound like a human place.

Despite the evidence suggesting people in prison might benefit from contact with nature, it is often seen as risky, costly to initiate and maintain, and an attribute that could incite anger and

---

\(^1\) Anglophone meaning English speaking; used here to describe similarities in prison design across English speaking countries.
distaste from local communities (Moran and Turner, 2019). However, without plant life, prisons become sterile and artificial (Jewkes and Moran, 2015). In places devoid of nature, instances of it can be the subject of great interest and curiosity. King and McDermott (1990) gave geranium seeds to residents of a prison where they had carried out research. The plant's growth was observed by clusters of men who would stop by to observe the seeds’ progress. The prison, however, did not recognise curiosity or an affiliation with nature, but only risk – frequently reporting and investigating prisoners who lingered too long, rendering the geranium subversive. Regarding nature as an inherently risky frivolity persists in contemporary prisons, yet it is an inherently human trait to be interested in things that grow and change (Jewkes and Moran, 2015).

During the multiple lockdowns enforced in the UK to tackle the spread of COVID-19, people have been told to go outside and connect with nature to cope with the stresses and pains of pandemic life (Briggs, 2021; McCarthy, 2020). People in prison, however, have had to endure heavy restrictions, for lengthier periods than the community, with some prisons enacting 23 hour-a-day lockdowns for significant periods (Maycock, 2021; HMIP, 2021). The large body of research around solitary confinement suggests that the costs of this approach are likely to be heavy and long-lasting (Reiter and Blair, 2015; Shalev, 2009). Severe lockdowns separate imprisoned people from each other, reduce available activities and limit a person’s world to their immediate environment. Imprisonment on these terms also forcibly separates prisoners from most nature.

To explore prisoner relationships with nature, this article focuses on the concepts of biophilia and biophobia. Kellert (1993:21) describes Wilson’s 1984 theory of biophilia as the “claim of a human need, fired in the crucible of evolutionary development, for deep and intimate association with the natural environment, particularly its living biota”. The theory suggests that humans evolved in and from nature to such an extent that a need and preference for it became genetically encoded. It also describes an almost spiritual experience, wherein people feel meaningful connections to certain natural places or types of nature and feel positive results from spending time in them.

Contrastingly, biophobia is the perception of nature as frightening, disgusting, subservient or irrelevant (Orr, 1993). Urban living, cleaning products, barriers against nature and environmental controls may all contribute to a discomfort with the natural world. However, Wilson (1984) suggests that our brains are primed for nature, primed for affiliations with it
and primed to be improved through positive exposure to it. To speak of affiliation for nature is not to deny the existence of other affiliations but to recognise that those who live apart from nature may be unknowingly missing something vital (Orr, 1993). People in prison who are isolated from nature are cut off from the unique range of sensory information it supplies and the wellbeing benefits it conveys. Instead, prisoners are often under-exposed to positive nature – views, variable daylight, plants and benign animals. Simultaneously, they are over-exposed to its negative counterparts – prisons are often too hot during summer, too cold in winter, poorly lit, home to vermin and pests, and patrolled by guard or sniffer dogs (Sharkha et al, 2020; HMCIP, 2017; Moran, 2015). These factors can encourage discomfort with the natural world to emerge or be amplified as a result of the prison environment itself.

Methodology
In this project, thirteen men were interviewed who were residents at HMP Springhill, an open prison in rural Buckinghamshire. Whilst transport links to the prison are poor, its rural location and open status afford Springhill many natural spaces usually absent in higher security establishments, including a large exercise field, outdoor seating areas, a woodland pathway for visits and the Buddha Grove. Apart from the natural areas, Springhill is an odd mixture of rundown buildings. Like many open prisons, the site was originally a country estate, and the grand house still stands though inside it is somewhat dilapidated. A number of ‘huts’ provide rooms with shared bathrooms and kitchenettes, which were criticised in the last HMIP report but would require significant investment to improve (2018).

Category D or open prisons are very different from the closed estate. At Springhill, no walls surround the site, and residents are free to move around most of the grounds, are not confined to cells, have more access to employment and pre-release support (Marder et al, 2021). Open prisons are intended to support people who have served lengthy sentences to become accustomed to life outside prior to release. In recent times, more diverse prisoners serving shorter terms are being assigned to open prisons as well. Risk is a key consideration for open prisons, who wish to select trustworthy people who are unlikely to abscond or re-offend; these things do happen, but the intention is to minimise this risk (Statham et al, 2021). Open imprisonment remains under-researched; there are many aspects of it that may make imprisonment easier to bear, but also unique challenges (Shammas, 2014). Whilst this paper is not intended as an analysis of open imprisonment, I hope it can elucidate the difference

---

2 A small area with a statue of Buddha and benches, set in a woodland area with views across the countryside. The space is popular but does require special permission to access it.
between the physical environments of open and closed estates and how these differences are experienced. This site was selected because residents would be able to talk about not only their time at rural Springhill but also time spent in closed facilities and how these experiences compared. I use the terms ‘open’ and ‘closed’ to clarify which part of the prison estate a participant is speaking about.

Qualitative, semi-structured interviews were utilised to provide an understanding of how the men experienced nature at Springhill and other establishments (Davies et al 2011; Bosworth, 2005). For three weeks, I spoke with people and traversed the grounds. This acquainted me with Springhill as a relative outsider who had no lived experience of living or working in a prison. The number of interviews was limited by the time available for Masters research; however, qualitative research stresses the value of individual experiences, seeking to explore these in depth rather than seeking to produce generalisable data (Lareau, 2021).

Ethical approval was granted by the University of Cambridge and the HMPPS National Research Council. Verbal consent was gained from participants before the interview, and an information sheet was provided which described the research, its purpose and participant rights. Before starting an interview, a consent form was signed once we had discussed that participants may withdraw until publication, questions could be skipped without explanation, and the interview could be ended at any time. Participants’ accounts were anonymised to protect their identities. Whilst speaking about nature may not seem the most emotive subject, discussing any aspect of imprisonment can be difficult. One participant was overcome by emotion; he felt that conditions at Springhill were much better than closed conditions, and it elicited a strong reaction, though he was happy to have the chance to talk about what coming to Springhill meant to him.

It is worth acknowledging that ‘nature’ and related terms are vague and may summon different imagery for different people depending on experiences, culture and environment (Bratman et al., 2012). Nature is often described as green but can be many colours; it can be wild or manicured, vast swathes of forest or a potted plant, immersive or vicarious. Some interview questions referred to specific aspects of nature; however, most deliberately used broad terms to allow participants to frame their answers within their understanding of what nature ‘is’.
Results and Discussion
This project explored experiences of nature more broadly, but thematic analysis revealed examples of biophilia and biophobia, which seemed to occur naturally, as a result of the environment or sometimes in spite of it.

Biophilia
Biophilia often seemed innate, allowing access to nature to become a simple joy in simultaneously complex, dull and frightening environments. Sam responded viscerally to the far-reaching views from the window of the Springhill interview room, “makes you want to live, doesn’t it, makes me want to be alive, makes you want to live, makes you happy, makes me happy anyway”. The presence of nature for Sam was, in and of itself, life-affirming. Simon found entering prison very difficult but felt fortunate to have become involved in a gardening programme early on in closed conditions:

“That time [in the garden] gave you the wherewithal to be able to cope with the bang-up, […] without that time outside, without that time just getting your hands dirty and everything else; I hate to imagine what would have happened”.

The time outside fortified Simon against the more destructive side of imprisonment, allowing him to get out of his cell but also to escape from the thoughts and feelings that became overwhelming during long periods alone. Nature at Springhill provided opportunities to find joy in small things; Paul took advantage of this, using nature to augment his personal space; “wherever you look there’s something – at any time of day or night, there’s something to make you smile, there’s flowers out there, I actually pick a few of the daffodils, and I put them in my room”. Having plants in his room allowed Paul to integrate nature more fully into his life as a source of comfort and strength. Prisons can be incredibly stressful places to live and work (Massoglia, 2008), rarely allowing time or space for peace; in the quiet nights of Springhill, however, Mo found peaceful and restorative contemplation:

I just usually sit on the bench and look out, look at the trees, and it’s dark, most of the time I sit there it’s dark, and it’s just quiet, and it’s peaceful, and that’s one of the things I really like about this place, you know, cause, I think in nature you find comfort and I feel for people in closed conditions when they don’t have that.
Biophilia in prison was often frustrated by both the physical and disciplinary environments. The lack of physical contact with nature was felt keenly by participants who were prohibited from engaging haptically with grass, sunlight and rain in closed conditions. Indeed, on arriving at Springhill, Joel walked barefoot on the grassy field - “that just felt lovely, just having that connection to the ground felt really nice because I couldn’t remember the last time I did that”. Richard and Joel described the joy of feeling rain on their skin at Springhill; people in prison are often kept inside when it rains because ‘bad’ weather has negative connotations for staff. Richard said he had not felt the rain for eight years in higher category prisons, so he would choose to remain outside even when it was torrential.

As with the haptic elements of grass and rain, nature was often yearned for in sensory capacities. Indeed, the benefits of exposure to nature are often found through multi-sensory interactions (Heerwagen, 2009). Such interactions are often frustrated in prisons, where bland, homogenous, and ‘an-aesthetic’ design deadens the senses (Jewkes et al., 2017). Visually, closed prisons were felt to be restrictive “caverns of grey and beige” (Heerwagen, 2009:53), and a dearth of views in many closed prisons was lamented. Spaces were made to feel small and enclosed by a lack of far-reaching views, “every time you turn around and look through a window, all you saw was a brick wall” [Ralph]. Where views were available, they were often impeded by security elements, “my window had all bars and then cages over it […], and you’re like how the fuck am I supposed to see out of this window?” [Darryl]. The presence of natural, appealing, and sweeping views at Springhill was seen as an asset that improved living conditions, despite the poor state of many housing units, “it’s the uninhibited view, you know, land space, you can see it, it makes a difference, it definitely makes a difference” [Sam]. The passage of time was also felt keenly in closed conditions; each day was described as a monotonous continuum that made participants acutely aware of their location. Shaun described his time in closed conditions as a parade of soaps that he did not seem to enjoy particularly but which provided a welcome distraction. At Springhill, however, he no longer needed to force the passage of time, “I don’t even know what’s happening in EastEnders! You know, everything’s changed, I don’t even know the times it comes on no more. Even Hollyoaks, I ain’t even watched Hollyoaks since I come here!”. Distraction was no longer needed; the environment of Springhill provided space for contemplation but also topics of conversation, areas to congregate and socialise, freedom to associate with other residents and opportunities to see friends and family in less restrictive settings.
Wilson’s (1984) biophilia is not just related to flora but also a profound connection to fauna, both human and non-human. Animals can be hard to come by in prison environments; the security constraints for humans often exclude animals as well. Some prisons utilise Prison-based Animal Programmes, in which residents interact with animals – usually dogs but sometimes, horses, birds or farm animals (Furst, 2006). Such programmes are found throughout prison history, though most commonly in the US, and utilise animals for companionship, therapy and employment purposes, or some combination thereof (Strimple, 2003). Whilst many programmes report significant, positive results, they run in relatively few prisons, usually for limited periods and there are often restrictions regarding the ‘type’ of prisoners who are allowed to engage (Minke, 2017; Mercer et al, 2015). Permanent pets are rare and often subject to upsetting rules; one participant reported that he had a budgie, but when he was transferred to another prison, he was not permitted to take the animal, of which he had become very fond, with him.

Some of the frustrated biophilia that emerged from the data involved joyful encounters with non-domestic animals, including foxes, spiders and pheasants, enacting biophilia despite the restrictive environs of higher category prisons. Joseph described the visitations of a wild animal to a closed prison; “They used to have a massive goose there, and he used to come round and chase everyone, and yeah he’d chase everyone and try and bite you, but he died … so that was really, really sad”. Joseph’s palpable sadness at the passing of the goose speaks of a connection that went beyond its outward wildness and aggression to an appreciation of the animal just as it was. The cruelty of nature can be distressing, death and its part in lifecycles are as natural as anything beautiful, but they are also reminders of our own mortality and, as such, can be rendered unsettlingly abject (Kristeva, 1941).

**Biophobia**

Wilson (1984) describes biophilia as a spectrum including negative reactions, forming part of the natural range of responses to nature which evolved in humans and were hypothesised to serve a largely protective function – a fear of heights or snakes would keep a person safe. Biophobia, however, is also thought to manifest in people who live apart from nature and have undergone an ‘extinction of experience’, whereby consideration of, comfort with, and enjoyment of the natural world fail to emerge (Soga et al., 2015). Humans live in increasingly controlled urban environments that have little in common with the natural world and which often seek to exclude nature, admitting only its most inoffensive aspects. Nadkarni et al (2017) found city-dwelling children were more afraid and uncomfortable than restored in
wilderness areas. Such research has not been replicated in prison environments, though some participants suggested similar ideas, “some of them are townies, and they prefer it in towns, they can’t get used to the countryside” [Ralph], representing innate biophobia as a distinctly urban experience. Likewise, Darryl, a lifelong Londoner, struggled with aspects of country living at Springhill; “we all worry and have to deal with the pollution of cities, especially like London, but mate, you don’t half miss that petrol smell when you’re up here smelling cow shit!”.

Darryl’s experience of biophobia came in the form of a sensory invasion; the smells of the environment were overwhelming and deeply unpleasant. Many incidents of biophobia took this form and were commonly induced by closed prison environments. Joel spoke of inadequate ventilation and unopenable windows that turned hot summer days into the stuff of nightmares (Skarha et al., 2020; Chammah, 2017). Dominic described feeling “itchy, like something’s on you” because of the number of mice, cockroaches and other pest animals that found their way into his previous cells, a common experience (Cattermole, 2019; Moran, 2015). Mo, however, was distressed by the damage done to animals by closed prison buildings, “I think the barbed wires are very oppressive, […] loads of birds just fly into it and get caught up in it, and then they’re flapping away, and you can hear them screaming and cutting themselves up”. Even invited animals could be highly threatening:

“When you go up a restricted walkway, and there’s a dog there, and a dog here, and you’ve got to walk up through the middle, their struggling, some of their handlers are struggling to keep them on the leash. It was there to send a message.” [Rick]

The prisons utilisation of Alsatians in the closed estate made Rick reticent to attend Friday prayers; their very presence felt weaponised against him. Similarly, the remoteness of many prisons has historically been utilised as a weapon, disincentivising escape, isolating prisoners from their ‘homelands’ and making visits from friends and family difficult (McAtackney, 2014). In such cases, even the most beautiful landscape surrounding a prison might be resented as a representation of the physical distance from home. If a landscape around a prison seems sufficiently ‘alien’, it may serve to make the observer feel deeply embedded, far from home and freedom (Crewe, 2011). Inside the prison, though, landscapes were rarely inviting; “I could have gone out, but it’s a concrete jungle and do you want to be walking round in circles in a concrete jungle?” [Rick]. Several participants evoked the image of prisoners walking in circles around a closed prisons’ concrete yard; these spaces were so
uninviting and dull that many saw no point in engaging with them. Outside spaces in closed prisons that were perceived as pleasant, were often off-limits “there were areas with benches, but they’re obviously not for the inmates […] we weren’t allowed in them sort of areas unless it was to pick up litter” [Ralph]. Such spaces epitomised sensory denial that appeared to reinforce a ‘less eligibility’ agenda, creating a sense of resentment towards spaces that were deemed ‘too good’ for people serving time.

Biophilia and biophobia are experienced in many diverse and inter-linking ways. Experiences of nature in prisons were influenced enormously by the prison environment, which often served as an impediment to biophilia whilst propagating biophobic tendencies. Whilst many of the described biophobic encounters would be unpleasant for anyone, outside people are more able to regulate their encounters with nature to ensure comfort; in prison, they were inescapable, unavoidable and unchangeable. However, whilst these concepts are often understood as oppositional, Wilson (1984) proposed biophilia as existing on a spectrum encompassing all responses to nature, including attraction, aversion, fear and delight (Kahn, 2001). To gain the benefits nature can offer, these affiliations require balance, which can easily be tipped to the negative by a lack of consideration in prison designs and regimes.

Conclusion
Some researchers have theorised that once a person lacks exposure to nature as a child, the window to foster biophilia – the ‘earth period’ - expires and biophobia becomes permanent (Hansen, 1998). However, Nadkarni et al (2017) found that showing videos of natural settings to American prisoners housed in solitary confinement increased feelings of wellbeing whilst reducing stress and aggression, which translated to an actual reduction in cell extractions. The findings discussed in this article suggest the value access to nature may provide, even within restricted environments, regardless of a person’s previous experience of nature. This study also shows a range of positive outcomes participants attributed to contact with nature, including increased wellbeing, self-worth, and comfort, as well as an appreciation for spaces which allowed for reflection, recuperation and connection to the natural world that felt absent or restricted in closed conditions.

It is important to recognise the simple presence of nature within the carceral landscape is not enough to legitimise it; using Nadkarni et al’s (2017) research to justify solitary confinement, for example, would be highly inappropriate. Despite the generally positive responses to nature at Springhill, the remote locations common to open prisons may be painful. Locations
should be balanced with good transport links and facilities for visitors to allow for continued,
regular contact with friends and family, a subject which should be considered in future
research. The type of nature, ease of access and outcomes desired are all key. Even if these
factors are appropriately considered, the presence of nature is not in and of itself curative, and
the complexities of carceral relationships with nature deserves further attention. The question
remains of how to introduce positive, accessible nature to prison landscapes while
minimising negative experiences, as well as exploring how these complex relationships may help or hinder (p)rehabilitation, desistance and re-entry into the community.

References

Research: Views from Inside’, Qualitative Inquiry, 11:2, pp.249-264

Prisoners’ Mental Health: Implications for Adaptation and Intervention’, International
Journal of Law and Psychiatry, 57, pp.61-66

Cognitive Function and Mental Health’, Annals of the New York Academy of Sciences, 1249,
pp.118-136

Available at: https://www.bbc.co.uk/news/science-environment-56889322
(Accessed:20.05.21)

Prisoner Views on a Prison Smoking Ban: Evidence from the Tobacco in Prisons Study’,
Nicotine & Tobacco Research, 21:8, pp.1027-1035


Chammah, M. (2017) ‘“Cooking Them to Death”: The Lethal Toll of Hot Prisons’, The
(Accessed:10.03.19)

Beyond Environmental Comfort, Routledge: Abingdon and New York, NY

Carried out by the European Committee for the Prevention of Torture and Inhuman or
Degrading Treatment or Punishment (CPT) from 13 to 23 May 2019’, CPT, CPT/Inf (2020)
18, Available at: https://hudoc.cpt.coe.int/eng/?i=p-gbr-20190513-en-1
(Accessed:04.12.21)

Punishment & Society, 13:5, pp.509-529


Holly Dempsey returned to studying as a mature student, completing an undergraduate degree in *Criminology and Criminal Psychology* at The University of Greenwich, and a Masters in *Criminological Research* at The University of Cambridge, before starting a PhD at The University of Bath, where she continues to explore relationships with nature in prisons.