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# Endangered Languages, Endangered Environments: Reflections on An Integrated Approach Towards Current Issues of Ecocultural Diversity Loss

## **Introduction: threats to biodiversity and linguistic diversity**

Since the onset of colonialism in the 15th century, social and ecological changes have been radical and disruptive, with serious consequences, particularly for the survival of vulnerable communities, their languages and their biodiverse habitats (Ghosh 2021). The processes of land dispossession and resource extraction have led not only to the destruction, flooding and submergence of natural wonders, but also of entire social and ethnic groups.

In the last century, the disappearance of minority and indigenous environments and cultures has been accelerated by processes of globalization, urbanization, industrialization and neo-colonialism. Indeed, environmental concerns were given little importance on both sides of the Iron Curtain before the 1960s and the emergence of modern environmental movements: states and societies prioritized economic growth and national security interests over everything else (Kirchhof Mignon and Mc Neill, 2019). Both communist regimes and capitalist societies, driven by the ideology of economic growth and the notion of nature as

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a mere resource, have contributed to the current crisis of biodiversity and linguistic loss we face today, in which countless environmental and cultural landscapes inhabited by communities speaking endangered languages are being wiped off the face of the earth due to economic development pressures, in the form of extractivism (Rivera Andía & Vindal Ødegaard 2019).

Today, the extinction of languages is part of the bigger picture of worldwide near total collapse of ecosystems. In an era characterized by constant technological progress, accelerated communication, socio-economic homogenization and the abandonment of rural areas, the survival of a number of endangered cultural elements and their ecosystems in all parts of the world is facing major challenges. A particularly high price is paid by the languages preserved by indigenous peoples who are linked to traditional ways of life and maintain a privileged relationship with their territory.

An endangered language is a language that is threatened with extinction because its speakers are dying out or switching to another language. Although languages have gone extinct throughout human history, the rate at which they are currently disappearing is unprecedented: 40% of the approximately 7,000 languages are currently threatened with extinction and it is predicted that at least 1,500 languages will have disappeared by 2100 (Olko & Sallabank 2021). There are many types of causes of language endangerment. Firstly, there are causes that physically endanger the population speaking the languages, such as natural disasters, man-made environmental degradation, famine, disease, war and genocide. Then there are the causes that prevent or discourage speakers from using a language, such as political oppression and cultural/political/economic marginalization/hegemony. In many cases, the two causes are linked: for example, patterns of marginalization and discrimination often precede the destruction of the natural environment in which communities speaking endangered languages live (see Brynne Voyles 2015 and Selvelli 2025, forthcoming).

Each language reflects a unique worldview, value system, philosophy and cultural characteristics. For minority communities, languages are carriers of traditions: they underpin cultural

identity and are an essential part of their heritage. The extinction of a language means the loss of cultural, historical, spiritual and ecological knowledge that can be vital not only for the speakers but also for countless other people: a historical heritage of inestimable value for humanity as a whole. Since the most important factor is the attitude of the community of speakers towards their own language, it is essential to create a social and political environment that promotes multilingualism and respect for minority languages, so that speaking such a language is an enrichment and not a source of discrimination. However, it is important not to neglect the role that the physical environment in which communities live plays in maintaining social cohesion and thus in the transmission of the language.

## **Interrelationship of nature and language: a missing link in academic research?**

Languages, like their speakers, are living entities that are constantly evolving, and the changes in their use reflect the broader relationships within their social, political and natural ecosystems. Surprisingly, the complementarity of language and environment as threatened elements has received relatively little scientific interest: Although research into the degradation of indigenous and native peoples' habitats has been a topic that has attracted considerable attention in both academia and the media worldwide for many years (Gray 1996), and although linguists have increasingly addressed the issue of endangered languages in recent decades, there appears to be a research gap. The role of the natural environment in the preservation of endangered languages of minorities and indigenous communities worldwide, including the European continent, has not yet been studied in a comprehensive, relational way, apart from the studies on biocultural diversity expressed in the publications in this field by Luisa Maffi and others (see Maffi 2018, Maffi & Woodley 2010). As suggested by Franco 2022, the field of biocultural diversity studies, which advocates an inextricable link between linguistic, cultural and biological diversity, might be

better defined as 'ecocultural diversity' to distinguish it from the biocultural approach that emerged in anthropology in the 1970s, an interdisciplinary and comparative approach is essential to shed light on the multiple meanings of ecological change and damage for different cultures and societies. Against this background, a relational approach proves helpful, aiming to overcome the separation and dichotomy between the study of the biological life of human organisms in their environment and the cultural life of their minds (Bateson 1972) in society.

This perspective, which I refer to here as 'ecocultural', (preferring this term to 'biocultural') highlights the reciprocal links between humans and place and recognizes the communicative bonds that connect humans to their environment and other social entities, which has been defined as 'sentient ecology' (Anderson 2002: 116). It also sees an inextricable link between ecological and cultural heritage. The ecocultural concept brings together the social, political and ecological dimensions of identity and views humans as cultural and ecological beings. Although the link between our identity and our ecology has long been recognized in many societies (especially those of indigenous communities), others seem to have forgotten its crucial importance (Milstein & Castro-Sotomayor 2020).

At present, the adoption of the ecocultural perspective in academia appears to have been better received by scholars in North and Latin America. In the European academic tradition, for example, the field of minority studies too often focuses only on the cultural elements (folklore and traditions, subordinate position in the system of cultural-political representation) or adopts a purely linguistic-descriptive focus (documenting the formal aspects of endangered languages) and neglects the broader economic, political and ecological aspects that determine the daily living conditions of minorities and the challenges of contemporary glocal phenomena for their societies. Moreover, mainstream linguistics has been and is too often preoccupied with treating languages and their speakers as mere »data sources« “and, in the context of endangered languages, seems uninterested in examining the concrete elements of speakers' environments and lives when analyzing

the conditions for the preservation of linguistic diversity., The field of language ecology (Haugen 1972) has in most cases retained only the metaphorical meaning of ‘ecology’, without incorporating the physical ecological environment or the relationship to other species. In recent years, an (albeit small) branch of ecolinguistics (see Skutnabb Kangas & Harmon 2017) and the emerging field of environmental linguistics have contributed to emphasize the “mutual relationship between cultural and ecological diversity” (Harrison 2023). They have also highlighted the linguistic implications of threats to the natural environment and the link between biodiversity loss and the loss of linguistic diversity, particularly among indigenous groups and minorities around the world.

In this era of ecosystem destruction, it is clear that an integrated ecocultural vision inspired by a “re-attachment of language to nature” (Harrison 2019) is needed, taking into account the cultural and linguistic consequences of ecological change for communities affected by patterns of environmental degradation. A truly interdisciplinary approach that is sensitive to our globalized environmental problems should be able to recognize the anachronistic nature of any distinction between human history and natural history (Chakrabarty 2009). This approach is based on a relational and cybernetic principle inspired in particular by the theories of the multifaceted scientist Gregory Bateson (1972).

## **The vulnerable position of minority and indigenous heritage**

We are in a time of loss of biocultural/ethnolinguistic diversity, in which we as scholars are called to support the struggles of ethnic minorities to preserve the diversity of languages, cultures and environments from the perspectives of sustainability, diversity and indigenous/minority rights. Minorities and indigenous groups seem to have been largely excluded from the debate on environmental change and remain underrepresented in the debates on the so-called green transition, which directly threatens their territories and resources and thus their cultural heritage. Even

though endangered languages are recognized and protected as intangible heritage in international discourse and rhetoric, as expressed for example in initiatives to preserve linguistic diversity such as the UN Decade of Indigenous Languages, European policies to promote multilingualism and the Convention on linguistic rights (Barcelona 1996), this does not apply to their tangible heritage, which also corresponds to natural environmental heritage. Thus, linguistic rights and environmental rights are not meaningfully related to each other, favouring a more abstract understanding of culture that tends to neglect the importance of the natural environment. In such 'unintegrated' views, the relationship between natural conditions and culture is relatively loose (Laschewski, 2013: 25) and the social component of communities is understood to be independent of specific feelings and practices of attachment to places, and elements of the natural environment. This tendency is problematic, since it portrays indigenous and minority communities as existing in "the "sphere of culture, free of an environmental-material dimension" (Lippart, 2020).

According to an ecocultural (Franco 2022) interpretation, issues related to the preservation of linguistic diversity cannot be considered in isolation from the analysis of the material/ecological environment (Edmonds 2021) in which minority groups live and the social factors that influence their existence. This also has implications for the wider political-ecological dynamics relating to resource extraction and access in areas inhabited by minority/indigenous communities, with the corresponding issues of power relations and relationships with local indigenous knowledge systems. Against this background, I believe that there is an urgent need to include the voices and experiences of indigenous minorities who have lived in their lands for centuries and have a privileged relationship with their environmental heritage (Xanthaki 2019) in the debate on sustainability and the conservation of ecocultural diversity at the global level (see Cultural Survival). An ecocultural approach to the loss of linguistic diversity, complemented by a political-ecological approach that integrates social and natural sciences, helps to shed light on the relationality and interconnectedness

of environmental and socio-cultural phenomena in a minority and indigenous perspective of endangerment.

Given the specific and strong cultural connection that many indigenous groups and minorities maintain with their land (Ford et al. 2020), the physical destruction caused by development projects (such as mining, hydroelectric dams, etc.) is potentially more damaging than for other 'majority' groups in terms of preserving cultural (including linguistic) diversity. The impact of man-made environmental degradation on minorities should be analyzed both diachronically and synchronically in a comparative perspective in a global context, pointing to a variety of historical and contemporary cases involving marginalized minorities and indigenous groups that seem to have been particularly neglected in the national modernization narratives of both capitalist and communist states and continue to be subjected to forms of neocolonialism, land dispossession and cultural genocide. In this context, human rights issues of minorities/indigenous groups and ecological issues of environmental conservation seem to be an indissoluble issue that relates to the broader framework of social ecology, as the preservation of eco-cultural diversity enables the transmission of traditional knowledge, practices and languages across generations (Maffi & Woodley 2010).

## **Environmental injustice affecting indigenous people worldwide**

The heritage of ethnic minorities and indigenous peoples is disproportionately affected by patterns of marginalization and man-made environmental degradation. Is this just a coincidence, or is it a specific pattern of »nationalization«? On all continents (with the exception of Antarctica), minorities and indigenous peoples have been subject to environmental degradation, with profound consequences for the maintenance of ecocultural health, which consists of “a dynamic interaction of nature and culture that allows for the co-evolution of both without compromising either critical ecosystem processes or the vitality of cultures” (Rapport 2011: 1044).

In Europe, these complex ecocultural patterns were disrupted, for example, in the case of the Sorbian communities in Germany, the Saami communities in Norway and the Vlach communities in Serbia, leading to an erosion of the environment and a threat to the minority language. In the case of the Sorbs, lignite mining in the area inhabited by this minority in eastern Germany began more than a century ago. It has led to the physical destruction of dozens of villages (137), with thousands of people affected by displacement and resettlement. The protests against lignite mining have sometimes taken on a cross-border character, with Polish activists also involved. The Sorbian village of Mühlrose is currently being demolished to make way for the Nochten open-cast mine.

In Asia, we can refer to the case of the Sakha (Yakut) people in Yakutia within the Russian Federation; to the case of the Karakalpaks in Uzbekistan, who inhabiting the area where the Aral Sea was located, but also to the Ainu in Japan. As for the Sakha people, this minority and other indigenous groups in this part of Siberia have been affected by the diamond mines for decades. The Vilyuy River, located in a remote area of the Sakha Republic, used to be crystal clear and rich in fish, but is now heavily polluted by diamond mining, which has led to an impoverishment of local biodiversity. In the past, especially in the 1990s, there were protests against the Aykhal and Udachyy diamond mines, but these were immediately suppressed (Crate 1997).

In Africa, environmental erosion has affected the lives and languages of the Ogoni people in Nigeria, the Nubian people in Egypt and the Amazigh communities in Morocco. Shell's environmental destruction of the territories inhabited by the Ogoni minority in the Niger Delta in Nigeria due to oil spills dates back to the late 1950s. It has devastated the land, contaminated the water and air and affected human and animal health. Ken Saro-Wiwa and eight other Ogoni activists who were part of the Movement for the Survival of the Ogoni People were executed by the Nigerian military dictatorship in 1995 for speaking out against Shell over the oil spills (Omoweh 2005).



In North America, communities at risk from resource extraction include the Hualapai (who speak the endangered Upland Yuman languages) in the Big Sandy River area (USA), the Cochiti tribe (and their language, Rio Grande Keresan) in the USA and the Beaver Lake Cree Nation (who speak the endangered Nē-hiyawēwin language) in Canada. As for the Hualapai people, their lives are impacted by the Big Sandy Lithium Project in western Arizona, with initial drilling (with 37 exploration wells) taking place in July 2018. The planned development of this lithium mine would destroy the Cofer Hot Springs (Ha'Kamwe'), a medicinal site considered sacred by the local Hualapai tribe: For this reason, there have been protests for years. However, the Australian company Hawkstone Mining Limited continues to maintain that the Big Sandy lithium is ideally suited for the production of lithium batteries for electronic devices and electric vehicles (Kelety 2021).

In South America, communities such as the Manduruku in Teles Pires, Brazil, the Mapuche in Araucania, Chile, and the Kariña (Kari'nja speaking) in Anzoátegui, Venezuela, have paid a high price for environmental injustice. The Teles Pires dam in the Amazon basin, for example, resulted in the blasting of sacred rapids (Karobixexe) for the indigenous Munduruku people and the removal of 12 sacred urns, leading to local protests and actions that were suppressed with police violence (Fearnside 2020). Unlike other dam projects that have been widely reported in the Brazilian and international press, the Teles Pires dam has been ignored due to various factors, such as its geographical remoteness. The paradox is that the Teles Pires Hydroelectric Company has received several green awards for its projects and has also secured carbon credits from the United Nations.

Last but not least is the continent of Oceania, where indigenous peoples such as the Anangu Pitjantjatjara in Maralinga, Australia, the Kanak (who speak the endangered Numèè language) in New Caledonia and the Maori in New Zealand are suffering from various forms of environmental degradation. In particular, the British nuclear tests in the 1950s and 1960s led to many Anangu (Pitjantjatjara), the indigenous people of South Australia,

being forcibly removed from their traditional lands in the run-up to the tests. The forced relocation destroyed the traditional way of life of the Aboriginal families (Palmer 1990). Even today, the lands in the Maralinga area remain problematic for settlement, particularly for traditional cooking. Unsurprisingly, the Aboriginal people of these areas still feel grief and loss over the contamination of their ancestral lands.

## **Conclusions: ecocultural damage and 'solastalgia'**

Man-made environmental destruction for the purpose of economic development affects not only the physical environment of vulnerable minority communities, but also their intangible heritage. It causes not only pollution, but also forced displacement, urbanization and language loss. It is therefore "ecocultural" damage in both direct and indirect ways. In addition, it causes health problems and psychological effects for the indigenous population of the areas affected by environmental degradation, such as the feeling of »solastalgia« among those who are left behind. Solastalgia has been defined (Albrecht 2005) as the emotional distress caused by environmental erosion, the feeling of homesickness while still at home and witnessing the irreversible alteration to one's native land caused by (man-made) environmental change. A number of socio-psychological and anthropological consequences result from the loss of minorities and indigenous heritage of eco-cultural diversity. Compared to the impacts of natural disasters, it is important to note that the sacrifice of these environments for the purpose of resource extraction and economic development is a deliberate, intentional act decided by state authorities and involves a failure to protect elements of ecocultural diversity and the rights of minorities/indigenous peoples.

Damage to the material tangible heritage, which consists of elements related to both the natural and cultural environment, has unfavorable consequences for the survival of the intangible heritage of minorities and indigenous communities worldwide, who are

disproportionately exposed to environmental change. Therefore, issues related to the preservation of ecocultural diversity in all parts of the world cannot be considered in isolation from the analysis of the material environment and social factors in which minorities and indigenous groups live, as well as the broader issues of political ecology involved in the dynamics that regulate such radical changes in the ecocultural systems of vulnerable groups.

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