

# Connecting with nature: Reciprocity as central to identity and wellbeing

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**Abstract:** Connection with nature is a fundamental human need with implications on wellbeing. However, people are increasingly distanced from nature with reduced opportunities for place-based practices, which are vital expressions of nature-centric identities and for living a good, fulfilling life. Drawing on past work on social identity theory, we propose that relational values and place-based practices are fundamental to the relationship between nature-based identities and wellbeing. We also discuss how many Indigenous communities demonstrate the importance of this relationship, with nature-kinship and place-based practices playing a vital role in the promotion of social and environmental wellbeing. As such, the negative consequences of ecological degradation on wellbeing are especially alarming amongst Indigenous communities, for whom nature is a fundamental part of their identity, but with ramifications also on broader populations. In this conceptual review, we briefly touch on nature connectedness and its relationship to values and wellbeing, before centering place as vital to value expression. We further propose that efforts to reverse cultural and ecological degradation must begin by supporting communities to enact nature-based values and practices, particularly for those Indigenous peoples who are most affected. We provide recommendations for future research into efforts to facilitate reciprocal reconnection between humanity and nature with the aim of understanding and supporting both environmental and human wellbeing.

**Keywords:** wellbeing, indigenous identity, place, reciprocity, relational values

## 1. Introduction

A relationship with nature is a fundamental and epistemic need for humanity (Kellert & Wilson, 1995; Wilson, 1986). Nature connection refers to the extent to which a relationship with nature is seen as important to one's sense of self (see Table 1 below). Place-based practices provide the opportunities for lived experiences which align with one's values and identity, fostering physiological and psychological health. However, the developed world has a long tradition of establishing political, physical, religious, and psychological boundaries to separate humanity from non-human nature. Processes, such as global urbanisation, has seen a reduction in biodiversity resulting in the loss of opportunity for people to engage meaningfully with nature (Hinds & Sparks, 2008; Pasaribu et al., 2022; Schultz, 2002; Turner et al., 2004). These boundaries have served to limit opportunities for nature-based practices and impede efforts to transmit and adapt the knowledge to future-proof such practices (Agrawal, 1995; Berkes, 2009; Whyte, 2019). Importantly, practices, such as resource harvesting or storytelling, serve as vital expressions of human identities with a deep connection to the natural world (Gratani et al., 2016; Verschuuren, 2006).

**Table 1.** Key components of centrality of place and place-based practices to identity expression and wellbeing

Concept	Key Works	Subcomponents	Definition
<b>Nature Connection</b>	Lengieza & Aviste, 2025 Mayer et al., 2004 Nisbet et al., 2009 Schultz, 2002	- Socio-Cultural Identity - Environmental Self-Identity	The sense of self shaped by a person's connection with the environment. In particular, how people include nature in their sense of self. Socio-cultural Identity refers to the influence of cultural and social factors on one's self-concept/identity, while Environmental Self-Identity is a personal alignment with environmental values and responsibility.
<b>Normative Values</b>	Schwartz & Bilsky, 1990 Schwartz, 1992 Schwartz et al., 2012	- Personal/Experiential vs. Self-Transcendence	Values are concepts or beliefs in pursuit of goals or motivations, which transcend specific situations and drive attitudes and behaviours across contexts.
<b>Nature-Relevant Values</b>	Dutcher et al, 2007 Martin & Czellar, 2017 Milfont & Duckitt, 2004 Pascual et al., 2023	- Utilization vs. Preservation - Instrumental vs. Intrinsic	The sense of importance attributed to nature, including how and why nature is valued, often shaped by personal experiences, cultural views, and perspectives on nature's relationship with humanity.
<b>Relational Values</b>	Chan et al., 2016 De Vos et al., 2018 Klain et al., 2017 Lengieza et al., 2023 Piccolo, 2017	- Non-substitutable - Human-nature focused - Kinship	Reasons for seeing nature as valuable that emphasize the interdependent relationship between humans and nature. These relational values are argued to be rooted in place and fundamental to the expression of identity through place-based practice (see below)
<b>Place Attachment</b>	Brown & Raymond, 2007 Hidalgo & Hernandez, 2001 Lalli, 1992 Lewicka, 2011	- Affective Place Attachment	The emotional and psychological connection to <i>place</i> , influenced by personal affective experiences, vital to <i>place-based practice</i> .

Concept	Key Works	Subcomponents	Definition
<b>Social Identity as Wellbeing</b>	Haslam et al., 2018 Jetten et al., 2017 Tajfel & Turner, 1979	<ul style="list-style-type: none"> <li>- Need to belong</li> <li>- Self-esteem</li> <li>- Group identity</li> <li>- Place-based identity</li> </ul>	The Social Identity Approach to wellbeing suggests that the social context is key to how people understand and construct their social selves. A meaningful social identity is fundamental to wellbeing through the fulfilment of psychosocial needs through identity expression. Place-based identity grounds one's self-concept within a social reality where <i>place</i> is central.
<b>Place-Based Practices</b>	Artelle et al., 2018 Bataille et al., 2021 Berkes, 2017 Lyver et al., 2019	<ul style="list-style-type: none"> <li>- Reciprocity</li> <li>- Care</li> <li>- Kinship</li> </ul>	Practices rooted in a specific place that emphasize mutual exchange, nurturing, and a sense of familial/relational connection to nature. These practices are centred on relational values, with a focus on non-substitutable places or species, and are critical to social identity expression.
<b>Wellbeing</b>	Diener, 2000 Nisbet et al., 2011 Ryff & Keyes, 1995	<ul style="list-style-type: none"> <li>- Agency</li> <li>- Autonomy</li> <li>- Sense of Belonging</li> <li>- Relationship with Nature</li> </ul>	The intensity and frequency of pleasant and unpleasant emotions (hedonic wellbeing) compared to a sense of purpose, personal growth, and vitality through the fulfilment of a need for "good living" (eudaimonic wellbeing).

Connection with nature is particularly important amongst Indigenous communities, who share a unique and profound connection to place, grounded in both deeply held kinship and spiritual beliefs and cultural practices (see Kearny et al., 2019; Martinez et al., 2023; Turner et al., 2022). Indeed, many Indigenous peoples perceive nature as an integral part of their genealogy and identity, with place as the centre and source of sustenance – both in terms of physical necessities, but also to satisfy spiritual and socio-cultural wellbeing (Lyver et al., 2017). Embedded within Indigenous nature-based values and practices is the notion of ‘reciprocity’ which privileges the wellbeing of nature because of its prominence to cultural identity and Indigenous sense of self. Consequently, Indigenous communities feel the impacts of disconnection from nature more keenly. As environmental decline threatens accessibility to place and species of importance, Indigenous peoples are among the first to face the negative consequences of such a decline on many facets of their culture (Timoti et al., 2017; Whyte, 2019).

Here, we present a conceptual review, where we draw together the socio-ecological values and social identity literatures to advance understanding on the importance of place-based practices and their impact on human wellbeing. We emphasise the importance of nature connectedness to human wellbeing, looking at the relational value of place as key to identity and value expression. We thereby advance the literature on nature connection by grounding environmental identities in place-based practices, drawing particular attention to this process amongst Indigenous communities. Drawing on past work, we note that many Indigenous worldviews exemplify humanity’s deep connection to the natural world, reflecting a sense of reciprocity that transcends both time and distinctions between humanity and environmental wellbeing.

This review is driven by a need to contextualise future research on humanity’s ever-changing relationship with the natural world, with indirect impacts on both environmental and human wellbeing. We begin by highlighting how individuals conceptualise nature connectedness, focusing on nature-relevant values and the formation of nature-based identities. Bringing together values and identity theories, we propose that nature connectedness emerges from both relational and shared nature-centric values, which are expressed through practices centred on place. We suggest that place-based practices are vital expressions of environmental and cultural identities and underline human eudaimonic wellbeing.

## **2. Connecting with nature**

Work within the environmental literature has argued for a deep mutual interdependence between the natural world and humanity. Whilst there are some variations in how nature connectedness is understood (see Mayer & Frantz, 2004; Lengieza et al., 2025; Nisbet et al., 2009), a common interpretation of nature connectedness refers to the inclusion of aspects of nature within the self-concept. Nature’s role in meaning-making, or the construction of the self, thus depends on how individuals perceive, interpret, and incorporate nature concepts within their identity.

Notably, nature connectedness is related to wellbeing (see Pritchard et al., 2020), fostering a sense of purpose, autonomy and personal growth that promotes both psychological and social wellbeing (Howell et al., 2011). Accordingly, nature connectedness is linked to eudaimonic conceptions of what it means to live a good life (i.e., those related to self-acceptance, life purpose, and a sense of belonging; see Nisbet et al., 2011; Pritchard et al., 2020). Nature connectedness thus reflects an individual’s subjective sense of their connection with the natural world, which is argued to be more strongly connected with “functioning well” (eudaimonic wellbeing) than “feeling well” (hedonic wellbeing; Pritchard et al., 2020).

Past work has indicated that the positive impacts of nature are moderated by one's personal level of nature connectedness (see Klotz et al., 2022), suggesting that it is not mere exposure to nature that promotes wellbeing. Rather, such work suggests that nature connectedness helps instil the importance of nature to the sense of self and opens opportunities to express these values through practice. Living out one's innate connection to the natural world is key to nature's positive impacts on wellbeing through value expression. This is rooted in cognitive, affective, and behavioural components, whereby connectedness is associated with the inclusion of nature within one's own self-concept or identity (Schultz, 2002), and where the behavioural expression of these nature-relevant values becomes important to eudaimonic wellbeing.

A plethora of past work has both supported and extended this framework, examining the impact of nature connectedness on values, affective connection, and behaviour (see Cuadrado et al., 2022; Kals et al., 1999; Mayer & Frantz, 2004; Petersen et al., 2019). For example, research examining spatial metaphors for the human-nature relationship has emphasised the importance of nature as it relates to the self, showing that a lack of identification with nature is associated with lower concern for the environment (Martin & Czellar, 2016). This work highlights the importance of nature connection in driving environmental concern, likely to protect opportunities for value expression that foster greater wellbeing.

Similarly, work extending the self-other overlap to the ecological domain demonstrated that relationship closeness, the extent to which one incorporates another person into their sense of self, can be extended to include the natural world (Mayer & Frantz, 2004). By including nature within the self, research has showed that individuals who demonstrate an experiential sense of oneness with the natural world show higher pro-environmental behaviour and subjective wellbeing (Martin et al., 2020; Sorthaix & Schwartz, 2017).

Nature connectedness lays the groundwork for a greater understanding of how communities understand their relationship with the natural world, examining a general worldview of humanity *within* the environment. This universalist view emphasizes a sense of interconnectedness between humanity and nature, where each entity relies on the other for sustained wellbeing. Nature connectedness encompasses a wholistic appreciation for the interconnectedness of all living things and goes beyond human-centered concerns, such as those regarding the utility or aesthetic beauty of the natural world (Nisbet et al., 2009). In relating to nature, one acknowledges that human needs and ecological needs are fundamentally intertwined. In turn, when individuals feel a strong sense of connection with nature but face barriers in expressing this connection, the interdependence of this human-nature relationship is threatened, with downstream impacts on both human eudaimonic and environmental wellbeing.

This interdependent human-nature relationship is perhaps best represented amongst Indigenous peoples, who have long expressed a profound connection between humanity and nature, embedded within complex belief-knowledge-practice systems (Berkes, 2017). These beliefs and practices create Indigenous worldviews and identities grounded in the importance of place and reciprocal responsibility, not only to the land and its resources, but also to ancestors and future generations (Durie, 2013). Indigenous worldviews highlight the importance of reciprocity to one's wellbeing through the responsibilities inherent to one's identity as a guardian of nature.

However, modern barriers to the human-nature relationship may inhibit the expression of this innate connection amongst many groups (Soga & Gaston, 2016). Past work has highlighted that urbanization and separation from natural spaces have reduced not only physical opportunities for people to engage directly with nature, but also people's motivation to do so by discouraging people's emotional connectedness to the natural world. These drive an 'extinction

of experience' and a negative cycle in which human-nature interactions are reduced through disaffection with nature (Soga & Gaston, 2016; Turner et al., 2004). Subsequently, the inability of Indigenous communities to fulfil the role of guardians due to reduced opportunities to engage with nature can severely impact the wellbeing of Indigenous peoples by negatively impacting the formation and expression of their shared identities and values (Apiti et al., 2023).

Accordingly, recent research investigates how identities rooted in *place* may serve as a crucial mechanism underlying the connections between broader nature connectedness and wellbeing (Cleary et al., 2017). We aim to support and advance this literature by suggesting that the centrality of place to one's identity results in value expression through place-based practices which are vital to social and cultural wellbeing. By helping to understand the irreplaceable centrality of place in the construction of some socio-cultural identities (such as those of Indigenous peoples), we aim to highlight pathways towards reciprocal and sustainable relationships between humanity and nature through place-based practice, with benefits to both human and ecological wellbeing.

### 3. Nature connectedness and values

Humanity's relationship with the natural world is rooted in eco-centric cognitions, which examine how individuals conceptualize nature and result in an array of eco-centric values (see Dutcher et al., 2007; Martin & Czellar, 2017). These values are essential for understanding how humans perceive their relationship with the natural world and vary based on the significance attributed to nature's role in relation to both broader humanity and the individual self-concept. We argue for a reciprocal relationship between nature connectedness and environmental values, with past work supporting a strong relationship between the two (Lengieza & Aviste, 2025; Mikusiński et al., 2023; Oh et al., 2021; Pereira & Forster, 2015; Vining et al., 2008). Consequently, environmental values are crucial to understanding the role of nature in shaping one's identity and perceived relationship to the self, and vice-versa (Martin & Czellar, 2017; Soga & Gaston, 2016).

Nature-relevant values have often been characterised by delineating between anthropocentric vs. eco-centric values (see Thompson & Barton, 1994; Kortenkamp & Moore, 2001). These values describe a dichotomy focusing on the instrumental value of nature, particularly how the environment might benefit humanity (anthropocentric), versus values which characterise nature has having intrinsic worth with corresponding moral responsibilities (eco-centric; see Thompson & Barton, 1994; Kortenkamp & Moore, 2001). Anthropocentric values are correlated with a weaker connection to nature, whilst eco-centric values are associated with a stronger connection to nature (see Martin & Czellar, 2017; Sockhill et al., 2022). In essence, environmental values are derived from how connected people feel with nature (Dutcher et al., 2007), with a stronger sense of connection corresponding with an increased inclination to view the natural world as intrinsically valuable.

Broadly, this anthropocentric vs. ecocentric framework positions the wellbeing of nature and humanity as exclusive, with an individual's values determined by their sense of personal connectivity with nature, as opposed to a more interdependent view of human and environmental wellbeing. This conceptualisation of a dichotomous human-nature relationship has often been repeated within the literature, with narratives such as utilisation vs. preservation attitudes (see Wiseman & Bogner, 2003; Milfont & Duckitt, 2004), instrumental vs. intrinsic values (see Chan et al., 2016; Justus et al., 2009; Lockwood, 1999), and religious dominion vs. stewardship narratives (Pasaribu et al., 2022).

Whilst not specific to the environment, value orientations (Stern et al., 1995a, 1995b) show a similar narrative dichotomy, examining self-enhancement (focused on power and achievement) vs. self-transcendence (concerned with benevolence and connection to the wider world) values (see Schwartz, 1992). Across this body of literature, self-enhancement values (closely aligned with instrumental concerns for nature) have been associated with lower environmental concern and support for environmental utilisation perspectives, whilst the self-transcendence is positively associated with pro-environmental attitudes and behaviours (see Hansla et al., 2008; Jia et al., 2017; Lengieza & Aviste, 2025; Milfont & Gouveia, 2006; Schultz & Zelezny, 1998, 1999; Schultz et al., 2005).

Self-transcendence values thus reflect a *universalism* motivation rooted in the perceived interconnectedness of nature and humanity's wellbeing (Schwartz, 1992). Notably, past work has found that nature connectedness is associated with greater endorsement of self-transcendence values and lower endorsement of self-enhancement values (Lengieza & Aviste, 2025), indicating that nature connectedness is rooted in an understanding of nature as deeply intertwined with humanity. This highlights a reciprocal relationship between humanity and nature (Starzyk et al., 2021), asserting intrinsic rights for both human and non-human entities and a holistic worldview of moral responsibility toward the natural world.

Previous work has also underlined theoretical distinctions between these nature-relevant values (Amérigo et al., 2007; Lee et al., 2015; Milfont et al., 2006; Stern & Dietz, 1994). Lengieza and colleagues (2023) showed a distinction between valuing nature for instrumental reasons (*nature for people*), valuing nature for intrinsic reasons (*nature for nature*), and valuing nature for relational reasons (*nature as community*), the latter of which is distinct from simple altruism towards nature but instead encompasses a deeply relational view of the human-nature relationship. Importantly, *nature as community* highlights collective-focused values which encompass a relationship with the natural world that goes beyond intrinsic and instrumental considerations. Lengieza et al.'s work highlights humanity's personal connection to the natural world, and the interdependence of both human and nature's wellbeing.

#### 4. The role of relational values

Indeed, Chan and colleagues (2016) suggest that previous conceptualisations of environmental values are inadequate for understanding how individuals understand and express their connection to the natural world. They propose the concept of *relational values* which are concerned with valuing specific objects or places due to their relationships with other objects (see Chan et al., 2018; Himes & Muraca, 2018; Klain et al., 2017; Piccolo, 2017). These objects are not substitutable (Chan et al., 2018) but rather tied inextricably to one's relational values, with potentially devastating impacts should those objects be lost (Kleespies & Dierkes, 2020). As such, relational values present a deeply entwined human-nature relationship (De Vos et al., 2018), with a responsibility for environmental stewardship and social responsibility, rooted in an eco-centric socio-cultural identity that emphasises a deeply personal, affective connection with nature (West et al., 2018).

Relational values thus provide insight into the personal and emotional aspects of nature-relevant values. These are grounded in a personalised relationship with a specific aspect or object of the natural world and express a *contingent* form of nature connection – rooted in *place* – as opposed to the universalist conceptualisations of the human-nature relationship from past work (Schwartz, 1992; Schultz, 2002). The experiential aspects of nature relatedness (Nisbet et al., 2009) are not only highlighted, but embodied and practiced within specific places, and with specific entities or objects. The importance of place as part of one's community emphasizes the

relationship between place-based practice and wellbeing (see Lengieza et al., 2023). Looking after nature is also looking after one's community and oneself.

Relational values thus highlight that caring for nature is also caring for humanity (see Jax et al., 2018), which alongside agency and specific knowledge converge to promote a sense of stewardship and reciprocity not *over* the land but *with* it (West et al., 2018). By invoking the concept of nature as part of one's community (Lengieza et al., 2023), these collective-focused values emphasize a personal and communal relationship with nature, with a strong focus on the interdependent human-nature relationship. Stewardship and reciprocity are strongly related to identities and self-concepts in which nature plays a central role (West et al., 2018), and act as expressions of nature connectedness/interdependence, promoting enhanced wellbeing through lived experience and value/identity expression.

This draws attention towards two important aspects of the literature; firstly, the role of emotional and experiential attachment to *place*, as well as the importance of kinship (Chan et al., 2016). These aspects converge in the construction of a place-based self-concept (or place-identity), where shared norms and values about place serve to underpin a broader common and collective social identity. Place serves a social context in which values of significance are mutually understood, a social category that organizes one's identity (e.g., how being born in a locale creates a distinction from those born in another; see Fleury-Bahi & Ndobu, 2021), but also as an entity in its own right.

## 5. Social identities, place-based practice and wellbeing

This work on place attachment highlights the importance of place in the construction of both social and individual identities within the environmental space. Place-identity emphasizes place as not merely an object, but a social category of its own, the source and setting for shared values and goals which contribute to a common, collective identity (Fleury-Bahi & Ndobu, 2017). Place identification also provides a sense of distinction that is vital to the construction of the self-concept, with stories, histories, and experiences rooted in a sense of place that help to differentiate individuals attached to that place from those who do not live there. In line with this, Klain and colleagues (2017) argue that relational values are best understood as a framing of environmental values/concern, through which nature – expressed through *place* – comes to be understood as part of an individual's self-concept.

However, the construction of one's identity is not solely predicated on an individual's self-concept. Past work has highlighted the importance of social realities in the construction of identities, encapsulated by Social Identity Theory (SIT; Tajfel & Turner, 1979). In brief, SIT suggests that individuals instinctively understand their place in the world and form their personal identity by situating themselves within a broader social context. Self-concept is thus structured within social networks, expressed through a fundamental need to belong to groups. Accordingly, individuals often self-categorise into social groups based on perceived shared characteristics, leading to enhanced positive feelings towards ingroup members and increased endorsement of the key attributes of the group identity, such as its values or ideals.

Social identities can be rooted in nature, emerging from nature-relevant values shared with like-minded others. Notably, exposure to nature has been shown to be associated with increased social connection through awe, which diminishes the sense of self and promotes focus on the collective (Goldy & Piff, 2020; Jiang et al., 2024; Ng et al., 2023; Piff et al., 2025). Similar work from Schertz and colleagues (2023) showed that natural areas promoted greater connections with others. Place plays an important role here, as place attachment has shown to mediate the relationship between nature connectedness and wellbeing (see Basu et al., 2020). Nature thus

provides an opportunity for shared experiences, including place-based practices, which increase the salience of nature concepts, reduce the focus on the self, and ground social identities based on shared values towards the natural world.

We argue that place-based attachment and practices are critical to this identity expression and thus meaningful social identification of many groups. Belongingness, norm adherence, and the expression of one's group identity are pivotal psychological processes which supports eudaimonic wellbeing through practice (Haslam et al., 2018; Jetten et al., 2017). Consequently, the centrality of obligation and reciprocal responsibility to one's social identity is fundamental in understanding the role of nature in the development of place-based identities and practices. Where social identities are structured around mutual concern for particular places, endorsement of shared eco-centric values, and the establishment of common place-based practices, environmental identity becomes an integral part of one's socio-cultural reality (Clayton, 2003; Stapleton, 2015).

## 6. Indigenous place-based identities

The importance of place to social identity is most apparent amongst many Indigenous communities, for whom the natural world is an important focus of both individual identities and social realities (Durie, 2003; Head, 2006). These relational values and place-based practices thus highlight the importance of *place* in how many Indigenous identities are formed, understood, practiced, and passed on (Chan et al., 2016). Notably, the kincentric beliefs, values, and practices of Indigenous social identities place a unique emphasis on the importance of the natural world in the construction of Indigenous communities (Salmón, 2000).

Throughout history, Indigenous communities have spoken unequivocally of nature in terms of kinship and being culturally sacred (Berkes, 2017; Kealiikanakaoleohaililani & Giardina, 2016). Indigenous spiritual beliefs often involve a deep-rooted sense of familial connection with the Earth and its inhabitants, both natural and supernatural. Accordingly, spiritual beliefs not only mediate social relationships within the community but also connect individuals with the natural and supernatural worlds (Durie, 2003; Kearney et al., 2019). In Australia, for example, ancestral places of significance map out the sacred geography of the land, and such spaces are alive with spiritual beings, including ancestral spirits and elemental presences, which highlight the deeply rooted connections between people and nature (Kearney et al., 2019). Notably, this is consistent with associations found outside of Indigenous communities as well (see Hedlund-de Witt et al., 2014).

These spirits encompass ancestors and entities with complex relationships to communities, and associated stories intimately connected to place. As a living entity, place encompasses humanity, the natural world, and the supernatural, and is the source of life itself, as well as Indigenous knowledge, cultures, languages, and identities (Dei et al., 2022). Indigenous cultural practices reflect and express their kincentric beliefs with a strong focus on reciprocity with nature, and the importance of historical and familial connections to places and people. For the Cheam First Nation Peoples in Canada, the presence of immanent spiritual entities is accompanied by a set of obligations and responsibilities; not only to the spiritual world, but also to the Earth itself (Lewis & Sheppard, 2005). Kincentric beliefs are not merely understood but lived and experienced through affective practices that connect people's sense of self to place.

As such, ancestral landscapes serve as vital sources of both environmental and socio-cultural wellbeing, providing for the expression and growth of Indigenous identities (Lyver et al., 2017). Moreover, this system is reliant on a reciprocal and sustainable connection with the environment. Whilst utilising natural resources delivers on culturally important values and connections; these

practices also serve as opportunities for the enactment of sustainable behaviours aimed to give back to the land. In turn, expression of reciprocity as a value is fundamental to the fulfilment of social identity obligations and thus eudaimonic wellbeing.

A noted example in Aotearoa New Zealand (NZ) are the worldviews and knowledge systems held by Māori (New Zealand's Indigenous peoples). For instance, birders within the Rakiura Māori community regularly engage in the cultural practices of "muttonbirding" (Anderson, 1997) and *heke ano kai tītī* (the annual migration to the Tītī Islands). These reflect the importance of place-based practice, with time on the islands serving to aid in reconnecting with family, reaffirm cultural identity, and promote social cohesion, as well as the opportunity to transmit cultural knowledge amongst Rakiura Māori for future generations (Kitson, 2006; Lyver & Moller, 2010; Skerrett & Richie, 2020). They also serve as opportunities to enact a variety of conservation behaviours to ensure the sustainability of the tītī (muttonbird) during the harvesting season, including the clearing and protection of breeding burrows (see Kitson & Moller, 2008). These practices serve to reaffirm the identity of Rakiura Māori as *kaitiaki* (guardians) of the land and the tītī and it is through such reciprocal stewardship with the natural world that one's identity is both understood and lived out, for the mutual benefit of both nature and human wellbeing.

Indeed, within *te ao Māori* (the Māori worldview), identity is strongly rooted in *whakapapa* (genealogy; kinship) and *ahikaarua* (the knowing of place; Durie, 2003). Place is extended beyond a social category or context and instead situated as an equal member of one's social group, characterized by ancestral and elemental spirits which both inhabit and represent place (Kearney et al., 2019). The reciprocal relationship Māori have with the land, or *Papatūānuku* (Mother Earth), is encapsulated by the term *whenua* (land), also meaning 'placenta'. The word connects children to the life-bearing properties of their mothers, and communities to the life-bearing properties of the earth.

This worldview connects individuals and communities to place (land and environment) and each other (social identity) through *whakapapa*. Notably, the *atua* (gods) are not only personifications of nature but kin to all Māori through a complex *whakapapa* reaching back to the union of *Rangi* and *Papatūānuku* (Mead, 2003). Place is given agency, emphasizing the interconnected relationship between the natural world and broader humanity. *Whakapapa* serves as the framework for the responsibilities of *kaitiakitanga* (guardianship) and underline the importance of interconnectedness between humans and nature as kin (Durie, 2003).

Notably, a fundamental obligation of *kaitiakitanga* is leaving the land and resources in better condition than before. In *Te Ao Māori* (the Māori worldview) this commitment to future generations is integral. Accompanying this worldview is a deep sense of responsibility and reciprocity with nature, as well as to both past and future generations (Dell, 2017), all of which are fundamental to Māori as *kaitiaki* (guardians of the land). To look after the land, and the *atua* who are kin, is both a responsibility inherited from ancestors passed and a commitment to the present and future wellbeing of *tangata whenua* (the people of the land). Thus, the wellbeing of people is intricately tied to the wellbeing of the natural world, particularly when individuals and communities feel they are unable to maintain or uphold their *kaitiakitanga* obligations (Mead, 2003). Such threats to their identity as *kaitiaki* can pose a risk to the eudaimonic wellbeing of Māori communities by preventing the fulfilment of basic psychosocial needs.

As Indigenous communities are already confronted with economic and cultural marginalization because of colonization (see Maldano et al., 2016; Malli et al., 2023), ongoing environmental degradation presents a heightened risk to their socio-cultural identities and associated wellbeing by preventing access to species or places of cultural significance (Ford et al., 2020; Menzies et al., 2024; Reyes-García et al., 2024). For example, pressures such the demands of

employment on time and mobility have been noted to affect the muttonbirding practices of some Rakiura Māori birders, for whom an 8–10-week commitment on Rakiura islands may be difficult to manage (Moller et al., 2009). These pressures may impact not only the ability of current generations to carry out practices needed for cultural expression but reduce opportunities for the transfer of skills and knowledge to future generations. These skills are vital to the continuity of place-based practices for future generations.

## **7. The importance of place**

However, the looming threat of ecological decline is a pressing threat to not only Indigenous communities, but all social identities which emphasise the importance of a relationship with nature and place. As relational values emphasise the irreplaceability of natural spaces and objects, their loss carries the potential for severe and lasting repercussions on socio-cultural identities both locally and globally (Kleespies & Dierkes, 2020). Richardson and colleagues (2022) argue that increased urbanisation and loss of wildlife is creating a shifting baseline syndrome where loss of nature is normalized by subsequent generations.

Future work should explore how place-based practices serve as expressions of relational values, promoting agency and eudaimonic wellbeing by allowing individuals to live out their values and identities. Of strong interest is an examination of kinship beliefs, which are fundamental to Indigenous social identities. These values emphasize reciprocity, making it an obligation to oneself, through the benefits of place-based practice on wellbeing, but also to the natural world as kin. However, fulfilling these responsibilities is becoming increasingly challenging to fulfil in modern society, as place-based practices (and thus identity expression) become less accessible.

These barriers act as powerful stressors on place-based identities and supporting these identities and connection to place are key values which will put communities and environments on a recovery trajectory towards a more sustainable and interdependent relationship with the natural world, providing a mandate and obligation for all humanity to act to reverse ecological degradation. Consequently, future work is needed to understand how best to address or adapt to ecological issues to ensure a future where cultural identities can be sustained, Indigenous communities can be empowered, and fundamental human needs for nature can be met.

## **8. Conclusion**

We argue for the necessity of future wellbeing research to examine the central role of nature in the construction of environmental and socio-cultural identities, particularly due to escalating ecological degradation. This deteriorating situation risks an increasing set of barriers towards accessing natural spaces, with profound implications on place-based practices and human and environmental wellbeing. These impediments are likely to frustrate humanity's innate need for a connection with nature with negative consequences on eudaimonic wellbeing.

Accordingly, those communities for whom a reciprocal relationship with nature is vital, are likely to bear the brunt of a deteriorating environmental situation on their ability to express and live out their social identities and stewardship responsibilities. It is therefore vital for both cultural and environmental advocates to support the restoration of peoples to their traditional places and the longevity of place-based practices and identities. We thus advocate for a concerted effort to change perspectives on the necessity of place-based practices to identity and cultural expression. Safeguarding both place and practice is needed to support sustainable and reciprocal human-nature relationships, with flow-on impacts on both environmental and human wellbeing (Muriwai et al., 2015).

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