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Building a Paradise? On the Quest for the Optimal Human Habitat

Anu Besson

Abstract

Do humans have a natural habitat? If yes, is it the original habitat of early hominids or the most optimal environment for today's humans? Are these two the same thing and, if not, what does 'optimal habitat' mean? I examine the concept of the optimal habitat from four viewpoints: 1) paradise; 2) urban design based on environmental psychology; 3) favorite places; and 4) environment as an invitation for action. I conclude that an optimal habitat is not a collection of more or less fixed elements but an environment that can be experienced as a beneficial feedback loop based on and responding to cognitive, emotional, aesthetic, and other needs. Different environments can prompt or hinder this experience of optimal habitat and consequently improve or diminish subjective well-being.

Key Words

environmental aesthetics; environmental psychology; optimal human habitat; paradise

1. Introduction

Some scientists have proposed that humans, like other animals, prefer certain surroundings because they serve the species' instinctive needs, making that environment the species' natural habitat.^[1] As a starting point, I have taken two concepts, paradise and the ancestral habitat where hominids evolved to examine whether they can offer insights to what might be the best environment for people to thrive in. Paradise is a long-standing, widely shared cultural concept of the ideal environment, and evolution psychologists have proposed the birthplace of the early hominids to be the most suitable environment for humans.^[2]

My key question is, is it meaningful to say that the first environment of early hominids and the best-suited environment for today's humans are the same or similar thing? Instead of technical-economic or socio-political analysis, this article focuses on positive and negative valence: What kind of environment(s) people tend to like and dislike?^[3] My method is a comparative and cross-polluting reading of texts in environmental psychology; biophilic design, that is, nature-based architecture and urban design; favorite place studies; and humanities like aesthetics, cultural geography, and history. I examine the following angles:

- Paradise as a culturally shared, ideal environment;
- Biophilic design: planning and building physically and psychologically beneficial or, at minimum, the least harmful environment;
- Favorite places as a means for self-regulation, like recovery from stress or low mood; and
- Environment as an invitation for action.

The term 'human habitat' is borrowed from Arnold Berleant, to whom it means a humane habitat, that is, an environment where people live, work, and socialize thrivingly.^{[4],[5]} By the optimal habitat, I mean Berleant's human habitat, but I add the qualifier to distinguish from those environments that people inhabit but do not thrive in; in ecology, a habitat is simply the residing area of an organism, not the best possible one. Paradise refers to a long-standing mythical-cultural concept of an environment that offers bliss, ease, and perfection; a place of ultimate harmony and lack of need. Aesthetic, in this paper, means a sensuous quality that is contemplated and valued from the pleasure and/or fascination it evokes.

2. Background

Children giggle and dogs bark, playing on perfectly green lawns. Adults lounge next to a pond, chatting lively. All ethnicities socialize under the golden sun or seek shade below the tall eucalyptus trees. The ambience is mellow, harmonious, inclusive: a Sunday afternoon in Kings Park, Perth, Western Australia. One word comes to mind: paradise. In today's parlance, paradise is usually understood as a lush and beautiful place of leisure and enjoyment, perhaps rare and longed-for, such as a holiday destination, spa, or tropical island.^[6] It is conceivable that paradise represents the idealized environment for humans. Who would not dream of ease, joy, and harmony, lack of need and discord, and eternal sunshine?

3. Theory

3.1. What is paradise?

The word 'paradise' originates from the Persian *apiri-Daeza*, a walled orchard

or garden. The earliest written records of the term date back 5,000 years to Sumerian culture.^[7] Jean Delumeau has shown that, for centuries in Europe, paradise almost exclusively meant the Garden of Eden, treated in the Jewish and Christian traditions as a real, hidden, or lost place.^[8] Also, ancient Persian and Mesopotamian cultures had a concept of paradise garden, and Greco-Roman culture envisioned Elysium and Happy Isles that later on merged with the Christian view about heaven.^[9] Virtually all mythologies and religions recognize a primordial paradise, with the common denominators of lack of suffering and need, and prevalence of abundance and enjoyment.^[10] Because life has never been perfect for the masses, the longed-for perfection often takes place in the otherworld, such as the dwelling of god(s) or the afterlife. Depending on cultural, geographical and other reasons, people have conceived different places or states of perfect life. For Vikings, the afterlife was a battleground with festivities; whereas for Christians, the afterlife appears to mean blissful communion with the divine.^[11]

The Dutch sixteenth-to-seventeenth-century artist Jan Brueghel the Elder is perhaps one of the most renowned depictees of paradise as it appears in the Western imagination today. His paintings portray lush, semi-open landscapes, with short and long vistas, water framed by trees, and flowering, fruit-bearing plants. Biblical characters and various animals populate the landscape depicting harmonious leisure.



Brueghel's paradise was Eden at the perfect end moment of creation. His style became popular in the seventeenth century, perhaps still influencing Western views about what a paradise looks like.^[12] But could such perfection ever exist? At first, the question seems nebulous, if not impossible. Whose views count, when a paradise is described or created? Different eras, cultures, and individuals hold different preferences. Yet, throughout history, the optimal human habitat has been a subject of not just contemplation but serious attempts to create it, by philosophers, idealists, and technical professionals.^[13]

Attempts to build the perfect environment, a paradise of a kind, have been undertaken in many forms, for example, by aspiring towards utopia.^[14] Utopia, an impossibly perfect ideal society, usually encompasses the ideal environment, which is seen as the enabling framework for the ideal activities or a reflection of those.^[15] It can be argued that all planning aspiring towards a better city is to some extent utopic; perfection is unattainable, because each new generation finds new problems and suggests new solutions. The essential elements and qualities for the most optimal habitat have been conceived differently throughout history. For instance, for modernists like Le Corbusier, the essentials were sunlight, green lawns, motorways, and a quick access to the separate areas of a sectorized city, whereas for today's placemakers, the essentials comprise a village-like, densely built, pedestrianized and green community that invites residents to interact and co-create.^{[16],[17]}

Utopia is fundamentally elusive, always somewhere further ahead.^[18] If the failed attempts to build utopia are understood as failed attempts to create paradise, is it possible to ever build a real version of the mythical perfection? In my view, the most important part of the question is, is a place of perfection the optimal environment? Optimal should not be understood only in positive terms of satisfaction, enjoyment, and ease. Landscape architect Jacky Bowring has raised the importance of places of sadness, reflection, and melancholy. Different environments can contribute to our well-being by offering an access to a full range of experiences, including negative, to help us feel whole.^[19] Also, it must be acknowledged that the thrill of drama, danger, and dereliction appeal to many and are one draw-in factor to urban life.^[20] 'Perfect' cannot thus mean only one color in the spectrum of experiences.

3.2. Longing for ancestral home

It has been proposed that the natural habitat for humans is the environment where the first hominids apparently evolved, the savanna.^[21] Gordon Orians and Judith Heerwagen stated in their savanna hypothesis that our evolutionary, instinctive landscape preferences include open areas of low grasses with some bushes and trees; water nearby; opening to at least one

direction, with vantage to horizon; evidence of animal life; and greenery, including flowering and fruiting plants.[22] The savanna hypothesis has been empirically tested a number of times, for example, on eight-year-old children, and results cautiously support the theory. But, the hypothesis has also been contested as lacking in cultural depth. Children may be conditioned to prefer savanna-like environments because similar elements are often found in parks and playgrounds, not vice versa.[23]

A current urban design stream that subscribes to the natural habitat theory, at least in principle, that is, that humans feel most at home surrounded by nature, is called biophilic design.[24] The term for innate affinity with living things originates from biologist Edward O. Wilson's book, *Biophilia* (1984), and it has been actively promoted by his collaborator, architect Stephen Kellert. Kellert, with his later co-authors drawing from the work of well-known environmental psychologists, such as Rachel and Stephen Kaplan, Roger Ulrich, Terry Hartig, and so on, whose research on the restorative and healing effects of nature became renowned in the 1980s to 1990s. Ulrich found that patients recover faster if they can experience nature, and Hartig has continued to provide support to Ulrich's findings.[25] The Kaplans' attention restoration theory states that directed attention, or cognitive task-executing, fatigues the brain, whereas nature offers content that effortlessly fascinates and hence revitalizes the mind, and their information gathering theory states that preferred environments are those that, in the past, have served our species' need to gain (spatial) knowledge and make sense of it.[26]

Biophilic designers think that humans evolved in a sensorially rich environment and that similar sensations continue to be crucial for our well-being. Kellert et al. state that the past 10,000 years of agriculture, technology, and, increasingly, urban life have not changed our species' underlying aptitudes, skills, and preferences, and hence nature-filled environment is where we belong. Building on the restorative effects of nature, Kellert et al. argue that experiencing organic forms, such as fractals, are a biological necessity for well-being as they offer "neurological nourishment." [27] In a biophilic design handbook, a chapter titled "Can Biomimicry Bring Us Back Home?" communicates a wish to return to or recreate the mythical original habitat. Kellert et al. even propose that any debate on aesthetic value has been settled: Nature provokes bio-neurological activity that the mind translates as an aesthetic experience due to evolutionary reasons, or what has been useful for our survival has become understood as beautiful.[28] Another example is by Katya Mandoki, who recently presented a similar view of the origins of aesthetic experience.[29]

Is experiencing beauty simply reacting to forms or features of nature? Arnold Berleant has discussed authentic and false environments, the former meaning an environment that allows people to grow and flourish, and the latter reflecting only a technical or economic solution to a problem, for example, a desolate parking lot of a supermarket is not a human-centered solution for better city life but a corporate solution to a financial and logistical problem. Berleant argues that we inherently attach values to experiences. We discriminate against environments that confine or physically or mentally restrict us and prefer and thrive in those that allow expansion. Berleant calls this expansion "productive awareness," encompassing curiosity, interest, exploration, discovery, and wonder.[30] Berleant indicates that aesthetic experiences are also drawn from environments or objects that allow expansion. Authentic and false environments parallel with Kellert's nature-filled and nature-deficit environments but Berleant has shown that aesthetic perception always takes place in subjective, cultural, and social contexts. Each society in history has had its own manner of perceiving aesthetically.[31] In my view, the current fascination with nature-like design can be seen as a counter-movement to the modernist, standardized, mechanical and nature-void city machine.

When the first humans emerged, everything was natural. Is it meaningful to say genes favored nature, versus urban areas, if non-natural habitats were not selectable? When environmental psychologists or biophilic designers discuss nature, it appears they mean environments with certain types or certain amounts of vegetation. However, for millennia, humans have chosen to live in vegetation-barren areas, such as deserts and mountain tops, and in arctic conditions. Another challenge to the presumed innate affinity towards nature is that attitudes towards nature are subject to change. Cultural geographer Yu-Fu Tuan, among others, has shown how wilderness has been a source of fear throughout history.[32] Ecological philosopher Gilbert LaFreniere has argued that aesthetic and ecological appreciation of nature only became possible with urbanization. By the twelfth century, enough people in Europe lived in urban settings to be able to admire the "civilized nature" of pastures and tamed woodlands in between, instead of being threatened by the hostile unpredictability of nature.[33]

3.3. *Place, mind, and well-being*

Are we more suited to live in nature than in an urban environment? Yes, has been the answer of the Garden City movement, by Sir Ebenezer Howard, in 1898, and its relatives. But, we are not just passive recipients of influences; we actively interact with and take action regarding our environment. The use of environment for emotional self-regulation, like management of emotions

and mood, has been studied since the 1980s. A study using 473 Norwegian students found that classic nature, namely leafy daytime forest, had the highest positive emotional potential, that is, expectation for positive feelings, followed by the other options: "urban environment with people," "shopping mall," "living room," "urban environment without people," and "unsafe nature," namely dark night-time forest.^[34] Despite its limitations, the study offers insight into positive and negative valence.^[35] Interestingly, nature was only appealing when perceived to be safe, something the habitat of early hominids most certainly was not.

Psychologist Kalevi Korpela has found that people actively use places as a pick-me-up to improve mood. Visits to favorite places are used for regulating feelings of pleasure, pain, and self-experience, and place identity is partly formed by these experiences. Importantly, favorite places offer experiences of beauty, control, self-expression, and freedom from social pressure, which all contribute to the therapeutic effect of the place.^[36] Often, favorite places are in nature but preferences depend on subjective attributes, such as disposition towards greenery and childhood experiences. For example, a study in 2008 found that 43% of respondents named a place in nature, 23% chose built-green environment, 19% a waterfront location, 9% a hobby setting, and 6% an urban location, either indoors or outdoors, typically a city center, in general.^[37] Another study found that disliked places were urban, crowded, traffic-filled, mechanistic, and, most importantly, lacked beautiful views, whereas favorite places were marked with high scores in factors of "being away," fascination, coherence, and compatibility to the subject, that can all also contribute to aesthetic experience and be present in human-made environments in addition to nature.^[38]

It appears that, at least in part, favorite places are selected to experience beauty, and those places that do not offer beauty are more likely disliked. Music theorist Giorgos Tsisiris has proposed that aesthetic appreciation is an intrinsic human quality arising from our need to find meaning in the world. According to Tsisiris, an aesthetic experience can be re-invigorating, ranging from refreshment to symbolic or mental rebirth: "[a]esthetic experience is transformative in its very nature, as both aesthetic experience and transformation lie in a process of creating or participating in something where means and ends do not exist as independent entities; a process which activates processes of self-growth and self-actualization in the person."^[39] Tsisiris' notion may help explain why favorite places have a therapeutic effect, perhaps arising from aesthetic experience rather than naturalness.^[40]

Using urban environment for self-regulation has been studied much less than nature, possibly because of the view that urban environments contain stressors that are absent in nature, rendering urban environments less restorative. However, many seem to also find urban environments restorative, if vacations are understood as attempts to become restored. In 2015, the British association for travel agencies, ABTA, found that, in the United Kingdom, 54% of holiday makers planned a city break, whereas 50% planned a beach holiday, 11% a lakeside or mountain trip, and 10% had a cruise in the pipeline.^{[41],[42]} Among the most popular tourist destinations, cities with interesting architecture, busy urban life, and/or historical elements feature year after year. Rome, New York, London, Tokyo, and Las Vegas do not attract tourists mainly with nature.



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If people are biologically predisposed to enjoy nature more than urban life, from where does the appeal to urban life arise? Marcel Hunziker et al. remind us that people also have cognitive and socio-cultural needs. We do not function only as biological organisms but attempt to make sense and create narratives about our surroundings, with attached personal memories, shared symbolic meanings, and so on, turning spaces into places.^[43] To examine how an urban environment can serve a range of complex needs, Berleant has drawn analogies between a city and a ship, circus, cathedral, and sunset. A city is a logistically and efficiently functioning place of economic and social activity (ship); it offers myriads of experiences ranging from culture to entertainment, wonder, thrill, and fright (circus); it manifests and immortalizes the ideas and ideals of people in its architecture, functions, customs, and layout (cathedral); and it anchors us to something larger (a cosmological viewpoint of the sunset).^[44]

3.4. *Environment as an invitation for action or in defense of cities*

Environmental psychology has provided evidence that urban life can cause stress whereas nature restores the mind and body. But, when harms of cities are discussed, are we bundling Delhi with Dallas and Mombasa with Melbourne? Are we disregarding qualitative differences? Geographer William Meyer has debunked many assumptions about the harms of urbanism, ranging from poverty and dangers to pollution.^[45] Meyer argues that cities do not cause poverty, even if they house poor people; rural poverty is far less visible and harder to tackle. High-density urban settlement causes less ecosystem alteration, whereas low-density settlement disrupts much larger areas per household. Denser living is less dependent on petrol-powered vehicles and allows more efficient use of infrastructure and key resources. Third-world cities may be polluted but third-world rural areas also suffer, from indoor air pollution from burning biomass. Cities often offer better shelter against natural hazards; fatal traffic accidents are less common in urban than rural areas; and dangerous primary resources and agricultural work do not take place in cities. Also, cities harbor fewer insects with infectious diseases, and urban areas tend to offer better health care.

If we innately prefer nature, or rural life, why does the majority of the world's population live in cities? Economic opportunities are not the only reason. Humans have always explored, altered, and exploited their surroundings. For the past ten millennia, alteration has become increasingly large-scale, beginning from agriculture and the domestication of animals leading to today's dam and bridge projects, megacities, and so on. Philosophers Maurice Merleau-Ponty and John Dewey pondered the environments' invitation potential. Merleau-Ponty noted that every environment invites us to

take some action in and as a response to it.[46] Dewey discussed how every being attempts to live in sync with its environment and if the sync is disrupted, the being attempts to restore it; the struggle enables learning and growth.[47] Learning, in turn, enables expansion or migration to another or different habitat. It can be argued that the ability of humans to construct and alter things is one of our key characteristics, in the same way beavers, ants, and bees build nests and societies. Also, our ability to collaborate leads to increasingly large-scale, shared building projects.

The information gathering theory of Kaplan and Kaplan (1989) provides another angle to examine the need to interact with one's surroundings. The theory states that people prefer landscapes that, in the past, stimulated the primitive human's rapid acquisition and processing of information because they developed the capacity to plan successful action in the environment.[48] The Kaplans identified four key qualities of preferred environment, of which complexity and mystery relate to the need to gather information, while coherence and legibility serve the need to make sense of it. The information gathering theory has been contested because of the lack of solid empirical support.[49] Nevertheless, indirect support can be drawn from a popular leisure activity: video games. Many of today's most popular games, such as Horizon Zero Dawn and Subnautica, are based on virtual exploration, foraging, and altering one's surroundings for survival. The endless possibilities to learn and find something useful from the landscape seem to keep players hypnotized.[50] I note that cities also serve information-acquisition needs, for example, through navigating the traffic, work life, shopping, and so on, and research has not been carried out to explain why the information-gathering needs could only be satisfied in nature. Logically, the need to learn and make sense seems to indicate an innate preference for those environments that have not been experienced before.

Chances to explore or alter one's environment also appear important based on the dislike towards environments that cannot be personalized. An anecdotal, common complaint by first-world city dwellers is how councils restrict alterations of dwellings. Another angle is a 2011 meta-study about open offices, reviewing over one hundred earlier studies. Open offices were found to be damaging to the workers' attention span, productivity, creative thinking, motivation, and satisfaction, but demotivation was not only caused by distractions. When employees could not influence how things looked or felt, including lighting and temperature, their spirits plummeted.[51] What if the appeal of nature does not arise directly from naturalness but from the perceived freedom to roam and explore; gather information, resources, and experiences, for example, pick berries or firewood and admire views; alter surroundings; and be free of others' control? What if that invitation for perhaps innately appealing action can be offered in an urban environment? Does that make the city, then, the optimal habitat?

4. Discussion

4.1. *Is primordial paradise the optimal human habitat?*

Savanna theory has been contested because it is unclear whether people like open parks innately or because of being used to them, that is, biology vs. culture. The design and preferences for parks and gardens have varied throughout history and across regions. From an architectural history point of view, it appears a stretch to assume that the current Western playground or park design is the most liked in history, or in the future. Furthermore, recent archaeological findings suggest that humans may have evolved in a number of places simultaneously, or perhaps migrated to the savanna from some other environment.[52] Given that we do not know the exact birthplace of the human species, there is no solid support to name one habitat type the original one. It is also unexplained why our instinctive responses would echo one specific time and place in history when evolution is an ongoing, never-ending process, and genes mutate at every living moment.

But, what if the ancestral environment is not understood as the savanna but nature in general? Environmental psychology also lends support to the idea that modern humans naturally feel better in nature; for example, people recover faster from stress or illness in nature. However, favorite place studies partially challenge the view about nature's healing power. When a person visits his or her favorite place, positive emotions dominate over the negative regardless of whether the place is in nature, an urban area, or indoors.[53] The restorative effect of a place appears to stem from varied notions of beauty, positive self-image, and feelings of being in control, not merely from instinctive cues from nature. Favorite places appear to be a feedback loop of means and ends in one. People choose certain places not just to relax and improve their mood but to enjoy a range of qualities, including aesthetic ones, that, in turn, help them feel restored and whole, and enjoy the place more.[54] The pitfall of favorite place studies is that they usually focus on a specific effect on mood: uplifting or soothing. Thus, the findings do not explain what kind of environment is preferred for everyday activities and chores. After all, we are not always stressed or feeling down. Favorite place studies currently tell about preferences to visit but not about preferences to live or work.

Biophilic design aspires to provide a sensorially rich and aesthetically rewarding environment. Nature is undoubtedly a generous source of aesthetic experiences but the risk is the presumption that only those

elements and qualities that have empirically measurable effects on people, for example, lower the blood pressure, are what matter, and only natural forms can be aesthetically valued. For example, Kellert instructs that non-natural colors should be avoided in architecture. Focusing on measurable effects may exclude or dismiss those aesthetic experiences that do not manifest as accepted measurable reactions. Also, if beauty is understood to be present in nature's forms only, will that leave room for art and architecture that seek to imagine non-nature-like things? Our interest, fascination, and sense of beauty are piqued not only by what is known and natural but by what is new. For example, the video games mentioned earlier are set on alien planets, where the player encounters hostile nature and interacts with robots. Beauty can be present in both nature and human-made environments. If beauty is the draw-in factor in favorite places, that explains why a favorite place can be anywhere, not only in nature.

An essential question about the most optimal habitat is, if perfect environments for humans exists, such as the savanna or a paradise garden, is perfection, in itself, optimal? The intuitive answer may be yes but contemplation raises pertinent issues. John Dewey said that every organism lives in rhythm with its environment and, as a result, its knowledge of itself and its environment expands.^[55] Evolution means the ability of organisms to adapt to something new or changed. As an everyday example, a forest may appear soothing to one person and threatening to another, but the latter can learn to enjoy the wilderness through exposure and expansion. Will perfection lead to complacency and lack of learning and evolution? Should optimal equate with comfort zone? Humans have spread around the globe and colonized almost every thinkable living environment. It appears that the ability to grow, learn, and adapt are characteristic to our species, even if they are not characteristics of each individual. Culture, social relationships, and adaptability are what define humans as a species, and hence focusing on biology and instinctive responses is too narrow a viewpoint.

4.2. Restorative and fatiguing environments

Is an optimal habitat inherently oppressive because what suits one person may be wrong for another? Can conflicting preferences be resolved or is the optimal habitat doomed to an eternal mediocrity that is not the best suited to anybody? Some studies suggest that a place's restorativeness depends most on the compatibility between a person's motivational orientation, that is, expectations and personality attributes, and the environment's characteristics.^[56] The key to studying what people like or dislike in their environment appears to be inside rather than outside the human mind.

Tsiris, Korpela, and Hartig discuss, from different viewpoints, that places that offer aesthetic experiences can prompt transformation of emotions and a greater sense of unity and coherence, potentially helping to find meaning and order in life. Berleant discusses "productive awareness," attention towards something fascinating, worth admiration, enjoyment, contemplation, or intellectual effort. According to Berleant, environments that enable or encourage productive awareness are human(e) habitats or, in my terminology, optimal habitats. I suggest that Berleant's productive awareness links to the Kaplans' information gathering theory and attention restoration theory, and to Korpela's findings on favorite places: 1) certain surroundings feed productive awareness; 2) experiencing productive awareness appears to reinvigorate the brain; which, in turn 3) enables more productive awareness, prompting a beneficial feedback loop.

From where, or in what circumstances, does the productive awareness emerge? To further elaborate on the Kaplans' theory, that is, the mind seeks to learn and make sense, yet is subject to fatigue, but can be restored, and Berleant's productive awareness theory, that is, the mind thrives when it is fascinated by something, I propose that we have six different mental operational states or tracks that the mind regularly locks on. Some tracks require active directing and effort by the brain; some are based more on observing the content of one's mind or the outside world, either absent-mindedly or in an engaged manner. Laborious tracks require fatiguing effort, like paddling a canoe upstream, whereas restorative tracks allow the mind to ride more freely, like a piece of bark sailing downstream. I propose that what track the environment prompts the mind to take is the key to liking or disliking the environment.

I propose that the potentially restorative tracks are^[57]

- Meandering internal track: dreaming, daydreaming, and musing.
- Meandering external track: being fascinated by or in sync with one's environment.^[58]
- Directed engaged track: curious making-sense, creative problem-solving, or flow.^[59]

The potentially fatiguing tracks are:

- Directed rational track, cognitive task-executing, for example, errands, studying, or menial work.^[60]
- Distressed track: mental, emotional, or bodily discomfort,

including worry and pain.

- Confused track: a prolonged or repeated state of distraction or foginess, caused by, for example, stress, busy-ness, Alzheimer's disease, mental illness, or substances.

I do not claim that the mind cleanly switches from one track to another but rather all the tracks intermingle, overlap, and switch back and forth all the time. For example, watching TV can activate the meandering external, the directed engaged, and the directed rational tracks, when one attempts to make sense of the news or follow a plot of a film. Also, all tracks have different strengths. Watching birds on a feeder and having an aesthetic experience in the Louvre can be at different spots of the axis of the external meandering track, overlapping with the directed engaged track. Building on Berleant's productive awareness and humane environments, I suggest that environments that enable or encourage restorative tracks can positively impact well-being and be understood as the optimal habitat.

5. Concluding comments

This paper examines different aspects of the optimal human habitat by reviewing studies in environmental psychology and contrasting them with theories and findings in the humanities, like aesthetics, cultural geography, and history. I aimed to show that the enjoyment of or thriving in urban and natural environments are not mutually exclusive, and nature, understood as rich vegetation, is not necessarily a habitat everybody instinctively longs for. For example, for millennia, people have also inhabited vegetation-barren areas, and nature or wilderness has been seen as bewildering in many cultures and eras. I defended cities as a habitat; after all, cities vary in quality and many presumptions about the harms of city life can be debunked.

As a response to the question, what is the natural habitat for humans?, I argued that the savanna or other specific nature environment types should not be labeled as the natural habitat, meaning the most suitable. I suggested that the appeal of nature may arise not from nature's instinctively appealing forms but from the perceived freedom to roam and explore, forage, for resources and/or information, alter and personalize surroundings, and obtain aesthetic experiences. I propose that these activities may be innately appealing to us as a species and, if they are available in a good-quality urban environment, drawing from Berleant's analogy of a city as a ship, cathedral, circus, and sunset, the city may be our optimal habitat.

Drawing from Merleau-Ponty, Dewey, Berleant, and the Kaplans, I suggest that our natural habitat is any environment that allows us to be curious and fascinated and, as a result, grow, expand, and evolve. Hence, the optimal habitat is diverse, offering variety, challenges, and even negative experiences, not eternal bliss and ease. By building on the Kaplans' attention restoration theory and information gathering theory, and on Berleant's productive awareness theory, I suggest that the restorative potential of a place depends on whether it enables productive awareness via restorative mind tracks. Experiencing restorative mind tracks may prompt the experience of the most optimal habitat. This study does not intend to claim that nature is not important to well-being but raise the idea that urban areas containing nature have the potential to be the best suited environment for today's humans.^[61]

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Endnotes

[1] An overview of evolution-oriented studies that have attempted to identify the original or the most preferred environment for humans is provided by Marcel Hunziker et al., "Space and Place – Two Aspects of the Human-landscape, Relationship," *A Changing World. Challenges for Landscape Research* (Netherlands: Springer, 2007), Volume 8, pp. 49-50. Researchers in this area include Gordon Orians; and John Balling & John Falk, "Evolutionary Influence on Human Landscape Preference," *Environment and Behaviour*, Vol 42, Issue 4, 2010.

[2] Katya Mandoki, "Bio-aesthetics: The Evolution of Sensibility through Nature," *Contemporary Aesthetics* (2017), Vol 15, Section 7.

[3] Instead of focusing on a specific group, demographic or culture, this study draws together different aspects of like and dislike based on findings in a variety of fields.

[4] Arnold Berleant, *The Aesthetics of Environment* (Philadelphia: Temple University Press, 1992) pp. 93-98. The term is also used by Pauline von Bonsdorff, *The human habitat. Aesthetic and axiological perspectives* (Lahti: International Institute of Applied Aesthetics Series Vol 5, 1998).

[5] *Ibid.*

[6] For example, an image search on Google for "paradise" produced 597,000,000 results on 19 April 2017: the first two hundred images depicted a tropical resort or a swimming pool.

[7] The origins of the paradise myth have been comprehensively discussed by Nancy Marshall, *The Eden Paradox: Humanity's simultaneous desire for and rejection of earthly paradise* (ProQuest Dissertations Publishing, 2015). In the earliest written records of paradise, gods roamed in walled orchards, protected from the surrounding desert sand and animals, pp. 13-15. Marshall argues that people have a tendency to long for absolute yet unattainable security (of imagined perfect childhood), manifesting as paradise archetype, pp. 115-118.

[8] Jean Delumeau, *History of Paradise: the Garden of Eden in myth and tradition* (New York: The Continuum Publishing Company, 2000), pp. 10-22.

[9] *Ibid.*, pp. 3, 5-6.

[10] Jane Garry & Hasan El-Shamy (edit.), *Archetypes and Motifs in Folklore and Literature. A Handbook* (US: M.E. Sharpe Inc, 2005), pp. 197-198.

[11] Heather Pringle, "What You Don't Know About the Vikings," *National Geographic*, March 2017.

[12] Leopoldine Prosperetti, *Landscape and Philosophy in the Art of Jan Brueghel the Elder (1568-1625)* (Great Britain: Ashgate, 2009), pp. 18-19.

[13] One example is the Venus Project by engineer Jacque Fresco (1916-2017): he worked on his sustainable, happy, utopian city from 1975 until his death. <https://www.thevenusproject.com>, accessed 29 September 2017.

[14] The term utopia was famously coined by Sir Thomas More in 1516 by combining two Greek terms, *outopia*, "noplac" and *eutopia*, "good place."

[15] Ruth Levitas, *The Concept of Utopia* (Germany: Peter Lang AG, 2010), pp. 19, 161, 209.

[16] Gili Merin, "AD Classics: Ville Radieuse / Le Corbusier," *ArchDaily*, 11 August 2013. <http://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier>, accessed 10 May 2017.

[17] Project for Public Places: *Placemaking and the Future of Cities*. UN-HABITAT, United Nations. <https://www.pps.org/wp-content/uploads/2015/02/Placemaking-and-the-Future-of-Cities.pdf>, accessed 10 May 2017.

[18] Levitas (2010), 23.

[19] Jacky Bowring, *Melancholy and the Landscape. Locating sadness, memory and reflection in the landscape* (New York: Routledge, 2017).

[20] For example Doreen Massey et al., *City Worlds* (Cornwall: Routledge, 1999), pp. 49-50. David Bell, ed., *Pleasure Zones: Bodies, Cities, Spaces* (US: Syracuse University Press, 2001). Valerie Voon, *Why danger is exciting – but only to some people*, *The Conversation* (2016), 6 September, <http://theconversation.com/why-danger-is-exciting-but-only-to-some-people-64680>, accessed 25 August 2017.

[21] Mandoki (2017); reference to Jerome Barkow et al., *The Adapted Mind: Evolutionary Psychology and the Generation of Culture* (US: Oxford University Press, 1992).

[22] Gordon Orians and Judith H. Heerwagen, "Evolved responses to landscapes," *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, eds. Jerome Barkow et al. (New York: Oxford University Press, 1992), pp. 555-579.

[23] Hunziker et al. (2007).

[24] The importance of nature in human habitat becomes evident not only from utopias but dystopias. As a topical example, nature is completely non-existent in the dystopian future of the movie *Ghost in the Shell* (2017), set in an ultra-consumerist Asian megacity, where the only remaining signs of nature are the weather and a polluted harbor. The movie explores individuality and humanity (the heroine is a human mind unwillingly locked in an artificial body) but it is also a dystopia of over-exploitation of nature and living things.

[25] For an overview, see Rebecca Clay, "Green is good for you," *Monitor on Psychology Journal of American Psychological Association* (2001), Vol 32, No 4, p. 40.

[26] Rachel & Stephen Kaplan, *The Experience of Nature. A Psychological*

Perspective. (US: Cambridge University Press, 1989), pp. 185-197, and Stephen Kaplan, "The Restorative Benefits of Nature: Toward an Integrative Framework," *Journal of Environmental Psychology* (1995), Vol 15, 169-170.

[27] Stephen Kellert et al., *Biophilic Design. The Theory, Science and Practice of Bringing Buildings to Life*. (New Jersey: John Wiley & Sons, Inc., 2008), Chapter 5: *Neuroscience, the Natural Environment and Building Design*.

[28] Kellert (2008), sub-chapter: *Biologically Based Design*. Similar idea is discussed in the field of neuroaesthetics: for an overview, see Marcos Nadal & Martin Skov, "Neuroaesthetics," *International Encyclopedia of the Social & Behavioral Sciences*, 2nd Edition (Elsevier, 2015), pp. 656–663.

[29] Mandoki (2017).

[30] Berleant (1992), pp. 86, 93-98.

[31] *Ibid.*, p. 21.

[32] Yi-Fu Tuan, *Landscapes of Fear* (Pantheon Books, 1979/2013 Kindle Edition).

[33] Gilbert LaFreniere, *The Decline of Nature: Environmental History and the Western Worldview* (Oregon: Oak Savannah Publishing, 2009), p. 99.

[34] Svein Johnsen & Leif Rydstedt, "Active Use of the Natural Environment for Emotion Regulation," *Europe's Journal of Psychology* (2013), Vol 9, No 4.

[35] The study was based on photographs, not experienced locations; it measured only two emotions, happiness and sadness, and only six environments were offered as options.

[36] Kalevi Korpela & Terry Hartig, "Restorative Qualities of Favorite Places," *Journal of Environmental Psychology* (1996), Vol 16, 221.

[37] Kalevi Korpela et al. "Determinants of restorative experiences in everyday favorite places," *Health & Place* (2008), Vol 14, 636–652.

[38] Results depended considerably on each subject's personal, and, no doubt, cultural, characteristics. Korpela & Hartig (1996), 221–23.

[39] Giorgios Tsiris, "Aesthetic Experience and Transformation in Music Therapy," *Voices: A World Forum for Music Therapy* (2008), Vol 8, No 3, Section: 'Transformation and Its Relation to Aesthetic Experience'.
<https://www.voices.no/index.php/voices/article/view/416/340>, accessed 29 September 2017.

[40] Kellert's claim that experiencing nature is *the* aesthetic experience and vice versa is too simplistic, considering Berleant's notion about every society having its own way of perceiving aesthetically.

[41] Holiday types could be combined or people took more than one trip per year, hence the percentage exceeds 100%.

[42] ABTA (Association of British Travel Agents), *Holiday Habits Report. ABTA Consumer Survey 2015*, p. 3.
https://abta.com/assets/uploads/general/HOLIDAY_HABITS_REPORT.pdf

[43] Hunziker et al (2007), pp. 49-50.

[44] Berleant (1992), pp. 72-79.

[45] William Meyer, "Urban Legends," *Colgate Scene* (Colgate University News, 2014) November, <http://news.colgate.edu/scene/2014/11/urban-legends.html>, accessed 24 August 2017.

[46] Taking action encompasses all forms of reactive and proactive responses in and towards the environment, including doing nothing (also perceiving is action). Komarine Romden-Romluch, "The Power to Reckon with the Possible," *Reading Merleau-Ponty. On Phenomenology of Perception*, Thomas Baldwin, ed.) (Great Britain: Routledge, 2007), p. 55.

[47] Philip Zeltner, *John Dewey's Aesthetic Philosophy* (Amsterdam: B.R. Gruner 1975), pp. 15-25 and 32-33.

[48] Arthur Stamps, "Mystery, complexity, legibility and coherence: A meta-analysis," *Journal of Environmental Psychology*, 24 (2004) 1–16, 1.

[49] *Ibid.*, p. 16.

[50] Horizon Zero Dawn is currently the second-most sold game for PlayStation4. Brian Crecente, "Sony: PS4 owners spend about 50,000 years a week gaming," *Polygon*, 5 June 2017,
<https://www.polygon.com/2017/6/5/15728406/ps4-sales-stats>, accessed 24 August 2017. Subnautica is highly acclaimed by critics: James Plafke, "Why 'Subnautica' Is Already One Of The Best Survival Games Ever Made, Before It's Even Released," 22 March 2017, *Forbes*,
<https://www.forbes.com/sites/jplafke/2017/03/22/why-subnautica-is-already-one-of-the-best-survival-games-ever-made-before-its-even-released/#5dc1841d13f8>, accessed 24 August 2017.

[51] Maria Konnikova, "The Open-Office Trap," 7 January 2014, *The New Yorker*. <http://www.newyorker.com/business/currency/the-open-office-trap>, accessed 24 August 2017.

[52] A fossil of possibly the earliest hominid, *Graecopithecus* was recently found in Greece. "Many mammals, including apes, giraffes, antelopes and hippos, lived in Africa and in Europe's eastern Mediterranean region between 9 million and 7 million years ago [with *Graecopithecus*]. These creatures probably moved back and forth between continents [...] making it difficult to pin down where each line of animals originated. *Graecopithecus* could have evolved in either Europe or Africa." Bruce Bower, "European fossils may belong to earliest known hominid," *ScienceNews*, 22 May 2017, <https://www.sciencenews.org/article/european-fossils-may-belong-earliest-known-hominid>, accessed 24 August 2017.

[53] Johnsen & Rydstedt (2013).

[54] Tsiris (2008), section: "Aesthetic Experience and Its Relevance to Music Therapy."

[55] Zeltner (1975), pp. 15-25 and 32-33.

[56] Kevin Newman and Merrie Brucks, "When are natural and urban environments restorative? The impact of environmental compatibility on self-control restoration," *Journal of Consumer Psychology* (2016), Vol 26, Issue 4, 535-541.

[57] Restorative should not be understood narrowly as "calming": for instance, flow is experienced positively, even if or because it is also invigorating, for example, during extreme sports.

[58] By 'in sync,' I mean Dewey's notion about every being either being in or out of rhythm with its environment, e.g. the environment enables or disables the being's intended actions.

[59] Flow means the sense of effortless action, when one's skills are fully involved or pushed to overcome a challenge or achieve a goal that acts as a magnet for learning and mastery. Mihály Csíkszentmihályi, "Finding Flow," *Psychology Today*, 1 July 1997, <https://www.psychologytoday.com/articles/199707/finding-flow>, accessed 11 May 2017.

[60] These tasks are offered as an example, but the same activities can also be refreshing depending on a person and situation: for example learning a new skill can produce flow.

[61] I wholeheartedly thank the peer reviewers of *Contemporary Aesthetics* for assisting with sharpening the focus and key arguments of this article.