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Biocultural Heritage and Rewilding Mountainous Landscapes

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Abstract

This chapter explores the notion of biocultural heritage as expressed in recent policy documents and academic literature, and compares it with what occurs in the field. The analysis is located in the mountainous rewilding landscape of the Côa Valley in northeastern Portugal. Through ethnographic fieldwork, this chapter recounts the ways that human-environment relations stretch back to deep time. In the geographic specificity of a mountainous landscape, the rewilding initiative shines a light on how agricultural practices, rural identities, and rock art are bound together, yet co-exist in tension. Continuous engagement between rewilding managers and local communities is required to work towards a shared vision for biocultural heritage futures.

Keywords: rewilding, biocultural heritage, heritage futures, mountain landscapes, ethnography

Introduction

There is increased recognition that biocultural heritage integrates the concepts of biological diversity with cultural heritage. These concepts often refer to ensuring the diversity of fauna and flora (biological and ecological diversity), while taking on board Indigenous and local communities' knowledges and practices (cultural heritage). However, the extent of local community traditions and identities in the recognition, production, and management of biocultural heritage remains an open question, particularly in circumstances when rural communities are faced with interest from nature conservation charities and organizations to undertake rewilding initiatives.

In this chapter, I investigate the conceptualization of biocultural heritage from recent reports, policy documents, and academic literature and apply it to the rewilding of mountainous landscapes. To do this, I situate my analysis in the Côa Valley in northeastern Portugal, where rewilding is bound up with agricultural practices and Palaeolithic rock art. I explore how the geographic specificity of the mountainous landscape, combined with the presence of rock art and the traditions of local mountainous communities, provides a complex web of past and present encounters.

If rewilding proposes to envision 'wilder' future landscapes by restoring natural processes, then in what ways can local cultural traditions feed into biocultural heritage futures? Ongoing tensions between rewilding advocates and local communities revolve around working through each other's perspectives and understanding the different future timescales that are involved. To navigate common tensions in rewilding initiatives, one way forward is to conduct periodic engagement with rewilding managers and local communities to uncover underlying values, find

solutions to persisting tensions, and discuss alternative visions for an area's biocultural heritage future.

Biocultural Heritage

In a 2008 report, UNESCO defined biocultural heritage as 'living organisms or habitats whose present features are due to cultural action in time and place' (UNESCO 2008, 8; also in Erikson 2018, 2). This definition can be broken down to understand its fundamental principles. First, by alluding to living organisms or habitats, the definition is aligned to 'natural heritage', considering natural features and habitats that are deemed valuable for the survival of the planet. Second, the definition speaks to cultural elements in action. The importance of being in action suggests that neither nature nor culture is static, that both are enacted. Indeed, this leads to the third breakdown in the definition: the importance of time and place. Overall, the definition highlights how cultural actions through time and in place have shaped the presence of living beings and natural environments.

Since that report was published, the term 'biocultural heritage' has evolved to include a multitude of definitions. Ove Erikson, who speaks of 'biological cultural heritage', suggests the following definition: 'biological manifestations of culture, reflecting indirect or intentional effects or domesticated landscapes, resulting from historical human niche construction' (Erikson 2018, 5). Here, by focusing on indirect or intentional effects as well as the human, Erikson points to how values—whether they are personal or communal—can influence landscapes. He identifies a set of criteria for biological cultural heritage to occur which all hinge on time (whether currently applied traditions or memories) and feelings (whether through identity, sense of place, or aesthetics). Erikson's contribution, therefore, is to consider the emotional and subjective engagements linking nature and culture. Erikson's conceptualization aligns with Karl-Johan Lindholm and Anneli Ekblom's definition of biocultural heritage as 'an understanding of cultural landscapes as the result of long-term biological and social relationships, shaping the biological and material features of the landscape and also memory, experience and knowledge' (2019, 2). In this definition, the use of 'shaping' suggests present practices that impact on the future.

As reflections on biocultural heritage gradually included the consideration of wider landscapes, specifically in the field of development studies, definitions started to shift towards two areas in particular: sustainable development and Indigenous communities. According to the International Institute for Environment and Development (IIED), biocultural heritage concerns 'the knowledge and practices of Indigenous people and their biological resources, from the genetic varieties of crops they develop, to the landscapes they create' (IIED, n.d.). The IIED's definition places a strong emphasis on Indigenous peoples—including their particular practices, such as the management of crops and landscapes. Furthermore, the definition also points to the genetic varieties of crops, suggesting that biocultural heritage integrates the concepts of biodiversity: the diversity of fauna and flora (biological and ecological diversity) with Indigenous traditional knowledges and practices. In a 2021 brief from Heritage and Our Sustainable Future (HOSF) conference series, biocultural heritage is associated with the United Nations' Sustainable Development Goals and the interdependence of nature and culture (UNESCO 2021). A key recommendation is that 'Indigenous Peoples' and local communities' knowledge and expertise provide alternative paradigms for sustainable development' (UNESCO 2021, 1). Here, we can see that the conceptualization of nature-culture dynamics is extended beyond the exclusivity of Indigenous peoples so as to appreciate the contributions brought by a range of local communities' knowledge and expertise of the landscapes in which they inhabit.

This has the effect of widening reach by taking into account inter-generational cultural traditions and how these have enabled communities to adapt to environmental change through time.

Biocultural heritage, therefore, assumes that in order to ensure local communities' sustainable development, biodiversity *and* cultural heritage must be combined and understood as shaping one another. Zoe Russell goes further by adding value systems to the mix, such as spiritual values, wellbeing, and the fulfilment of human rights (Russell 2021, 5), which create a more complex mapping of interdependencies when attempting to capture the notion of biocultural heritage in a given setting. The next section explores the site I wish to focus on in this chapter: the Côa Valley in Portugal.

The Côa Valley

The Côa Valley is located in northeastern Portugal, near the Spanish border. Shaped by the Côa River that stems from the Sabugal area in the south and cutting a northward journey to reach the Douro River, the valley's diversity is manifested in both its natural and cultural attributes. The Greater Côa Valley is a combination of *dehesa*, *sierra* and *montado* landscapes—the latter of which is recognized by UNESCO as a Cultural Landscape of Outstanding Universal Value. The land between the Douro River and the Malcata mountain range is varied through its river gorges, oak forests, rocky heathlands, and scattered fields, which are inhabited by vultures and eagles, otters and pond turtles, as well as the Iberian wolf, red deer, and roe deer (see Rewilding Portugal, n.d. b). Some of these animals are also featured in its rock art (Luís and García Díez 2008). The discovery of rock carvings in the 1990s and the subsequent inscription of the Côa Valley as a UNESCO World Heritage Site led to the creation of the Côa Museum and Archaeological Park as a major tourist attraction in the area featuring over 5,000 open-air rock carvings dating from the Upper Palaeolithic to the mid-twentieth century.

During the time I was researcher on the Heritage Futures programme¹, I undertook several ethnographic research visits to the Côa Valley between 2015 and 2017, each of which lasted between two to three weeks at a time. Fieldwork sought to investigate the processes and practices of natural and cultural heritage management in the area. One of the main activities occurring in the area at the time was the implementation of a rewilding pilot initiative, which was transforming the rural landscape from what is considered as abandoned agricultural land to the active restoration of ecosystem function. The main fieldwork periods involved me and Bárbara Carvalho—a research colleague from Portugal who is familiar with the area and the language—engaging in participant observation, interviewing by using mobile methods (go-along in the landscape) and photo elicitation, and using visual methods (photography and film) to better understand and capture the everyday practices of conservation managers and rural communities in this changing landscape. Importantly, the land targeted for rewilding was not all contiguous; rather, it was a patchwork of plots that may one day be connected, but for the time being, these rewilding plots were scattered throughout the wider Côa Valley. Therefore, our journeys between the plots of land targeted for rewilding involved driving through the sinuous roads, up and down the valley, criss-crossing the varied landscapes to reach the compact rural communities and tiny villages etched within or adjacent to these lands.

Part of the richness of this Iberian landscape is how human populations have grown with it through time, adapting their agricultural and forestry pursuits to maximize productivity, economic value, and sustainability (Sá-Souza 2014; Guzmán Álvarez 2016). Yet, in engaging in these pursuits, the rural communities sporadically located at various points within the valley are as heterogeneous from one another as the landscapes in which they live. At one point during a

discussion with locals, song-duelling was mentioned, which is a musical tradition that distinguishes the dialect, culture, and identity of one community from another, even when these communities were located quite close to each another (see Lyons 2020). These punctuated cultural distinctions were acute during the time of fieldwork, especially when, during informal interviews, we would mention another rural community in the valley, and participants were quick to comment on the differences (rather than the commonalities) of those villagers in contrast to their own.

Noticing these details through an ethnographic approach raises three important elements to consider when assessing biocultural heritage in the Côa Valley: (1) how rewilding practices are transforming mountainous landscapes and rural communities' practices, (2) how locals' cultural distinctions and their traditional engagements with the environment sit alongside rewilding, and (3) how a focus on biocultural heritage futures can help us think through the more-than-human relationships that are shaping this rewilding mountainous landscape. The next three sections will discuss each of these points.

Rewilding Mountainous Landscapes

As Steve Carver (2019) has pointed out, the definition of a rewilding project varies depending on the scale and individual circumstances of each site. Yet, in most cases, the intention of rewilding remains the same: to create landscapes that are self-willed (Carver 2019, 469). Enabling natural processes to flourish consists in understanding the landscape at hand—its present circumstances—as well as how the landscape has evolved through time (the past) and the alternative future states it can become.

Although it is now understood that rewilding as a term can come in varying degrees and forms, including processes of wilding, renaturing, and regenerative agriculture (Gammon 2018; Marland 2020; Holmes et al. 2020), rarely do proponents of rewilding focus on geography, specifically how rewilding practices in mountainous landscapes compare with those in other types of landscapes. This is perhaps because the conservation aims in rewilding areas target fauna and flora that can potentially adapt to the environments in which they are—or will be—located. However, for the purposes of this chapter, I want to explore the particularities of mountainous landscapes for rewilding initiatives.

There are a few studies examining rewilding in mountainous areas. In subalpine ecosystems, tree cover can assist in detailing temperature changes over time, such that these environments can record the impact of climate change. Subalpine ecosystems are natural laboratories to study the evolution of global warming since their dynamics are particularly sensitive to temperature changes. In a study examining pine trees in a range of Mediterranean mountain areas, Sangüesa-Barreda et al. (2020) looked at how past pandemics (such as the Black Death) and the consequential retreat of human activity on the landscape influenced the ecosystem. The study also explored land use changes on mountain forest dynamics over time. They concluded that a type of 'rewilding' occurred after the late medieval Black Death pandemic and successive pandemics, leading to important landscape transformation in the southern European mountainous landscape. Furthermore, when traditional human activity on the landscape started to shift in the second half of the twentieth century as people moved to cities, there was a gradual conversion of subalpine grasslands to forests. The research highlights that a similar pattern of regeneration occurred in different periods as human populations refrained from intervening in these environments. Another contributory variable may be that warmer

temperatures, precipitated by climate change, with increasing concentrations of nitrogen and carbon dioxide may also contribute to tree cover expansion (Sangüesa-Barreda et al. 2020).

The correlation between grasslands and forest cover is evident in a study in Italy's Northern Apennines. Haller and Bender (2018, 1081) describe how the 'rich biodiversity of grasslands once was the result of agricultural activities, yet today the maintenance/restoration of grasslands depends on biodiversity conservation'. They emphasize that traditional activities encouraging the maintenance of grasslands have significantly diminished over time and the only way to restore them is through rewilding—or conservation aimed at promoting biodiversity. This suggests that in the past, traditional farming included activities that sustained biodiversity—a practice that was lost following post-war industrialization of agriculture and now gradually returning in the guise of 'regenerative farming' (Langford 2023). What the authors are proposing is that it is through rewilding (as a form of conservation/restoration) that biodiversity can be achieved. Rather than a form of rewilding that encourages the removal of human influence, they allude to a rewilding practice that acknowledges how human intervention is necessary to re-establish biodiverse landscapes. This aligns with the conception that rewilding, through effective human intervention, is a mechanism that can assist in addressing climate change through carbon sequestration and—in mountainous areas in particular—wildfire mitigation.

What is curious in these studies is that although the natural environment is being restored, the rural built heritage does not see a resurgence of conservation activity. This suggests that in practice, nature conservation remains separate from cultural or built environment conservation. In the Côa Valley in Portugal, rewilding practices include similar endeavours. For example, reforestation in areas of low tree density as well as the planting and maintenance of indigenous species, such as cork oak trees, will be prioritized through rewilding (ATN 2015). Grassland restoration will also take place that 'may provide benefits to prey species of wolf and birds of prey' (Rewilding Portugal, n.d. c). Although the wolf has often been singled out in discussions about rewilding initiatives, I want to take a moment to highlight how birds of prey are critical predators when considering mountainous landscapes.

According to one of the founders of ATN (*Associação Transumância e Natureza*), the local nature conservation organization in Portugal, when they first started to consider restoration in the Côa Valley, the main objective was to restore and maintain cliff breeders, such as Griffon vultures and Bonelli's eagles. Vultures play an important role in nutrient distribution by disposing of carcasses efficiently and scattering their nutrients across the landscape (Hill et al. 2018; Van Den Heever et al. 2021). The importance of birds of prey in the area can also be seen through rock art depictions (Figure 1).



Figure 1: Vermelhosa, Côa Valley, Portugal; Rock 3. Birds of prey (possibly vultures) feasting on a fish carcass, part of a larger Iron Age combat scene involving human figures with spears riding horses (see also Luís 2015). Photograph by Mário Reis, Côa Valley Archaeological Park/Côa Park Foundation.

Acknowledging the contribution of birds of prey to enhancing ecosystem restoration in mountainous areas has started to emerge. For instance, research in the Mediterranean region has shown that Griffon vultures in the southern Spanish mountains seem to benefit from the first stages of rewilding in places where restoration efforts focussed on flora and the (re)introductions of wild ungulates, such as red deer and wild boar (Martin-Díaz et al. 2020). The study shows how wild ungulates will forage in areas where new and re-growing of natural vegetation is conserved and maintained through rewilding, thereby increasing the availability of carcasses for the Griffon vultures. Rewilding Europe, through their cooperation with ATN and Rewilding Portugal, also see the rock art as evidence of the area's long-standing relationship with nature (see also DeSilvey and Bartolini 2019). For instance, the Taurus programme selectively breeds and releases 'wilder' cattle species into the landscape. The Tauros are the modern-day equivalent of the aurochs, a wild cattle breed that was hunted to extinction in the early 1600s and featured in the rock art carvings (see Rewilding Europe, 2020; Figure 2).



Figure 2: Penascosa, Côa Valley, Portugal; Rock 3. Female aurochs, possibly from 18,000–17,000 BP, overlapping several other Palaeolithic animal figures. Photograph by Mário Reis, Côa Valley Archaeological Park/Côa Park Foundation.

The study also points to how it will be important that, as further stages of rewilding processes are reached, ongoing assessment and management of the birds of prey population are maintained. One of the issues raised by the authors is the tension between the (re)introduction of wild ungulates and the traditional hunting seasons in the area. This issue was also mentioned during fieldwork in the Côa Valley since many locals take part in seasonal hunting trips, which they perceive as maintaining a tradition. This adds a further layer to the multifaceted elements involved in the conceptualization of biocultural heritage practices in the Côa Valley, and it segways nicely to my second point, which explores local human population traditions with their immediate natural environment.

Traditional Engagements with the Environment

In Rewilding Europe's narrative, rewilding has a two-pronged purpose: it seeks to restore biodiversity in areas that have suffered from the abandonment of previously pastured lands, and it aims to re-energize local rural economies. As such, it brings together conservation practices and socio-economic prospects that speak to the nature-culture entanglements shaping landscapes. As a result of gradual land abandonment due to ageing populations and the exodus of younger generations to urban environments, rewilding is seen to enable the transition of both land use and livelihoods: from agricultural to eco-tourism pursuits. While Rewilding Europe appears to solve environmental and socio-economic issues, speaking to some locals revealed some of the discomforts around the rewilding movement. During fieldwork, one shepherd mentioned that it felt as though the rewilding movement was precipitating things, suggesting that human intervention through fauna and flora reintroductions prompts the natural environment to react at a quicker pace; rather, he suggested, all they needed to do is wait and the land would rewild itself. This perspective highlights how, for this shepherd, the rewilding movement is an interventionist practice implemented by rewilding

managers to kick-start ecosystem restoration. For this shepherd, the land can, through non-human activity and at its own pace, adapt to its changing circumstances. He recalled how, during his own lifetime, the land had changed, and mentioned how this land would have changed before then, when his father and his grandfather would have witnessed the ‘slow’ land transformations during their own lives (Figure 3).



Figure 3: Walking the land with the shepherd (October 2017, photo by author).

This anecdote reveals how the relationship with the land is one that locals see as extending back to the past. Many of the remaining locals inhabiting isolated villages in the depths of the Côa Valley have a particular relationship with the environment in which they grew up. In the two main communities we visited, agriculture was always part of their lifestyle. We heard locals describe how they learned to work with the land and the amount of hard work that they put in to ensure productivity of the soil. This also extended to other land-related pursuits: almond farming, cork farming, olive oil production, winemaking, and so on. Most of the villagers have vegetable gardens and fruit trees. One local described how one of his earliest memories is of fishing in the Côa with his father and grandfather. Another described how she and other women in the village pick herbs and wild rocket almost daily. One couple mentioned that they moved to France during the difficult economic climate of the Salazar reign (1932–1968) but returned a decade later, re-establishing a rhythm with the same habits they had with the land prior to leaving.

Village life is also deeply rooted in communal gatherings, especially around religious celebrations. For example, during one fieldwork period, we noticed small wooden boxes being passed around from house to house in two different communities. Inside these boxes was a representation of Our Lady of Fatima, which was blessed by the local priest and housed in different homes every month. The connection among rural life, social gatherings, and spirituality in the Côa Valley is also reflected in contemporary rock art carvings. Figure 4 depicts what is

believed to be a nineteenth-century Christmas scene featuring roosters. Roosters are embedded in several Portuguese traditions; arguably, these stem from the Jacobean legend of Saint James the Greater and the folktale of the ‘rooster miracle’ involving a crowing rooster releasing an innocent man from death (Amaro 2024; Gonçalves and Costa 2016). Christmas Midnight Mass is known as *Missa do Galo* (Rooster Mass), which is said to have originated around the fifth century and is associated with a time when the cock crows. In northern Portugal, ceramic handicrafts elevated the Rooster of Barcelos to a national symbol during Salazar’s *Estado Novo* regime (Amaro 2024; Gonçalves and Costa 2016).



Figure 4: Vale do Forno, Côa Valley, Portugal; Rock 56. Nineteenth-century human figures and roosters. Part of a larger Christmas scene. Photograph by Mário Reis, Côa Valley Archaeological Park/Côa Park Foundation.

Moving cattle or livestock seasonally between mountains and lowland pastures is a tradition known as *transumância* (transhumance). In Portugal, the tradition culminates with the *Festival dos Caminhos da Transumância*. Recently, this tradition has gained traction with the slow-food movement, as it involves locals opening their doors to tell stories, and local artisans and small businesses selling their products (Marques and Reis 2022). One of the founders of ATN, whose organization features the transhumance tradition in their name, highlighted how this tradition represents the dynamic between nature and transhumance as a form of pastoralism in the area. During initial discussions with a nature conservation organization in Spain, who also recognize the importance of the Spanish transhumance tradition, a distinction surfaced: the Portuguese group were mainly interested in promoting the nature component of the tradition while the Spanish contingent was mainly concerned with promoting the pastoral tradition. This brought to the fore some interesting debates, such as how in Portugal, conservation (and rewilding) was

initiated through discussions about land while in Spain, discussions arose from talking with shepherds. One of ATN's concerns is that today, shepherds have modernized transhumance, and now many use trucks to move their livestock. More traditional migratory movements and 'slower' transportation methods were beneficial to nature because during the longer journey livestock would often die, and their carcasses were left for birds or wolves, as well as invertebrates involved in decomposition.

As mentioned in the transhumance example, some of the traditional engagements with the land have been modified by locals. However, in the Côa Valley, as inter-generational practices become traditions through the accumulation of time, these practices gradually develop distinct identities (see also Knight 2016). There is, therefore, a fine balance between rewilding managers' plans to conserve mountainous landscapes with specific ecological benefits in mind and human populations who might be resistant to changing their ways or decide to adapt to changes through their own design (see Bartolini, Carvalho, and May 2024). The next section explores the tensions in this nature-culture entanglement.

Navigating the Tensions of Biocultural Heritage Futures

In some cases, rewilding has been perceived as a movement originating from institutions 'outside' a community, solving a problem that locals did not necessarily think they had. Early in the adoption of the rewilding initiative, ATN was able to purchase parcels of land in one part of the Côa Valley, but not in another area located farther south where the village mayor was a farmer and hunter, as were many of his constituents, and therefore the protection of rewilding lands from hunting was perceived as threatening their way of life.

One issue that came up repeatedly during fieldwork were the discrepancies between generations. The older generations were seen by some rewilding officers as being too tied up in traditions, which prevented their mindsets from adapting with changing circumstances. Younger generations we spoke to, however, were prepared to 'return to the land sustainably' with the intention of working with nature to find solutions for the climate emergency, such as working with sustainable local materials and limiting consumption (see Bartolini, Carvalho, and May 2024). This tension between the past and the present is an example of how different futures are envisioned for the Côa Valley. These alternative futures are shaped by a combination of affective, emotional, cultural, memorial, and wellbeing aspects that impact on the notion of biocultural heritage in a given area.

As discussed in the previous section, traditional nature-environment engagements can sit uncomfortably with rewilding practices. Hunting deer, for instance, is a traditional pursuit, one that locals often mentioned during fieldwork. Yet, rewilding practices seek to protect the deer population. Hunting was a key point of tension in workshops between locals and rewilding managers (Leuvenink 2013). Another contentious practice that emerged during discussions was intentional burning. One of the main issues ATN had to deal with in the early stages of the rewilding pilot was the number of wildfires that resulted from farmers' intentional burning of the land in order to produce low-lying grazing areas for their livestock. After focusing on (re)introducing and conserving vultures and other birds of prey, ATN shifted their attention to reintroducing 'wilder' horse breeds. This involved selecting certain horse breeds that were deemed capable of learning to acclimatize to the rough and hilly landscape; in other words, they would need to fend for themselves and eventually become undomesticated. As the horses gradually adapted to the landscape, part of the survival strategy would be for them to graze the low-lying shrubs, and this action would have similar effects to intentional burning. By naturally

‘cleaning’ the landscape, the horses would reduce the risk of uncontrolled burning, which is partly responsible for the severe wildfires that took place in the area within the past two decades (see Bartolini 2020).

Although this strategy seemed like a win-win for both locals and nature, it had the effect of creating new problems. For instance, the horses were enclosed in fenced areas to enable them to gradually adapt without interference from neighbouring farmers and domesticated animals. But during one fieldwork period, there was a severe drought in the area, and the horses were unable to reach the only remaining water source in their enclosed area at the bottom of a cliff, having not yet learned to scale the cliffs. The rewilding manager asked a local shepherd to provide water to the horses, which he was happy to do since he and other locals mentioned during fieldwork that the landscape is very harsh, and humans and animals that have inhabited the area have always worked together to survive. Rewilding managers saw this moment of adjustment as part of the process of experimentation: they had to come up with a solution to help the horses they reintroduced into the landscape cope with the drought, while giving them enough time to adapt to the landscape to eventually be able to scale the cliffs themselves. This poses the question of animal autonomy in rewilding, and to what extent—and at which point—nature can take care of itself (see DeSilvey and Bartolini 2019). It also brings to the fore questions around temporality and future scenarios: in particular, the short-, medium- and long-term futures involved so that fauna and flora become self-willed.

As much as rewilding may sometimes seem overzealous in its pursuit of ‘restoring natural processes and ecological dynamics’ (Jepson and Schepers 2016, 2), there is something to be said about the way that rewilding managers in this case dealt with the reintroduced horses, specifically the interconnectedness between humans and animals involved in problem-solving. Of course, this intervention (both the reintroduction of the horses and the problem-solving) is human made. However, the managers also did not want to precipitate the horses’ acclimatization to the land. Like human populations, animals also need time to adapt to new environments. Donna Haraway describes these human-animal relations as ‘situated naturecultures’ in which: ‘all the actors become who they are *in the dance of relating*, not from scratch, not *ex nihilo*, but full of the patterns of their sometimes-joined, sometimes-separate heritages both before and lateral to *this* encounter’ (2008, 25, emphasis in the original). Interestingly, Haraway uses ‘heritages’ here to refer to the baggage that we bring forward from the past to present encounters. This quotation is useful to think through those encounters in the wider rewilding landscape of the Côa Valley, encounters shaped through human-animal mobility and environmental change. So how are these encounters now shaping and contributing to envisioning biocultural heritage futures?

In his book *Geography and Vision*, Denis Cosgrove mentions that ‘vision’s meaning incorporates imagination: (...) it can denote foreseeing as well as seeing’ (2008, 8). Vision, in this sense, recognizes what is *present* and what it could be in a *distant future*. Rewilding Europe’s vision of a ‘rewilded’ Côa Valley can be viewed on the organization’s website (Rewilding Europe, n.d. a). The artistic impression features a series of animals (such as birds, deer, lynx, horses) and even some humans alongside a tent and a couple of jeeps. Clearly, this vision is of a ‘wilder’ Côa Valley where humans can visit the area as though on a European safari tour. This may be the vision of Rewilding Europe and even other local nature conservation organizations, which includes a recognition of built cultural heritage since the artistic rendering features a castle and a bridge in the distance. However, as Cosgrove states, ‘there are “ways of seeing” that vary with individuals, genders, cultures, and so on, and there are histories and historical geographies of

seeing' (2008, 5). Visions and ways of seeing are different depending on who one talks to. Perspective—and whose perspective—is important when critically attending to nature-culture entanglements and biocultural heritage futures.

Work by Annemiek Leuvenink (2013) in the Côa Valley and Tony Knight (2016) in the French Pyrenean landscape emphasize the tensions among local transhumance, mountainous populations, and rewilding initiatives. In their work, workshops and ethnographic research evidence how locals and rewilders often start off with exploring deeply entrenched values. As Sheila Gooderham (2020) mentions, however, it is important to understand that fear is often behind diverse views and opinions. Yet, it is through ongoing communication that underlying fears can be shared and examined, and solutions can be unearthed. An essential component in this endeavour is to discuss how to live with the transformation of landscapes (DeSilvey, Bartolini, and Lyons 2020) and the alternative futures—or biocultural heritage futures—that are envisioned. One of the lessons learned from Leuvenink's (2013) work is that in order to achieve success in an engagement process, there needs to be concrete commitments from all parties and, I would add, an agreed-upon mechanism to ensure follow-up. Understanding the fears and challenges faced by the different groups impacted by rewilding mountainous areas is the only means to uncover the opportunities afforded through biocultural heritage futures.

Conclusion

In this chapter, I have sought to understand how the definition of biocultural heritage has evolved throughout policy and academic development, and how the term can be applied to the transformation of the Côa Valley's landscape. Biocultural heritage has always been associated with the interrelation between biological (or natural) heritage and cultural heritage. The term now considers wider conceptions of heritage, such as how heritage is linked with spirituality, wellbeing, and human rights. Furthermore, biocultural heritage has broadened from being principally linked with Indigenous peoples and their long-standing practices with the land and living entities to a broader appreciation of local communities' traditions with the environment they inhabit. This latter aspect enables the conceptualization of the Côa Valley through its long-standing human-animal encounters evidenced from the Palaeolithic rock art to today's rewilding endeavours. Local communities within the Côa Valley have distinct cultures and have been adapting their practices according to varying relationships with the land.

The rewilding initiative is sometimes perceived as a movement promoted by a new generation of conservationists and biologists who witness decreasing agricultural production and increasing land abandonment as an opportunity to strengthen ecological dynamics and rural economic development. The vision is one of a flourishing 'wilder' Côa Valley with an emphasis on shaping future natural heritage and promoting tourism. However, there remains identity-related cultural traditions that the older generations have grown up with. These older generations, still living in isolated villages around the Côa Valley, are attached to the land and carry intangible cultural heritage practices that link to spirituality, wellbeing, and a way of life.

If rewilding managers seek to change the natural environment, in an effort to address the climate emergency or to meet the UN's Sustainable Development Goals, there is no doubt that these changes also shape locals' cultural traditions and practices. Yet, the changes that are taking place may not necessarily correspond to local communities' values. Within these subtle changes are those that specifically respond to the environmental and ecological constraints of a mountainous landscape. For instance, vultures and other birds of prey were (and still are) a fundamental part of the conservation and re-introduction targets for ATN. Not only are they cliff-

breeding species, but they also contribute to sustaining natural ecological processes, such as their role in the ‘slower’ traditional transhumance practice—eradicated through modern livestock transportation practices. Furthermore, their presence in the area is evidenced in Iron Age rock art, thereby making them part of the local community encounters through time.

Other changes in the mountainous landscape blur the lines between rewilding and domesticating practices. The reintroduction of horses in a location that experienced severe drought caused rewilding managers to seek assistance from locals to provide water to the horses. Rewilding managers have suggested that the horses need time to adapt to the environment. However, this raises the issue of the extent of human intervention required in rewilding initiatives, as it reinforces domestication.

The tensions that exist between rewilding advocates and local communities can result in entrenching conflict even further when fundamental values are uncovered. If both parties share a commitment to biocultural heritage pasts, this does not prevent a discordant vision of biocultural heritage futures. Rewilding efforts often seek the advantages of restoring natural processes for a *distant* future, and struggle to change the mindset of older generations because they engage less with their immediate, lived futures. On the other hand, local communities can often feel threatened by rewilding initiatives that promote the (re)introduction of predators or animals ill-equipped to cope with the harshness of the landscape, precipitating human-animal and territorial conflicts in the *present and immediate* future.

As we know, actions in the present shape alternative heritage futures (Harrison et al. 2020). Ongoing engagement is therefore essential for rewilding managers and local communities to openly discuss tensions and propose solutions. Some suggest that the responsibility lies with nature conservation/rewilding organizations to generate constructive community engagement, mainly to provide information to local populations about the benefits to the environment (Messmer 2000; Mekonen 2020). However, I agree with Leuvenink’s method (2013) that a neutral third-party facilitator (or mediator) might be best placed to assist the interested and impacted stakeholders to uncover entrenched values (see Gooderham 2020). Addressing fundamental fears and enabling solutions to emerge from the parties during the gradual transformation of the landscape will hopefully result in more constructive and committed biocultural heritage futures in rewilding mountainous landscapes.

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