

# Rachel Carson Center

## Perspectives

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## **Biocultural Diversity and the Problem of the Superabundant Individual**

The emergent biocultural perspective challenges longstanding separations between nature and culture, encouraging fields that typically separate categories such as “humans,” “animals,” and “the environment” to consider them together. As Luisa Maffi has written, “Historically, the biological sciences have tended [to see] nature as exclusively moulded by biological evolutionary processes, and as existing in a ‘pristine’ state, unless and until humans encroach upon it for purposes of development and natural resource exploitation” (2010, 13).

This paper deals with the subset of work on biocultural diversity that quantifies cultural and biological elements in order to map and compare them across regions (Stepp et al. 2004). These maps reveal that cultural and linguistic diversity are covariant with biological diversity, ultimately helping to link arguments for linguistic, cultural, and environmental conservation. Biocultural diversity conservation projects, as they are called, make the goal of conservation explicit (Maffi and Woodley 2010).

In this paper, I suggest that two forms of misalignment in the emergent biocultural frame need to be addressed. My first suggestion is a call for more sophisticated taxonomic calibrations so that categories such as “ethnicity” and “species” do not become wrongly equated. The second suggestion calls attention to the dangers of overly aligning the conservation of human diversity with environmental management strategies. My purpose, then, is to suggest two ways in which the biocultural frame can integrate more sophisticated forms of alignment in order to fulfill its promise of maintaining biocultural diversity worldwide.

### **Suggestion 1: Taxonomic Calibration**

Efforts to quantify and map biocultural diversity on a global scale (Stepp et al. 2004; Skutnabb-Kangas, Maffi, and Harmon 2003, 40–1) have been ambitious. These projects involve the collection of cultural, linguistic, and biological data from around the world in order to illustrate that human and biological diversities are imbricated and

covariant. The integration of human population data and biological data via maps, creating datagraphics, allows findings in biocultural diversity research to become intelligible to a non-academic audience (Maffi 2010) and to thwart traditions in geography wherein “human” variables (such as census data) have been typically mapped separately from biological data.

However, comparisons between human diversities (typically measured in terms of ethnicity and language) and biological diversities (typically measured at the level of species) are misaligned. It is indeed the case that “maps now show that areas of high biodiversity, especially in tropical regions, also abound in linguistic diversity” (Maffi 2010), but by comparing linguistic difference with species difference, language and other forms of cultural difference become equated with the much more fixed, biological category of species. Comparative projects of this kind need more subtle rhetorical approaches that highlight instead of hide this misalignment. A rhetoric that acknowledges such differences and enacts a taxonomic calibration is crucial given the long history of equating different species of plants and animals with different races of humans. Historically, such misalignments have been used to justify environmental management based on racist and anti-immigrant sentiments (Fine and Christoforides 1991; Heise 2008).

While it is certainly not the case that work in the area of biocultural diversity is in any way ill-intended, it is important for the vast differences between ethnicities and languages on the one hand and biological species on the other to be conceded and foregrounded in work of this kind. As I will describe in the following section, misalignments can lead not only to confusion, but to risky justifications for treating speakers of superabundant languages as members of superabundant species are treated within an environmental management framework.

### **Suggestion 2: Tending to the Alignment with Environmental Management**

The emergent biocultural frame connects such otherwise disparate fields as geographic information systems, evolutionary science, sustainability studies, and ethnobotany. Biocultural diversity conservation projects (Maffi and Woodley 2010) constitute a particular interdisciplinary connection between work on the conservation of language

and culture and the field of environmental conservation. A predominant approach to environmental conservation is environmental management, and it is my concern that establishing this relationship between human diversity conservation and environmental management introduces the possibility of developing what Matsuda and Jablonski have characterized as a “problematic interdisciplinary relationship” (2000).

In interdisciplinarity, each discipline brings with it methodological, historical, and ideological differences (Stillings et al. 1995, 13). Strategies used to maintain linguistic and cultural diversities have, historically, been distinct from environmental management strategies aimed at maintaining biodiversity. Cultural and linguistic diversity has typically been maintained via programs and efforts that focus on endangered cultures and languages, whereas environmental management strategies involve attending to scarce, abundant, and superabundant species as elements in a larger system. Such efforts to maintain biodiversity are based largely on theories of population dynamics (Williams, Nichols, and Conroy 2002, 15–22). As a result, superabundant species of animals worldwide are routinely culled and sterilized based on an understanding that such management practices can alleviate pressure on beleaguered species while posing no threat to the fitness of the culled or sterilized species as a whole. Under the auspices of environmental management, superabundant individuals are deemed expendable when cullings and sterilizations are calculated to aid not only biodiversity, but also such human interests as agriculture, industry, and even air travel.

Large colonies of native and non-native gulls throughout the world have been routinely culled to protect airports or preserve nearby endangered species (Dolbeer and Bucknell 1994; Bosch 1996), and invasive species such as Burmese pythons are hunted to limit their numbers in the Florida Everglades (National Park Service 2008). Non-lethal population control measures have been used in cases where culling would generate public outcry: non-native wild horses have been sterilized in the American West (Layton and Eilperin 2009) and native elephants have been vasectomized in southern Africa (Majors 2006). Cullings and sterilizations are common.

My point here is that a potentially problematic interdisciplinary connection has been made in the biocultural frame by linking efforts to maintain human diversities with longstanding approaches to environmental management. Failing to address this interdisciplinary misalignment could give way to neo-eugenicist rationales for aggressively

limiting the pressures posed by speakers of superabundant languages, for instance, should they fail to enhance the overall linguistic diversity of a given region.

### Conclusion

In highlighting these two instances of misalignment—the first taxonomic, the second interdisciplinary—my intention is to help foster even more persuasive, careful, and strategic arguments among scholars working within the biocultural diversity framework. This emergent scholarship erodes important nature/culture binaries, and mapping projects in particular are a powerful way to visualize the coincidental nature of diversities globally. However, in reifying cultural and linguistic differences by comparing them to species, and by implying that superabundant aspects of human diversity might be successfully managed in ways similar to the treatment of Burmese pythons in Florida or elephants in Swaziland, the biocultural frame is currently based on unstable alignments. These issues need to be addressed for this important work to move ahead as productively as possible.

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