RESEARCH ARTICLE

The Multiple Values of Nature

On the links between nature's values and language

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Abstract

1. Recent research into the plural values about nature is focusing on relational values as a concept through which to better understand the breadth and importance of situated human–nature relations. However, potential relevance of language as a mediating factor in relational values has not been sufficiently examined.

2. To investigate the links between language and values, we explore the influence of the ancient non-Indo-European Basque language ('Euskara') upon people's relationships with mountain forests in the Western Pyrenees of the Basque Country.

3. Results based on triangulation of data from Q-methodology, focus groups and a socio-demographic survey indicate that while relational values are highly rated in all principal viewpoints about local forests, there is an emergent perspective that emphasises Euskara's key role in relations with the forest via cultural identity and place attachment.

4. We conclude that positive relational values linked to Euskara may be seen as key levers for local sustainability transitions.

5. The fact that positive rapports with language can have a meaningful role in human–nature relations points to the need for further research into the consequential links between biological and linguistic diversity.

KEYWORDS

Basque language, biocultural diversity, cultural identity, environmental values, linguistic identity, relational values, sense of place

1 | INTRODUCTION

Recognising and respecting value pluralism is needed for nurturing sustainable human–nature relationships and human well-being (IPBES, 2019; Wallace et al., 2021). Research into value pluralism provides a lens through which to better understand cognitive models about human–nature relations (Muradian & Pascual, 2018; O'Connor & Kenter, 2019) and the diversity of values about nature (Chan et al., 2016, 2018; Díaz et al. 2018; Pascual et al., 2017; Zafra-Calvo et al., 2020). Recent explorations into the links between values and beliefs as related to people's personal identities (e.g. in relation

to connectedness to nature, place identity and cultural identity; Kleespies & Dierkes, 2020), drawing on long-term studies of the co-constructive relations between individuals, collectives and nature (Bateson, 2000; Greider & Garkovich, 1994), promise to be a powerful lens through which to map out human–nature relations and associated value systems.

The role of language in discussions about conservation of nature has been enriched by the parallels drawn between cultural and biological diversity (Pretty et al., 2009) and through research in fields such as ecolinguistics and linguistic anthropology (Duranti, 2009; Fill & Mühlhäusler, 2006). But a need for further emphasis on language

through interdisciplinary environmental scholarship has been voiced (LeVasseur, 2015). Although recently language has been discussed in the literature on environmental values as an important variable in ethical research (Saxena et al., 2018) and has been highlighted in terms of its role in harbouring indigenous and subaltern epistemologies and worldviews (Gould et al., 2019), little attention has been paid to the potential of languages to tangibly influence people's human–human and human–nature relations (Bridgewater & Rotherham, 2019). This may be partly explained by the fact that while there is ample literature on the interlinkages between cultural identity, place and nature (Hay, 1998; Hernandez et al., 1998; Ives et al., 2017; Raymond et al., 2010), this literature has rarely focused on the role of language in shaping environmental values (Hanks, 1990).

Here we set out to explore whether and in which ways language influences people's rapports with nature. More specifically, we ask the following questions: is language a salient variable in people's values about nature? And, are relational values about nature, beyond the traditional dichotomy between intrinsic and instrumental categories of values, shaped by the role of language? (and if so how?). We tackle these questions by means of an empirical study into the links between the Basque language ('Euskara') and the values of and about mountain forests in a multilingual region of the Western Pyrenees in the Basque Country (bordering France and Spain). Possessing a base vocabulary and syntax highly distinct from French and Spanish, Euskara is a language isolate and is widely considered as the last remnant of pre-Indo-European language in Western Europe (Hualde et al., 1996). We conduct an empirical analysis based on a mixed-methods approach using the semi-quantitative Q-methodology (Zabala, 2014; Zabala et al., 2018) and qualitative methods (e.g. in-depth interviews with key informants and focus group discussions) to obtain as comprehensive picture as possible of the role of language within value systems about (local) forests.

In the next section, we present a conceptual framework that introduces and links key concepts about plurality of values (emphasising relational values) and language, as mediated by culture, identity and place. Section 3 presents a brief overview of nature in the case study area and provides contextual information about the Basque language. Section 4 introduces the methodological approach including the use of the Q-method. Results are described and discussed in Sections 5 and 6, respectively, with emphasis on the links between Euskara and relational values, as reflective of meaningful relations with nature through learning and living the Basque language. We conclude by highlighting the link found been between language and relational values and call for further study into how rapports with language can act as levers for more sustainable ways of life.

2 | CONCEPTUAL FRAMEWORK: LINKING LANGUAGE AND RELATIONAL VALUES

The exploration of the links between language and values about nature (and more specifically relational values) can be facilitated by a conceptual framework that draws on different research traditions. Although relational values associated with the idea of personal flourishing (Knippenberg et al., 2018) and care (West et al., 2018) may be articulated through rapports with language, the conceptual framework that we develop here focuses mostly on relational values about nature as connected to cultural identity and place attachment, and their explicit links with language.

2.1 | Relational values

Theories of relationality as regards human–nature interactions include hybrid geographies (Whatmore, 2002) and vibrant materialism (Bennett, 2010). While many social scientists call for an overhauling of the human–nature binary (see e.g. Descola, 2013; Haila, 2000), interdisciplinary sustainability science retains the broad socially recognised categories of humans/culture and nature/environment while endeavouring to raise societal awareness of complex human–nature interdependencies (Fischer et al., 2015; West et al., 2020). Nature's values tend to be understood in a simplistic binary way, that is, as either instrumental or intrinsic, and this framing dominates large tracts of the global conservation policy landscape (Pascual et al., 2021). This binary understanding of values is being broadened by explicitly recognising the diverse contributions nature makes to people's good quality of life, both individually and collectively. One way to move beyond this dichotomy is through the concept of relational values (RVs; Chan et al. 2016, 2018; Pascual et al., 2017).

Relational values encompass preferences (e.g. worth and/or importance of local nature connected to other-regarding, bequest, preferences) and guiding principles (e.g. caring as the 'right thing to do') which to a large extent can determine human relationships with living nature (Chan et al., 2016, 2018; Díaz et al. 2018; Pascual et al., 2021). Largely informed by the treatment of human well-being in the social sciences, including research into indigenous and local relational ontologies (Gould et al., 2019), the concept of RVs encourages research into the importance of desirable relations with nature and among people through nature (Himes & Muraca, 2018; Klain et al., 2017).

Although all values are relational in origin (values *of* things arise by means of relating to those things), RVs are here seen as specifically those whose worth originates in the relationships themselves with nature or with humans through nature (Chan et al., 2016, 2018). As a concept to frame the need for conservation and more desirable human–nature rapports, RVs are being researched in terms of their base concepts (Chan et al., 201), components (Jax et al., 2018), cultural roots—including local and indigenous cosmologies (Gould et al., 2019; Sheremata, 2018)—and applications in policy and practice (e.g. Bremer et al., 2018; Chapman et al., 2019).

Relational values are generally seen as combining general value concepts and context specific to place and, unlike instrumental values, are not readily substitutable, in part due to incommensurability (Chan et al., 2018; Pascual et al. 2017). The emergent literature on

RVs focuses on the importance of connectedness, care, responsibility, stewardship, kinship, community and identity (individual and collective) and personal flourishing ('eudaimonia') in connection to how people experience nature (Chan et al., 2016; dos Santos & Gould, 2018; Kleespies & Dierkes, 2020; Knippenberg et al., 2018).

2.2 | Cultural identity

Cultural identity underpins RVs. It is formed out of two contested concepts. Culture denotes the 'ways of life' of social groups and their ongoing process, as reflected in the term's etymological link with 'cultivation'. The term retains relevance in the social sciences as a lens through which to understand processes of social mediation and representation (Mitchell, 1995). While culture is a fluid relationally constructed concept, it still constitutes a core identity marker for individuals and communities (Eisenstadt & Gie-sen, 1995). Meanwhile, the notion of identity has been adapted in response to changing discursive interpretations of the human subject (Hall & Du Gay, 1996). Originally founded on humanist concepts depicting essentialised, static entities, increasing attention is now paid to the role of social processes in identity formation (Hall & Du Gay, 1996). In this vein, identity becomes a useful conceptual lens to understand discursive processes which reify new hybrid visions of self and community (Abdelal et al., 2006; Bucholtz & Hall, 2005). The composite term 'cultural identity' is thus taken to refer to a situated way in which people interpret themselves and their position in social groups and local places.

2.3 | Place attachment, sense of place and place meanings

The concept of 'place' comprises both an object of study and a source of meaning through which knowledge about the world is created (Cresswell, 2014). The broad concept of 'sense of place' refers to the meanings and attachments that individuals or communities may have towards a location (Tuan, 1977). Understanding values related to place is crucial to promote meaningful place-based human–nature interactions (Brown & Raymond, 2007; Lee, 2011; Pred, 1984; Stenseke, 2018). Within the concept of sense of place, 'place attachment' is a term taken from environmental psychology which emphasises the emotional (relational) ties or extent of attachment between people and place (Lewicka, 2011; Scannell & Gifford, 2010), whereas 'place meanings' are the significance that people attribute to a given location (Manzo, 2005).

Sense of place is commonly associated with individual and collective RVs but understanding place attachment can draw from diverse and often divergent methodological and theoretical traditions (Brehm et al., 2013; Cresswell, 2014). Broadly, place studies have been pursued through quantitative methods ('place as a locus of attachment') or qualitative methods ('place as a centre of meaning'; Manzo & Devine-Write, 2013). A distinction has been made between the conservative and progressive meanings of place

(Lewicka et al., 2019), with early scholarship depicting a place's singularity as fixed and naturally bounded (Di Masso et al., 2019). Such essentialist ('sedentaristic') views of place seem to predominate among place scholarship (Malkki, 1992), but have also been challenged by the progressive theories of place as 'relational', 'global' (Massey, 2010) and defined by being in a constant state of 'becoming' (Cresswell, 2006; Massey, 1993). Here we consider sense of place from the perspective of 'place as a locus of attachment' (Entrikin, 1976; Manzo & Devine-Wright, 2013).

2.4 | Language

Currently, over 7,000 languages are used worldwide (Eberhard et al., 2020). Spoken languages are in constant processes of evolution, and definition of what constitutes a language, rather than a dialect or variant, owes much to socio-political and historical factors which fully recognise some linguistic forms as 'languages' and stigmatise others (relegated to categories like 'dialects' or 'patois'; Edwards, 2009). Beyond their communicative functions, languages also constitute crucial symbolic markers of individual and community identity, and language issues can be sources of conflict (Dwyer, 2005; Lijphart, 1979). The continued loss of linguistic diversity globally implies an irreversible loss of unique ways of knowing and dwelling (Nettle & Romaine, 2000). Language loss can indicate and reinforce socio-economic inequalities, as unilateral power afforded to some linguistic varieties can indicate and intensify the dominance of certain social groups over others (Blanchet, 2017; Phillipson, 2012).

Just as people hold a range of values about nature, we posit that attitudes towards language can also be understood through the lens of instrumental, intrinsic and relational values. The instrumental value of a language can be seen to arise from its utility as a tool of communication and comprehension and even as a vector of economic gain. The intrinsic value of language rises from the perception that it has intangible significance independent of its instrumental utility (Smeets, 2004). One can also identify a host of relational values about language, with one's preferences and attitudes towards language being inextricably linked, for instance, to individual and community identity formation and attachment to place.

2.5 | Linking nature's relational values and language

Language, culture and nature (as social construct) are inextricably interrelated. Cultural and place identity can be intimately connected with the idea of RVs in so far as they are expressions of the significance that people's relations with nature (including the notion of 'place') can have on their own interpretation of 'self', the ensemble of symbols making up collective 'culture' and importantly, on their evaluation and attachment to the local socio-ecological context. In a given place, the local environment sustains people with material conditions to live and a sense of self

to live by. In turn, people sustain and shape the local environment through knowledge, values and practices embedded in their cultures and their languages. As a case in point, indigenous languages are immense reserves of traditional ecological knowledge (Maffi & Woodley, 2012), and thus, interesting parallels have been drawn between biological and linguistic diversity (Gorenflo et al., 2012; Maffi, 2001), generally explored under the term 'biocultural diversity' (Merçon et al., 2019). However, interlinks and potential cross-fertilisation between language and nature conservation must guard against non-critical, sweeping and non-consequential analogies (Bastardas-Boada, 2002).

Linguistic specificity is linked to the concept of place. Most languages are spoken in a limited geographical area and tend to leave their mark on place, while conversely places leave their mark on language via constantly reified associations between languages and their 'native territory' (Myhill, 1999). For instance, it has been posited that people's relationships with place names play a significant role in connections with locality and identity construction (Helleland, 2012; MacDonald, 2017). Research in linguistics has recently focused on language and communities through the conceptual lens of place (Montgomery & Moore, 2017) while the sub-discipline of ecolinguistics places great importance on how (minority) languages interact with each other in a socio-political context, and how linguistic varieties, people and nature coevolve with a given place or region (Mühlhäusler, 2003; Stibbe, 2015).

Language is in constant relation with human knowledge and practices associated with the use and experience of local nature. Moreover, language is a variable existing in co-productive rapport with cultural identity and thereby potentially influences people's attachment to place. Given that cultural identity is largely defined by positive disassociation from the 'other', in contexts where speakers of different languages are in close interaction, language may emerge as a key identity symbol and thus constitute a core component of value systems (Abd-el-Jawad, 2006; Tajfel, 1978).

Strong relations between people's identity, local nature and language can also be reflected through place attachment (Ramkissoon et al., 2012). Similarly, place names in local languages also often carry social histories and consequently, languages—particularly, but not only, those transmitted mainly orally—can constitute a connection between place and memory (Basso, 1996; Berg & Kearns, 1996). It is nonetheless important to note that individual- and community-level rapports between place and cultural identity, language and local nature are plural and dynamic and are further complexified by the uneven spatial impacts of changes in language use over time.

We can take the example of local forests. People may see local forests in terms of either (intrinsic) value-in-themselves (independent of the valuer) or in terms of the benefits they derive from them, that is, as a means to an end (instrumental values; links 1 and 2 in Figure 1). Yet, many of the values of local forests also arise through
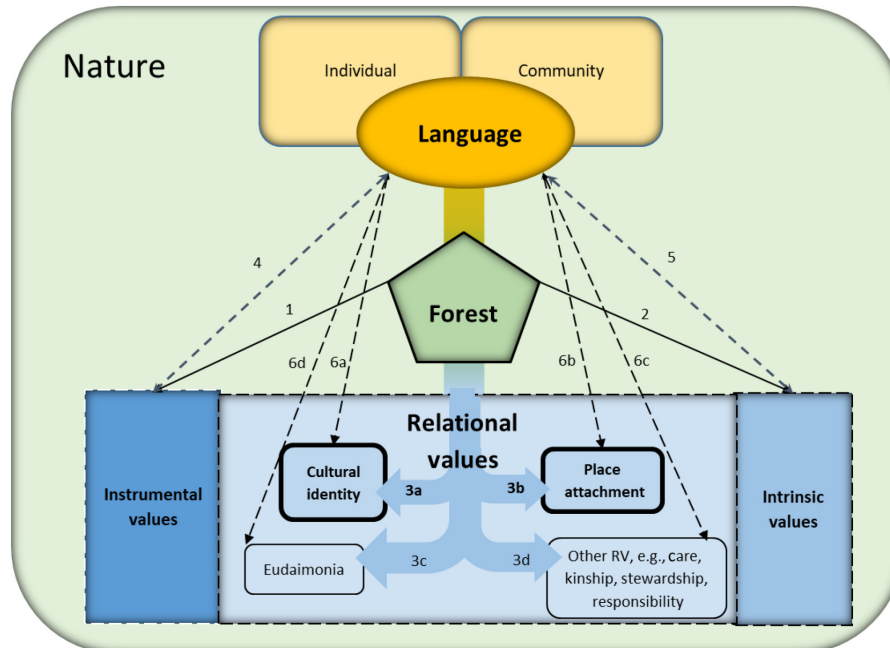

FIGURE 1 Conceptual framework linking language and relational values about nature. Language here is understood as the local vernacular of a region, whereas nature refers to all biotic and inanimate beings that constitute the environment, here represented by a local forest. The main reasons why people may care about local forests can be understood in terms of forests (i) providing a means to an end (e.g. economic benefits) to people ('instrumental values': link 1), (ii) having 'intrinsic worth' independent of valuers (link 2) and (iii) providing the opportunities for valued relations with people and among people ('relational values: link 3). In a similar vein, any language can also be associated with instrumental values (link 4), intrinsic values (link 5) and relational values (link 6). The vertical (thick) arrow (link 3) suggests that language and relational values co-evolve in rapport with individual and collective human relations. The conceptual framework emphasises how language shapes RVs about nature (downward link between language and relational values)

specific, situated human–nature relationships that cannot be reduced to substitutable values (link 3).

Here, we mainly focus on how RVs linked to people's cultural identity (link 3a) and place attachment (link 3b) are shaped and expressed through relationship with language. While human relationships with a given part of nature, such a local forest, can shape one's cultural identity, the importance of language as an identity symbol can also influence values about nature (link 3a). Similarly, people's relations with local nature are fundamentally connected to their emotional ties to place, with strong connections to local language and nature thus invariably linked to place attachment (link 3b). Although not the focus of this study, eudaimonia related to nature may also be articulated through prolonged engagement with language as a critical link to local histories and identities, which can, in turn, foster meaningful ways of living through deepening human–nature connections (link 3c). Another important bundle of RVs, including values of care, stewardship and responsibility for local nature, may be reinforced by long-term protection of language as this may carry specific and embedded meanings of nature and locality (link 3d).

Furthermore, we posit that language itself can also be associated with three types of values (instrumental, intrinsic and relational).

The instrumental value of language lies in its communicative (and by extension its economic) potential (link 4), whereas languages and linguistic diversity can also be seen as possessing intrinsic value, independent of their communicative value (link 5). The RVs framework can also be applied to people's relations with and attitudes towards language. The value of a given linguistic variety can arise through its role as a key symbol of cultural identity (link 6a) and as a core element of local geographies and socio-historical meanings (link 6b). Languages can also be valued through relations of care and stewardship and sentiments of responsibility for the local vernacular and its significance for a sense of community (link 6c). The self-realisation and purpose found in such lasting relations with and through threatened local languages is a good example of eudaimonia (link 6d).

3 | CASE STUDY BACKGROUND

The case study was conducted in a region of the Western Pyrenees evenly divided between the French Pyrénées-Atlantiques department in the north and the Spanish Autonomous Region of Navarre in the south (Figure 2), both within the historic and cultural Basque
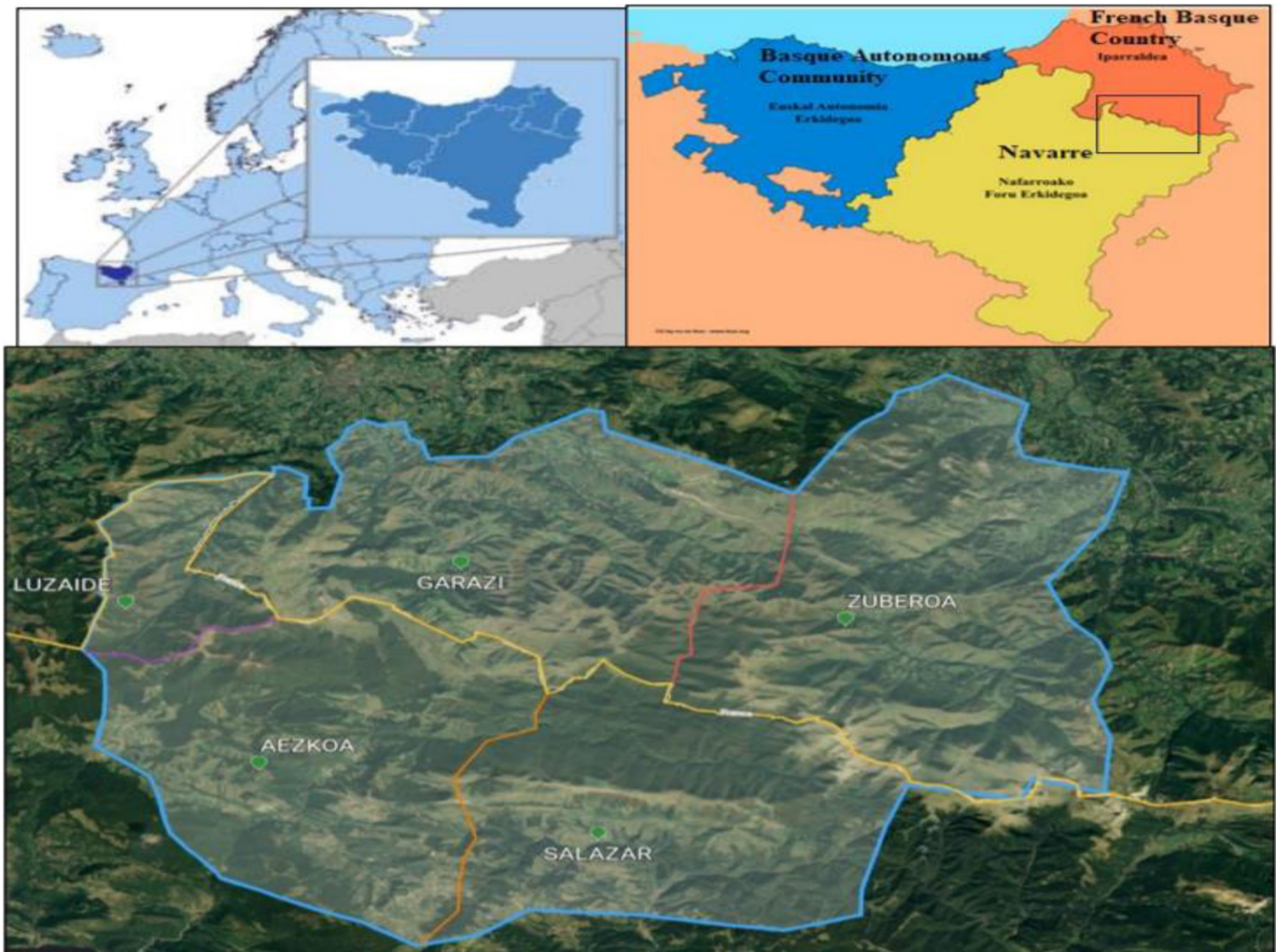

FIGURE 2 The case study region located in the Basque Country (Euskal Herria)
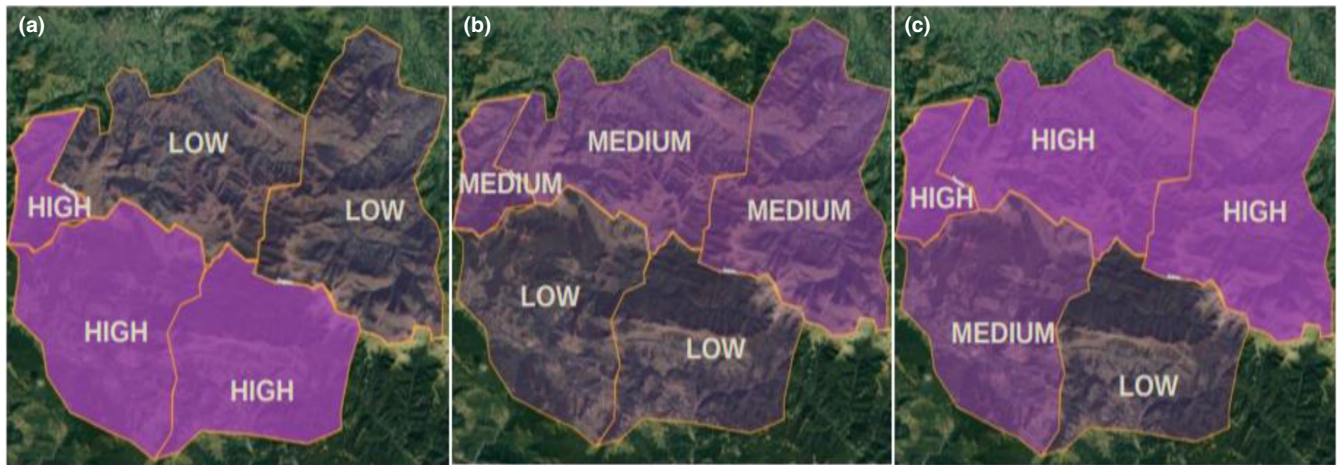
FIGURE 3 Prevalence (proxied by proficiency) of Euskara in the case study region. (a) Basque proficiency among young people (18–40) in the region (UEMA, 2020). (b) Basque proficiency among middle aged (40–65) in the region. (c) Basque proficiency among elderly people (66+) in the region

Country ('*Euskal Herria*' in Euskara, literally meaning the 'Country of the Basque language'). This area is mostly comprised of forests, mountain pasture and small settlements and is divided between four main valleys.[1] Local settlements are in close proximity to local mountain forests, namely *the Arbailles* and *Irati*, the latter being one of the largest and best-preserved mixed beech-fir forests in Europe (Bourquin-Mignot & Girardclos, 2001).

The Western Pyrenean region has been isolated from France and Spain for much of recorded history and has long been essentialised as a peripheral zone of sparsely populated wilderness, with French geographers, only a few short decades ago, calling it 'the end of the world' (Chadefaud & Dalla-Rosa, 1973, p. 5). Along with pasture and small-scale agriculture, forests cover over half of the region (see Figure 2) and host numerous rare plant and animal species (Sanz, 2008, p. 23). Historically forming a crucial part of local life, the economic significance of the forest in the community has declined in recent years: while primary sector activities such as transhumance still contribute to local economies in the French valleys, the Spanish valleys in the south are more service based (Sanz, 2008, p. 178). Regional forest management plans mainly emphasise instrumental values as providers of material and non-material contributions to the local people, for instance via tourism revenue (Brocas & Legaz, 2005; GDN, 1998).

While French and Spanish are currently the dominant languages, Basque (Euskara) has been the main language in the region for most of documented history and is still spoken to varying extents by Basque–French and Basque–Spanish bilinguals. In the southern valleys, family transmission of the Basque language was severely repressed during Spain's fascist dictatorship (1939–1975), but the introduction of Basque-medium schools in recent decades has ensured that most people born post-1977 can speak the language (Jurío, 1997). In the northern French region, the situation is different: although Basque was still locals' predominant language of communication into the latter half of the 20th century and most middle-aged and elderly people speak Euskara, the majority of young people are French monolinguals.[2]

Although cultural groups are far from homogeneous, we adopted the prevalent local representations used to differentiate cultures (principally Basque/Spanish/French) along historical and ethno-linguistic lines. Within the Basque cultural community, Euskara remains a core identity symbol. This is reflected in the fact that people from the region are called 'Basque' or *euskaldun*, literally meaning '(s)he who possesses the Basque language'. The language itself has been reinvigorated in the Basque Country thanks to large-scale social mobilisation and the development a standardised form, termed 'unified Basque' (*euskara batua*), from a divergent set of dialects spoken across the Basque Country (Urla, 2012). The standard has been widely adopted as a means of education and media and is the form of Euskara known and used by younger inhabitants in the southern part of the case study area.

The high variation in dialects of Euskara and varied extents of official status across the valleys presented a challenge during research. This was particularly the case in the Northern sites, where we find significantly distinct Basque dialects such as *Baxenafarrera* and *Zuberera* and less familiarity with the standardised 'unified Basque' (Zuazo, 2019). The linguistic profile of the researchers[3] offered participants the chance to use their local vernacular, thereby generating a richer set of variables through which to explore links between language, identity and relational values.

4 | METHODS

4.1 | Fieldwork

We adapted our guiding research questions to the specific context of the case study and asked (a) do relations with Euskara affect the way people in the region understand and come into relations with their local forest? and (b) if so, what form do these links take? The empirical analysis was based on fieldwork carried out between August and December 2019. Fieldwork had two principal targets: first, to

gather information about local people's relations with the local forest and languages through key informants, focus groups and reviews of written documents; and second, to design and apply a tailored Q-method alongside the administration of a semi-structured survey. All fieldwork participants, including Q-method participants, focus group participants and key informants agreed freely to take part in the research and they all signed an informed consent form whereby anonymity of their views and opinions would be guaranteed and were free to interrupt participation at any stage of the fieldwork. At the time of fieldwork, there was no local ethics committee nor a formal ethics protocol required by the Basque Centre for Climate Change (BC3) to conduct field research.

Our positionality shaped the direction of the research. The authors are both Euskara speakers, share an interest in value pluralism about nature and were largely motivated by the fact that the role of language in human–nature relations was an understudied area of high importance. We set out with the idea that the role of Euskara in people's relational values about the local mountain forests could be understood through cross-referencing local perspectives (and value systems) about nature with people's linguistic characteristics. Given the lack of available templates for empirical study of links between language and RVs, we assumed an open-ended, iterative approach that was receptive to different possible connections between local language and nature in the Basque Country.

Key informants (18) were identified via contact with local town halls and radio stations, and included historians, Basque teachers, tour guides, village mayors, farmers, local artists, officials for regional agricultural syndicates and dynamic young adults. Key informants assisted in obtaining contacts and providing relevant documents and often had exceptional knowledge of the region's history and communities. They also helped organise focus groups, where on occasions they held co-mediator roles, and in some cases helped locate participants for the Q-method. Attempts were made to include a representative share of participants in terms of gender, sub-region of study, age and different language profiles (Basque, Spanish and French). The vast majority of those recommended as key informants were men, with some participants attributing this gender imbalance to the belief that men were more knowledgeable about regional nature and history and others to the fact that men spend more time in the forest. In contrast, when looking for a wide variety of participants for the Q-study, women were more likely to be suggested and attend than men. We targeted proportionally similar participation from the northern (N), French, and southern (S), Spanish, sub-regions, with key informants (NW: 6, NE: 5, S:6), focus groups (N:4, S:4) and the Q-study participants (N: 25, S: 31). When we tried to get an equal division of Basque and non-Basque speakers, it transpired that even in areas with high levels of French or Spanish monolingualism, Basque speakers were more likely to participate in the study. This may have occurred due to one of the authors (DI) being a foreign Euskara speaker, a rarity that encouraged some local Basque speakers to get involved.

Of the 56 Q-participants, all spoke either French or Spanish. Most spoke Basque (82%) and nearly half of the Q-participants'

predominant language was Euskara (48%). Spanish, French, 'unified' Basque and two dialects of Euskara (Behenafarrera Basque and Zuberera, the Basque variant of Zuberoa) were used in the fieldwork (see Q-participants profiles in Table A1, in the annex). Although all three languages were used in focus groups, Euskara was the most employed language during focus group discussions.

The mixed-methods approach prior to the deployment of the Q-methodology lasted several months. First, based on discussion with key informants, a list of possible values about local mountain forests was drawn up, and this list was discussed and further developed by participants in focus groups. After conducting a pilot focus group, eight focus group discussions (45 participants) were held in September 2019 in six villages, (five of which were conducted in Euskara, two in Spanish and one in French). The focus groups were mediated by DI and were divided into three parts: (a) exploring participants' relationship with local nature through engaging with the list of human–forest relations, as proposed by key informants; (b) discussion of individual and community relations with Euskara and (c) inquiring about any perceived and experienced links between language and local nature. This yielded an extensive 'concourse' of potential statements articulating rapports with local mountain forests ($n = 120$) which constituted the basis of statements elected for inclusion in the final set of statements used in the application of the Q-method.

4.2 | The Q-method

Q-method (herein Q) is becoming increasingly popular in conservation research, where it is used to understand people's perspectives, preferences and values (Nordhagen et al., 2017, 2021; Zabala, 2014; Zabala et al., 2018). Q requires a set of statements (also known as items) from diverse data sources reflecting the multiplicity of perspectives on a given topic, usually obtained from a combination of information from secondary literature, key informants and focus groups (Brown, 1996). The statements are normally printed onto cards which are later ordered by participants onto a grid (Figure 4). Although sorting processes vary between studies, participants ultimately gradate the statements according to those which most and least reflect their point of view. This process enables an exploration of the value patterns that underpin the participants' attitudes (Ellis et al., 2007). Researcher bias and influence when designing the statements and guiding the test is a risk (Ockwell, 2008) and can be mitigated by aiming for transparency and comprehensiveness in design and clear and concise instructions during the Q-exercise itself (Zabala et al., 2018). The 56 Q-participants were varied in terms of socio-demographic profiles and came from 11 villages (four in Spain and seven in France) whose populations ranged between 126 and 584 inhabitants (see Table A1 for more details).

We selected a set of 33 statements from the concourse and adapted some of them to more clearly fit with the categories of relational, intrinsic or instrumental values associated with the forest

FIGURE 4 The Q-grid

(Table 1). The Q-statements were translated into French, Spanish and three Basque vernaculars. With regard to the latter, our initial translations were then checked by contacts fluent and literate in these local variants, with this correction constituting an important iterative process which on several occasions problematised the use of certain words in the original wording of the Q-statements. The Q-set was designed to represent the breadth of values about the forest expressed during the focus group discussions, with an emphasis on the array of local relational values articulated. It is important to note that when designing the study, we did not put particular emphasis on statements about Euskara in the Q-set itself, as we expected that any links between Euskara and forests (e.g. historical knowledge, uses of the forest, associated myths, values and any other relationships) would emerge through cross-referencing local perspectives about the forests (via the resulting perspectives through the Q-method) with Q-participants' language profiles (linked to a complementary structured survey). Thus, the Q-set itself did not specifically focus on statements that linked value systems about nature and people's language profiles, although some statements articulating this relation were included.

Most statements in the Q-sample were associated with relational values about the local mountain forests ($n = 24$), although important instrumental values ($n = 7$) and intrinsic values ($n = 4$) were also included (Table 1). Given the fluidity between the three broad types of values, we categorised relational values following Chan et al. (2018). For instance, if according to the local perceptions and experiences the type of well-being obtained through specific relations with the local forest could not be replaced or attained via other activities (i.e. a non-substitutable relationship), such a relation with the forest was associated with a relational value. But if the benefits of a given relationship could be fully or partly obtained via other activities, this would constitute an instrumental value of the forest. In addition, some statement pairs are similar but distinct; for instance, statements #11 and #22 link the local forest with cultural identity: the former refers to a broader idea of local culture (not necessarily limited to Basque), and the latter refers specifically to Basque culture. This subtle difference enables us to evaluate the relative importance of (Basque) culture in people's value systems, a vein of analysis assisted by questions in the supplementary survey about participants' language and identity. Although the Q-method combines the reflective capacity of qualitative methods and the

empirical potential of quantitative approaches, it should be noted that the operationalising of RVs like place attachment through self-report statements may have offered Q-participants less opportunity to express the breadth of place meanings than may have been enabled through more qualitative methods (Brown et al., 2015; Stedman, 2002).

Participants tended to initially agree with most statements, so consequent sorting of cards into further groups was undertaken through considering their relative degree of importance for the individual. Once participants had broadly graded the degree of importance through forming several piles of cards, they then transferred these onto the grid using a likert-type scale from −4 to +4 (least agree to most agree; Figure 4). Q-sorting usually took participants between 30 and 60 min.

The final distribution of Q-sorts was photographed, transcribed and then grouped using the multivariate data reduction techniques provided by the 'QMETHOD' package in R software (Zabala, 2014). After conducting the principal component analysis (PCA), the 'perspectives' resultant from summary responses of participants' Q-sorts, also termed 'factors', were interpreted. The number of factors to be extracted was decided through assessing their salience and similarity (Zabala et al., 2018). These extracted factors were then interpreted through both factor loadings (showing the extent to which individuals loaded[4] onto each factor or perspective) and z-scores (which indicate how well each statement fits with each of the factors extracted). The interpretation of factors is based on the statement results, that is, their salience within each of the factors and the extent of their distinctive position as compared to that of other factors. Statements that have statistically significant different scores across factors can be interpreted as being distinguishing statements. Each factor denoted a distinct viewpoint about the local forest and, taken together, the factors provided an indication of current local value systems about nature. Four factors were initially extracted, but two of these indicated very similar value systems, and drawing on Zabala et al. (2018), we limited abstraction to the three qualitatively distinct factors which still captured enough internal consistent variability of the data. To assist with identification and interpretation, each factor was given a label that reflected its key distinguishing traits.

Qualitative information was also collected through recording participants' comments about the sorting process and the rationales

TABLE 1 Statements used in the Q-method in relation to different types of values

No (#)	Statement	Value[a]	RV type	Source[b]
1	Being in or near the forest makes me feel free	RV	Eudaimonia	FG
2	The forest is culturally important for me as the home of the *Basajaun* and other mythical beings	RV	Cult. identity	KI
3	We should be respectful of the forest	RV	Responsibility	FG
4	Caring for the forest helps me lead a more fulfilling life	RV	Eudaimonia	FG
5	The forest should be stewarded for future generations	RV	Equity	FG
6	The forest reflects the beauty of nature	*Intr.*	—	FG
7	The forest is important because it enables a sense of community	RV	Group identity	LR
8	The forest is important in people's education	RV	Eudaimonia	FG
9	The forest is important for my identity as a person	RV	Indiv. identity	FG
10	Caring for the forest and its different species is a moral duty	RV	Stewardship	FG
11	The forest connects me with the culture of the region	RV	Cult. identity	LR
12	When I am in the forest, I feel a more spiritual person	RV	Eudaimonia	LR
13	People, plants and animals are all part of the same web of life	RV	Kinship	FG
14	The trees of the forest have value, even if we do not have a relationship with them	*Intr.*	—	LR
15	The forest is an important place to enjoy relationships with other people	RV	Community	KI
16	Sensing wildlife in the forest makes me feel happy	RV	Eudaimonia	FG
17	The forest is important because it is a place where I practice leisure activities	RV/Inst	Eudaimonia	FG
18	Going to the forest is good for my health	RV/Inst	Eudaimonia	FG
19	Human beings are responsible for the care of the forest	RV	Responsibility	FG
20	I cannot understand my cultural identity without the forest	RV	Cult.identity	KI
21	Reliance on the forest is a defining aspect of my lifestyle	RV	Indiv. identity	FG
22	The forest is important to my Basque identity	RV	Cult. identity	FG
23	Connection to the forest through Basque place names is important in helping me understand and enjoy the forest	RV	Cult.identity	LR
24	Being in the forest gives the opportunity to enjoy and deepen relationships with friends and family	RV	Community	KI
25	I feel deeply attached to my local forest	RV	Place attachment	FG
26	Forest resources should be equally shared among all people in the community	RV	Equity	FG
27	Tourism generated by the forest produces economic well-being in the region	*Inst.*	—	FG
28	The clean air and water regulated by the forest are important for our well-being	*Inst.*	—	LR
29	Non-timber forest products are important for the community's economy	*Inst.*	—	FG
30	Timber provided by the forest is important for the community's economy	*Inst.*	—	FG
31	Our forest is important for absorbing carbon and regulating climate change	*Inst.*	—	LR
32	The forest has always been important in and of itself	*Intr.*	—	FG
33	The living beings of the forest should be respected in *all* circumstances	*Intr.*	—	FG

[a]Type of value: Relational value (RV), instrumental value (Inst) and intrinsic value (Intr).

[b]Main source of information: Focus groups (FG), Literature review (LR), Key informants (KI).

behind their choices. In addition, we nuanced emergent Q-factors by cross-referencing them with a socio-demographic survey which documented the language profiles of the Q-participants. The structured survey included demographic questions about age, gender, education and occupation; linguistic questions about languages spoken, dominant language(s), language(s) of education and home and native language; and specific questions about distance from the local forest and frequency of visits to the local forest.

5 | RESULTS

Q-method revealed three distinct value factors or typologies of people regarding the local mountain forest in the case study. We name them (a) *Stewards*, (b) *Eudaimonians* and (c) *Euskarians*. These three distinct perspectives are represented by the value statements that obtained the highest z-scores. Figure 5 shows the main distinguishing statements used to interpret the three salient perspectives as
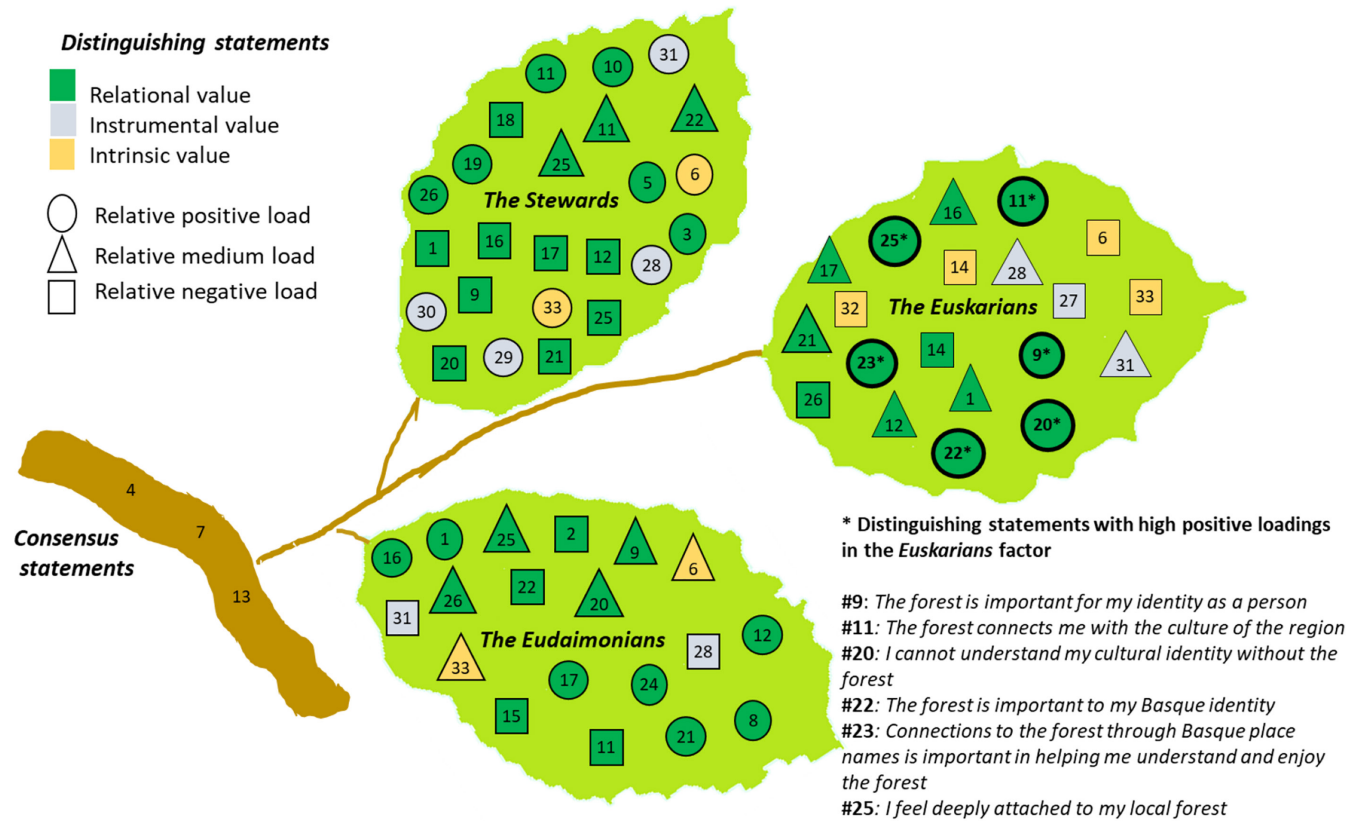
FIGURE 5 The Q-statements associated with the different types of the values of the forest. The Q-statements are represented by their numbers (Table 1). The statements that help define a given perspective appear in each of the three leaves. The statements in the branch on the bottom left show similar scores across the three perspectives and those in the leaves are highly distinguishing ones for each of the perspectives. The starred statements are those positively distinguishing statements for the *Euskarian* perspective and are all associated with relational values linked to linguistic and cultural identity, and place attachment (see conceptual framework, Figure 1)

based on the *z*-scores (Table A3), thus indicating how the archetypical respondent for each factor (perspective) would sort the statements (Nordhagen et al. 2017; Zabala et al. 2017). Figure 5 takes the form of a beech-tree branch, where the left-hand branch shows convergence statements across the perspectives and each leaf contains distinguishing statements for the indicated perspective.

One can differentiate between statements with *relative* positive, intermediate and negative loadings in each perspective. A relatively negative-loaded statement suggests that the statement is less important in defining the perspective (it does not mean that the statement itself represents a negative value type, nor that the given perspective is necessarily defined by absolute negative valuation or rejection of the message embodied by the statement). For instance, #33 is a distinguishing statement with a relative negative load for the Eudaimonian perspective, which means that rather than defining the statement as being relatively highly important to define this perspective, it is relatively less important in comparison with other statements. In contrast, #26 has a relatively positive loading in the Steward perspective, meaning that the statement positively defines or distinguishes this factor from the Eudaimonian and Euskarian perspective. There is a similar number of statements that define the Steward (24), Eudaimonian (19) and Euskarian (20) perspectives. The relatively high quantity of statements associated

with RVs among distinguishing and consensus statements simply reflects the predominance of RV statements over different value types in the Q-set.

Perspective 1: The Stewards. Participants who positively load onto this factor put greatest value on the need and responsibility to protect and care for local forests and on the importance of these forests as providing a healthy environment for local communities. The Steward perspective is epitomised by a remark made by one of the study's key informants: '*the first priority is to care for the woods, then [the second is] to live off them*'. Recognition of the ethical responsibility to respect the rights of future generations to enjoy the forest (statement #5) and the key role of the forest in ensuring environmental balance (#31) forms a key part of this typology which thus prioritises a mix of RVs (#3, #5, #10) and instrumental values (#28, #29, 20, 31). For instance, the relatively high acceptance of the role of the forest as an important carbon sink (#31) is also an intergenerational equity-relevant RV, as it reflects a desire to prevent future generations from suffering negative climatic impacts. This perspective exhibits low factor loadings (approval rates) for statements describing the potential of the forest in individual and collective identity (#9, #20) and lifestyles (#21).

Perspective 2: The Eudaimonians. This perspective focuses on the eudaimonic benefits that the relationship with the forest

brings as exemplified by statements #1, #12, #16, #17, #18 and #21. It also reflects the sentiment that the forest is important for the education of local people (#25) and awareness of the interconnectedness between humans, the forest and non-human beings (#13). This perspective was epitomised by comments from Q-participants such as '*it is as if I were part of it [the forest]... an incredible feeling*' (participant 47) and '*The forest is my energy...*' (participant 53). The lowest factor loadings for statements according to the Eudaimonian typology concern the value of the forest as source of clean air and water (#28) and in relation to sense of community (#24), cultural identity (#11), mythology (#2) and Basque identity (#22, #32).

Perspective 3: The Euskarians. This perspective puts particular emphasis on the importance of relations between the local forests and Basque culture and language (Euskara). Statements with high approval rates for the Euskarians perspective are highlighted in Figure 5 (asterisk and bold). Although Basque-speaking participants exhibited high variation in value preferences, the term 'Euskarian' denotes an explicit link between the co-constructive role of the forest, culture and Euskara in certain individual and collective identities. For Euskarians, Basque language ties them to their local nature, which they use to understand and deepen links with local place. The importance of Euskara as key to this understanding of the forest is clearly illustrated by the high ranking of statement #23, itself exemplified by the remark from participant 17, who claimed that as he was learning the Basque language, he '*came to understand the local place names, [and thus] the surrounding geography made more sense to me*'. High levels of attachment to the local forest (#25) reflect the strong links between nature as place (#11) and personal (#9) and cultural identity (#20, #22). A further statement with high positive loading emphasises the importance of interaction with the forest for eudaimonic well-being. Statement #20 ('*I cannot understand my cultural identity without the forest*') does not make a direct link to Basque identity, but the high ranking of #22, which is similarly formulated but specifies Basque identity, suggests that the former is also referring to conscious adhesion to the Basque community. This perspective affords least importance to the forest's potential to support the local economy through tourism and as a site for social interaction and strengthening of community ties (#7, #27).

Basque speakers are distributed across the three perspectives and results from Q-analysis and complementary information from fieldwork (mostly based on surveys and focus group discussions) indicate the existence of a diversity of value systems within the local population. Indeed, information about the high heterogeneity of linguistic profiles across Q-participants, obtained from the socio-linguistic survey, appeared to foreclose the establishment of links between language and values about local forests. However, the Euskarian perspective itself identified a type of relationship with the forest that is consequentially informed by Euskara. The socio-linguistic profile of participants whose Q-sorts loaded most positively onto the Euskarian perspective suggests that the consequential interlinks in values about language and nature are most present among young speakers in the southern region.

The importance of the forest for linguistic and cultural identity over instrumental or intrinsic values in the Euskarian perspective is one of degree, not substitution. The presence of the three broad types of values among most participants is demonstrated by the fact that participants tended to indicate general agreement with most of the Q-statements in the initial sorting stage. However, the Q-method forced participants to make value trade-offs and prioritise some statements over others. The fact that Euskarians exhibit high levels of agreement with statements linked to their linguistic and Basque cultural identity suggests that nature in the region is linked to these people's relationships with Euskara, a relationship which is, in turn, is shaped by individual and community representations of the local forest. Similarly, the high valuation of Euskara and culture in relation to the local forest can be interpreted as inextricably linked with place attachment, as a meaningful relation with local place could potentially reinforce and be fortified by understanding of the local culture (Basque) and local nature (forest) as special and part of the unique character of both individual and community.

Other interesting findings emerged through cross-referencing the three perspectives with participants' socio-demographic characteristics. For instance, as seen in Figure 5, while any focus on the relative prevalence of value types across the factors must bear in mind the composition of the initial Q-set, the complete absence of instrumental values in the positively charged distinguishing statements of the Eudaimonians and Euskarians perspective indicates that some perspectives about nature could link to RVs more than to others. Moreover, the notable predominance of non-substitutable RVs contrasts with the fact that the local forests are almost exclusively managed by authorities through the lens of instrumental values (GDN, 1998). Age also emerges as an important variable; for instance, the Stewards have a relatively higher average age (70 years) compared to the overall average (55 years), suggesting that older people prioritise collective RVs about forests as associated with intergenerational equity and moral responsibility over and above more individual-based RVs.

6 | DISCUSSION

We begin our discussion of the main results by exploring the Euskarian perspective and how it establishes links between values, language and local nature. This perspective is positively distinguished by six statements which all refer to linguistic and cultural identity and place attachment, suggesting that local mountain forests and Euskara are interlinked in local human value systems. The causal relationship between participants' use and knowledge of Euskara and their high positive loadings for the Euskarian perspective is not immediately clear and there are two alternative ways of interpreting the dominance of these statements here.

First, the high degree of importance given to cultural identity in the Euskarian perspective could originate from the fact that the Euskarians had a lower average age (45 years) than the average participant (55 years) (see Table A2). Tarrant and Cordell's (2002)

study into value systems about forests raises the possibility that this finding can be attributed to the increasing emphasis placed on post-materialist values—such as cultural identity—by younger generations for whom material needs are comfortably provided. This would fit with the significant intergenerational variation in attitudes towards local place, nature and language in local Basque communities as expressed across focus groups and in recent literature on the region (e.g. Xamar, 2018). However, the likelihood that the role of language and culture remains significant beyond the explanation of increasing post-materialism is indicated by the fact that the Eudaimonian perspective also shows high positive loading on non-material benefits of the forest, and by the finding that the average age of participants who load significantly onto this factor is *above* the average (59 years). This suggests that there is no simple correlation between youth and post-materialist value systems about local nature and that the age profile of participants that load onto the Euskarian perspective may instead be attributed to the recent revival of expressions of Basque identity and language in the southern region of study (Urla, 2012).

The second challenge to any causal relationship between participants' use and knowledge of Euskara and their high positive loading on the Euskarian perspective is found in the fact that loading onto this factor did not always come with proficiency in Euskara. For instance, the fact that participant #18 is strongly reflective of the Euskarian perspective (see Table A4) but is not a Basque speaker[5] suggests that Basque cultural and linguistic identity can also be important for those who do not speak Euskara but have a strong sense of Basque cultural identity. Moreover, several of the Basque speakers most reflective of the Euskarian perspective spoke better Spanish than Euskara, suggesting that the Basque language may constitute an important identity symbol despite not always functioning as an individual's dominant language.

Yet, there remain strong grounds to claim that the Euskarian perspective is shaped by a powerful relationship with Euskara. As Figure 4 shows, this perspective is defined by statements such as #11 ('*The forest connects me with the culture of the region*'); #20 ('*I cannot understand my cultural identity without the forest*') and #22 ('*the forest is important to my Basque identity*'), suggesting that it prioritises the forest landscape as a place through which one's Basque identity can be understood and articulated. Crucially, Basque socio-cultural identity is itself a significant nod to a close relationship to Euskara. As previously mentioned, in Basque the word for 'Euskara speaker' and 'Basque person' is the same—*euskalduna* (i.e. '*(s)he who holds Euskara*'). Thus, the concept of 'Basque identity' in Euskara explicitly denotes 'Basque-speaking identity'.[6] This suggests that Euskarians' values about the forest are also an implicit valuation of one's identity as a Basque speaker. This would imply that any considerable changes to the forest environment may be considered by 'Euskarians' as a threat to their linguistic and cultural identity.

A further distinguishing statement for the Euskarian perspective is #23 (*Connection to the forest through Basque place names is important in helping me understand and enjoy the forest*), pointing to a connection to a local landscape dominated by place names (toponyms)

in Euskara. It suggests that if people have a positive relationship with Euskara, which itself is linked to a specific locality, it is more likely to reinforce their attachment with the local place and fuel the perception that the landscape itself is more 'Basque' (in the implicit sense of 'Basque-speaking' or *euskaldun*) than 'French' or 'Spanish'. This proximity of local nature, language and cultural identity is further reinforced by the transmission of local histories and meanings that serve to story localities' past and provide sense to the present. The affective ties made between Euskara and local nature through people's knowledge and conscious pride in the language's historic imprint on local landscapes make a tangible difference to people's perceptions and viewpoints regarding the multiple values of the forest, especially relational values. It follows that linguistic identity is clearly linked with local nature, and hence the processes of caring for local nature and caring for language may be fundamentally interlinked.

The socio-linguistic profile of participants that loaded positively onto the Euskarian perspective challenged our expectations around the nature of people's relations with Basque and the forest. Initially, we expected any consequential links between language and nature to be found in Q-participants' linguistic profiles. Although this expectation reflects modes of categorisation of linguistic populations common in socio-linguistics (Urla, 1993) and studies into biocultural diversity, our fieldwork found it problematic in its dependence upon the homogenisation of highly heterogeneous populations according to simplified characteristics. Results show that most participants that load highly onto the Euskarian perspective are young Basque speakers from the southern (Spanish) side. In this region, family transmission of Euskara had largely been lost, and instead Basque was learnt at school or later in life as part of renewed interest and pride in Basque culture and identity (Xamar, 2018). Some of these individuals relate Euskara to the specificity of local place and history and reproduce new Basque identities which defy discourses maintaining that an 'authentic' relation with the language must come via traditional family transmission (Urla et al., 2016). Our findings therefore indicate that the link between language and values about nature is far from organicist or generalisable. Rather, tri-directional links between people, language and nature exist and influence how some people view the forest in ways which defy facile notions of 'native' or 'authentic' speakers. The dynamic nature of these links suggests that knowledge of and attachment to local language could be regarded as a potential catalyst for more caring place-based engagement with nature.

The complex relationship between language and nature that emerged in our research also enriches the debate around sense of place. Results linking Euskara, as 'ancient' language, to mountain forests via place attachment and cultural identity may initially appear to rest upon an organicist link between nature and language and thereby primarily feed into the conservative and 'essentialist' tradition in studies of sense of place. Yet, as we have highlighted, participants with the strongest positive loadings onto the Euskarian perspective were mostly young Basque speakers who have not learnt the language through traditional family transmission but have reclaimed and dynamically formed relationships with Euskara as

a way of inhabiting the specificity of local place and history. This is complemented by the subsidiary finding emergent in the focus groups that many participants experienced the rewards of understanding place by learning and living through Euskara as an end-in-itself (Ayesta Sagarduy, 2014). This is congruent with the RV of eudaimonia or the process of long-term personal flourishing (Deci & Ryan, 2008). Thus, the relationship with Euskara is part of the ongoing cultivation of positive links between language, nature, place and identity which bridges both essentialist and progressive perspectives on sense of place.

Finally, our findings can be discussed in terms of their implications for language preservation movements. Although linguistic diversity is often conferred intrinsic value and celebrated as an important 'intangible cultural heritage' (Maffi, 2005), many languages are otherwise considered expendable from a purely instrumental and economicist (utilitarian) viewpoint. In general, language preservation scholarship has rarely made empirical, causal links between language, identity, place and value systems about nature (Gorenflo et al., 2012; Maffi, 2005). All languages, particularly minority vernaculars, are associated with a specific geographical area and are suspended in a co-constructive relationship with landscapes and a speaker's sense of identity and community. Exploring how these links are manifested as relational values could offer a powerful conduit through which to better reflect the role of language in sustainable relations of attachment with local communities and their environment. This could create new action-oriented vocabulary to argue for the catalysing of the plural values of nature through nurturing linguistic diversity around the world.

7 | CONCLUSION

This paper has focused on the role that language may play in shaping plural values, and more specifically relational values about nature. Guided by the development of a conceptual framework, an empirical study centred around the Q-method was conducted in a Basque-speaking region of France and Spain. Initial assumptions that any links between values about nature and language were likely to emerge by directly comparing perspectives about local forests with different linguistic profiles were challenged by the complexity and multi-scalar heterogeneity of language knowledge and usage in the region. Results revealed that social local relationships with mountain forests clearly pivoted around the significance of relational values connected to cultural identity and place attachment. More specifically, they indicated that relational values linking identity, place and forest were themselves directly shaped by rapports with the Basque language (Euskara) and participants' self-experience as 'Euskaldun' ('(s)he who possesses Euskara. i.e. Basque speakers').

The findings from this study are of broader significance as they suggest that languages do matter for sustainability. In addition to being instruments of communication, they can shape value systems about local nature. If people experience a language as forming an important part of their identity and sense of place, this engagement can also be channelled to establish and deepen meaningful relationships between local communities and their natural environment. While there is a need to further understand the connection between language and human–nature relations and value systems, this study points to the importance of promoting linguistic diversity to support and encourage more sustainable ways of life around the world. We hope that this study will inspire further research into the links between language and nature's diversity of values.

CONFLICTS OF INTEREST
U.P. is an Associate Editor for People and Nature, but was not involved in the peer review and decision-making process. The authors have no other conflicts of interest to declare.

AUTHORS' CONTRIBUTIONS
U.P. conceived the idea; D.I. and U.P. contributed equally to the development of the conceptual framework and to the design of the empirical research; D.I. led the field work and analysis of the data; D.I. and U.P. contributed equally to writing and revising the manuscript.

DATA AVAILABILITY STATEMENT
All data used in this manuscript are available at the Dryad Digital Repository 10.5061/dryad.tdz08kpzz (Inglis & Pascual, 2021).

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ENDNOTES
[1] Garazi (Fr: *Cize*) and Zuberoa (Fr: *Soule*) in the northern Basque Country (France) and Aezkoa (Es: *Aézcoa*) and Zaraitzu (Es: *Salazar*) in the Navarre (Spain).

[2] The Spanish village of Luzaide (Es: Valcarlos) in the NW of the region of study is an exceptional case; being geographically on the French side of the Pyrenees has meant that transmission of Basque was much better maintained than in the rest of the southern region (Figure 3).

[3] D.I. is proficient in Euskara (Unified Basque, Baxenafarrera and Zuberera variants), French and Spanish, whereas U.P. is proficient in Euskara and Spanish.

[4] The factor loading indicates the relation between the perspective and the participant.

[5] While completing his Q sort, this participant said that he felt 'shame' and 'regret' that he had not been transmitted Euskara at home or at school, and that he nevertheless regarded the language as an essential element of his relationship with local place and nature.

[6] When discussed in Basque, 'Basque identity' quite literally means 'Basque-speaking identity' ('euskal identitatea'). An anecdote illustrates this point. During research, DI caught a taxi from a French–Basque market town across the border. The taxi driver was delighted to hear an English person speaking in Basque, and repeated '*you are Basque, you are Basque*' (*eskualduna zira*). I replied that '*although I may be a "Basque speaker," I could hardly call myself "Basque"*'. Yet, the driver strongly maintained that the core meaning of Basque identity was in its language and repeated in French '*tu es Basque!*'.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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