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Papers

Same Nature, Different Values: The Relational Dimension in The Valuation of Ecosystem Services

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Abstract

In recent decades, the ecosystem services approach has gained prominence in the field of environmental conservation by highlighting the connection between human well-being and ecosystem functions. However, critics have pointed out that the predominance of utilitarian and monetary assessments often overlooks the sociocultural and affective values that different social groups attribute to nature. This article explores the relational dimension in the valuation of ecosystem services through the experiences of the Quilombola communities of Cafundá Astrogilda and Dona Bilina, located in the Pedra Branca State Park (Rio de Janeiro, Brazil). The research adopted an interpretivist and sentipensante methodology, combining action research, interviews, and territorial immersion to understand the communities' perceptions and values regarding nature. Building on the experiences investigated, this study contends that the ecosystem services framework must transcend utilitarian and monetary paradigms. Recognizing the centrality of relational values — such as care, reciprocity, ancestry, and spirituality — in shaping these communities' relationships with the forest is essential for advancing equitable and enduring conservation efforts. By foregrounding practices and worldviews that conceive of nature as a principle of life, a locus of spiritual connection, and a source of knowledge, this research establishes the basis for a more integrated and pluralistic approach within the field. Such a perspective not only fosters the development of fairer and more culturally grounded conservation practices but also constitutes an act of intellectual decolonization — one capable of informing social policies and institutional decision-making toward the resolution of socio-environmental conflicts through the recognition of cultural and epistemic diversity.

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INTRODUCTION

In recent years, growing concerns about biodiversity loss and ecosystem degradation have highlighted the critical need to understand the intrinsic links between human well-being and ecosystem functions (IPBES, 2019). To tackle these environmental challenges, various approaches and tools have been developed to assess these relationships, with the ecosystem services (ES) framework emerging as one of the most widely recognized and influential (Campanha *et al.*, 2019).

The ES approach examines the interconnections among drivers of change, ecosystems, the services they provide, and human well-being. Within this framework, the model proposed by the Millennium Ecosystem Assessment (MEA, 2005) illustrates how alterations in indirect drivers - such as policies, economic systems, or cultural norms - can trigger changes in direct drivers, including land use or pollution. These direct drivers subsequently affect ecosystems and the services they deliver, thereby shaping human well-being. The MEA defines ecosystem services as "the benefits people obtain from ecosystems," highlighting that these services are influenced by societal needs and perceptions. Its conceptual framework categorizes services into provisioning, regulating, cultural, and supporting. In the following years, additional frameworks have emerged, notably the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2012), which frames these benefits as "nature's contributions to people." Since then, research and assessment initiatives on ES have grown substantially. Prominent examples include the global initiative The Economics of Ecosystems and Biodiversity (TEEB), which evaluates the economic implications of biodiversity loss, and the Biodiversity Finance Initiative (BIOFIN), which identifies biodiversity financing gaps and seeks financial solutions for governments and businesses.

The concept of ES has increasingly reached decision-making spheres, including governments, civil society organizations, private companies, and financial markets, where it has taken on more applied and instrumental roles. The same is occurring in Brazil, where research and methodologies for assessing, monitoring, and valuing ES are being developed, alongside public policies that reflect growing concern for ecosystem conservation (Campanha *et al.*, 2019). However, a significant challenge remains: the tendency to overlook the power relations that shape access to, use of, and management of ecosystems, which often limits the effectiveness of current ES approaches. This limitation is evident in the difficulty of accounting for the wide range of perceptions and values associated with nature (Colloff *et al.*, 2017; Zafra-Calvo *et al.*, 2020; Guibrunet *et al.*, 2021). Such diversity directly impacts the ability to ensure that resulting decisions are socially just (Colloff *et al.*, 2017; Laterra *et al.*, 2019; Zafra-Calvo, 2020).

At the same time, the literature on social-ecological systems emphasizes that achieving transformative change requires acknowledging and fostering a diverse array of values associated with nature - both those held by different actors and those ascribed directly to nature itself (Stålhammar, 2020). Social values shape individual and collective priorities, guiding how we perceive the world, process information, and interpret reality (Manfredo *et al.*, 2017). In this regard, values form the foundation of human goals and aspirations (Schwartz, 2006). Consequently, shifts in values can set off a cascading effect, influencing actions, perceptions, and the assimilation of information. Importantly, value transformation is not merely an individual process - it entails collective restructuring, since values emerge within networks that interconnect individuals and groups. They are not isolated or autonomous structures, but sociocultural constructs that link individuals to communities and traditions, fostering both a sense of belonging and identity (Manfredo *et al.*, 2017).

The concepts of *value* and *valuation* are widely debated within the field of ecosystem services. Typically, value is associated with initiatives such as the MEA, TEEB, and IPBES, and is primarily addressed through environmental valuation. In this context, value is not understood in terms of ethical beliefs or moral principles but rather as a measure of preference or an indicator (TEEB, 2010), reflecting the relative importance of different ecosystem functions for human well-being.

The IPBES framework categorizes ecosystem service values into three types - intrinsic, instrumental, and relational - which determine the significance of ecosystem benefits to humans. Intrinsic values refer to the inherent worth of nature, independent of any human use or benefit. Instrumental and relational values, by contrast, arise from human–nature relationships and are

therefore shaped by human interests, needs, and the subjective meanings assigned to nature. Himes and Muraca (2018) argue that, because of their largely utilitarian nature, instrumental values are often replaceable, whereas intrinsic and relational values are irreplaceable, as they are closely tied to intangible benefits such as spiritual, cultural, and aesthetic dimensions.

Relational values, according to Díaz *et al.* (2015), are those that contribute to "desirable (sought after) relationships, including those between people and nature (as in 'living in harmony with nature')". IPBES (2019) defines relational values as those that pertain to:

> the importance of reciprocal and meaningful relationships (...) through nature (e.g., sense of belonging, spirituality, responsibility, care, reciprocity, stewardship).

These values are therefore intangible and non-monetary, characterized by emotional and affective qualities, contributing to the well-being and quality of life of both human and non-human beings. This classification contrasts with the predominantly utilitarian frameworks commonly used in ecosystem service assessments.

Himes and Muraca (2018) draw a crucial distinction between the valuation process and the content being valued, noting that conceptual confusion can arise due to their inherently relational nature. Valuation refers to the process through which something becomes worthy of assessment based on its significance, whereas the valued content refers to what is being evaluated and the way in which value is attributed. In terms of the "genesis of valuations," the authors argue that valuations are shaped by both subjective and objective dimensions, as they:

> are not produced entirely by the observer nor are they inherent to the thing itself, but rather emerge in the space of the encounter where subject and objects come into being (p. 2).

As Manfredo *et al.* (2017) suggest, what is considered important by individuals or groups is mediated by the world in which they live, co-determined by "socially shared horizons of meaning that form shared narratives, institutions, norms, and habitual practices" (Himes; Muraca, 2018). This perspective extends the debate beyond individual or subjective dimensions, opening space for deeper reflection on the worldviews that shape valuation processes and practices.

In exploring dominant worldviews, Escobar (2016), drawing on Zapatista thought, reflects on the plurality of realities and knowledge systems that coexist in contemporary society, advocating for a transition toward "worlds in which many worlds fit" (*mundos donde quepan muchos mundos*) - a pluriverse (*pluriverso*) (p. 13). For Escobar, the current global crisis can be understood ontologically as a crisis of a particular world or, more precisely, of the set of practices that constitute that world.

The world we typically reference corresponds to the dominant form of Euro-modernity. Escobar (2016) cites John Law (2011), who characterizes this as the One-World World (OWW) - a world claiming to represent a single, universal worldview, asserting the right to be the World while subordinating or rendering invisible all other worlds; a world in which there is room for only one World (Law, 2011, p. 15).

Within the context of ES, Manfredo *et al.* (2017) highlight that relational approaches and non-monetary values allow for more adequate and pluralistic assessments, recognizing diverse perspectives and value systems within their specific sociocultural contexts. This approach supports collective and reflective processes in value construction. Consequently, perceptions and valuations of ecosystem services can vary widely across social groups, cultures, and knowledge systems, influenced by belief systems, traditions, local knowledge, and spiritual values. The field thus requires approaches that move beyond monetary and instrumental paradigms, fostering deeper engagement with the plurality of values.

In this article, we explore the perceptions of nature that shape the values ascribed to it by residents of the Cafundá Astrogilda and Dona Bilina quilombos, situated within Parque Estadual da Pedra Branca - PEPB (Pedra Branca State Park) -in Rio de Janeiro. A quilombo is a historically and culturally significant community in Brazil, originally formed by escaped enslaved Africans and their descendants. These communities were established as safe havens, often in remote or difficult-to-access areas, where people could live free from colonial and slaveholding oppression.

We have used participatory action research and semi-structured interviews and adopted the concept of *sentipensar* (feeling-thinking) as a

methodological foundation, approaching our analysis from an interpretivist perspective, which has proven effective in uncovering meanings and interpretations within socio-ecological contexts (Stålhammar, 2020). This study aims to contribute to the science of ES by advancing theoretical, analytical, and methodological approaches that enhance the recognition and understanding of diverse ways of valuing nature, with particular emphasis on non-monetary values.

METHODOLOGICAL APPROACH

The concept of *sentipensamiento* ("feeling-thinking") was developed by Fals Borda, who argued that the researcher "must combine reason and love, body and heart" (Moncayo, 2015, p. 10). For Borda (2015), researchers immersed in territorial realities are shaped through direct engagement with everyday life, local circumstances, the environment, and geographic context. Through the practice of endogenesis - a research approach grounded in local realities - the most relevant initiatives for local societies and communities can be prioritized, facilitating the identification of context-appropriate responses to crises (Bastidas Aguilar, 2020, p. 64).

Sentipensar, which forms the methodological and analytical backbone of this study, was applied transversally throughout the design and analysis of interviews. The interview questions were crafted to elicit emotional, spiritual, and cognitive reflections on participants' relationships with nature. This approach allowed to capture perceptions that extend beyond utilitarian dimensions, aiming to reveal the relational values ascribed to nature in the communities' daily lives.

To explore these perceptions and values in the context of ES - particularly through the lens of relational values as defined by IPBES (2019) - we drew upon three primary sources of data: participatory action research through active involvement in audiovisual production workshops, semi-structured interviews, and territorial immersion.

The interviews were organized around three core thematic axes: (1) perceptions and emotional connections to nature; (2) uses of and values attributed to the Pedra Branca forest; and (3) relationships between environmental conservation and quality of life. These axes were informed by existing literature on ecosystem service valuation (Himes; Muraca, 2018; Guibrunet *et al.*, 2021), aiming to capture how different types of values - particularly relational values such as care, ancestry, spirituality, and reciprocity - manifest in the narratives of community members.

Direct engagement with the communities also contributed to a situated understanding of perceived ecosystem services - although these were not explicitly labeled as such by the communities themselves - but were instead expressed through symbolic connections, traditional practices, and affective memories tied to the territory.

To investigate perceptions and values within *quilombola* communities in the Pedra Branca Massif, we drew upon three primary sources of data. The first was a participatory action research process conducted with members of the Cafundá Astrogilda and Dona Bilina quilombos. One of the authors actively participated in the co-production of audiovisual materials and publications in the communities. This approach allowed for deep immersion in everyday life and local knowledge systems, while simultaneously engaging the communities in shaping the themes and contents through workshops held between October 2021 and December 2022.

The second source consisted of semi-structured interviews, conducted in the second half of 2023 with seven participants from these communities. The interview scripts were structured around the three main thematic axes mentioned above. In the results section, letters accompanying the quotations indicate the source of the data: *E* corresponds to interviews, and *V* refers to participants of the workshops focused on audiovisual production.

Finally, territorial immersion in the quilombos served as a crucial source of insight, enabling the development of interpersonal bonds and a deeper understanding of daily practices, narratives, and connections to ancestral traditions.

Study Area

Created in 1974, the Pedra Branca State Park (PEPB), encompasses all slopes of the homonymous massif located above the 100-meter elevation line. Covering an area of 12,393.84 hectares, it is considered one of the largest urban forests in the world. As a strictly protected area under the Sistema Nacional de Unidades de Conservação – SNUC) (Brazilian National System of Nature Conservation Units) (, the Park falls

under the most restrictive category of conservation units, in contrast to the category of "sustainable use" areas.

The overlap between protected areas - especially strict protection units - and territories historically inhabited and used by agricultural and/or traditional communities (as is the case with the PEPB) has generated conflicts that are part of the broader reality across many regions of Brazil.

The establishment of the Park, initially recognized for its water resources and later for its environmental importance, subjected both small-scale farmers and quilombola communities to a specific legal framework that regulates access to, occupation of, and use of land and natural resources.

RESULTS AND DISCUSSION: PERCEPTIONS AND VALUES IN QUILOMBOLA COMMUNITIES IN THE PEDRA BRANCA STATE PARK

In discussing traditional populations within the framework of conservation strategies, Diegues (2002) highlights that these groups have developed:

> distinct ways of life characterized by a deep reliance on natural cycles, extensive knowledge of biological processes and natural resources, ancestral technologies, symbolic systems, myths, and even unique languages (p. 142).

Within the quilombola communities that live and farm in the Parque Estadual da Pedra Branca - PEPB (Pedra Branca State Park), this relationship with the land is shaped by a longstanding interaction with the territory, mediated through agricultural practices developed across multiple historical cycles of production. This agricultural tradition endures to this day, reflected in the continued cultivation of bananas, vegetables, and medicinal herbs.

Nature as principle, bond, and spirituality

We begin our analysis by exploring participants' understanding of nature and whether they perceived themselves as part of it. In response to the question *"What is nature?"*, participants offered definitions that reflect both ontological and existential dimensions:

> Nature is everything – it's the beginning of everything." (E 2, 2023)
> "It's life. It's the beginning, the middle, and the end. (E 4, 2023)

Another response revealed a religious connection by expressing the feeling of divine presence of Oshun and Osoosi orishas in everyday life, underscoring the spiritual dimension as a value ascribed to nature:

> Our lives revolve around it (…) I think nature is a lot of what we are. It gives us health, you know? Those of us who are deeply connected to nature tend to live with more quality of life. I encounter and feel nature within my home. Mother Oshun is always present in my life. Father Osoosi is everywhere I look. I feel deeply blessed and immensely grateful. (E 1, 2023)

Others emphasized the affective and embodied nature of this relationship, rooted in lived experiences and agricultural practices:

> I feel that I'm part of nature because I enjoy planting and watching things grow. I love working with the soil, planting with my hands. For me, that's what it means to belong to nature. (E 5, 2023)

In *On Decoloniality*, Mignolo and Walsh (2018) as cited in Ramos (2020) underscore the significance of *relationality* (relacionalidad) as a conceptual lens for understanding how local narratives intersect with and inform decolonial approaches and practices. These practices are embodied and materialized in lived experiences and in the ongoing struggle to dismantle the mechanisms that continue to reproduce various forms of coloniality. Mignolo and Walsh's (2018) interpretation of relationality is further enriched by the notion of *vincularity* (vincularidad), which foregrounds the interconnectedness between beings, territories, and cosmologies.

According to Ramos (2020), *vincularity* lies at the heart of the Anthropocene concept, as it evokes the idea that nature - in its broadest ecological and cosmological dimensions – and

cosmos have always existed in a relational balance (p. 125). Therefore, according to the author, *vincularity* aligns with emerging currents in ecological thought that seek to reestablish equilibrium and mutual respect between all elements of nature, human and non-human alike, while emphasizing their ontological interconnection (Bispo dos Santos, 2015; 2023).

Regeneration and ecological intelligence

Several narratives further illustrate how nature-based ways of life are imbued with ecological wisdom, reflecting an understanding of the intrinsic regenerative capacity of natural systems:

> Since I was born in the midst of nature, to me it is everything—it's who I am. We lived and still live from it. People often say, 'I want a better world.' But a better world *is* nature, just as it is. On TV we see so many disasters. And people want to reforest. But if you just leave it be, it grows back on its own. It comes back in its own way. Want an example? That flood we had here - the water took everything. And look at it today: it's all back again. (E 3, 2023)

This reflection refers to an episode recounted by the quilombola community of Cafundá Astrogilda, later shared by researcher Rita Montezuma in an audiovisual material. During a visit to the Paineiras River spring, community members recalled that the area had once been occupied by the quilombo itself. Over time, however, they began to notice that their settlement and land use practices were adversely affecting the watershed's health and water quality. In a collective and autonomous decision, the community chose to relocate to lower ground, thereby allowing the landscape to recover. Over the following years, the forest and the spring gradually regenerated, affirming the community's observations and stewardship ethic.

This account highlights the critical role of knowledge that emerges through direct, embodied engagement with place - an intimate ecological awareness cultivated through sustained interaction with the territory. As emphasized by Rita Montezuma, such locally embedded knowledge systems are vital for identifying environmental changes, guiding decision-making about the use of natural resources, and informing territorial governance (Sertão Carioca, 2022). Indeed, local communities often serve as the primary interface with ecosystems, as they rely on and are directly affected by ecosystem services. As noted in the Millennium Ecosystem Assessment (MEA, 2005), these communities are frequently the most vulnerable to ecosystem degradation while also being key actors in conservation and stewardship.

Memory, kinship, and nature as a relational landscape

The interviewees' recollections associated with nature evoke family experiences, cultural practices, and affective bonds, consolidating the landscape as a territory of memory:

> My fondest memory is taking herbal baths from my grandmother. We would go into the forest to collect the herbs, and my grandmother would macerate them to give us baths" (E 2, 2023).

> I remember my father, who worked with medicinal herbs. When I think of nature, I think of family. My greatest memories are of my family (...)" (E 6, 2023).

> I have many memories. I remember that when I was little, my family and I would always go to the waterfalls of Rio da Prata. (...) I also have visual memories that I will never forget. My first childhood fantasies were related to the mountains, the Rio da Prata ranges. I used to think: the world ends there. The world ends there" (E 7, 2023).

Diegues (2002) emphasizes that traditional ways of life are anchored in family and land. In this sense, memory and landscape intertwine in the construction of belonging and collective identity.

> (...) I've always loved full moons. You stop everything just to gaze at her. I'm from a time when we asked the moon for blessings: 'bless me, dear little Moon' - we called her *dindinha*, our godmother" (E 3, 2023).

> When a child was born, we would remove their clothes, leaving only a diaper, lift them up by the arm - just like in *The Lion King* - turn them toward the moon and say: 'Moon, moon, take this child to raise, and once they're grown, return them to me.' (...) And every time we saw the moon, we would ask for her blessing. I think that's an Indigenous tradition" (E 2, 2023).

These practices reveal an expanded conception of kinship. Beyond human-animal interactions, some peoples maintain close emotional and vital relationships with other elements of nature, such as rivers, the sky, mountains, and stones. For instance, Krenak (2020) - an indigenous writer and activist belonging to the Krenak people - reports that various Indigenous peoples of South and North America, Japan, and Russia have cosmogonies referring to a time when humans had a different corporeality:

> Some were fish, some were trees before imagining themselves as human. We all were something else before we became people (p.51).

This human integration with the natural world occurs not only in its origin but also through a cyclical vision of corporeality, in which human matter reconnects with the matter of nature:

> We understand that we continue to exist, in other forms. We are earth. We return to the earth, to the rivers, to the forests. That is why, when you hug a tree, you might be hugging a brother (p.30).

Biodiversity as a way of life

It is important to recognize that relational values can involve both instrumental and non-instrumental relationships with nature (Himes; Muraca, 2018). This complexity is strongly reflected in accounts regarding the use of forest foods and medicinal plants. The recognition of food diversity and its practical utility is closely intertwined with affective, identity-based, and relational dimensions.

> I remember using and enjoying all the fruits. Imagine, all the fruits. I climbed all the trees. This left a mark because it was a time of abundance, right? We could complain about anything except food. It was our backyard. As we grew, we drifted toward luxury. But even today, if I see a tangerine tree, I'll just sit there (E 3, 2023).

> We always gathered things in the forest to survive. I went with my mother; she would collect chayote, chicory, everything from the forest. Coffee, pigeon peas. It was our market bag: oranges, Persian limes, tangerines, bananas (V 1, 2021).

> There was cornmeal, sweet potatoes, bananas, fig bananas, which we call 'banana-sapo.' Here there was also chayote from the grotto (V 2, 2021).

> You can find everything in the forest: chayote, taro, river amaranth (V 3, 2021).

> I think the forest serves to feed the people. I think that's the main thing. Few places have bananas like here" (V 6, 2021).

With regard to cultivated foods, the community's approach to ecosystem management is generally grounded in the promotion of diversity (Guibrunet *et al.,* 2021). This strategy reflects a fundamental recognition that biodiversity conservation and the safeguarding of livelihoods are not opposing goals, but rather interdependent pursuits.

Farmers ascribe value to nature insofar as it supports the reproduction of their ways of life - deeply anchored in their biocultural memory (Ibid.). To this end, they foster biodiversity through a strategic integration of multiple agricultural components across the landscape, generating a wide array of natural resources. While the specific composition of this diversity is shaped by practical objectives, it is also guided by *biointeractions*. As articulated by Antônio Bispo dos Santos (2015; 2023), quilombola intellectual, *biointeractions* denote a harmonious relationship between human beings and the natural world, in

which a collective and reciprocal bond emerges - one that is essential to the practices of cultivating, harvesting, and sharing. Therefore, farmers' knowledge, practices, and cultural expressions are rooted in empirical experimentation, which serves as the foundation for their relational values (Guibrunet *et al.,* 2021).

It is also crucial to underscore that the management of protected areas has historically reinforced a dichotomy between human and non-human nature, often prioritizing exclusion over interaction (Büscher; Fletcher, 2019). Traditional conservation models tend to focus on shielding nature from human activity by imposing access and use restrictions, rather than fostering integrated and reciprocal relationships.

Within this context, medicinal plants and herbs occupy multiple roles in community life. They are recognized not only as therapeutic resources that support collective health (instrumental values), but also as vital elements of local culture and identity (intrinsic and relational values). Knowledge of medicinal plants is passed down across generations and is sustained through trust-based relationships with the forest.

> We still use them a lot. And we know there are herbs that only grow in the forest: abre-caminhos, vence-demanda, guiné, which we use for cleansing baths. If we didn't have all this forest around us, we wouldn't have these herbs. I think this reserve [the PEPB] is very important for us. And I don't think we could live elsewhere (V 1, 2021).

> My mother never took us to a doctor for anything. Our doctor was the forest. She would make teas, baths, and that's how we were raised (V 6, 2021).

> I usually turn to nature, to herbs, and only then to the pharmacy. This has been the case since childhood: your mother, your father, your aunt, your uncle - this knowledge is passed down. When you're a child, you don't pay much attention, but when you need it, you realize it was stored in your memory (V 8, 2021).

> The herbs serve to remove something from the body. My father also made them for bronchitis. He gave the medicine, and people were healed" (V 16, 2022).

> Talking about Rio da Prata without mentioning medicinal herbs is almost impossible. [...] What someone else sees as mere vegetation, we see as medicine. And they are there because someone in the past cultivated them (V 17, 2022).

Spirituality also informs the uses and meanings ascribed to plants, revealing an underlying ethic of care and reciprocity with the forest. These practices draw upon knowledge systems that integrate body, spirit, and territory.

Additional narratives underscore the forest's role as a common good - one that provides essential elements for sustaining quality of life, including clean air, freshwater, and climate regulation. This perspective is embedded in multiple value dimensions, particularly an ethical orientation grounded in principles of interdependence and respect for life.

> First, it [the forest] is my lung. And how can you destroy what feeds you? Then you're destroying yourself. It is a greater good for everyone. Its destruction comes more from ambition than understanding (V 3, 2021).

> Here we have quality, from water to air. But other people in the city have no idea (...) (V 4, 2021).

> When I talk about what it [nature] provides me, I mean for everyone. But people have little awareness of that (V 7, 2021).

The perception of the forest as an ally in both physical and spiritual well-being underscores the central role of reciprocity in biointeractions. Forest degradation, in this view, is understood as a direct threat to collective life.

The values and perceptions identified in this study are not isolated or autonomous constructs; rather, they emerge from a sociocultural continuum that binds individuals to communities and communal traditions, shaping how people

relate to nature. As such, the transition toward new solutions and the development of alternative scientific, paradigmatic, and civilizational frameworks requires engaging with lived realities and acknowledging the significance of small-scale, everyday practices (Bastidas Aguilar, 2020). In this context, the future of ES science is deeply tied to relational value systems and to meaningful engagement with local contexts.

CONCLUDING REMARKS

This study was grounded in a commitment to collaborate with the communities whose experiences and perspectives shaped the research. In exploring the incorporation of relational values into the ES framework, a critical insight emerged: ES, far from being merely utilitarian tools, have the potential to transcend restrictive dualities. Consequently, it is necessary to move beyond conventional limitations and embrace the diversity of perspectives and values embedded in human–nature relationships. Within this context, *sentipensar* - as both a methodological and analytical approach - proves particularly relevant, attending to emotional and intuitive dimensions. The relationships cultivated throughout the research had an emotional resonance that influenced both theoretical-methodological decisions and ongoing reflections. As such, the *sentipensar* approach operates along a dual trajectory, shaped simultaneously by the researcher and the community or groups engaged with the subject of study.

In constructing these reflections and pathways toward alternative paradigms, the social and ontological struggles of traditional communities come to the fore, collectively inviting global recognition of *pluriverses*. By foregrounding practices - and, by extension, relational values - in ES assessments, it becomes possible to establish a foundation for a more integrated approach, contributing to a subversion of intellectual colonialism and shaping social policies and institutional decisions regarding socio-environmental conflict resolution.

With regard to the prevailing conservation model, institutionalized in the West for over a century, its connection to the valuation approaches commonly employed in ES science is evident. In contrast, a novel and necessary model of conservation calls for the inversion of this logic: identifying relational values and promoting frameworks that recognize biointeractions. In this sense, understanding the value systems of traditional peoples, such as quilombolas, is increasingly vital, given their central role in biodiversity governance through practices that are more intimately integrated with nature.

From this perspective, ES science can be strengthened by engaging in dialogue with other movements, including environmental jurisprudence, which fosters a more ethical understanding of human–nature relationships. Movements that incorporate relational, cultural, and spiritual values into socio-environmental contexts contribute to revising concepts traditionally central to ES approaches, such as and development. Integrating these perspectives can enrich and advance ES science, creating opportunities for the institutionalization and standardization of distinct relational values and promoting a world in which many worlds can fit.

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Ingrid Almeida de Barros Pena: Conceptualization, Methodology, Data Curation, Formal Analysis, Writing – Original Draft, and Writing – Review & Editing. Helena Neri Alves Pinto: Data Curation, and Writing – Review & Editing. Agnieszka Ewa Latawiec: Supervision, Funding Acquisition, Project Administration, and Writing – Review & Editing.