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ONTOLOGICAL DIFFERENCES AND THE PURSUIT OF PLANETARY WELL-BEING

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Introduction

Scientific concepts and methods not only characterize and analyze worlds but also shape them. Global systemic concepts born and raised in Western universities may appear to be neutral and unbiased abstractions floating above the complexity of the world, but they reflect the worldviews of their makers. Indeed, human perception, including scientific knowledge, is socially and culturally produced (Latour and Woolgar, 1986; Said, 1978) and takes part in the shaping of realities (Law and Urry, 2004).

Planetary well-being draws attention to the integrity of ecosystem and Earth system processes that are vital to the well-being of all organisms, species, populations, lineages, and ecosystems. The concept addresses the need for an ethically inclusive and systemic conceptualization of well-being that takes into account the multiple dimensions of interaction between divergent entities (see Chapter 2). It also works as a tool for bridging different worldviews to make the concept globally applicable (see Kortetmäki *et al.*, 2021). This chapter approaches the notion of planetary well-being as a dynamic, political process that develops through transdisciplinary collaboration, which brings together viewpoints, concepts, and methods from both natural and human sciences. We contribute to the development of planetary well-being by discussing its cross-cultural applicability and suggesting how to make the concept more open to difference and, hence, better able to resonate with perceptions that differ from mainstream Western (scientific) thinking. Our suggestions aim to support the goal of promoting planetary well-being through transdisciplinary and decolonizing research.

One possible way of enhancing the cross-cultural reach of planetary well-being is to open it to divergent ontologies. By ontologies we mean various understandings

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of what exists, and the constitutive relations of diverse kinds of beings. Ontologies are enacted and performed through an array of practices, including discourses, scientific methods, and everyday mundane tasks (Gad, Jensen and Winthereik, 2015); thus, we start from the premise that *practices shape realities*. Planetary well-being is a particular kind of practical ontology that both perceives and enacts the world as a range of ecological processes and categorizes all beings as biological species and mutually exclusive biological organisms that are part of ecosystems. While this is an appealing way of apprehending existence within the scientific domain, biological species and ecosystems may not be meaningful or sufficient organizing categories in all ontologies. Furthermore, not all ontologies are based on a human–nonhuman dichotomy or other Cartesian dichotomies such as culture (social)/nature, material/immaterial, mind/matter, and animate/inanimate. While planetary well-being, faithful to scientific realism and materialism, perceives ecosystems as material and independent of the human mind (Chapter 2), ecosystems can also be approached as dynamic material-discursive wholes, which change and develop through practices such as ecosystem conservation programs. From this perspective, the human mind-body is embedded within the ecosystem and "nature" more generally.

Western, Eurocentric science tends to view the world from an "exterior observational point" (Barad, 2003, p. 828), thereby enacting a category of pure Nature existing independently of human cognition. Here, however, we do not seek to reproduce the dichotomy of "the West" and "the rest", but recognize that "the West", too, is ontologically multiple (Jensen, 2021, p. 100) and that ontologies interact and entangle. In fact, the coming together of divergent ontologies *as equals* is necessary for a common world that enables planetary well-being to be realized. This does not require their becoming the same; rather, it involves respecting difference (Verran, 2002). Ontological dialogue starts with the recognition that the dominant scientific ontology is not an objective view coming from a detached, external nowhere.

The great divide of nature and culture is deeply embedded in scientific theories and Western thought dating back to the age of Enlightenment and René Descartes, or all the way to the emergence of mainstream monotheistic traditions in the Middle East (Ginrich, 2014). While nature and the material world have been to a significant extent excluded from social theory, the social and the human have been correspondingly excluded from natural sciences (Tsing, 2014). We have ended up with a separation of the human and natural worlds, as if human culture was not part of nature. While sometimes represented as overlapping and interrelated, they are still conceptualized as two distinct realities. Another outcome of these Cartesian dualisms is anthropocentrism, which lies at the root of the current environmental and climate crises, since nature and other entities have been valued merely as resources for human beings to utilize. The concept of planetary well-being defeats normative anthropocentrism by prioritizing the intrinsic value of nonhuman populations, species, and lineages over their instrumental value for human prosperity (Kortetmäki *et al.*, 2021). Thus, it puts humans back to nature by rendering *Homo sapiens* a species among others.

We argue that to promote and achieve planetary well-being, we also need to recognize that culture is not a separate entity but *enmeshed within nature*. Instead of framing human practices merely as a threat to biological systems, it is important to analyze how they may maintain, enhance, and even create biodiversity (Maffi, 2007, 268; see also Pretty *et al.*, 2009) and planetary well-being. For example, the concept of biocultural[1] diversity views biology, culture, and language as dialectically and inextricably intertwined (Franco, 2022; Maffi, 2005, 2007; Skutnabb-Kangas, Maffi and Harmon, 2003). According to Luisa Maffi (2007, p. 269), biocultural diversity is based on three key elements. Firstly, it recognizes that the diversity of life is made up not only of the diversity of plants and animal species, habitats, and ecosystems found on the planet, but also of the diversity of human cultures and languages. Secondly, it acknowledges that these diversities do not exist in separate and parallel realms but affect one another in complex ways. Thirdly, it notes that the links among these diversities have developed over time through mutual adaptation between humans and the environment at the local level. In sum, biocultural diversity realizes that biological, cultural, and linguistic diversity co-occur and mutually support one another. They are also threatened by the same forces. To maintain the resilience of social-ecological systems on the long run, it is imperative to maintain diversity in all its forms (Pretty *et al.*, 2009).

Focusing on biocultural diversity highlights cultural differences in the satisfaction of basic needs, central to the notion of planetary well-being (Kortetmäki *et al.*, 2021). However, instead of perceiving difference only in terms of culturally varying need satisfaction, the concept of biocultural diversity encourages sensitivity towards ontological difference and related perceptions of needs and well-being: Determining what well-being means requires openness to different ontologies (Hiemstra, Subramanian and Verschuuren, 2014). But how, then, could ontological multiplicity be addressed in the development and implementation of planetary well-being?

John Law and John Urry (2004) encourage researchers to ask what kinds of realities we make with our concepts and methodologies, and what kinds of realities we would wish to make with them. Taking these questions as our starting point, we propose that the pursuit of planetary well-being be geared towards cultivating divergent biocultural realities. This requires that ontological difference is appreciated by means of "softening" the realisms of biology (Law and Joks, 2019, p. 441). We seek the means to do this by drawing on ontological politics, discussed in the following section. After that, we propose some conceptual and methodological tools that open up a space for interdisciplinary and cross-cultural dialogue on planetary well-being. Anthropologist Anna Tsing's (2017) conceptual pair of *multispecies resurgence* and *Anthropocene proliferation* is helpful in envisioning planetary well-being from the point of view of biocultural diversity grounded in and emerging from particular landscapes. Her approach to landscapes as *more-than-human assemblages* enables investigation of how multiple world-making practices—ranging from those of plants and fungi to industrial landscape

projects, Indigenous cosmology, and scientific classification—come together. In other words, landscapes are open-ended and constantly changing gatherings. Their livability depends on how well the gatherings succeed in cultivating biocultural diversity and well-being. Tsing's conceptual tools, we argue, are hospitable to different realities, including the scientific ontology of planetary well-being.

Enacting realities

Within the social sciences and humanities, the core concepts of culture and society are subjects of constant debate. The concern with cultural and social differences relies on a conception of the world as one, while "culture" implies only a specific kind of perspective on the one world. In other words, epistemologies (ways of making sense of the world) vary, but there is only one ontology (what kinds of things exist and their constitutive relations) (Heywood, 2017). Conventionally, the task of anthropologists has been to study people's cultural perceptions—that is, epistemologies—of the one world. However, the Western notion of culture takes its ontological status for granted as it relies on the dualism of nature and culture (Blaser, 2013, p. 550). Therefore, we need to move beyond "cultures" in thinking about difference.

Western science tends to treat Indigenous and other realities as cultural takes on a single natural world, the one reality. Politics, then, comes to be about negotiating individual and collective rights and duties within the social realm, a "politics of who" (Mol, 2002, p. 166). Marisol de la Cadena (2010, p. 360) calls this "politics as usual", referring to "power disputes within a singular world." But what if we start from a position that the common world is not pregiven, that semiotic and material practices do not just reflect knowledge of the one world but enact and perform diverse realities or ontologies?

A sensibility known as *ontological politics* assumes that the making of reality is open-ended, contested, and shaped within mundane practices (Law, 2002; Mol, 1999). Approached from this perspective, science's single Nature loses its purported objectivity, and "multiculturalism" turns into "multinaturalism" (Latour, 2011; Lorimer, 2012). Multiple natures, however, are not different kinds of human perspectives, but emerge from embodied entanglements of human and nonhuman agents including plants, animals, materials, and technologies, which make these knowledge communities more-than-human. Furthermore, differing natures are not stable and mutually exclusive totalities; rather, different kinds of enactments clash and collaborate (Mol, 1999, p. 88). Therefore, it is more fruitful to focus on world-making *practices* than on "orders" that locate actors within impermeable worlds (Gad, Jensen and Winthereik, 2015). Indigenous peoples, for instance, do not live in closed and pure "indigenous worlds." Their knowledge and practices cannot be separated from the larger world of media, science, and political and economic systems or ignore the impact of (uneven) power relations within these global systems of localities (see, *e.g.*, Hastrup, 2015; Kottak, 1999). For instance, economic

globalization has resulted in changes in many indigenous contexts, including that of turning traditional practices into commercial activity (Kopnina 2012, p. 131).

Abandoning mononaturalism in favour of multinaturalism opens the possibility of attending to the ways in which ontological difference is recognized and handled. For example, in their analysis of the enactment of the Deatnu River and its salmon by the Norwegian state and Indigenous Sámi people, John Law and Solveig Joks (2019, p. 440) argue that the former tends to be intolerant of different realities. Although the Norwegian state recognizes traditional ecological knowledge in theory, genuine dialogue between divergent realities has not been achieved in practice, leading to the gradual disappearance of Sámi fishing practices and the realities that go with them. The "settler" way of ignoring ontological differences is a form of colonial politics (*ibid.*). A more successful case of ontological dialogue has been presented by Helen Verran (2002) who has studied how Yolngu Aboriginal landowners and environmental scientists in Australia relate their respective fire-control strategies, *worrk* and prescribed burning, in workshops involving lectures, seminar-type discussions, and practical demonstrations of fire control. Verran argues that a postcolonial knowledge space resulting from the workshops enables the participants to see how their strategies are both the same and profoundly different. The common world, then, is not a pregiven solid ground, but "a risky and highly disputable goal that remains very far in the future" (Latour, 2011, p. 9). Yet, despite being extremely difficult to obtain, the common world is an existential and ethical imperative, which necessitates co-researching and collective experiments (Latour, 2011). As Wim Hiemstra, Suneetha M. Subramanian, and Bas Verschuuren (2014, p. 24) posit, "a plurality of ways of knowing is better able to find ways of flourishing within ecological limits than one mainstream way of knowing on its own."

From the perspective of ontological politics, the methodological choices of natural and human scientists are not objective or innocent. They are political and performative, taking part in the shaping of realities (Law and Urry, 2004). In global research, it is important to understand divergent ontologies and avoid imposing concepts and categorizations that may not be relevant outside the West or which may even reproduce colonialist attitudes and power structures. Anthropology's historical complicity in the colonial project (*e.g.*, Asad, 1973; Hymes, 1969) has led to a heightened awareness of how research practices may reproduce systems of oppression. Decolonizing science means engaging in critical reflection on questions of power in knowledge production, how we teach, and how we frame our research questions and relate to the people with whom we work (McGranahan and Rizvi, 2016). All this starts from recognizing and reflecting on one's own ontological presuppositions and position within intersecting structures of power—a prerequisite of ethical research.

Promoting planetary well-being, however, requires both understanding diversity and supporting the struggles needed to sustain it (see Brightman and Lewis, 2017, p. 22). The fight against the erasure of differences, an instantiation of colonial politics, amounts to "resistance against territorial expropriation, against institutional

disaggregation, and against ontological erosion" (de Almeida, 2017, p. 283). As scholars, we need to be cognizant of the fact that our concepts shape the worlds that they describe. Choosing and using certain methods, concepts, and (underlying) ontologies are world-making practices, since they outline how the world will be categorized and represented, and what will be left out of the inquiry. In the following section, we present some conceptual tools that assist in approaching divergent world-making practices and cultivating a postcolonial sensibility in striving for planetary well-being.

Tools for bringing culture back to nature

Reconciling human interests with nonhuman well-being poses challenges. For instance, most conservation and development projects seek to preserve either nature or cultures (Kopnina, 2012), something visible in struggles over who decides the aims and ways of preservation and the opportunities local people have to be involved in these negotiations (see Chapter 8). Nature preservation plans have been seen as neo-imperialist since they have sometimes ignored the rights and/or ways of life of local residents and Indigenous communities in favour of endangered species (Kohler and Brondizio, 2017; Kottak, 1999). Correspondingly, prioritizing the social, cultural, and economic rights of human communities over biodiversity and the rights of nonhuman species has been criticized for enacting elite-imposed concepts such as development and human rights that support the anthropocentric line of thought (Kopnina, 2012, p. 141).

A focus on biocultural diversity helps to reconcile these challenges (Kopnina, 2012; Pretty *et al.*, 2009). As Tove Skutnabb-Kangas, Louisa Maffi, and David Harmon (2003, p. 42) have stated, "fostering the health and vigour of ecosystems is one and the same goal as fostering the health and vigour of human societies, their cultures, and their languages." The study of biocultural diversity also assists in addressing ways of protecting natural places that have endured over generations and that value certain sites as sacred (Pretty *et al.*, 2009); these are not based on scientific ontologies but on spiritual connection to the more-than-human environment. While Indigenous and local lifeways must not be romanticized, they provide diverse solutions to current environmental crises and help to envision "radically alternative futures" (Chapter 8). Focusing on interactions and relations that occur in divergent environments, the concept of biocultural diversity enables culture[2] to be integrated into interdisciplinary research of planetary well-being. But how can the various relations that contribute to the making of biocultural diversity and particular biocultural realities be approached? How can this be done in a world where ontologies and localities are affected by and involved in global processes?

Several fields of science have sought to overcome the division of nature and culture. Among others, these include cultural geography, with the elaboration of the concept of landscape (see Wylie, 2007); posthumanist, feminist, and new materialist theories that attend to vibrant matter (*e.g.*, Barad, 2003; Bennett, 2010); and

philosophies that see the world as composed of assemblages and actor-networks (*e.g.*, Deleuze and Guattari, 2004; Latour, 2005). Anthropologist Anna Tsing builds on Deleuzian assemblage theory to investigate more-than-human histories of places, entities, relations, and multispecies communities on multiple scales. In the following, we present her approach and suggest it as a suitable tool for interdisciplinary investigation of the making and unmaking of biocultural diversity—and, thereby, planetary well-being.[3]

Multispecies resurgence and Anthropocene proliferation

Planetary well-being states that human activities are sustainable if they "retain the opportunity for all types of living entities on Earth to satisfy their needs now and in the future" (Chapter 2). Visioning true and serious sustainability, Tsing (2017) presents a similar idea on a local level, grounding analysis in landscapes: Dynamic gatherings or "assemblages" of more-than-human encounters (Tsing, 2015, pp. 22–23). She claims that human ways of life within particular landscapes are truly sustainable only if they "align themselves with the dynamics of multispecies resurgence" (Tsing, 2017, p. 51). Here resurgence refers to the ability of multispecies communities to regenerate after disturbances through the actions of many organisms, including humans. In the long run, the continuity of human cultures also depends on multispecies resurgence that forms livable landscapes. Tsing uses the term "resurgence" instead of "resilience", because of its polysemy and lack of exact definition. With this conceptual choice, she aims to facilitate open-ended discussion among natural scientists, humanists, and social scientists (*ibid.*, p. 63). Tsing's radical, non-anthropocentric reconceptualization of sustainability encourages us to envision what kinds of worlds we want to enact with planetary well-being. It facilitates the perception of humans as part of multispecies communities and landscape gatherings, and cultural practices as part of their regenerative processes. Consequently, Tsing's approach is useful for researching biocultural diversity and the more-than-human practices and processes increasing and decreasing it.

To describe the making of livable landscapes, Tsing (2017) turns towards the ecological modality of the Holocene, the era starting from the glacial retreat in the northern hemisphere after the Ice Age. Species recolonized land emerging from the ice through the dynamics of succession. Holocene farming encouraged the reenactment of post-Ice Age succession, such as that of field and woodland species. Some patches of Holocene resurgence where farming practices reproduce resurgence processes and species assemblages typical of the Holocene still exist. Tsing (*ibid.,* pp. 56–57) gives an example from her own research on Japan's Honshu Island, where traditional cultivation produced a biodiverse woodland, the *satoyama* forest. The peasants made intensive use of these forests by cutting down trees for timber and firewood, collecting leaves and humus for fertilizing fields, and gathering products for everyday needs. Farming and subsistence in villages was dependent on the surrounding forests. Meanwhile, human engagement in the forest

repeated the pioneering succession where pines that would have died out without human disturbance, smothered by broadleaf trees, colonized bare mineral soil with their companion species, matsutake mushrooms. Without villagers cutting down broadleaf trees, pines would have disappeared from the forests together with the culturally appreciated matsutake. Multispecies resurgence of the *satoyama* forest both depended on and enabled traditional farming as a way of life. Currently, however, these forests have mostly been replaced by timber plantations or transformed after being abandoned by peasants. People have moved to cities and traditional farming practices have been replaced by chemical fertilizers and fossil fuels. Without human engagement, deciduous trees have taken over the forests with species assemblages that no longer support traditional farming; matsutake is now imported from Europe and North America (see Tsing, 2015).

Pretty *et al.* (2009) state that many of the drivers for the loss of biocultural diversity evolve from capitalist economies that stress economic growth. Growth orientation has resulted in a shift in consumption patterns, the globalization of markets, and the commercialization of resources, paving the way to the homogenization of cultures and landscapes. For instance, globalization of the food system leads to loss of ecological knowledge and locally developed skills and practices, and monocultural plantations lead to loss of traditional diets and knowledge of famine foods (*ibid.*, pp. 104–105). Tsing (2017, pp. 51–52) argues that in the Anthropocene, multispecies resurgence has become severely threatened by ecologies of *proliferation*: Simplified, human-made ecologies that are designed to produce assets for future investments and kill off beings not recognized as assets. The Anthropocene is characterized by plantation ecologies, industrial technologies, and large-scale governance projects, as well as capitalist modes of accumulation that drive major changes in landscapes and earth system processes (*ibid.*, p. 53). Its ecological modality produces monocultural proliferation of a few species, separating organisms from their life worlds and companion species. Monocultural plantations and related global trade kill off diversity and enable the unmanageable proliferation of viruses and pathogens (see also Chapter 4). For instance, industrialization of the nursery trade of ash trees led to a dieback of ashes around Europe in the early 1990s as trading and shipping young plants across regions and continents allowed the spread of a fungal pathogen. The dieback of ashes poses a threat to biocultural diversity; in addition to having cultural significance, the ash is a keystone species, supporting many insects, lichens, fungi, molluscs, and birds (Tsing, 2017, p. 59).

Overcoming the ecological crises requires an understanding of the more-than-human histories and socialities of the Anthropocene (for examples, see Tsing *et al.*, 2021) that are killing off biocultural diversity. However, there are still patches where human practices align themselves with regenerative processes that sustain multispecies communities. Spotting and learning from those rare patches may be critical to sustaining a livable world (Tsing, 2017, p. 62) and achieving planetary well-being. In sum, to promote planetary well-being, we need to be aware of the histories in which various more-than-human social relations come into being:

Relations of proliferation (destructive to planetary well-being) as well as relations of resurgence (supportive to planetary well-being).

More-than-human assemblages

A focus on multispecies relations and communities makes Tsing's conceptualization of sustainability well suited to envisioning planetary well-being. Furthermore, and not restricted to biological and ecological relations, her approach to the more-than-human formation of landscape assemblages and multispecies socialities has potential for bridging different ontologies. In assemblages, the lifeways of organisms and non-living ways of being come together and emerge through mutual transformations. They consist of everything that gathers in a place: "Assemblages are just those we find assembled", such as plants growing around each other in a particular landscape, or plants and their symbiotic fungi (Tsing, 2014, pp. 31–32). Both landscape assemblages and entities gathering in them take shape within more-than-human social relations that transform over time.

Investigating what gathers paves the way to noticing underlying relations without making a priori assumptions about what kinds of relations or entities matter. Importantly, the investigation does not have to be restricted to living organisms. Assemblages can include biotic and abiotic, natural and supranatural, material and immaterial, as well as discursive and practical entities, among others. For example, rocks, rivers, gods, ancestors, and sacred places can participate in the making of landscapes, and so can tools, technologies, infrastructures, governance discourses, global economies, and so on. Therefore, Tsing´s understanding of assemblage is particularly beneficial in bridging different ontologies and perceptions of well-being in the pursuit of planetary well-being. It attends to what matters in actual more-than-human landscapes where biocultural realities are made.

Assemblages are continuously taking shape, but careful, sensitive, and critical description enables the co-emergence of gathered entities in a landscape to be traced and explored and opens their more-than-human histories to investigation. Various scales and sources from Indigenous cosmology and unwritten histories to scientific reports and observation can be combined when investigating more-than-human landscapes and their historical trajectories, keeping in mind that different sources have different methods of knowing and making the world (Tsing, 2017, p. 62; on Indigenous storytelling as research, see, *e.g.*, Iseke, 2013). Tsing (2014) advises us to start by following people into their landscape. Listening to human informants and perceiving and participating in their actions offer insights into the cultural practices involved in the shaping of landscapes, although it is not human practices as such but the dynamic relations among many species that create the multispecies web of social relations. In addition, landscapes are the products of multiple histories of various scales from microbial to global. For example, *satoyama* forests emerge from local interspecies relations as well as from global timber and fuel markets (*ibid.,* pp. 35–38). Apart from understanding the material

and semiotic nature of divergent ecologies, we need to combine observations in particular multispecies communities with broad histories and difficult-to-trace connections (Tsing, 2017, p. 61).

Approaching (landscape) assemblages and entities as products of more-than-human histories enables transdisciplinary work and research that covers multiple aspects of complex realities.[4] Tsing's assemblage approach can be used as a tool for investigating Anthropocene proliferation as well as multispecies resurgence in livable landscapes. Therefore, it has the potential to provide a bridge between the biological relations and ecological processes central to the notion of planetary well-being, and the multiple more-than-human relations that remain outside the scope of the ecological/biological perspective. These include relations to spirits, gods, and ancestors to which planetary well-being does not assign any moral consideration. Undertaking cross-disciplinary and multi-ontological "assemblage studies" through the lens of planetary well-being would benefit both conceptual elaboration and practical implication of the concept. The approach allows the combining of different ontologies and conceptualizations of well-being without forcing them into a unified framework.

While we encourage ontological bridging both on the theoretical plane and in empirical research and development projects, we are not claiming it to be an easy task. Indeed, softening the scientific realism of planetary well-being with assemblage thinking poses challenges. For instance, the assemblage perspective on landscapes as emergent and fluid gatherings undermines the stability of biological and ecological systems and processes that are central to the concept of planetary well-being. Seeking synthesis between different ontologies is problematic, but some promising attempts have been made. In the field of sociology, Timothy Rutzou and Dave Elder-Vass (2019) have sought to combine critical realism with assemblage thinking. The way they integrate critical realist focus on structure, stability, and causality with assemblage theorists' interest in heterogeneity, fluidity, and processes could be useful in further conceptual and theoretical development of planetary well-being. Bridging ontologies will certainly involve (yet unforeseen) problems. Nevertheless, the aim of ethically inclusive well-being requires us to go through the trouble of seeking to broaden the ontological foundations of planetary well-being.

Conclusions

This chapter has focused on recognizing the importance of ontological sensitivity and conceptual choices to the development of the concept of planetary well-being. Enacting a world of mutually exclusive species, lineages, populations, and ecosystems, planetary well-being proposes a predefined, singular domain of Nature (see Lorimer, 2012) removed and abstracted from social and cultural life, or the "human mind" (Chapter 2). However, these categories are not universally meaningful. Hence, we have suggested first acknowledging that *scientific practices shape realities*. Second, we encourage shifting the concept of planetary well-being towards

cultivating biocultural diversity, which necessitates openness to other realities and ways of knowing and making them. Not only do we think this augments the concept's genuine ability to bridge worldviews, it is also more generally beneficial to the pursuit of planetary well-being.

This chapter has highlighted the importance of considering what kinds of worlds we make—and would wish to make—with our investigations. The concepts, categories, and methodologies that we use are world-making practices. This idea is not news to planetary well-being, with its stated aims of overcoming moral anthropocentrism and building a world where the integrity of earth system processes is retained so that all organisms can be well. Proposed as a tool for policy and governance, the pursuit of planetary well-being seeks to put the concept into practice on a global scale. This, we argue, requires engaging in dialogue with other place-based ontologies. Otherwise, the promotion of planetary well-being risks reproducing Western dichotomies and colonizing different biocultural realities with universalizing notions of reality and well-being. We emphasize the importance of cultivating multiple biocultural worlds instead of a universal one and suggest that an important aim for planetary well-being would be making a *world where different biocultural realities can thrive*.

How should we proceed with this aim in practice? Kortetmäki *et al.* (2021, p. 6) suggest that the first step towards planetary well-being could be "the adoption of indicators that emphasize sufficiency and the meeting of basic material, social, and psychological needs while depreciating environmentally and socially harmful development." We encourage drawing on biocultural diversity in developing indicators grounded in local socio-ecological contexts (Sterling *et al.*, 2017). To be appropriate and relevant, these indicators must respect local ideas of well-being. Some local visions emphasize spiritual connection to the surrounding environment—manifested in the form of sacred sites and ritual practices—apart from material and social connection (Escobar, 2014; Hiemstra, Subramanian and Verschuuren, 2014). Planetary well-being does not currently recognize the importance of spirituality and religion for well-being although both have been shown to have a significant role in facilitating environmental conservation and poverty alleviation (see, *e.g.*, Bhagwat, Dudley and Harrop, 2011; Hiemstra, Subramanian and Verschuuren, 2014).

Ontological dialogue is also a question of social justice. Bringing culture back to nature provides opportunities for more just development plans and outcomes. Furthermore, protecting the existing patches of biocultural diversity is important for the pursuit of planetary well-being, because achieving planetary well-being will require adapting human actions to ecological processes *everywhere*. There exists a real possibility of learning from those patches of biocultural diversity where human action aligns with regenerative processes. This learning means understanding the way "cultural" beings and practices engage in making multispecies communities, ecosystems, and more-than-human landscapes. By committing oneself to a dialogical learning relationship with other ontologies, one may learn new ways of engaging with the world.

Finally, the chapter has discussed how planetary well-being could be enacted without the nature–culture division and suggested some conceptual tools for interdisciplinary and cross-cultural collaboration and experimentation. It has proposed Tsing's conceptual pair of *multispecies resurgence* and *Anthropocene proliferation* for making sense of how cultural practices can either cultivate or disrupt regenerative processes central to planetary well-being. The chapter has also presented Tsing's assemblage approach to investigating more-than-human histories of landscapes and multispecies communities. On the one hand, the approach is useful in embedding scientific practice within the reality that it analyses; on the other, it helps the researcher to attend to biocultural realities as dynamic products of divergent world-making practices gathering in landscapes, without denying the effect of power asymmetries. Bridging ontologies may not be an easy task. Nevertheless, it is something that is required in the pursuit of *planetary* well-being.

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Notes

1 Or ecocultural, see Franco (2022).
2 In principle also language, although this remains beyond our focus here.
3 Tsing uses the Deleuzian concept of assemblage (agencement) in her own way. Her use of the concept also differs from other later uses, like that of actor-network theorists (Tsing, 2015, Chapter 1, footnote 8). On a synthesis of assemblage theory and critical realism, see Rutzou and Elder-Vass (2019). On different uses of assemblage, see Buchanan (2021).
4 For examples, see Tsing *et al*. (2021).

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