

RESEARCH ARTICLE



How urbanization is shifting the context of nature experiences from economic to recreational

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Abstract

1. With increasing global urbanization, the proportion of the world's population engaged in the primary sector of the economy continues to decrease, leading to significant changes in the experience of nature (EoN). As a result, not only are opportunities for EoN reduced, but they are shifting structurally because the proportion of nature experiences that take place in leisure time increases relative to that which takes place in a work and production context.
2. In order to understand the implications of this structural change, a new typology is introduced that defines experiences of nature by considering their social context: *economic* and *recreational* EoN.
3. Economic EoN is predominantly purpose-oriented, while recreational EoN is primarily experience-driven. Compared to economic EoN, recreational EoN often requires less skill and knowledge while relying on stereotypical constructs of nature, demonstrated, for example, by traditional land uses and tourism, respectively. As urbanization continues, the proportion of recreational nature experiences will continue to increase, raising an important question: How can the experience-driven, recreational relation to nature contribute to long-term engagement and responsible stewardship?
4. Long-term engagement is evident in leisurely behaviour where people pursue hobbies. In urban societies, many people invest a considerable amount of time and material resources in their hobbies, while developing specific skill sets and acquiring extensive knowledge in the process. Furthermore, nature-related hobbies enable the transformation of irrelevant economic EoN into meaningful recreational EoN, allowing the emergence of an individual perspective on and a lasting relationship with nature, as well as creating a skill-based sense of place.
5. Policy implications: As traditional economic EoN diminish and becomes irrelevant during the urbanization process, hobbies can help preserve ecological knowledge and skills with recreational EoN. Protected areas and other organizations curating nature experiences should create and promote experiences that relate to nature-based hobbies and focus on supporting skill development.

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KEYWORDS

experience of nature, extinction of experience, landscape, outdoor recreation, skills, tourism, traditional ecological knowledge, urbanization

1 | INTRODUCTION

In an increasingly urbanized world, experiences of nature (EoN) are changing (Clayton et al., 2017; Evernden, 1995; Kühne, 2018). Instead of a complete extinction, we see a reduction of EoN (Gaston & Soga, 2020), but there is also a structural change within the existing experience of nature. Coherently capturing and describing this structural change is the goal of this paper. As a starting point, I use the concept 'extinction of experience' (EoE) as introduced by Pyle (1978, 1993) and further developed in various publications, among them: Soga and Gaston (2016) Gaston and Soga (2020) and Clayton et al. (2017). Pyle observed a 'loss of opportunities to experience nature' and coined the term 'extinction of experience' (Pyle, 1978). Gaston and Soga define extinction of experience as a 'progressive loss of the interactions that people have with nature' (Gaston & Soga, 2020). This 'extinction' is problematized in the literature for two main reasons. First, the benefits that nature experiences provide are at risk of being lost (Colléony et al., 2020; Gaston & Soga, 2020; Turner et al., 2004), such as increased physical and mental health and well-being (Bratman et al., 2015; Cox et al., 2018). Concepts like 'green care' and 'green prescriptions'—physical outdoor activities prescribed by general practitioners—are being discussed and evaluated in this regard (Swinburn et al., 1998; van den Berg, 2017) as a sedentary lifestyle increases the risk of non-communicable diseases (such as obesity, diabetes and cardiovascular disease; Hamlin et al., 2016) while regular physical activity is beneficial in the prevention as well as in the treatment of these diseases (Patel et al., 2011). The health-promoting and restorative effects of experiencing nature are of particular interest in many research studies and reviews (Bratman et al., 2012; Hartig et al., 2014).

Second, a decline in nature experiences could lead to an emotional disconnect and a decrease in understanding and support for biodiversity-promoting measures (Miller, 2005; Whitburn et al., 2019), as individuals who feel more connected to nature seem to be more likely to engage in pro-environmental behaviours (DeVillie et al., 2021; Ives et al., 2018; Whitburn et al., 2019). Hence, personal experiences with nature are regarded as a necessary precondition for the emergence of emotional connection and individual motivation to protect biodiversity.

2 | URBANIZATION AND NATURE

In this paper, I aim to draw attention to the social conditions under which EoN changes or becomes irrelevant. Several authors working on the 'extinction of experience' acknowledge urbanization as a key factor in understanding changing or altogether disappearing EoN (Bratman et al., 2015; Colléony et al., 2020; Miller, 2005;

Samways, 2007; Schuttler et al., 2018; Soga & Gaston, 2016; Stokes, 2006). Urbanization refers to the emergence and growth of cities (Knox & McCarthy, 2012; Vlahov & Galea, 2002). However, there are different definitions and uses of the word, so a brief comparison is helpful. In demographic statistics, a distinction is made between urbanization and urban population growth, where urbanization describes the (globally growing) share of urban versus rural population. Hence, urban population growth can also occur without urbanization if there is equal natural population growth in rural and urban areas (Tacoli et al., 2015). This definition is important for the argumentation of this paper, as it describes a factual development that is interpreted with regard to its impact on EoN. Brenner and Schmidt develop a concept of urbanization that draws attention to the relationships and interdependencies between spaces that are usually described along the rural–urban dichotomy. They strive to overcome the limitations of this dichotomous understanding and describe urbanization as an all-encompassing process of change, consisting of 'concentrated urbanization', which refers to growing cities and 'extended urbanization', which involves the 'operationalization of places, territories and landscapes, often located far beyond the dense population centers, to support the everyday activities and socio-economic dynamics of urban life' (Brenner & Schmid, 2015). Brenner and Schmid's description of the urbanization process is equally important for the development of this paper because it points out that urbanization has profound and lasting effects on most, if not all, aspects of social and ecological systems far beyond the conventional conception of urban areas.

Despite their great influence on social development through power and trade relations, cities initially grew relatively slowly over centuries and this development was by no means linear, but frequently interrupted by crises, social changes, natural disasters, colonialism and other events (Reba et al., 2016). The industrialization of Western Europe brought permanent growth to many cities and caused a sharp, and also persistent, decline in the proportion of the population working in the primary sector. During the 20th century, global urbanization continued to intensify. In developing countries, however, it was partially decoupled from industrialization and economic growth (Gollin et al., 2016), demonstrating that even without industrialization, the urbanization process can continue.

Associated with urbanization is the decline of employment in the primary sector of the economy (Tacoli et al., 2015). Over the past three decades, according to an estimate by the International Labour Organization (ILO), the proportion of the world's population employed in agriculture has steadily declined from 44% in 1991 to 26.6% in 2021 (ILO, 2023). As more people shift to employment in other sectors of the economy, the number of people who experience nature in the context of production and work decreases, resulting in two important EoN changes. The first is simply the reduction of EoN.

The remaining nature experiences, however, are subtly shifting in context, as a growing proportion are taking place during leisure time and recreational activities. This structural change in EoN derives from the reduced need for direct human interaction with nature for subsistence in urban societies.

Following Gordon Childe's main arguments (Childe, 1950), developed in his essay 'The Urban Revolution' in 1950, the division of labour and social differentiation intensified with the emergence and growth of cities. While the vast majority of people were still engaged in agriculture for thousands of years after the founding of the first cities, for the first time in human history, cities eventually enabled some people to devote their labour exclusively to tasks other than producing their own food. The development of cities arguably changed societal perspectives on nature early on, possibly even giving rise to the concept of 'nature' and consequently the dichotomy of nature and culture in the first place (Descola & Sahlins, 2014; Evernden, 1995). A linguistic study of nature terms used worldwide and their distinct etymological roots suggest that the concept of 'nature' likely emerged relatively recently and independently in urban contexts, throughout different parts of the world (Ducarme et al., 2021). The emergence of this dichotomous understanding was only possible from the nature-distanced perspective of an urban lifestyle. As science demystified nature and technological advances made environments more controllable, everyday constraints by nature receded from urban life. Once made into a cultural object, a new experience of nature developed: the aestheticization of the overall impression of the surrounding nature as landscape (Antrop, 2004; Burckhardt, 2015; Kühne, 2018, 2019; Ritter, 1962). This development was lamented by Jean Jacques Rousseau as a loss of original unity (Cooper, 2006; LaFreniere, 1990; Rousseau, 1762), and yet celebrated by Friedrich Schiller as a liberation from natural constraints (Ritter, 1962; Schiller, 1800).

Toward the end of the 18th century, urbanization gave rise to a new admiration of nature that found artistic expression in the Romanticism movement, affecting cultural perceptions of nature. Romanticism developed and popularized powerful new experiences of nature that are still replicated today (Antrop, 2004; Kühne, 2018; Löfgren, 2002). Members of the wealthy elite escaped cities polluted by industry and sought adventure in nature. These people were no longer dependent on nature through a direct primary economic relationship, but were able to paint, sing about and experience 'nature' as a counterworld to society. During this time, the first alpine club was founded in London, and it was members of the urban elite who climbed mountains and travelled the seashores—in search of adventure or health, for pleasure or diversion (Löfgren, 2002). This new EoN is expressed to perfection by the German painter Caspar David Friedrich in what is perhaps his most impactful work, 'The Wanderer over the Sea of Fog'. This painting not only depicts a landscape, but it brings an experience to life (Figure 1).

Alpinists and other explorers, along with artists, can be considered pioneers of modern nature tourism (Enzensberger, 1964). Löfgren uses numerous examples to describe how, simultaneously in Europe and North America, the perception of nature shifted toward

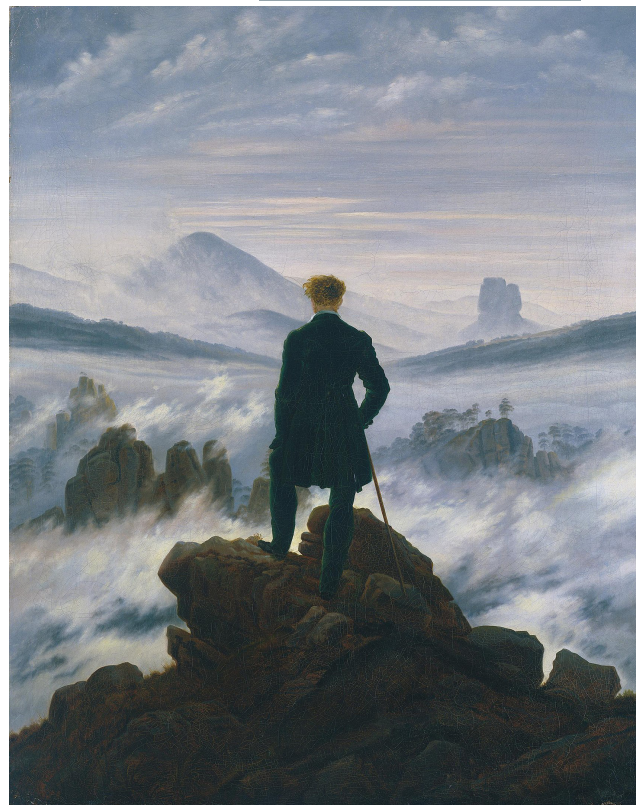


FIGURE 1 Caspar David Friedrich, archetype of the modern appreciative and recreational experience of nature? *The Wanderer above the Sea of Fog*, circa 1818. Copyright: Hamburger Kunsthalle/bpk. Image credit: Elke Walford.

an idealization of the sublime (Löfgren, 2002). Cronon reconstructs the close connection between the Romanticism movement and nature conservation in his classic essay, 'The Trouble with Wilderness' (Cronon, 1996). The new fascination with sublime 'wild' nature brought about by the 19th century is expressed not only in the emerging tourism, but also in nature conservation through the designation of protected areas. National parks and other large protected areas were established to preserve nature and a specific *experience* of nature (Cronon, 1996). However, what was then called 'preservation' can be understood today as an *innovation*. This is because this kind of appreciative idealization of sublime nature had not yet existed to a comparable extent, nor were the landscapes that were the site of these new experiences actually untouched by humans—a central reoccurring theme. Indeed, in most of the early protected areas, there were indigenous inhabitants who had used and shaped the landscapes—how profoundly, the emerging nature conservation science only became aware of slowly and gradually over the following century and a half (Cole & Yung, 2010).

The designation of the first large protected areas came at the same time as the new development of massive tourist infrastructure, such as mountain railroads. Thus, it is no coincidence that only 3 years elapsed between the opening of the first tourist mountain railroad on Mount Washington in 1869 and the designation of Yellowstone National Park in 1872. The development of tourism

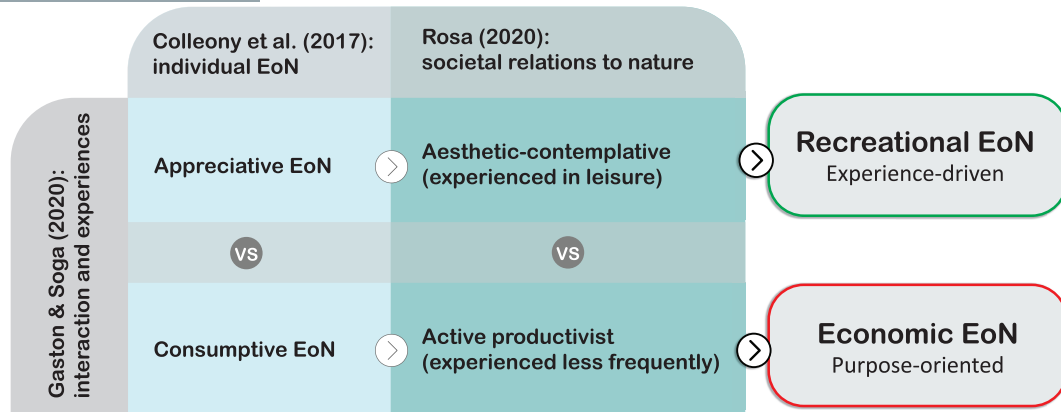


FIGURE 2 The distinction between Economic and Recreational EoN based on the concepts of Gaston and Soga (2020), Clayton et al. (2017) and Rosa (2022). Source: Erik Aschenbrand & Jon Chance.

infrastructures in Europe and North America took place at about the same time (Aschenbrand, 2017), even if the designation of national parks in Europe was still forthcoming (Gißibl, 2020). From then on, the enjoyment of sublime nature was no longer strictly the privilege of alpinists, artists and other avant-gardists; sublime landscapes were obtainable for the masses and therefore became marketable. In summary: Urbanization and romantic enthusiasm for sublime and wild nature share an intertwined history, shaping both art and social ideas about nature, which include motivations for conservation (Cronon, 1996; Schama, 1996), and the experience of nature.

3 | TYPOLOGIES OF THE CONCEPTS OF EXTINCTION OF EXPERIENCE AND EXPERIENCE OF NATURE

By first comparing individual aspects of three different typologies that contribute to understanding the extinction of experience phenomenon, namely from Gaston and Soga (2020), Clayton et al. (2017) and Rosa (2022), I introduce a synthesized typology that offers a new perspective on the EoE discussion. Gaston and Soga (2020) present a typology to refine the 'extinction of experience' by describing the individual level: What form of interaction or experience with what aspects of nature occur when in the course of life? One of their dimensions is the distinction between experiences and mere interactions. This distinction is helpful because interactions are much easier to quantify than experiences, and, therefore, research often only examines interactions (Gaston & Soga, 2020). Not every interaction, however, constitutes an experience. Because nature experiences are considered to be especially formative during childhood (Colléony et al., 2017; Gebhard, 2020; Molinaro et al., 2020; Pyle, 2002), Gaston and Soga are careful to include the stage of life in which a nature experience or interaction occurs in their typology.

Clayton et al. emphasize not an extinction of EoN, but rather a transformation (Clayton et al., 2017). They describe this transformation as a multidimensional process, and their typology specifies six continuous dimensions of experiences of nature. One dimension

is particularly suitable to describe structural changes to EoN in the course of urbanization: this is the distinction between *consumptive* versus *appreciative* EoN. Clayton et al. use these terms to describe goals with respect to individual EoN. In consumptive EoN, the goal is to modify or exploit nature in order to use it as a resource (for example, by hunting or fishing). In appreciative EoN the goal is to 'appreciate it, without considering it to be a resource', as in, for example, bird- or whale-watching (Clayton et al., 2017). A similar juxtaposition can be found in the work of sociologist Hartmut Rosa, who describes different 'world relationships' of modernity spanning a larger social and historical arc in which he places individual experiences of nature.

Rosa (2022) distinguishes an aesthetic-contemplative from an active-productivist social relation to nature. According to Rosa (2022, 467), the culturally established world relationship of modernity fluctuates back and forth between an 'action-effective, practical and institutionally dominant relationship to nature, in which nature serves as a resource to be intellectually mastered, technically processed and economically exploited; and a psychoemotional relationship to nature, in which nature functions as a sphere of resonance' (translation provided by the author). Emotional relationships with nature are based on personal experiences, that cannot be reconciled with what can be scientifically proven and cognitively learned about nature. Nature is sought out in leisure time, such as after work, on weekends or during vacations: 'In the forest, on the mountain top or at the ocean, people usually do not experience self-efficacy in an active working or response relationship with nature, but they experience romanticized and idealized moments of being passively touched' (Rosa, 2022, 468) (Translation provided by the author). However, these brief moments of being touched are not sufficient to encourage change toward more sustainable behaviour in general. Rosa considers experiences of nature, which are contemplative, as the source of an environmental consciousness that manifests itself in concern for 'wild' nature (in its iconic form as a national park, a glacier or a charismatic animal species), but incapable of decisively influencing the active-productivist social relation to nature.

I agree with Rosa's statement that nature experiences of urbanized individuals are mainly made in leisure time (this observation was

popularized by the sociologist Gerhard Schulze (2005) with his still valid diagnosis that we live in an 'Erlebnisgesellschaft' [experience society]), but I see Rosa's description of the leisure time context as too one-dimensional and devalued by describing the nature experience as purely contemplative and passive.

Based on Gaston and Soga's distinction between interaction and experience, Clayton's concept of *consumptive* and *appreciative* experiences of nature and Rosa's *active-productivist* and *aesthetic-contemplative* relations to nature, I introduce two new categories of EoN that describe the structural changes in experience of nature in the course of urbanization: *economic* and *recreational* EoN (Figure 2). While *interactions* with nature certainly change in the course of urbanization, I focus on the changing *experiences*. If we want to understand how the meaning of nature for societies changes in the course of urbanization, quantifying interactions is important but not enough. Rather, we need to understand how experiences and their associated underlying perceptions and interpretations change. The introduced distinction between *economic* and *recreational* EoN creates a useful differentiation, as it describes an essential aspect of the social context that generates the meaning of an EoN (e.g. the EoN of a recreational angler is different from that of a traditional fisherman, even when the practices used are very similar).

The recreational mode of experiencing nature includes but goes beyond the contemplative. It is best described as *experience-driven*, because the focus is on actively acquiring first-person experiences, even in cases without a clear understanding or specific expectation of what the experience will be. In contrast, economic EoN is concerned with producing and securing a livelihood and, therefore, purpose-oriented.

This can be summarized somewhat pointedly as follows: The economic EoN is purpose-oriented; along the way, one experiences nature as a secondary by-product, whereas recreational EoN is experience-driven; depending on which experiences one wants to have, one sets different goals. To represent the effects of urbanization, Figure 3 illustrates how recreational EoN tends to increase and replace economic EoN as the urbanization process develops. It describes shifting proportions within the (reduced) amount of EoN (Figure 3).

4 | THE SIGNIFICANCE OF HOBBIES AND LEISURE FOR A SKILL-BASED SENSE OF PLACE

In the course of urbanization, more and more people make the majority of their nature experiences in their leisure time—after work, on the weekend or during their holidays. Tourism and leisurely behaviour are often criticized for being superficial or even destructive: Rosa describes EoN in leisure activities as exclusively contemplative and suspects that the brief moments of being touched are not enough to encourage more environmentally friendly behaviour in everyday life (Rosa, 2022); Enzensberger wrote that the tourist (quite literally) destroys what he seeks by finding it (Enzensberger, 1964); Hall described global tourism in 2019 as less sustainable than ever (Hall, 2019). Consequently, Büscher and Fletcher (2019) call for a shift from 'voyeuristic tourism' to engaged visitation and meaningful long-term engagement.

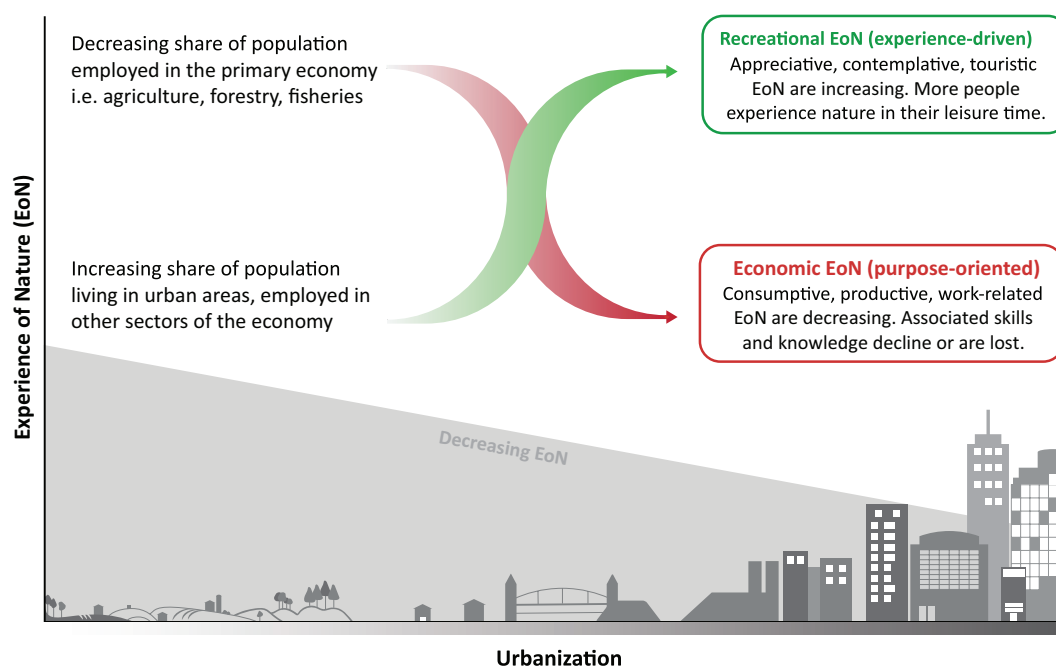


FIGURE 3 Urbanization—from Economic EoN to Recreational EoN. Image description: Recreational EoN tends to increase and replace economic EoN as the urbanization process develops. The graphic describes shifting proportions within a reduced amount of EoN. Source: Erik Aschenbrand & Jon Chance.

Meaningful long-term engagement can already be found in leisurely behaviour where people pursue hobbies. In modern societies, many people invest considerable time and material resources in their hobbies and regularly develop extensive specific knowledge and skills in the process (Warwitz, 2022). Especially in the more extreme manifestations, some hobbies, such as alpinism or free diving, require specialized nature-related knowledge and skills to be developed in staggering scope and complexity. The skill development and long-term engagement are also evident in nature conservation, which would hardly be conceivable in its current form without volunteer participation. For example, thousands of amateur ornithologists regularly enter their bird observations into online tools that aggregate their data, which then flows into governmental monitoring programmes that, in turn, provide a technical basis for designating and managing protected areas. Such extensive monitoring would not be feasible by purely full-time paid individuals (Wahl & Sudfeldt, 2010). A major challenge is how to encourage people to participate in such citizen science programmes. While Chandler et al. (2017) show that the contribution of citizen science to global biodiversity monitoring varies greatly by region and by species group, promoting more attractive citizen science programmes, especially among youth (e.g. in schools) could be a promising way to reverse the extinction of experience (Schuttler et al., 2018).

Those who practice ornithology as a hobby develop their skills in recognizing bird species and their habitats. Thus, an additional dimension of landscape perception as well as explicit landscape knowledge develops as the habitat requirements of individual species are learned. The cultivation of such knowledge does not automatically translate to general behaviour changes in support of more ecological sustainability. It does, however, create an awareness and emotional reference that knows and values non-human aspects of nature, including their autonomy.

While not all recreational EoN necessarily rely on specialized knowledge or skill sets, the opposite is true for economic EoN. Many accounts demonstrate how local ecological knowledge and skills associated with traditional land and sea uses are disappearing (Ali-Shtayeh et al., 2008; Aswani et al., 2018; Berkes, 2008; Burbidge et al., 1988; Rahmatullah et al., 2013). Yet, despite severe challenges, there are opportunities to promote recreational EoN that resemble economic EoN without idealizing them, as they often provide a low standard of living and are not always sustainable (Navarro & Pereira, 2015). The crucial question is, therefore, how to preserve ecological knowledge and skills associated with traditional land uses, at least partially, through the urbanization process in other practices such as hobbies and education.

Stryamets et al. (2015) use examples from Sweden, Ukraine and Russia to show how the collection of wild and medicinal plants is changing from an economic necessity to a leisure activity, while socio-economic status is rising. Interestingly, in some cases, wild plant collecting is stigmatized as an expression of poverty. Educational programmes can assist in destigmatizing and reframing traditional knowledge, as Cruz García shows using the example of knowledge transfer about edible plants (Cruz García, 2006).

Brosi et al. address the disappearing knowledge of traditional canoe making (including knowledge of the necessary plants and habitats) in Micronesia and propose active promotion of traditional canoe races to generate interest and increase social appreciation (Brosi et al., 2007). Such a transformation from an economic EoN, which has become irrelevant, into a meaningful recreational EoN (from purpose-oriented to experience-driven) has occurred in kayaking. The traditional Inuit kayak is a hunting technology whose construction and use require an extraordinarily high level of ecological knowledge and skill (Boyd et al., 2011; Walls, 2012). In the Arctic regions of origin, this knowledge continues to be cultivated as part of the cultural heritage in recreational contexts (Golden, 2006; Walls, 2012). In addition, the kayak has become a popular means of experiencing nature around the world in countless variations.

Other concepts such as urban gardening (Hand et al., 2017; Lin et al., 2018), urban farming, the creation and operation of school gardens (Berezowitz et al., 2015; Blair, 2009), etc., can preserve and redevelop experience with and knowledge of production contexts. Even if these resemble simulations of the original experience in traditional agriculture, such initiatives provide opportunities to connect to the natural processes behind the cultivation and harvesting of food. In this sense, Shephard et al. stress the role of recreational fishers, for example, as stewards of aquatic ecosystems. They argue that striving for excellence in fishing is synonymous with the development of skills that can only be acquired through years of immersion in habitat and the environmental influences to which it is exposed. This intensive involvement not only generates knowledge and skills, but also leads to a specific ecological consciousness (Shephard et al., 2023).

In short, perspectives on landscape and the relationship with nature develop through the acquisition of skills and knowledge. In urbanized societies, nature-related skills are acquired primarily through hobbies. We, therefore, need to better understand the influences and dynamics surrounding nature-related hobbies: What hobbies during which parts of a lifetime provide what EoN; How, in turn, do these EoN help shape attitudes toward nature? In the examples mentioned, the development of skills has an explicitly physical dimension—it is associated with physical activity and can therefore also be expected to have positive health effects in line with the discussion on 'green care' and 'green prescriptions' mentioned in the introduction. Furthermore, nature-related hobbies have the ability to transform mere *spaces* into *places*, and so, a 'sense of place' emerges. In contrast to a home-based sense of place, which refers to aspects such as tradition and origin, a skill-based sense of place is geographically transferable, enabling meaningful experiences in new spaces—an aspect that is relevant for highly mobile urban societies. Incorporating the aspect of skill development is relevant for the design of urban green spaces, but also for the management of protected areas. Protected areas play an essential role in the relationship between people and nature in urban societies (West et al., 2006). Current visitor management practices, however, especially in protected areas, often deliberately keep visitors at a distance (Aschenbrand & Michler, 2020).

Understandably, boardwalks and barriers may be necessary when visitor traffic is high to protect assets from trampling and other unwanted impacts. In doing so, however, they also reduce the types of interactive EoN, eliminating opportunities to create or develop skills.

5 | CONCLUSION

As urbanization increases, the proportion of the world's population engaged in the primary sector of the economy will continue to decrease. Traditional practices of land and sea use are declining (Aswani et al., 2018). As a result, EoN are reduced, but they also change structurally, as the proportion of EoN that takes place in leisure increases relative to that which takes place in the context of work and production. This structural change can be described in terms of *economic* EoN and *recreational* EoN, which were developed based on existing typologies by Gaston and Soga (2020), Clayton et al. (2017) and Rosa (2022).

While economic EoN is typically associated with specific ecological skills and knowledge, this is not necessarily the case for recreational EoN. Tourism, in particular, is often characterized by stereotypical and idealized images in its references to nature (Aschenbrand & Michler, 2020; Kühne, 2019). However, an engagement with nature that is based on stereotypical ideal images tends to lead to overcrowding of particularly iconic places, but not necessarily to the development of a personal perspective on nature, and rarely supporting a long-term process that allows specific skills to develop.

The interpretation proposed here suggests that in the future, the proportion of recreational nature experience will continue to increase. With this, an important question arises: How can the experience-driven, recreational relation to nature contribute to meaningful long-term engagement and responsible stewardship? In urbanized societies, people spend considerable resources on hobbies and nature-related skills are often acquired through hobbies (Warwitz, 2022). We should, therefore, strive to better understand the role and harness the potential of leisure and hobbies in relation to experiences of nature since they have the potential to encourage long-term meaningful engagement. An interesting aspect of landscape- and nature-related hobbies is that the development of skills creates a new perspective that generates knowledge and emotional references to non-human aspects of nature and its autonomy which can be instrumental when experiencing, interpreting and valuing altogether new and unknown places.

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