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The preservation of the Bosc de Tosca: complexities, challenges, and intergenerational aesthetics

Abstract

This paper explores the aesthetic aspects at play in the preservation efforts in the Bosc de Tosca to gain insight into the role of aesthetics in preservation of natural heritage. The preservation of landscapes entails a complex balancing between aesthetics and sustainability, as preservationist decisions based primarily on appearance may be at odds with pressing environmental concerns. If the area to be preserved is a constantly evolving and lived landscape, the interventions enacted on the place may affect the current appearance and the way in which the area is lived now and in the future. By resorting to the issues discussed in intergenerational aesthetics, this paper aims to show how including the potential aesthetic experience and values of future generations may help in making more aesthetically and environmentally sustainable decisions. The paper begins with a description of the Bosc de Tosca and its surroundings, its metaphysical status, and a description of the preservation approaches at play in the area. It then presents the main stakes of intergenerational aesthetics. It ends by discussing specific aspects of the preservation of the Bosc de Tosca area and aesthetic interventions to show the complex relationship between aesthetics and sustainability and how intergenerational aesthetics can contribute to both theory and practice of preservation taking into account environmental concerns.

Keywords
Intergenerational aesthetics, Philosophy of preservation, Geoheritage

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1. *Introduction*

"At the end, the criterion is aesthetic, everything is aesthetic".

With these words, Emili Bassols Isamat concluded our walk through the Bosc de Tosca or Tosca Forest, a protected area that is part of the Natural Park of La Garrotxa Volcanic Zone, the only volcanic area in the Iberian Peninsula. Emili is a biologist and the responsible for Park's Natural Heritage Section, he is passionate about his job and eager to protect the unique landscape and biodiversity of the park. That somebody with such a deep understanding and insight of the area, aware of the complexities in preserving and protecting it, acknowledges the centrality of aesthetic aspects in the Park's mission points to the importance of the role of aesthetics in preservation of natural heritage.

This paper explores the aesthetic aspects at play in the preservation efforts in the Bosc de Tosca area to not only show their importance in this specific case, but also to gain insight in the role of aesthetics in general in the preservation of natural heritage. The preservation of landscapes entails a complex balancing between aesthetics and sustainability, as preservationist decisions based primarily on appearance may be at odds with pressing environmental concerns. If the area to be preserved is a lived landscape constantly evolving, the interventions enacted on the place may affect not only the current appearance and the way in which the area is lived and experienced, but also that of future generations. Preservationist interventions that bring back aesthetic appearances from the past also bring other values associated with such aesthetic values, and these may well clash with our current cultural values. Our current concerns regarding the environment, climate change, and sustainable design, for instance, are not part of the worldview from a hundred or a hundred and fifty years ago. By examining the case of the Bosc de Tosca and resorting to the issues discussed in intergenerational aesthetics, this paper aims to show how including the potential aesthetic experience and values of future generations may help in making more aesthetically and environmentally sustainable decisions. Specifically, this paper centers on intergenerational aspects of aesthetics, given that preservation is also an intrinsic intergenerational endeavor, as it aims to protect objects, landscapes, and areas bearing in mind the potential aesthetic values and experiences of future generations. The paper begins with a description of the Bosc de Tosca and its surroundings, its metaphysical status, and a description of the preservation approaches at play in the area. It then pre-

sents the main stakes of intergenerational aesthetics. It ends by discussing specific aspects of the preservation of the Bosc de Tosca area and aesthetic interventions to show the complex relationship between aesthetics and sustainability and how intergenerational aesthetics can contribute to both theory and practice of preservation by taking environmental concerns into account.

2. *Description of the area*

The Bosc de Tosca, literally "Forest of the rough", short for "Forest of the rough stone", is a 210-hectare protected area in the north-east of Catalonia. It encompasses the municipality of Les Preses in the south and that of Olot in the north, which is the capital of the county of La Garrotxa, the only territory in the Iberian Peninsula with volcanoes. The Pedra Tosca is part of the Natural Park of La Garrotxa Volcanic Zone, a natural reserve created in 1982 to protect the unique geological environment and landscape of the area. The Natural Park of La Garrotxa Volcanic Zone is a 15-hectare Holocene volcanic field that includes forty volcanic cones ranging from 5000-7000 years old to 700.000 years old and around twenty basalt lava flows. It includes 28 natural reserves and 11 municipalities with a total population of ca. 40.000 [Figures 1, 2][1].

The area that is now the Bosc de Tosca was formed 11.500 years ago from the lava flow of the Puig Jordà volcano. Its geological specific interest stems from the presence of "tossols" or "rootless spatter cones" (Planagumà and Martí 2018: 295), little hills ranging 4-15 meters created when lava flows through wetlands. The thermal contrast creates small eruptions of evaporated water that further contribute to the formation of the hills. The area was covered with vegetation until the beginning of the 19th century, when the forest was felled and cultivation and agricultural usage began. The area's current cultural interest stems from this time: While volcanic soil is very fertile, it is also very rocky. In order to have agricultural land, farmers moved volcanic rocks by hand, one by one, to create the so-called "artigues" small and irregularly shaped fields for crops [Figure 3]. With the stones they removed, they created dry-stone walls to delimit the fields as well as huts or shelters to store farming tools and themselves in case of bad weather. Other remarkable structures are

[1] For more information about the Park see the Park's official website.

dry-wall constructions especially designed to preserve the "bufadors", jets of cold air emanating from subterranean caverns which were used to keep food cold in the summer (Planagumà 2022) [Figure 4]. Throughout the 20th century, the site degraded progressively because of the urban expansion of the surrounding towns of Olot and Les Preses, illegal dumping, the loss of traditional crops, and the lack of irrigation. In 1985, the site became officially protected and the project to restore the area began, in part with European funds. This entailed the revitalization of the ecological and environmental resources as well its cultural significance. It also entailed the official institutionalization of the preservation efforts, thus enabling a political framework from which to implement regulations, protective measures, and oversight.

Overall, the Bosc de Tosca can be described as the aggregation of many different sorts of protected areas and stakeholders under the auspices of the bigger institution that is the Natural Park of La Garrotxa Volcanic Zone. There is a very complex balance of interests and usages as well as intricate relationships among the various agents and the Natural Park of La Garrotxa Volcanic Zone. In addition to a mix of public and private properties, there are built and unbuilt areas, which include isolated houses and small neighborhoods; paved main roads, streets, dirt paths and walkways; actively used and abandoned areas; cultivated and highly curated zones and wild sections. The stakeholders include the cities of Olot and Les Preses, landowners, renters, subletters – it is sometimes not even clear who owns a specific piece of land, and it is estimated that there may be around one-thousand owners, some of which do not know that they are. Note that the Natural Park does not own property, it only oversees its management. This variety creates an eclectic aesthetic scape that includes a juxtaposition of sinuous dry walls and "artigues", cultivated fields, wild meadows, neat grass lawns, wild overgrown areas, vegetable gardens, homemade shacks, water tanks, abandoned tools, all sort of fences ranging from harmonious wooden structures to metal bedframes, houses of varied styles and sizes, and the Pedra Tosca Park [Figures 5,6,7, and 8]. Located in Les Preses, the Pedra Tosca Park is the only area in the larger Bosc de Tosca that is completely curated [Figure 9]. The aim of this preservation project is to bring back how the area looked like a century and a half ago while considering the fact that the area is inhabited and subject to inevitable human influence. To achieve this aesthetic outcome, traditional agricultural and architectural techniques, all related to the volcanic orography of the site, as well as traditional crops and livestock tending were reintroduced. Contrary to the other protected areas in Bosc de

Tosca, the Pedra Tosca Park is completely maintained by resorting public funding and is envisioned as a touristic attraction, which adds an additional stakeholder – the visitors to the area.

3. *Metaphysical status of the Bosc de Tosca*

Trying to exactly pin down what sort of entity the Bosc de Tosca is, i.e., trying to establish its metaphysical – fundamental and defining properties, presents some challenges. UNESCO includes the category of "mixed sites" or "mixed properties", in their list of world heritage sites. These mixed sites or properties "derive their outstanding universal value from a particularly significant combination of cultural and natural features" (UNESCO, Glossary of World Heritage Terms). Similarly, when discussing the aesthetics of preserved environments, Brady et al. (2018) coin the term "modified environments" to describe those spaces where the confluence between human and non-human agency, between culture and nature, make those spaces be what they are. They acknowledge a diversity of such modified environments – they discuss gardens, agricultural landscapes, ecological artworks, and ecologically restored places, but this category encompasses any environment modified by "anthropogenic causes or intentions" and "shaped by ecological and geological processes" (Brady et al. 2018: 6). They also acknowledge the dialectical relationship between the two agents, but emphasizing that it is a dynamic process, whose synthesis may never be final. Following these definitions, the Bosc de Tosca would count as a mixed site and a modified environment.

Brady et al. further state that "aesthetic experience in both the generation and appreciation of modified environments can contribute in part to developing particular kinds of ethical attitudes toward the natural world" and that "the intentional expressions of certain aesthetic values through landscape modification are concurrently expressions of an environmental ethic" (Brady et al. 2018: 3). At the Bosc de Tosca, however, aesthetic experience and environmental concerns are often at odds with each other. In order to preserve the "natural" appearance of the area and to try to achieve the look of the area as it was at the end of the 19th century, internal regulations of the natural reserve determined that some contemporary technological advancements, such as solar panels, could not be installed. Only as recently as January 2022 were inhabitants of the area allowed to install solar panels in their properties. Even in such cases

there are strict limitations: panels can only be installed if they do not interfere with the area's aesthetic appearance, having to be placed in areas not visible to the public, which excludes many southern-facing roofs that could provide optimal efficiency for solar panels, and must abide by a specific design, which entails the purchase more expensive panels. This hinders the introduction of more efficient and sustainable energy options crucial for the overall preservation of the area.

In addition to being considered a mixed and modified environment, the Bosc de Tosca falls into the category of geosite. Geosites are places of geological interest whose significance is determined by values such as uniqueness, representativeness, relevancy, place, time, or context[2]. Geoheritage is devoted to the preservation of geosites based on geological or scientific grounds and also based on aesthetic, cultural, pedagogical, and economic reasons. The preservation of geosites is closely related to geotourism, the "knowledge-based type of tourism" that situates the "tourism industry with the conservation and interpretation of geological heritage" (Planagumà, Martí 2018: 1). Geotourism is exerting great influence on the preservation of geosites, as it aims to promote sustainable economic and social development of the communities living in geosites. The intertwinement between geological and lived environment is strikingly present at the Bosc de Tosca, as the site of geological interest is surrounded and affected by urban growth, the people living in the area and increasingly the amount of tourists and visitors to the area and the Natural Park of La Garrotxa Volcanic Zone in general[3]. Because of the closeness to urban areas of some geosites, scholars speak of anthropogenic pressure to describe the urgency and necessity of preservation (AbdelMaksoud 2018).

The metaphysical status of the Bosc de Tosca is thus complex. Like other geosites affected by human intervention, the very geosite emerges when preservation is deemed necessary, that is, when destruction is of such a magnitude that what remains needs to be preserved. This preservation of destruction creates something new (Capdevila-Werning 2020). There is no aim to return to an ideal and untouched state of nature –

[2] For a general context see UNESCO's International Geoscience and Geoparks Programme (IGGP) and for criteria see the Global Geosites Project by the Instituto Geológico y Minero de España.

[3] Incidentally, since the eruption of the volcano Cumbre Vieja on the island of La Palma in the Canary Islands in September 2021, the interest in vulcanology has increased exponentially in Spain and so have the visitors to La Garrotxa.

which would be impossible, but relatively recent transformations are embraced. In Bosc de Tosca, this entails the recovery of the "artigues", the adaptation of the former railway path into a bike path, and the non-demolition of structures built without permission in the past. The geological history of the site becomes only explicit through instances of human-caused destruction. In La Garrotxa, the awareness towards the geological heritage began in the 1960s, when the exponential increase of industrial exploitation of volcanic sites fostered the grassroot campaign "Salvem els Volcans", "Save the volcanoes" in the 1970s, which was institutionalized with the creation of Natural Park of La Garrotxa Volcanic Zone in 1982[4]. The history of the place as geologically relevant emerged once the destruction had already occurred. This means that the geological ground of the geosite is in a sense a human product as well, since the physical changes in the site were human-made and the geosite becomes what it is due to radical human intervention. The further preservation of the geosite entails a physical aspect and a conceptual one, since without the value conveyed to the geological features there would have been no reason to preserve them, nor would the place have become a geosite. That is, the metaphysical status of geosites relies on cultural, historical, legal, economic, and conceptual contexts. Tourism is the central economic factor that plays a key role in the creation of the site, because most of the interventions in such natural reserves are not just to recover and protect the landscape, but precisely to allow access and visibility while protecting the site from such access. In the case of the Bosc de Tosca and specifically the Pedra Tosca Park, given its volcanic and geological significance, criteria of geoheritage are taken into account in order to promote sustainable tourism in addition to the recovery of traditional activities. To preserve Bosc de Tosca area, and per extension, the entire volcanic area, entails that the sites are made public (remember that the Natural Park is publicly managed with state funds), which means both granting cultural value and open access so that they become common goods. The more value of a site, the more public awareness there is and the more tourism is gener-

[4] For a detailed discussion on the history and creation of the Natural Park see: Bassols 2007 and 2008; Gil 2011; Planagumà 2017; Martí and Planagumà 2017).

ated, which means that the site is more prone to being damaged and consequently more protection is needed – a catch-22 situation. Preservation approaches are thus central[5].

4. *Preservation approaches*

At the Bosc de Tosca, a variety of preservation criteria are in play, depending on the area, the type of site, and also on jurisdiction. The Natural Park issues recommendations, permits for certain interventions, oversees that rules are followed, but it does not have punitive functions, which fall into the corresponding municipalities. Their preservation efforts are thus limited.

For Emili Bassols, the responsible for the Park's natural heritage, several criteria are intertwined. Aesthetic reasons are part of them. During our walk, he pointed out a series of things that should be changed or should not be there at all. In the first place, there were the things that "fan lleig", literally that "make ugly", things that are eyesores or have a bad appearance. By this he means those unnecessary additions to the space that could be done in a less intrusive way and that clearly do not belong to the area: plastics to cover the earth so that plants do not grow and no tending is required; fences made out of bedframes obstructing views and movement for animals; locked accesses, concrete slabs, runes, unauthorized additions to existing houses that include foreign materials and designs; chicken coops, pasturing fields for horses that are too small causing overgrazing and soil erosion; plastic drum barrels, uralite roofs, basketball hoops and volleyball nets, to mention a few that we saw. In the second place, there are those areas that are too curated and cultivated: pristine grass fields regularly watered and mowed, perfectly geometric hedges made with nonnative plants; stonewalls made out of local volcanic rocks, but not following the traditional drywall system; huts built by anonymous builders transformed into highly designed houses using brick, concrete, and other materials, thus acquiring a more permanent character. From an aesthetic perspective, all these curated interventions may be perceived as pleasing or even beautiful; however they are not suitable to their context, and are thus deemed inappropriate. In the third place,

[5] For a thorough discussion on geosites and their philosophical status see Capdevila-Werning 2020.

there is the central issue of how to preserve biodiversity and indigenous flora and fauna. Currently, the Park is inundated by invasive species that are endangering autochthonous plants. Given the multiplicity of stakeholders and the lack of funding, even attempting to get rid of non-indigenous species becomes a Sisyphean task. Nevertheless, some actions can be taken to ameliorate the situation, such as promoting biodiversity by cultivating meadows and fields with a variety of indigenous plants, not a single crop, bringing awareness of the negative consequences of invasive species, and encouraging stakeholders to not actively grow them. In terms of environmental aesthetics, Emili's approach is clearly a cognitive one: one needs to have some sort of knowledge or understanding in order to be able to appreciate the nature (Carlson 2020). Here is one case: what seemed to me just a spot with plants growing wildly, was for him perfectly representing the symbiotic relationships of the area's biotope.

In addition, there is the issue of controlling the growth of vegetation to preserve drywalls, "artigues", sheds, huts as well as access to paths. This is easier said than done because the apparently simple task of pruning, mowing, or getting rid of plants has relevant consequences. In the not so distant past, the clearing of paths and drywalls was done by the inhabitants of the area with a sickle while walking. This meant that the plants were cut recurrently but at different lengths and places. Nowadays, this task is done mechanically, cutting everything at once and very short. Consequently, the stones are more exposed to the weather, animals do not have a place to hide and, depending on the timing, flowers may not grow, thus affecting bees and other symbiotic relationships at place. If animals such as rodents lose their natural habitat, then they move to cultivated fields, thus affecting the crops and forcing farmers to resort to more aggressive measures to protect their fields (all within the limits of a natural reserve) or risk losing the harvest[6]. So, clearing paths and drywalls to protect them and to create a clean, organized, and well-tended appearance, all aesthetic terms, results in undesirable environmental consequences.

Lastly, there is the very specific preservationist approach taken in the Pedra Tosca Park. The purpose of bringing back the area to how it looked like one-hundred and fifty years ago is paradoxically achieved with one

[6] I am thankful to Montse Miralles, from Can Maia, and Rosa Compta, from Can Païssa, who live in the Natural Park of the Volcanic Zone of La Garrotxa, for having shared with me the intricacies of tending their surroundings.

exception, which is that of making the area available to visitors, thus creating an infrastructure suitable for tourism and introducing an economic activity that was not present in the past, or at least not in today's magnitude. To do so, RCR Arquitectes, a team of local architects and 2017 Pritzker Prize awardees, designed the area and made modifications and physically intervened in the space. They included points of access and a series of labyrinthine paths architecturally delineated for visitors to explore the site. So, aesthetically speaking, what we find at the Pedra Tosca Park is a combination of two sets of aesthetic and cultural values, ones from the mid- to end of the 19th century, and the others from the turn of the 21st century [Figure 10].

All these present considerations about how to preserve the site concern also the future, as they affect how the site will endure and how it will be lived and experienced. In this sense, sites are intrinsically intergenerational entities, as they are preserved not only for us today but mainly also for future generations.

5. *Intergenerational aesthetics*

Given that preservation is an intergenerational endeavor and aesthetic criteria play an active role in preservation, intergenerational aesthetics can offer a particularly interesting insight in terms of conceptual framework and actual practice. Intergenerational aesthetics offers criteria to determine what aesthetic decisions should be taken now bearing in mind the potential aesthetic experience of future generations. In addition, intergenerational aesthetics aims to include the potential aesthetic experience and judgments of future generations to the current aesthetic reflection and practice. Similar to environmental ethics and intergenerational justice, it focuses on aesthetic values in terms of obligations towards future generations. This is central considering the pressing concern regarding our present situation in terms of environment and sustainability. If the possibility of changes in taste is not accounted for, then some places or structures that would have been appreciated in the future may disappear.

Putting intergenerational aesthetic concerns at the center acquires a broader significance if one considers that aesthetics is mainly a cognitive endeavor. Following Nelson Goodman, I take the objects of aesthetic appreciation as symbols that convey meaning. These aesthetic features grant unique cognitive access to our surroundings, convey meaning, and are open to interpretation (Goodman 1968; 1976; Goodman and Elgin

1988; Elgin 2017; Capdevila-Werning 2014a). This conception of aesthetic experience entails that feelings and emotions are already cognitive. Together with our senses and any other prior knowledge, understanding, and experiences we have, we engage in a cognitive process of interpreting what surrounds us, creating meaning and gaining understanding of the world and of ourselves. From an intergenerational perspective, aesthetic decisions have epistemological consequences, as they determine not only the possibilities of perception, but also the cognitive access of future generations. Intergenerational aesthetics entails an essential normative component and proposes a set of general principles or guidelines for both theory and practice:

- Aesthetic decisions made in the present should not foreclose future aesthetic judgment, experience, attribution of values, nor limit the possibilities of interpretation and meaning.
- Aesthetic decisions should maintain access to existing aesthetic values and taste, but not impose one's aesthetic worldview to future generations.
- Aesthetic decisions should also aim at non-deception and at seeking truthfulness whenever possible.

To do so, one should consider the potential future appearance of something. This may require an act of creative imagination and the acknowledgment that not everything can be controlled nor determined, as shown in garden preservation (Salwa 2019) or unintended results in rewilding projects (Prior and Brady 2017). The passing of time and its effect should be acknowledged, since it seems evident that taste and what is aesthetically valued evolves, and making decisions assuming permanent or even universal values has an influence on the aesthetic perception of future generations. To avoid imposing present aesthetic taste and preferences, intergenerational aesthetics considers all sorts of aesthetic values, positive and negative, since what is a positive value now may not be so in the future. Intergenerational aesthetics considers the possibility of aesthetic obsolescence and that such obsolescence may turn into desirability in the future.

All these normative claims have practical outcomes. Aesthetic decisions made considering future generations do not need to generate identical aesthetic outcomes nor be equally appropriate: modularity and adaptability provide a response to the uncertainty of not knowing the needs or preferences of future generations. They also open the possibility of aesthetic choices and thus do not foreclose aesthetic appreciation nor

the possibility of change in taste since a project's inception. Intergenerational guidelines also offer criteria to decide upon preferable preservationist interventions. Preferability may also be assessed in terms of symbolic functioning of preserved structures (Capdevila-Werning 2014b), as it is argued that one of the main roles of restoration is to preserve symbolic functioning (Elgin 1997) and, consequently, at an epistemological level, preserve cognitive access. In historic preservation, interventions can be assessed according to their role in fostering truthfulness and avoiding deception. Such interventions range from less invasive practices like cleaning and maintenance; archaeological restorations where the intervention is visible; integral restorations that bring back original appearance without hints that it is a restoration, palimpsests of matter showing the passing of time; and total reconstructions, which may be faithful or an act of creative imagination (Capdevila-Werning 2012, 2013, 2015, 2017).

6. *The Bosc de Tosca and intergenerational aesthetics*

Bearing these intergenerational aesthetics criteria in mind, let us take a closer look at the Bosc de Tosca and discuss the interventions in terms of aesthetics and environmental sustainability. Given that the Pedra Tosca Park has such specific characteristics that set it apart from the rest of the Bosc de Tosca, it will be discussed separately.

The reasons for preserving the area are obvious: to avoid further destruction of the site and to recover and protect an area of natural, geological, and cultural interest. Bassols (2013) lists the "threats" to the site: urban growth; urban pressure; construction of transmission towers; urban recklessness; barracks and accumulation of residues; affectations derived from the use of the area for livestock; flattening and landscaping linked to residential or recreational uses; inappropriate constructive solutions; lack of visualization, perception and, consequently, valorization. These threats reflect the state of the area and are the ones that for the Natural Park become "management challenges". In order to face these threats, a series of norms and very specific construction solutions for installing fences and building walls were passed. Most of them are based on aesthetic criteria, not sustainable ones (otherwise solar panels and other environmentally-friendly technologies would have been allowed a long time ago). Note that the structures that are being preserved were originally spontaneous, made by anonymous farmers without any plans

nor following regulations. So the preservation is already changing some of the aspects of the area in order to preserve it. In terms of intergenerational aesthetics, these solutions are imposing one's current aesthetic vision to the future while obscuring those existing in the past.

Perhaps the most glaring example of imposing one aesthetic vision to an entire landscape is found in the Pedra Tosca Park. The aesthetic appearance that aims to be recreated is that of the 19th century pre-industrial time with a romanticized vision of nature (and if there are traces of past industrial activity, such as the former railroad track, these are also re-naturalized and covered with greenery). This vision is tamed by what Boym terms the "future of nostalgia": the "longing for a home that no longer exists or has never existed", "as a sentiment of loss and displacement, but […] also a romance with one's own phantasy" (Boym 2001: 7). This phantasy is that of turn of the 21th century understanding of what nature (cultivated/curated nature) should look like. This aesthetic vision entails erasing or making invisible any traces of contemporary technology, be it sustainable or not. The haystacks in the meadows in the Pedra Tosca Park need to be hidden as much as possible because of the plastic necessary to protect it; the cows pasturing are on foreground. There is a process of beautification where any traces of human activity that is actually necessary for life are being taken out of sight, forbidden, or controlled.

Check, for instance, the relatively new sheds for tools that have been designed and imposed by the Park's management: a dark rectangle made out of wood and steel that eerily resembles minimalist artworks [Figure 11]. There is thus a superimposition of a certain romanticized vision of nature with minimalist modern aesthetics. These sheds aim to replace more spontaneous storage facilities and at not using the original stone storage structures, which are now merely mementos from the past or tourist attractions. In other words, the interventions proposed reflect a certain current aesthetic and also cultural values. And these values are not carried out on bearing in mind sustainability issues or the fact that the area is inhabited, even though they are implemented to preserve the area, and here is where intergenerational aesthetics could help. Sheds, of different sizes and with rain-water collectors and mini solar panels, could be modular and adaptable through time, both in their use and appearance. In that way, the sheds would address the sustainability concerns of the present time and also account for the possibility of change in taste in the future.

The clearest example of how frozen-in-time and not future-oriented the Pedra Tosca Park are the "artigues": some of them are preserved as empty spaces, regularly mowed but not cultivated; other are planted with traditional crops, such as buckwheat, turnips, corn, and rapeseed. The Park also promotes an art program where one is encouraged to paint the landscape as the artists during the second half of the 19th century did, precisely the period that is evoked in the preservation. This picturesque experience of nature is the one that was most popular during the 18th and most of the 19th century (Carlson 2020); so perhaps it is not a simple coincidence that they promote of such artistic picture-like approach to nature. The artists of that time founded the so-called School of Olot, which promoted a realistic landscape painting which is also tied to the cultural renaissance of Catalan nationalism at that time. Restoring the Pedra Tosca Parc to that period, thus entails a whole set of cultural meanings which may be related to a current nostalgia for a certain past, as mentioned before.

In intergenerational terms and going back to the criteria presented before, first, one could say that it is foreclosing future aesthetic judgment, as it aims to provide a very specific aesthetic appearance. Second, regarding the criterion of non-deception, we could perhaps venture that the two layers will be perceivable: that being recreated (19th) century, and the 20th-21st century interpretation of that time including all the nostalgic and nationalistic connotations it carries – since the 2010s there has been a political grassroots movement calling for Catalan independence. In that sense, this criterion would be fulfilled. Note that, ironically, the artists that contributed to the campaign to protect the area and "Save the Volcanoes" were not the representatives of the second or third generation painting in the traditional style of the School of Olot, whose subject is precisely this landscape, but younger artists creating in more contemporary styles. So another aesthetic layer can be added to the mix.

The appreciation of the "artigues" is mediated or made possible by a second intervention, which is that by RCR Arquitectes (Fairs, 2007). Since 1989, they also happen to be also the architects assessing the Natural Park, thus with the power to determine aesthetic outcomes and shape the landscape's appearance; they were the instigators of the minimalist sheds discussed above. RCR's works are typically site-specific, designed and conceived bearing in mind the uniqueness of the place. At the same time, while aesthetically referring to the local by paying close attention to site-specific materials, textures, and traditional structures, also claim universal values. The Pritzker Prize Jury pointedly praised RCR's work as

an architecture that has its "roots firmly in place" and its "arms outstretched to the rest of the world". Their intervention that the Pedra Tosca Park is not an exception. In their intervention, the corten-steel that delimits the paths seems to have been always part of the existing landscape: just as the basalt rocks seamlessly slope and become pave gravel, the corten, with its rusty surface and texture, seems to have been found while excavating the site despite being one of its most recent additions. The architectural elements are integrated so deeply within the landscape that they almost disappear or become part of it and the histories of the site come to the fore[7].

The passing of time is ineluctably present in the Pedra Tosca Park. The corten steel, for instance, with its feature of aging over time, marries human endeavors to a geological temporality, as this kind of steel is specifically designed to age rapidly, as if accelerating natural weathering processes and compressing time. Just as their work is both local and universal, in RCR's employment of materials one finds again the synthesis of two generally opposed features, the new and the old, the contemporary and the ancient. In fact, RCR's work has been characterized by breaking traditional architectural dualities, such as built and unbuilt, interior and exterior, or materiality and void that, for many, engage with human's core experiences of space, time, and existence. As beautiful and as appealing as the connections between local and global and the collapsing of space and time may be, from an intergenerational and environmental perspective, this intervention may not have been the most appropriate decision. This is clear if one considers the main material of the intervention: corten-steel. From a technical point of view, corten-steel forms a layer of rust that protects the steel underneath from deterioration so that paint is not needed. But this process requires specific environmental conditions that not always occur: if the steel gets wet and dries out, the rust layer becomes thicker and the underlying solid steel thinner. It takes two to three years for the corten-steel to stabilize, and then one should have a maintenance-free material. But if the conditions are not ideal, the rust layer never stabilizes and interventions may be needed. In addition, the extraction of iron and production of steel are clearly not environmentally friendly: the iron and steel industry is the largest global source of CO2 and the second-largest industrial consumer of energy.

[7] For a detailed discussion of RCR's works and their intervention in the Pedra Tosca Park specifically, see Capdevila-Werning 2023.

7. *Conclusion*

Considering the intergenerational criteria mentioned above, perhaps one should find ways to preserve this natural environment without further creating a negative environmental impact. In terms of aesthetics, some very specific solutions could entail using more environmentally-conscious materials and modular and adaptable structures both in use and appearance. One could also begin introducing renewable technologies, such as solar panels, modern irrigation systems, maybe even windmills. Currently, transmission towers traverse the Bosc de Tosca and they have a clear aesthetic impact; more sustainable options could replace them. We may even learn to aesthetically appreciate them as we relate them to environmentally-friendly alternatives, as Saito (2004) suggests happens wind turbines. There seems, however, to be a long way to go: the Natural Park of La Garrotxa Volcanic Zone just approved the installation of a metallic fence surrounding one of the most relevant volcanoes in the park, the Croscat, in order to prevent further erosion of the volcanic soil and layers. Designed by RCR Arquitectes and budgeted at half a million euros, the fence is made with materials extraneous to the area, a high carbon footprint, and with a very specific non-alterable aesthetic appearance.

In general, then, having the guidelines and criteria of intergenerational aesthetics in mind may help in assessing actual preservationist interventions and strategies. It may also be a useful conceptual framework to address the complexities of modified environments and preserved spaces, foster bottom-up dialogue and solutions among stakeholders rather than bottom-up impositions of aesthetic solutions. If we were to make aesthetic decisions that do not foreclose future aesthetic judgment or experience, nor impose our own aesthetic worldview to future generations and aim at non-deception, then geosites and natural reserves and parks in general could preserve not just the natural and geological heritage of the area, but also the past and the present aesthetic appearance and experience without environmentally jeopardizing the future.

Bibliography

AbdelMaksoud, Kholoud M., Al-Metwaly, Wael M., Ruban, Dmitry A., Yashalova, Natalia N., *Geological heritage under strong urbanization pressure: El-Mokattam and Abu Roash as examples from Cairo, Egypt*, "Journal of African earth sciences", n. 141 (2018), pp. 86-93.

Bassols Isamat, E., *Els volcans salvats*, "Revista de Girona", n. 258 (2008), pp. 60-5.

Bassols Isamat, E., *Parc Natural de la Zona Volcànica de la Garrotxa, 25 anys de gestió del territori,* "Annals del Patronat d'Estudis Històrics d'Olot i Comarca", n. 18 (2007), pp. 189-245.

Bassols Isamat, E., *El patrimoni arquitectònic rural del Bosc de Tosca (Les Preses, La Garrotxa). Un patrimoni protegit, però... conservat?*, "VII Trobada d'estudi per a la preservació del patrimoni en pedra seca als Països Catalans, Parc de Pedra Tosca", Les Preses 17, 18 i 19 de maig de 2013, https://pedrasecaarquitecturatradicional.cat/wp-content/uploads/2019/07/Bosc-de-Tosca-Les-Presses-E-Bassols.pdf (accessed: 10/12/22).

Boym, S., *The future of nostalgia*, New York, Basic Books, 2001.

Brady, E., Brook, I., Prior, J., *Between nature and culture. The aesthetics of modified environments*, London, Rowan & Littlefield, 2018.

Capdevila-Werning, R., *From Berliner Stadtschloss to Humboldt-Box and back again: architecture in the conditional*, "Proceedings of the European society for aesthetics", n. 4 (2012), pp. 136-48, http://proceedings.eurosa.org/4/capdevila 2012.pdf (accessed: 10/12/22).

Capdevila-Werning, R., *Constructing the absent – preservation and restoration of architecture*, "Proceedings of the European society for aesthetics", n. 5 (2013), pp. 163-77, http://www.eurosa.org/volumes/5/CapdevilaESA2013.pdf (accessed: 10/12/22).

Capdevila-Werning, R., *Goodman for architects*, London, Routledge, 2014a.

Capdevila-Werning, R., *Restaurierte und rekonstruierte Zeichen: Symbole und Baudenkmalpflege*, "Zeitschrift für Semiotik", n. 36/1-2 (2014b), pp. 125-50.

Capdevila-Werning, R., *Palimpseste in der Architektur: ein symboltheoretischer Zugang*, in J. Gleiter, L. Schwarte (eds.), *Architektur und Philosophie*, Transcript, Bielefeld, 2015, pp. 207-17, 277-80.

Capdevila-Werning, R., *Every difference makes a difference: ruminating on two pavilions and two modernities*, in J.J. Lahuerta et al. (eds.), *Mies van der Rohe – Barcelona, 1929*, Barcelona, Tenov, 2017, pp. 202-33.

Capdevila-Werning, R., *Preserving destruction: philosophical issues of urban geosites*, "Open philosophy", n. 3/1 (2020), pp. 550-65, https://doi.org/10.1515/opphil-2020-0137 (accessed: 10/12/22).

Capdevila-Werning, R., *Renegotiating globality: Catalan architecture in a transnational context*, "Catalan review", n. 37 (2023), forthcoming.

Capdevila-Werning, R., Lehtinen, S., *Intergenerational aesthetics: A future-oriented approach to aesthetic theory and practice*, "Philosophical Inquiries", n. 9/2 (2021a), pp. 175-98, doi: 10.4454/philinq.v9i2.343 (accessed: 10/12/22).

Capdevila-Werning, R., Lehtinen, S., *A first approach to intergenerational aesthetics: theoretical stakes, practical examples, and future research avenues*, "Proceedings of the European society for aesthetics", n. 13 (2021b), pp. 43-58.

Carlson, A., *Environmental aesthetics*, in E.N. Zalta (ed.), *The Stanford encyclopedia of philosophy (summer 2020 edition)*, https://plato.stanford.edu/archives/sum2020/entries/environmental-aesthetics/ (accessed: 18/9/22).

Elgin, C., *Preservation and work identity,* in *Between the absolute and the arbitrary*, Ithaca, Cornell University Press, 1997, pp. 97-109.

Elgin, C., *True enough*, Cambridge, MIT Press, 2017.

Fairs, M., *Pedra Tosca Park by RCR Arquitectes*, "De Zeen", 14 February 2007. https://www.dezeen.com/2007/02/14/pedra-tosca-park-by-rcr-arquitectes/, (accessed: 18/9/22).

Gil Farrero, J., *Ciència i medi ambient a Catalunya. La Gestació del Parc Natural de la Zona Volcànica de la Garrotxa (1975-1982)*. Master's Thesis "History of Science: Science, History, and Society", Universitat Autònoma de Barcelona, Universitat de Barcelona, 2011.

Goodman, N., *Languages of art. An approach to a theory of symbols*, Indianapolis, Bobbs-Merrill, 1968.

Goodman, N., *Ways of worldmaking*, Indianapolis, Hackett, 1976.

Goodman, N., Elgin, C., *Reconceptions in philosophy and other arts and sciences*, Indianapolis, Hackett, 1988.

Instituto Geológico y Minero de España. Proyecto Global Geosites. http://www.igme.es/patrimonio/GlobalGeosites.htm#lugar (accessed: 18/9/22).

Martí, J., Planagumà, L. (eds.), *La Garrotxa Volcanic field of Northeast of Spain: case study of sustainable volcanic landscape management*, Cham, Springer, 2017, https://doi.org/10.1007/978-3-319-42080-6.

Parc Natural de la Zona Volcànica de la Garrotxa. *La Garrotxa zolcanic zone natural park*, https://parcsnaturals.gencat.cat/en/xarxa-de-parcs/garrotxa/inici/ (accessed: 18/9/22).

Planagumà, L., Martí, J., *Geotourism at the natural park of La Garrotxa volcanic zone (Catalonia, Spain): impact, viability, and sustainability*, "Geosciences" n. 8/8, 295 (2018), https://doi.org/10.3390/geosciences8080295 (accessed: 18/9/22).

Planagumà, L., *Els bufadors volcànics*, Geonat, Parc Natural de la Zona Volcànica de la Garrotxa, Olot, 2022.

Planagumà, M., *Salvem els volcans*, Olot, Òmnium Cultural, 2017, https://vimeo.com/246945981 (accessed: 10/10/22).

Prior, J., Brady, E., *Environmental aesthetics and rewilding*, "Environmental Values", n. 26/1 (2017), pp. 31-51.

Saito, Y., *Machines in the ocean: the aesthetics of wind farms*, "Contemporary Aesthetics", n. 2 (2004), http://hdl.handle.net/2027/spo.7523862.0002.006.

Salwa, Mateusz, 2019, "The aesthetics of garden conservation", in *Aesthetic investigations. Special issue - Restoration* 2, 2, pp. 163-183, https:// doi.org/10.5281/zenodo.4073315 (accessed: 10/10/22).

UNESCO. *Glossary of world heritage terms. June 1996*, http://whc.unesco.org/archive/gloss96.htm, (accessed: 18/9/22).

UNESCO. International geoscience and geoparks programme (IGGP). https://en.unesco.org/international-geoscience-and-geoparks-programme (accessed: 18/9/22).

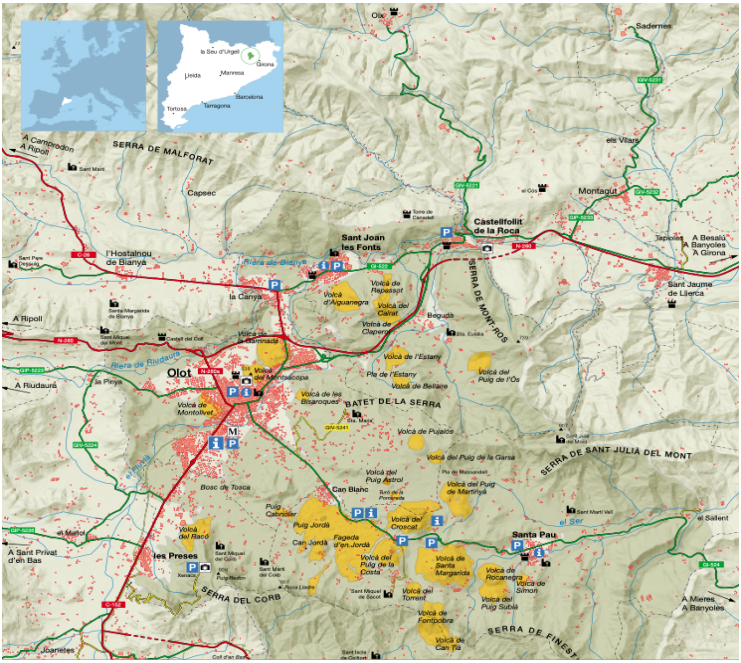

Figure 1. Map of the Natural Park of La Garrotxa Volcanic Zone. Source: Parc Natural de la Zona Volcànica de la Garrotxa, Plànol del Parc Natural. UTM fus 31N, European Datum 1950. Institut Cartogràfic i Geològic de Catalunya.

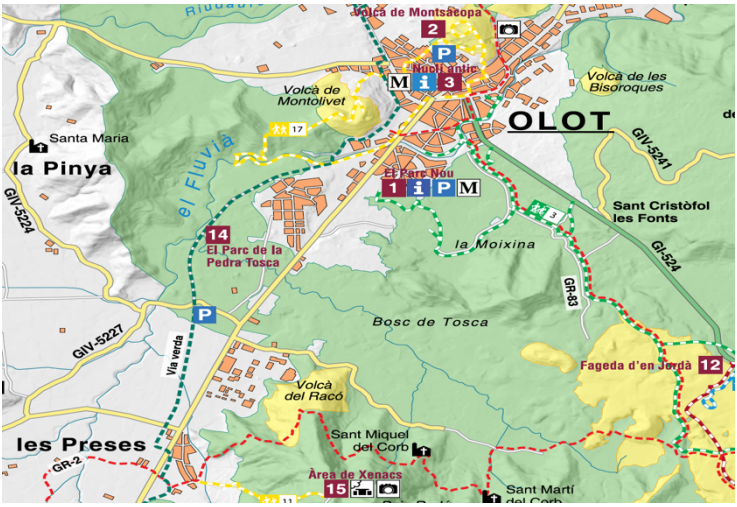

Figure 2. Bosc de Tosca. Excerpt from Map of the Natural Park of La Garrotxa Volcanic Zone. Source: Map/Guide, Parc Natural de la Zona Volcànica de la Garrotxa, Generalitat de Catalunya, December 2017.

Figure 3. Artigues. Photo courtesy of Emili Bassols Isamat.

Figure 4. Dry-wall hut built above a "bufador". Photo by author.

Figures 5, 6, 7, 8. Various views from the Bosc de Tosca. Photos by author.

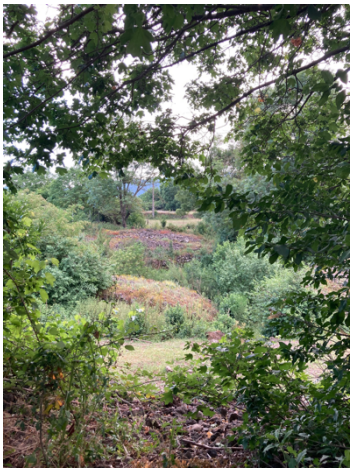

Figure 9. Parc de la Pedra Tosca. Photo courtesy of Peter Minosh.

Figure 10. Parc de la Pedra Tosca. Photo courtesy of Peter Minosh.

Figure 11. Minimalist shed next to traditional dry-wall shed. Photo by author.