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Environmental Aesthetics: A Synthetic Review

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Abstract

1. The main aim of the article is to provide up-to-date knowledge of environmental aesthetics for an interdisciplinary audience, and to signal the importance of research in this area for studying people-nature relationships.

2. Environmental aesthetics has emerged in the last fifty years from the philosophical fields of aesthetics and environmental philosophy. Other disciplinary perspectives have also shaped environmental aesthetics, including landscape architecture, human geography, restoration ecology, and empirical studies on landscape preferences in developmental and environmental psychology.

3. This review and synthesis mainly addresses the theoretical approaches and concepts that provide a framework to the key debates in the field, but also considers how empirical approaches have shaped recent developments, and how conceptual issues arise with respect to empirical cases.

4. We outline the background and context of environmental aesthetics, its key concepts, and provide a critical review of contemporary theories in the field. We then consider how aesthetics features in issues pertaining to the conservation, preservation, and restoration of nature.

5. Finally, we identify some new directions for environmental aesthetics scholarship, that can productively contribute to ongoing debates regarding various relationships between people and nature.

1. Introduction

Environmental aesthetics has emerged in the last fifty years from the philosophical fields of aesthetics and environmental philosophy. The questions and issues which shape this subfield have been drawn principally from the Western philosophical tradition. Other disciplinary perspectives have also shaped environmental aesthetics, including landscape architecture, human geography, restoration ecology, and empirical studies on landscape preferences in developmental and environmental psychology. This review and synthesis mainly addresses the theoretical approaches and concepts that provide a framework to the key debates in the field, but also considers, to some extent, how empirical approaches have shaped recent developments, and how conceptual issues arise with respect to empirical cases. We note that our expertise and, thus, the expertise of this review, is primarily confined to UK, European, and North American scholarship.

2. Aesthetics, Nature and Value

What is meant by 'aesthetic' in the philosophical sense? 'Aesthetic experience', 'aesthetic response', 'aesthetic appreciation', and 'aesthetic judgment' are commonly understood by philosophers as centred in human perception and the senses, and these

terms are often interpreted as referring to human experiences involving feeling/affect

and imagination, rather than being centred on the acquisition of knowledge (Shelley,

2013; Parsons, 2008).[1] Aesthetic experience is considered the basis of aesthetic value

and has been characterised as based in a feeling of pleasure or admiration in response

to perceptual qualities, forms, and meanings in relation to an object (Levinson, 1996;

Stecker, 2006).[2]

Although the study of the general field of aesthetics reaches back to classical

philosophy, aesthetics was first named in 1735 by Alexander Baumgarten who defined it

as the 'science of sensory cognition' (quoted in Guyer, 2014: 5). In the eighteenth and

nineteenth centuries, in Britain and on the Continent, aesthetics emerged as an

important subfield of philosophy. During this time, many philosophers (for example,

Francis Hutcheson, Edmund Burke, Immanuel Kant and Arthur Schopenhauer)

discussed both the arts and aesthetics of nature, including 'wild' nature and designed

landscapes such as gardens (Carlson, 2009; Brady, 2013; Paden et al., 2013).[3] Today,

the field of aesthetics is commonly described as a branch of philosophy which studies

concepts and questions related to the arts, architecture, design, the everyday, and

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[1] Though see our discussion later about 'scientific cognitivism', which challenges this interpretation with
respect to the role of knowledge.

[2] For our purposes in this review, we will use 'aesthetic experience', 'aesthetic response', 'aesthetic
appreciation', and 'aesthetic judgment' interchangeably. 'Object' is used in this article, and more widely by
aesthetic philosophers, to identify what it is that is being aesthetically appreciated. 'Object' can refer to an
individual object such as a rose, a constellation of objects in a forest, ocean, landscape, sky, and so on.

[3] In the article, and with respect to environmental aesthetics, we assume that aesthetic experience and
value relate to a dynamic variety of places, organic and inorganic matter and processes, as well as
animals, all of which have been more and less modified or influenced by humans. We recognise that
'nature' is a contested term and concept (the literature on this issue is vast. See for example: Soper,1995;
Lorimer, 2015; Vogel, 2015). In the article, we shall use the term 'nature' interchangeably with 'natural
environment'.

natural and modified environments. Although the field is broad in terms of the subject matter of study, primacy of attention is given to the arts and has been since roughly the mid-nineteenth century (Carlson, 2000; 2019; Moore, 2008). Although environmental aesthetics has emerged as an important subfield, aesthetics remains dominated by discussions of the arts.

In order to provide a fuller account of the nature of aesthetic experience and value, we turn to a brief discussion of key historical ideas which have influenced environmental aesthetics today. In the eighteenth century, discussions focused on the exercise of aesthetic judgment, or making a value judgment about the beauty of something, for example, 'That rose is beautiful.' Aesthetic judgments were commonly theorised to emerge from the 'disinterested' contemplation of perceptual qualities which, importantly, describes a kind of interest that is disconnected from desiring the object of the judgment (Kant, 2000). Below, we show how this idea has influenced more recent conceptions of aesthetic value as a type of non-instrumental value. In addition, aesthetic theories since the eighteenth century have been influential for focusing more on the *subject's response* to qualities of objects, in contrast to the notion of beauty as an objective quality. In both classical and medieval notions of beauty, it was common to identify beauty and aesthetic value with objective qualities alone, for example, harmonious proportion (Sartwell, 2017; Paden et al, 2013; Tartarkiewicz, 1972). In terms of current relevance, this focus is significant for opening up an exploration of the subject's aesthetic experience and appreciation of natural and modified environments, including the study of imagination, emotion, and multisensory responses.

We mentioned above that the field of aesthetics today has developed a somewhat broader scope that now includes environments and the everyday. This scope rests in part on the idea that aesthetic experience is not limited to exalted experiences of beauty or sublimity, or indeed to something which takes place within artistic institutions such as the gallery or opera house. Here, we see the influence of the twentieth-century pragmatic tradition in philosophy, which contends that the aesthetic experience arises through an active engagement between self and environment, and through ordinary activities, including both practical and intellectual pursuits (Dewey, 1980). Works of art can create such experiences, but also experiences in day-to-day life that stand out in some way, such as enjoying a special meal. We would suggest that, for example, a well-designed community garden might also give rise to this kind of experience. The pragmatic tradition is interested in understanding how aesthetic experience and the arts are part of everyday life, and how they might contribute to human flourishing.

Both eighteenth-century aesthetic theory and the pragmatic tradition have impacted the development of environmental aesthetics, and although some of their ideas lie in contrast, they also share an interest in aesthetic experience and value as intimately related to the senses and perceptual absorption. Both approaches demonstrate how the aesthetic response emerges through the subject's perception of qualities in the world. There is also a common emphasis on the active imagination and the place of feeling or emotion, in contrast to deeply intellectual or scientific pursuits which are often characterized by reasoning and logic.

Turning to the concept of aesthetic value, these ideas have shaped its conception within environmental aesthetic theories (Berleant,1992; Budd, 2002; Brady, 2003; Carlson, 2000; 2019). In the judgment, 'That rose is beautiful', the aesthetic value of 'beauty' is ascribed to the object (in this case, a rose). Aesthetic value is one just one type of environmental value that may be ascribed to objects; in discussions about the environment, there are various types of value that may be ascribed, including (but not limited to) ecological, historical, cultural, economic, ethical, and aesthetic value. According to O'Neill et al. (2008), environmental values are 'the various ways in which individuals, processes and places matter, our various modes of relating to them, and the various considerations that enter into our deliberations about action.' (O'Neill et al., 2008: 1). On this latter point, Kempton et al. (1995) similarly understand environmental values to be 'moral guidelines' that serve as the basis for 'environmental concern and action' (Kempton et al., 1995: 87). Thus, environmental values are normative positions that ascribe relative or absolute goodness or badness to certain things such as individuals, processes and places, but also species and other components of ecosystems.

There is strong agreement among philosophers today that aesthetic value is a form of intrinsic or non-instrumental value, where something is not valued as a means to some end, rather it is found to have value in and for itself (O'Neill, 2003; Stecker, 2006; Brady, 2003; Parsons, 2008). This form of value can be understood in aesthetic terms as appreciating something for its own sake, that is, appreciated for the individual

distinctiveness of the qualities of the object in question. For example, a particular forest might be ascribed aesthetic value in virtue of its aesthetic qualities, such as the fine aroma of pine, melodious birdsong, or golden shafts of light reaching through the canopy to the forest floor.

This common interpretation of aesthetic value rests on the idea that the pleasure or admiration arising through aesthetic appreciation is deeply connected to aesthetic qualities ('aesthetic quality' refers to a quality of something that is appreciated for its own sake). In this respect, the focus of aesthetic experience is on the thing in question, rather than being directed towards one's own satisfaction or what a person might gain for themselves from aesthetic experience (Stecker, 2006). The implications of these points are two-fold when it comes to understanding the character of aesthetic value. Although aesthetic value can involve pleasure or liking something, this cannot be detached from the object-centred appreciation of aesthetic qualities in the natural world. Also, while such liking may be considered a benefit to people who experience it, perhaps the enjoyable experience of a forest enhances their well-being, it is not the motivating aim of the experience but rather the outcome of aesthetic attention to the world.

Below, we pick up on connections between aesthetic value, conservation, and environmental decision-making, as well as the conflicts that arise between aesthetic and other environmental values. Before moving to the next section, it is relevant to point out that aesthetic values can also be positive and negative. Aesthetic disvalue is commonly

articulated through the category of 'ugliness' (Moore, 1998; Saito, 1998a; Eco, 2011). There has been less attention to disvalue in both artistic and environmental aesthetics (Sepänmaa, 1986; Saito, 1998b; Brady, 2012), however there has been more attention to aesthetic value categories which involve a mixture of pleasure and displeasure, such as tragedy, the sublime, and neighbouring categories including awe and wonder (Feagin,1983; Brady, 2013; Shapshay, 2013; Paden, 2015a; Hepburn, 1984; McShane, 2018).

3. Contemporary Theories in Environmental Aesthetics

In this section, we address three principal issues in contemporary theories in the field: (1) the distinction between art or object-focused aesthetics and environmental aesthetics; (2) the multisensory potential of environmental aesthetics compared to visual and scenic approaches; and (3) 'cognitive' versus 'non-cognitive' environmental aesthetics.

When environmental aesthetics emerged as a new sub-field in the 1960s, philosophers such as Ronald Hepburn (1966), Arnold Berleant (1970), and Allen Carlson (1979) were keen to show what was distinctive about environmental aesthetic appreciation in contrast to the appreciation of the arts and other artifacts. The *environmental* character of appreciating the natural world and humanly modified environments (for example, parks, gardens, and agricultural landscapes) marks a significant contrast to the more object-centered approach typical of the arts, where paintings and sculptures are

experienced as relatively static because they are bounded by a frame or by their material (other art forms are less static, such as music, video art, film, and installations).

Consider the aesthetic experience of a painting of a forest in contrast to first-hand experience of a forest. The actual forest is not experienced as a two-dimensional, unchanging surface, but rather as a complex ecosystem shaped by various organisms, light, water, growth, decay, the effects of weather, the seasons and so on. In contrast to the arts, the less constrained and more dynamic character of environments will have an effect on the range of aesthetic qualities that are grasped and valued by the perceiver, and there may also be the opportunity to perceive changes in aesthetic qualities over time and in light of various factors. In environmental aesthetic appreciation there is greater potential for immersion, for example, being enveloped by a forest, and this opens up opportunities for multisensory appreciation.

Above, we pointed to how ideas from both eighteenth-century aesthetic theory and the pragmatic tradition have influenced environmental aesthetics. More specifically, they have influenced the common, contemporary position that aesthetic experience of nature begins in and is often focused through sensory perception (Hepburn, 1984; Saito, 1998b, Berleant, 1992). Importantly, that perception is not limited to vision and, potentially, it draws on all of the senses. Many scholars emphasize the range of senses that ground aesthetic experience and judgment, and thus how the various senses shape aesthetic valuing of the natural world (Fisher, 1998; Prior, 2017; Thompson and Travlou, 2009). The work of Arnold Berleant is key here, having advanced a phenomenological

account of environmental aesthetics, which emphasises the importance of 'sensory immersion' within a given environment that creates close intimacy (Berleant uses the term 'unity') between perceiver and environment (1992: 170).[4] Similarly, Callicott (1994) has put forward a 'land aesthetic' developed from the writing of Aldo Leopold, which also proposes a multisensory account of aesthetic experiences, in contrast to purely visual ones. The immersive, multisensory possibilities of the environmental approach serve to challenge narrower scenic approaches, where aesthetic valuing of nature is primarily placed on scenic and visual qualities. The 'scenic model', as it is sometimes called in environmental aesthetics, treats nature as a fixed scene to be gazed at, rather than as environmental and ecological, with all of the dynamic, changing and spontaneous processes that constitute nonhuman nature (Carlson, 2000; 2010; Gobster, 1999).This scenic model can be traced back, at least, to the Picturesque movement of the eighteenth and nineteenth centuries, where landscapes were judged as aesthetically pleasing according to standards of human design, such as gardens and landscape paintings (Porteous, 1996; Carlson, 2000; Saito, 1998a).[5] Below, we discuss how this model has played a role in landscape assessment.

While there is general agreement that broader, richer approaches are needed to capture the potential diversity of aesthetic qualities of environments, nature, and landscape, the contemporary debate in environmental aesthetics has been strongly

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[4] For a critique of Berleant's phenomenological environmental aesthetics, see Parsons (2008: 89-94).
[5] Though see, for example, Paden (2015b) who offers a qualified defence of picturesque landscape paintings as a component of scenic aesthetic appreciation, noting that '...the experience of these [picturesque] paintings is not "distanced" and "static"; instead, they invite us into their world, and we move through it, back and forth, as we trace out its various relationships' (p.57).

shaped by two contrasting approaches: 'scientific cognitivism' and 'non-cognitivism.' Scientific cognitivism holds that if appreciation is to reach beyond a superficial aesthetic response and issue in judgments appropriate to their objects, it must be informed by scientific knowledge (Carlson, 1979, 2000, 2010; Rolson,1995; Parsons, 2002). The most influential position within this type of approach is Allen Carlson's (2000) 'natural environmental model'. Here, aesthetic valuing emerges through sensory perception of aesthetic qualities in the world, but the role of knowledge is essential. His argument for this model is driven by an argument by analogy. In the appreciation of art, it is often held that the appreciator turns to art history and criticism in order to contextualise and make the most informed judgments of, for example, a Cubist painting (Walton, 1970). By analogy, and filling a similar role for aesthetic appreciation of nature, will be knowledge supplied by the natural sciences, for example, ecology, geology, and natural history more generally. It is claimed that such knowledge will support aesthetic judgments that are appropriate to their objects because the judgments are made from a solid foundation of objective knowledge. Carlson argues that if appreciating a whale under the category of 'fish' rather than 'mammal', might lead to a judgment of the animal as clumsy rather than recognising aesthetic qualities of extraordinary majesty as this very large mammal moves gracefully through the ocean (Carlson, 2000). It is argued that such knowledge provides relevant context and directs the perception of aesthetic qualities appropriately. The model can also support an account of aesthetic experience where it is possible to identify aesthetic value over disvalue. Imagine a forest that has been affected by a naturally occurring wildfire. Knowledge that fire may have beneficial

effects for the forest's ecology can enable the appreciator to find value in what might otherwise seem to have ugly qualities, appearing grey, charred and lifeless.

An emphasis on the role of knowledge can enable aesthetic appreciation of nature 'on its own terms' (Saito, 1998b). According to Saito's position, which falls between scientific cognitivism and non-cognitivism, aesthetic valuing begins and ends in the sensuous surface of things, with scientific knowledge and cultural narratives such as myths and folklore providing further grounding for aesthetic judgments. By arguing for appreciation of nature 'on its own terms', she brings moral considerations to bear on aesthetic values; a position inspired by the work of Aldo Leopold. In the 'Land Ethic', Leopold's holistic ecological thought draws upon values of beauty and aesthetics, for example, as shown by his well-known remark (which some scholars take as a central principle in his work): 'A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.' (1989, 224-225; Callicott, 1994).

Various non-cognitivist theories de-emphasise the role of knowledge, however, there is agreement with cognitivists that it is important to avoid deep subjectivity or misinformation which potentially distorts our aesthetic judgments of nature. Many non-cogntivists object to Carlson's model for being too reductive, for example, through its strong emphasis on the role of scientific knowledge and the neglect of fundamental and richly aesthetic ways that people experience natural and semi-natural environments. Arnold Berleant's influential 'aesthetics of engagement' (1991, 1992) makes a strong

case for a participatory, multisensory, and immersive aesthetic positioning and doing away with the subject-object dichotomy that he argues is associated with 'disinterestedness'. Berleant emphasises a holistic and somatic approach, rather than giving a central place to scientific knowledge in aesthetic valuing: '[The aesthetic environment] is sensed through my feet, in the kinesthetic sensations of my moving body, in the feel of the sun and wind on my skin, in the tug of branches on my clothing, in the sounds from every direction that attract my attention' (1992: 27).

Many non-cognitive theories focus on bringing out significant components of aesthetic valuing or appreciation while recognising that other components, such as scientific knowledge, will still play some role. The 'arousal model', an emotion-based account, argues that scientific cognitivism fails to capture how emotional responses shape aesthetic appreciation (Carroll, 1993). Carroll's theory is important because it seeks to show how emotions have a legitimate, non-sentimentalizing place in environmental aesthetic appreciation, and he draws upon various arguments in the philosophy of emotion to show that emotion-based aesthetic judgments can have an objective rather than subjective basis.

A key feature of Kant's aesthetic theory, imagination, has been brought to the fore in a set of positions which argue that exploratory, projective, and ampliative imaginative activity can enrich and deepen appreciation without falling foul to humanising or trivialising nature (Brady, 2003; Hepburn, 1996; Mikkonen, 2018). Hepburn, for example, writes that imagination enables the appreciator to 'shift attention flexibly from

aspect to aspect of the natural objects before one, to shift focus from close-up to long

shot, from textural detail to overall atmospheric haze or radiance; to overcome

stereotyped grouping and clichéd ways of seeing' (1984: 47). Garden design often

creates opportunities for imagination through 'invitation' (Ross, 1998: 166), but it is also

possible for natural features to invite imaginative exploration. Consider how an opening

in a dense forest might draw in a hiker to explore the place through various senses and

imagination. In viewing a U-shaped valley from the top of a mountain, one may be able

to imagine the geological forces which have shaped the place over time.

Several non-cognitivists have also objected that cognitivists naïvely accept science as

providing the most objective grounding for aesthetic appreciation, and that they fail to

see that subjectivity and cultural bias can also be present in the sciences (Godlovitch,

1994; Brady, 2003; Mikkonen, 2018). The 'acentric model' takes this type of criticism

further by arguing that the only appropriate form of aesthetic valuing is one that

decentres human imposed categories of knowledge (scientific and cultural) so that

nature is approached as ineffable, or as 'mystery'. In so doing, it may be possible to

recognize nature's independence and autonomy from humans (Godlovitch, 1994). On

the one hand, this position might seem reasonable, especially in light of the criticism

that when people aesthetically appreciate environments, this is a human-centred

enterprise, even hedonistic (Lee, 1995). On the other hand, although the aesthetic

valuer and their aesthetic judgments may be described as anthropogenic, it does not

follow that they are anthropocentric. As discussed above, aesthetic appreciation is commonly theorized as valuing things for their own sake.

Representing a synthesis of cognitivist and non-cognitivist positions, there are several pluralistic positions which argue for a range of grounds for aesthetic appreciation of nature (Parsons, 2008; Brady, 2016). Hepburn's (1984, 1996) interest in multisensory responses and participatory, reflexive appreciation suggest many appropriate ways to approach nature, from thoughts, imaginings, and feelings to various kinds of knowledge and narratives in science, literature and the arts. With special emphasis on the role of perception and imagination, and influenced by Kant, the 'integrated aesthetic' theory aims to be inclusive regarding potential layers of aesthetic experience, with the senses, attention to perceptual qualities, imagination, emotion and, to some extent, knowledge playing a role, depending on the particular aesthetic situation (Brady 1998, 2003). 'Syncretism' weaves together various layers of appreciation, such as imagination and scientific knowledge, making natural beauty central to the good life (Moore, 2008). Finally, Heyd (2001) argues that the 'many stories' of nature shape aesthetic valuing and can function to highlight various aesthetic qualities, potentially engaging the appreciator more deeply than scientific facts. All of these positions may be described as forms of *critical* pluralism, in so far as they do not simply accept the views of scientific cognitivism. Critically-engaged forms of pluralism, especially ones that are watchful of trivial, sentimental or overly humanising aesthetic judgments (Hepburn, 2001), provide promising ways to move the contemporary debate forward.

4. Aesthetics, Environmental Conservation, and Policy

Environmental aesthetic judgments and the articulation of aesthetic values have been intimately bound up with efforts to conserve nature, and the role of aesthetics in environmental conservation policy is well recognised within the environmental aesthetics scholarship. For example, in the late 1970s the environmental philosopher Eugene Hargrove briefly traced how different aesthetic categories, the beautiful, the picturesque, the sublime, and the interesting, exerted considerable influence on the development of environmental attitudes in the US, and in turn various landscape preservation designations in the 1800s, including the founding of Yosemite and Yellowstone National Parks (Hargrove, 1979). Similarly, Selman and Swanwick (2010) have provided a potted history of the role of 'natural beauty' in landscape legislation policy in the UK, starting from the 1949 England and Wales National Parks and Access to the Countryside Act, and its relation to other natural aesthetic categories such as the sublime, and the picturesque (see also Brady, 2003: 226-233).

However, there are a number of issues that environmental aesthetic theorists, and others from across environmental philosophy, continue to grapple with: to what extent should aesthetics play a role in environmental conservation decision-making, particularly in relation to other types of value? Upon whose aesthetic judgments should conservation proceed? Are aesthetic values too 'subjective' as a basis on which to form conservation policies? In this section, we will consider some of the existing positions from across the subfield, in response to these questions.

In environmental aesthetics, concerns about conservation and preservation of environments are often taken for granted, with the general goal being to show how aesthetic valuing of nature is possible, philosophically-speaking. Within environmental philosophy, there is more attention to environmental ethics than aesthetics, but several scholars have been interested in showing how the two are connected. This connection is made by exploring whether and to what extent aesthetic experience and value may be said to support moral attitudes toward the environment (Brady, 2003; Carlson & Lintott, 2007; Saito, 2017a; Carlson, 2010, 2018; Richardson et al., 2019; Welchman, 2018). For example, the position known as 'aesthetic preservationism' holds that through the sensitive perception characteristic of aesthetic attention and the discovery of beauty, majesty, and so on, people may develop care and respect for nature. On this philosophical view, a particular kind of aesthetic awareness potentially feeds into ethical attitudes and forms of environmental action (Hargrove, 1989; Thompson, 1995; Fisher 2003; Rolston 2002; Parsons, 2008). The focus of this kind of approach tends to be unmodified rather than modified natural areas, following the tendency of preservationist arguments in favour of protecting designated 'wilderness' areas.

Hettinger's (2008) 'aesthetic protectionism', a version of aesthetic preservationism, argues that valuing natural beauty can serve as an important motivation for protecting the environment, as long as sufficient justification can be provided, for example, some kind of objectivity found, for aesthetic judgments of nature. Welchman (2018) takes a different view, arguing that aesthetic experience of nature is a component of human flourishing, which provides a justification for protecting the environment for current and

future generations of people. To support these kinds of positions, Hettinger and others draw on high-profile cases where natural beauty has been cited as a reason to prevent development of natural areas, such as the long-standing dispute concerning oil-drilling in the Arctic National Wildlife Refuge in Alaska, or the attempt to quarry Roineabhal mountain on the Isle of Harris in Scotland (Hettinger, 2008; Brady, 2019).

Stewart and Johnson (2018) argue that aesthetic preservationism is problematic because it focuses too narrowly on positive aesthetic values and ignores the problem of how aesthetics is implicated in cases of environmental or ecological harm. For example, they argue that aesthetics can 'obfuscate environmental degradation in the public memory' in relation to attractive public parks that have been created from landfill sites, hiding the problem of massive human consumption and the waste it creates (2018: 444).

In some contrast, Brady et al. (2018) object to the focus on wild places implicit in aesthetic preservationism and argue that a broader approach is needed, namely, one that recognises people-nature relationships in the context of both modified and wild environments. They also point to the importance of being sensitive to the changing narratives of places, in contrast to aesthetic preservationism, which does not explicitly acknowledge the role of indigenous communities in shaping environmental history (O'Neill, Holland, & Light, 2008). Educating people about how a particular place has evolved or using aesthetic design elements to illustrate a place's changing history can address one concern raised by Stewart and Johnson.

Other cases of aesthetic-ethical conflict which have attracted attention in the public discourse include the taste for manicured green lawns, which require heavy management and use of weed killers that are harmful to plants and wildlife (Hall, 2011), and the many harmful, invasive species that are found to be aesthetically appealing, such as *Rhododendron ponticum* in the UK or *Lupinus nootkatensis* in Iceland. Conversely, there are examples of landscapes judged to be of high ecological value that are aesthetically disvalued. For example, Parsons (1995) describes how densely vegetated patches of woodland that are important for biodiversity, are consistently attributed low aesthetic value as compared to more open grassy areas, while Prior and Brady (2017) outline how rewilding efforts will likely give rise to challenging aesthetic qualities, including ugly and unscenic landscapes. Additionally, Lintott asserts that animals that are 'aesthetically unappealing or aesthetically unimpressive' (2008: 381), such as bats and snakes, do not garner the same level of public interest or support as compared to more charismatic species, when it comes to conservation efforts on their behalf. This has led to efforts to develop what is termed an ecological aesthetic (Gobster, 1999; Gobster et al., 2007), or an eco-friendly aesthetic (Lintott, 2008), wherein aesthetic and ecological values are aligned, particularly as a result of landscape design interventions and educational programmes.[6]

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[6] Since this time, there has been some empirical research tentatively demonstrating that people may tolerate or even prefer the aesthetic qualities of high biodiversity over low biodiversity green spaces in urban contexts, such as urban meadows over amenity lawns, though this preference is linked most strongly to individuals who are already supportive of conservation efforts, and when such spaces still display signs of human maintenance (see Hoyle et al., 2017; Hoyle et al., 2019; Southon et al., 2017).

While few, if any, philosophers hold the view that aesthetic value ought to trump other values in environmental decision-making, some have argued more explicitly that justice, respect, and other ethical concepts and attitudes must have a role alongside aesthetic appreciation, or be integrated into aesthetic concerns (Saito, 2017a; Carlson, 2018; Parsons, 2018). A significant barrier to giving a prominent role to aesthetic value in environmental decision-making and conservation is the claim that aesthetic value is subjective, as expressed through the common-sense belief that 'beauty lies in the eye of the beholder'. Values which are underpinned by scientific or quantitative support, or values that are assumed to be objective, are often taken more seriously. Further to this, Stan Godlovitch (1998) has argued that aesthetic values need to be measurable and in turn rankable, if they are to be taken seriously within conservation decision-making, stating that 'only if natural aesthetic value is measurable will it stand a chance of influencing conservation priorities. Otherwise it will be swept aside as just another vague externality or subjective attachment' (Godlovitch, 1998: 122). An unfortunate result of identifying aesthetic judgments with subjective preferences is that, for example, a community's expressed aesthetic enjoyment of a beautiful place may be considered only a matter of opinion, having little force when compared to the monetary valuation of that same space (Brady, 2019). Several philosophers working in environmental aesthetics have recognized the importance of showing that aesthetic judgments are not the same as subjective preferences and ought to be viewed as important, rather than trivial (Thompson, 1995; Hepburn, 2001; Eaton, 2008; Hettinger, 2008).

There are long-standing debates concerning the subjectivity or objectivity of values in philosophy, and these provide arguments that are aimed at challenging unsubstantiated assumptions about the nature of moral and aesthetic values. With respect to aesthetic value, one influential effort is David Hume's concept of the 'standard of taste' (Hume, 1965). He understood that divergence in our aesthetic responses was common and that a standard of taste is needed to settle disputes and indicate what is aesthetically valuable or good. This standard is set by an appeal to competent or 'ideal' judges, or people with relevant experience and developed aesthetic sensibilities (Hume, 1965). Hume was concerned with the arts, but we suggest that in the environmental context, ideal judges might range from artists, poets, and literary figures to ecologists, botanists, ornithologists, geologists, meteorologists, and others. What makes them competent would be familiarity with the aesthetic objects in question, an interest in aesthetic qualities rather than only intellectual/scientific interest, and awareness of how to separate out personal bias from their judgments (for example, a poet who suffers from herpetophobia). Exactly what constitutes an ideal judge is contentious in the literature, but the key point is that Hume, and others following his views, outline an objective basis for aesthetic judgments, rather than assume they are simply expressions of individual preferences (Goldman, 1985; Ross, 2011).

In environmental aesthetics, attempts to establish the objectivity of aesthetic judgments may be seen as a route to establishing the non-triviality of aesthetic values and the possibility of their playing a stronger role in the practical context of conservation. Based on scientific cognitivism, Carlson holds that knowledge of the natural sciences provides

an objective grounding for aesthetic judgments (Carlson, 2000, 2010). A more inclusive

position which tries to capture the range of reasonable and justifiable aesthetic

judgments is put forward by Hettinger (2008), who argues for a robust form of critical

pluralism. He argues that there are many legitimate bases for aesthetic judgments, not

only those drawn from the sciences. Inspired by the ideas of Kant (2000) and Sibley

(2001), Brady (2003) contends that aesthetic judgments have an intersubjective

grounding: individual judgments may have their own particular inflections based on a

person's specific background knowledge, experience, etc., yet agreement with other

aesthetic judgments of the same aesthetic object may be established. Nicolson (1959)

provides a historical example of the intersubjectivity of aesthetic judgments, outlining

how Romantic era writers shaped commonly-held perceptions of mountainous

landscapes. Previously, such landscapes were judged negatively as barren wastelands,

but Romantic writers and poets effectively helped usher in a dramatic change, wherein

mountains were perceived to be majestic and awe-inspiring, which are now so

commonly-held aesthetic judgements amongst the general population that we tend not

to question them. Rather than being private expressions of individual taste then,

aesthetic judgments may be based upon a set of critical activities that are practiced and

developed in a public context. So, although there is ongoing debate, there is also

considerable work which argues against the assumption that aesthetic value is a

subjective matter.

To what extent have these conceptual discussions been influential beyond philosophical

debates? This is not easy to gauge, but it is possible to pin down a couple of ways that

environmental aesthetics has impacted other disciplines and policy. First, philosophers have been critical not only of the narrow scope of the visual landscape assessments which have been used, for example, as the basis of landscape designations, but also of attempts to quantify natural beauty. In early discussions of this issue, Eaton (1989: 81) describes what she calls the 'fallacy of confusing objectivity with quantifiability'. The problem is that objectivity in landscape assessment is assumed to be possible only through quantitative methods, and she points to an alternative informed by philosophical methods: 'Objectivity is not a matter of reducing things to numeric formulas; it is a matter of grounding one's claims in evidence in such a way that interpersonal agreement or disagreement is meaningful' (1989: 81). Carlson (1977) argues that quantitative work on landscape preferences produces an incomplete and sometimes misleading understanding of a landscape's aesthetic qualities, and that qualitative approaches are essential.

More recently, Cooper et al. (2016) critique the view that aesthetic and spiritual values can be captured adequately by cultural ecosystem services because these kinds of values are non-instrumental and not measurable through neoclassical economic valuation methods. Their case is based upon both theoretical arguments and empirical evidence. In another critique, Kenter et al. (2015) argue that it is possible to identify shared cultural values, and that participatory and deliberative processes provide a promising empirical method and alternative for capturing aesthetic and spiritual values, compared to forms of monetary evaluation.

Second, philosophical approaches have been drawn upon to provide a conceptual understanding of various ideas, such as natural beauty and aesthetic qualities. Selman and Swanwick (2010; see also Swanwick, Selman, and Knight, 2006) discuss conceptual debates in environmental aesthetics in their study of 'natural beauty' in landscape policy in the UK. They also provide evidence of both individual and convergent views of natural beauty based on empirical research with stakeholders. Thompson and Travlou (2009) refer to environmental aesthetics in their critical review report to the Forestry Commission concerning woodland perceptions, aesthetics, affordances and experiences. They note that there has been progress beyond the scenic model, but also remark that: 'Understanding what mechanisms lie behind these responses [of the wider public] and drawing on a theory of aesthetics that embraces the perception of beauty alongside the cultural (including the historical) and biological (or ecological) dimensions of the aesthetic would seem to be an important way forward.' (2009: 3.6) Also, various philosophers working in environmental aesthetics have drawn upon their disciplinary knowledge to communicate to policymakers (for example, see Parsons, 2010; Coates et al., 2014; Kenter et al., 2014). In the next section, we return to a consideration of empirical approaches, specifically an examination of aesthetic values and qualities concerning ecological restoration outcomes.

5. Aesthetic Value and Ecological Restoration

As with discussions pertaining to the broader topic of environmental conservation, ecological restoration has a complicated, and often-fraught, relationship with aesthetic

values. The most widely used definition of ecological restoration has been formulated by

the Society for Ecological Restoration International, and is stated within their Primer on

Ecological Restoration as follows: 'ecological restoration is the process of assisting the

recovery of an ecosystem that has been degraded, damaged, or destroyed' (Society for

Ecological Restoration International Science & Policy Working Group, 2004: 3). Such

assistance toward recovery aims to restore the historical conditions that existed before

an ecosystem was degraded, damaged or destroyed (ibid.: 12). The 'provision of

aesthetic amenities' (ibid.: 4) is listed elsewhere within the Primer as a possible goal of

ecological restoration, but only inasmuch as this is a secondary aim; even if this aim

were absent, the activity being undertaken would still classify as ecological restoration.

For some, aesthetics, and, importantly, not only that which is confined to 'amenity

value', is more central to ecological restoration outcomes than this. Morrison (1987:

160) lists 'physical, biological and aesthetic characteristics' of a pre-disturbed site as

qualities that are restored through ecological restoration, while Higgs, who in his work

foregrounds the role of design in ecological restoration, has argued that our

understanding of what constitutes 'good' ecological restoration should embrace

aesthetics, as well as other social and cultural valuations of restored systems (Higgs,

1997, 2003). For others, the centrality of aesthetics within ecological restoration means

that 'the activity it [ecological restoration] resembles most closely is art' (Turner, 1990:

48), and that a sense of beauty is important within ecological restoration, as beauty

'...tells us what is relevant, what is likely, what is proper, what is fruitful' in restoration

efforts (*ibid*.: 49). Refining Turner, Jordan III identifies ecological restoration as a

specific type of artistic practice, namely the performing arts, arguing that restoration is akin to a number of performative genres such as comedy and ritual (Jordan III, 2003: 160-194).

Artists themselves have explored the aesthetic-restoration interplay head-on, recognising the artistic potential of ecological restoration actions. Blandy et al. (1998) provide a useful synopsis of some land and performance artists that have used land art as a means of restoring degraded ecosystems, including *7000 Oaks Action* (1982) by Joseph Beuys, a reforestation 'action' carried out in Kassel, Germany, and Betty Beaumont's *Ocean Landmark Project* (1980), which involved the construction of an artificial coral reef system in the Atlantic Ocean off the coast of New York; subsequent multimedia installations documented the project as a means '...to raise public awareness to the necessity of active participation in ecological and cultural restoration' (Blandy et al., 1998: 238). Other instances of artists-as-restorations include Harriet Feigenbaum, who carried out land reclamation of strip mines in Lackawanna Valley, Pennsylvania (Murray, 1991), while in Boston a group of artists and landscape architects joined together in 1989 to form Reclamation Artists, who have undertaken land restorations in and around the city (Brigham, 1993).

Further to this, it has been argued that various forms of environmental art can act as a conduit between restoration efforts and the public, giving '...form and voice to restored landscapes, thereby deepening our awareness and appreciation of natural processes' (Lambert and Khosla, 2000: 110). Meanwhile, Sayre (2010) provides an example that

raises some challenges regarding the place of the arts within ecological restoration. Sayre analyses the work of art critic John Van Dyke to demonstrate that within Van Dyke's 'aesthetic-mystical' writing about the arid and semiarid deserts of the southwestern region of the USA, he 'misread' them as sublime 'pristine' wilderness landscapes (Sayre, 2010: 24). This aesthetic still influences how contemporary restorationists determine the 'correct' goals of their practices in the region, which, Sayre argues, results in aesthetic 'satisfaction' but an ahistorical landscape state (ibid.: 30).[7]

Regardless of whether aesthetics is considered to be a central or secondary goal of ecological restoration, or whether or not ecological restoration is conceptualised as an artistic practice, there will always be aesthetic repercussions stemming from restoration activities. The aesthetic qualities and characters that arise from ecological restoration practices are often inseparable from the environmental ethical values held by restorationists, insomuch as these qualities and characters are a sensorial representation of a particular environmental ethic. For example, the messy and unscenic aesthetic qualities that are likely to emerge from rewilding - a particular type of ecological restoration that emphasises the role of natural processes so that restored ecosystems are self-sustaining and self-regulating - are a direct outcome of an environmental ethic that rejects continuous human management of landscapes and ecosystems (Prior and Brady, 2017). By contrast, restoration undertaken with the goal of producing a heritage park that seeks to hold in tension a dialectical relationship

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[7] It should be noted, however, that there is much debate within the ecological restoration literature regarding whether restoring to a historical landscape state is feasible or even desirable, particularly in light of rapid environmental change and climate destabilization (see Prior and Smith (2019) for a discussion of historical baselines in ecological restoration theory).

between nature and culture, can lead to neat, orderly, and legible aesthetic qualities and the emergence of a landscape character of functional beauty (Brady et al., 2018).

Much of the literature that has considered the implications of ecological restoration for ecosystem and landscape aesthetics, has done so from an environmental preferences perspective. Broadly, this research seeks to empirically investigate people's' aesthetic preferences for different ecological restoration outcomes. Junker and Buchecker (2008) consider the potential conflict between 'lay' aesthetic preferences and 'expert' ecological knowledge of different post-restoration river systems; using computer-generated images of different post-restoration scenarios of an undefined Swiss river to test aesthetic preferences, the authors conclude that there is a strong aesthetic preference for perceived 'naturalness' (as opposed to river channels that are evidently highly modified), which aligns with 'expert' assessments of likely ecological quality post-restoration. Likewise, Cottet, Piégay and Bornette (2013) demonstrate that there are no substantial differences between 'lay' and 'expert' judgments of aesthetic and ecological value of a wetland system in the east of France, while McCormick et al. (2015) arrive at a similar conclusion following an investigation of aesthetic and ecological assessments of a river system in Auckland, New Zealand.

A problem occurs, however, when the aesthetic qualities that emerge from restoration practices conflict with public aesthetic preferences; this is certainly a concern for the public acceptance of rewilding strategies (Prior and Brady, 2017). Paul Gobster provides an example of a restoration project in DuPage County in west Chicago that

was eventually terminated due to public resistance. Restoration ecologists developed a plan to restore 7,000 acres of densely wooded land to an oak savanna and open prairie ecosystem, that would have necessitated the felling of approximately half a million trees, and the removal of deer populations. While Gobster found that there was 'little wholesale opposition to the restoration'; rather, there were concerns over specific types of restoration practices (Gobster, 1997: 33-34). When concerns were expressed, aesthetic values were constantly invoked: the removal of the trees and brush would leave an open, 'barren' landscape that was ascribed with negative value; the trees had formerly screened 'urban sights and sounds' and buildings and roads; the loss of 'forest character' was assumed to be deleterious on adjacent property values; and recreation and wildlife values, including the opportunity to see deer, would decrease (Gobster 1997).

6. New Directions for Environmental Aesthetics

So far in this paper, we have provided an overview of the major theoretical approaches and concepts that have preoccupied environmental aestheticians over the last fifty years or so. In this final section, we want to explore new directions for future research within the environmental aesthetics subfield. There are many neglected areas that would be fruitfully addressed in future research: more discussion of artistic and other creative representations, expressions and interventions with respect to the natural environment; new explorations of environments that are modified by humans; a greater response to the critical environmental issues and changes of today, such as global

climate change, mass extinctions, species loss; adopting a more global perspective which engages with a variety of cultural aesthetic approaches; more exploration of negative aesthetic qualities, as well as experiences of places that are fast disappearing (glaciers, coral reefs). We shall discuss only a few of these, for there are many, indeed, given the relative infancy of the subfield, especially as compared to art-based aesthetics scholarship. In discussing new directions, it should become even clearer how environmental aesthetics fruitfully contributes to the burgeoning philosophical literature on the relationships between people and nature.

In this review, we have seen that there are moments within the history of environmental aesthetics where there has been some consideration of visual forms of media, most notably landscape painting, from an aesthetics perspective. We have also seen that environmental aestheticians have attempted to differentiate artistic from environmental experiences, so that nature is appreciated 'on its own terms', rather than from an artistic perspective; again, landscape painting is a notably conspicuous artistic genre within this discussion, particularly in relation to the assumed incorrectness of viewing landscape as a static pictorial scene (see especially Carlson, 2000). Nonetheless, we want to suggest that the subfield would benefit from interrogating the aesthetic qualities and values of media representations of nature and the environment, in a manner that accounts for the plurality of such media representations, which includes but is not limited to photography, film, music, and ecological and environmental art works, given the importance of these forms of media in communicating but also developing positive valuations of nature, landscape, and the environment.

Currently, such work is very sparse within what can be broadly construed as the philosophical environmental aesthetics literature. Environmental aesthetic theories have been brought to bear on landscape photography (see Friday, 1999), with particular attention being paid to photographic representations of the aesthetics of environmental degradation (Bürkner, 2014; Kane, 2018). Analyses of the photographic work of Edward Burtynsky are notable here, wherein the notion of the 'industrial' or 'toxic' sublime as an aesthetic category has been developed (Schuster, 2013; Ray, 2016; Zehle, 2008).

Scholars have also addressed how some artworks may support ecological flourishing and enhance a positive human-nature-relationship. Covering a wide range of artistic forms, including literature, architecture, photography, and installation art, Malcolm Miles (2014) has written a sustained account of different art works and art activism that cultivate an 'eco-aesthetic', as a means of imagining alternative futures to environmental collapse.[8] However, it has also been argued that some creative interventions directly in the land may constitute an aesthetic or ethical 'affront', being harmful to their surrounding environment (Carlson, 2000; Boaz Simus, 2007; Boetzkes, 2010). For example, although aesthetically attractive, many of the artworks by Christo and Jeanne-Claude may be said to use nature merely as a backdrop, with the artefact taking centre-stage.

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[8] See also Klaver (2014) on the role of landscape painting and photography in 'catalyz[ing] an environmental imagination' (p. 137).

We think that scholarship on media representations of nature can be productively developed in ways that do not necessitate the non-differentiation of environmental and artistic aesthetics, and instead develop from a position that considers artistic representations as mediators between, and expressions of, existing and possible future relationships between people and nature.

Overwhelmingly, environmental aesthetics has centred on the aesthetic qualities and values of landscapes that are perceived, rightly or wrongly, to be largely untrammelled by humans; strongly natural environments have dominated discussions about the aesthetics of nature. To be sure, this reflects a wider trend in environmental philosophy wherein cultural landscapes, particularly urbanised ones, have tended to be either ignored or constructed as places of disvalue (see Light, 2001). This situation is, however, starting to be rectified, if only in a rather piecemeal fashion. For example, gardens and gardening have received attention within the environmental aesthetics literature. Here, gardens have been highlighted as significant places where creative interactions and relationships of co-dependence between humans and nature may develop (Brady et al, 2018; Cooper, 2006), and as places of multisensory pleasure (Ross, 2007). Scholars have also dissected the aesthetics of different gardening styles, leading some to argue, for instance, that Japanese garden aesthetics exhibit a 'respectful attitude toward nature' as compared to Western formal gardens (Saito, 2017b: 154; Saito, 1998c), while others point to the 'artificial' qualities of Japanese gardens that create 'an idealized version of nature' (Carlson, 2000: 171).

Agricultural landscapes have also been examined, with emphasis placed on the aesthetic qualities and values of different modes of agricultural practices, including 'industrial' and 'traditional' farming (Arribas Herguedas, 2018; Brady et al., 2018; Arntzen and Brady, 2008; Carlson, 2000), alongside other productive landscapes, such as wind farms (Gray, 2014) and other 'energy landscapes' (Jørgensen & Jørgensen, 2018). Further, the environmental aesthetics literature has tentatively shifted its gaze towards urban landscapes, with an edited collection that contains essays on urban aesthetics and multisensory aesthetic appreciation of cities (Berleant & Carlson, 2007). Nonetheless, such 'modified environments', wherein a given landscape is evidently the outcome of both human and non-human forces (see Brady et al., 2018), are still relatively neglected, not to mention marginalised landscapes that elide being easily categorised as clearly natural or cultural landscapes, such as urban wastelands (Gandy, 2013) and novel ecosystems that are the outcome of inadvertent human activity (Higgs, 2017). We think it is important that environmental aesthetics scholarship continues to move beyond natural environments, not least because modified environments are ones in which a growing majority of the world's human population encounter non-human nature. Given emerging debates about the Anthropocene, environmental aesthetics can also make a valuable contribution by reflecting on issues at the intersection of aesthetics and ethics, as they relate to human influences on the natural world.

We have established that the philosophical environmental aesthetics literature has attended to environmental conservation and ecological restoration, yet we think that environmental aesthetics scholarship should be extended to accommodate other

pressing environmental issues. Philosophers have extensively examined climate

change from an ethics perspective, covering a broad terrain of issues, including climate

justice (particularly from an intergenerational perspective), geoengineering, carbon

budgets, and climate adaptation policies (Attfield, 2014; Gardiner et al., 2010 Preston,

2016). But there are relevant aesthetic questions to be explored, as well, which go hand

in hand with concerns about ethics and justice. In aesthetic terms, what kind of world

will be left to future generations in light of the catastrophic effects of climate breakdown?

How will losses affecting people and nature also become losses in aesthetic value, for

example, the loss of island and coastal landscapes that many people call home, or the

loss of beautiful bird species (Brady, 2014; Ziser & Sze, 2007)? Might these aesthetic

losses compound ecological grief (Cunsolo & Ellis, 2018)? Further, although there has

been some attention to aesthetic value and non-human animals (Parsons, 2007;

Tafalla, 2017), philosophical scholarship has thus far neglected the role of aesthetics in

biodiversity loss and extinction events.

Finally, environmental aesthetics tends to draw largely on North American, European

and Anglo-understandings of environment, with some work on Japanese aesthetics of

nature and gardens (Saito, 1998c, 2017b; Nguyen, 2018). Chinese scholars have taken

an interest in contemporary environmental aesthetics in the West but have been

developing their own distinctive theories as well, such as ecoaesthetics, which grapples

with the relationship between aesthetics and ethics (Cheng, 2013; Carlson, 2019).

Taking a cue from Saito (2010), environmental aesthetics ought to take up opportunities

to extend philosophical understandings of aesthetic valuing of nature to other global traditions, and to engage with contemporary debates beyond Western perspectives.

Data Availability Statement

No original empirical data were used for this manuscript.

Conflict of Interest

The authors have no conflict of interest to declare.

Authors' Contributions

Both authors wrote the manuscript and gave final approval for publication.

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