



Research

## Relational values and empathy are closely connected: A study of residents of Vermont's Winooski River watershed

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**ABSTRACT.** Relational values are emerging as an important aspect of ecosystem valuation scholarship and practice. Yet, relatively few empirical examples of their expression exist in the literature. In addition, many characteristics of relational values suggest that they may interact with the quality of empathy, but scholars have not explored that interaction. To address both of these gaps, we designed a semi-structured interview protocol to explore relational values among residents of a large (~28,000 ha) watershed in Vermont, United States of America. We used thematic analysis to explore expressions of relational values and how they may relate to empathy. We discuss how relational values interact with empathy and perspective-taking, as the latter two concepts are theorized in social psychology. In our study, every reference (discrete codable expression) of empathy among our participants co-occurred with a relational-values reference. Conversely, 21% of relational-values references co-occurred with empathy. These results support our proposition that the two concepts are closely related, and we thus argue that there is strong reason to consider empathy as a relational value. We conclude by discussing possible implications of the interaction between relational values and empathy for research and practice, notably their promise for informing the global transformative changes regarding sustainable human–nature relationships called for by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

**Key Words:** *Biodiversity loss; conservation; empathy; environmental decision-making; environmental ethics; environmental valuation; perspective-taking; relational values; transformative change*

### INTRODUCTION

Both direct and indirect drivers of biodiversity loss and climate change have accelerated over the past 50 years, and goals for “conserving and sustainably using nature” will not be met if current trajectories of production and consumption of resources are followed (IPBES 2019: 772). The 2019 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment that details these findings concludes that catastrophic ecosystem collapse can only be avoided through “transformative changes across economic, social, political, and technological factors” (IPBES 2019: 772). Embracing relational conceptions of a good life and promoting latent pro-environmental relational values were identified as two important leverage points in these transformations (Chan et al. 2020). In a largely separate line of research, scholars have explored the role empathy may play in sustainability; work from multiple disciplines suggests that empathy may be an influential force in moving toward sustainability. Toward this end, we explored the intersection of two concepts that hold promise for informing societal transformations around sustainable human–nature relationships, and that have not yet been linked in academia: empathy and relational values.

#### Empathy and sustainability

Empathy, which can be defined as an “other-oriented emotional response congruent with the perceived welfare of another individual” (Batson et al. 2002), is related to prosocial and helping behavior among humans (Batson et al. 2002, Williams et al. 2014, FeldmanHall et al. 2015). Perspective-taking, which involves attempting to perceive the experience of another from their point of view, is a widely used technique for inducing empathy between humans, and experimental trials reliably show that perspective-taking positively impacts empathy and prosocial and helping

behaviors (Batson et al. 1995, 2002, Williams et al. 2014, FeldmanHall et al. 2015). Consistent with research on perspective-taking and empathy among humans, taking the perspective of the environment or components of the environment, like plants and animals, also leads to an empathic response (Schultz 2000, Sevillano et al. 2007, Ahn et al. 2016). Some of this environmentally focused research has explored connections between perspective-taking of environmental entities, empathy, and pro-environmental behavior, and finds them to be correlated (Berenguer 2007, Swim and Bloodhart 2015).

Brown et al. (2019) synthesize recent advances in environmental psychology, sociology, and philosophy and propose an empathy-sustainability hypothesis: “empathy – through processes of perspective-taking and emotional connection – is a prerequisite for sustainable actions with the biosphere” (p. 11). They argue that empathy, for both other people and the rest of nature, is not only a potential avenue to achieve pro-environmental behaviors, but a necessity. They suggest that empathy, through perspective-taking, may be an under-utilized tool for increasing the motivation to protect the environment, build trust and understanding between communities, and increase the success of collaboration among potential allies (Brown et al. 2019). They conclude with a call to better account for how environmental policy affects people’s sense of place and identity, and, therefore, how it affects the well-being of “who or what they feel empathy toward” (Brown et al. 2019). We suspect that integrating understandings of empathy and relational values may offer avenues to respond to their call and incorporate environmental empathy into environmental policy (specifically, environmental valuation). This may strengthen the potential of both concepts to improve sustainability and well-being outcomes.

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### Values and sustainability

In a line of work largely separate from research on empathy, scholars worldwide are exploring how to best characterize the multiple values associated with nature and include these values in decision-making. Within academic and policy discourse about environmental ethics, the value of nature has been conventionally organized into two domains: the value derived from what nature provides to people (instrumental values), and the value inherent in nature, regardless of people (intrinsic value) (Muraca 2011, 2016). These two value constructs, however, do not sufficiently describe the full spectrum of values people ascribe to nature and on their own fail to resonate with many people (Himes and Muraca 2018, van den Born et al. 2018). To address these insufficiencies, better reflect why nature matters to people, and avoid the unjust and undesirable conservation outcomes that attention to solely instrumental and intrinsic value can produce, scholars have developed a third understanding of values to accompany intrinsic and instrumental values: “relational values” (Muraca 2011, 2016, Chan et al. 2016). Instead of value gained from nature (instrumental values), or the value inherent in nature (intrinsic value), some researchers describe relational values as value derived with nature (Knippenberg et al. 2018). Described more fully, relational values (RVs) are “preferences, principles, and virtues about human–nature relationships,” and also include eudaimonic values (Chan et al. 2018: A1). In this context, eudaimonic values refer to non-substitutable contributions toward a good, meaningful, and worthwhile life that are derived through relationships with nature (Chan et al. 2018, Knippenberg et al. 2018, Pascual et al. 2017).

Like instrumental values, relational values can involve tangible and intangible benefits to people. A key difference is that, in practice, the qualities and components of nature associated with instrumental values are often treated as substitutable. One prominent manifestation of this substitutability is that these aspects of nature are sometimes represented in monetary terms and are thus reduced to fungible units of economic exchange. The qualities and components of nature associated with relational values, however, often cannot be substituted (Himes and Muraca 2018). The meaning of this is easy to see when considering relational values associated with people. One could not, for instance, substitute one’s best friend with another human of similar disposition without changing the value derived from that relationship. The friend is non-substitutable, because the primary value associated with that friend is relational (not instrumental).

Recent years have seen a rapid increase in studies of relational values; we provide a few examples. Much of this work describes RVs in diverse contexts, and it is based on diverse forms of data (quantitative, qualitative, mixed; from original data collection and existing sources). Klain et al. (2017), for instance, collect quantitative data on relational values from Costa Rican farmers, tourists in Costa Rica, and U.S. residents. They find that RVs resonate broadly with each group of people and use factor analysis to show that relational values constitute an internally coherent framework. Kleespies and Dierkes (2020) surveyed German university students to explore statistical characteristics of the Klain et al. (2017) survey instrument and found support for convergent and discriminant validity of RVs as a construct.

Saito et al. (2021) used a different survey instrument to study differences in values (some of which are relational values) toward local nature and nature in general in Greater Tokyo and found RVs to be present among a broad age range. Calcagni et al. (2019) demonstrate that social media data can reveal relational values. Gould et al. (2019) explore relational values in written accounts of Hawaiian culture and worldview and find that many core Hawaiian principles align strongly with relational values.

Other research explores the role relational values could play in transformative change toward sustainability. Uehara et al. (2020) demonstrate that relational values such as stewardship are important aspects of Japanese satoumi management systems and use results of semi-structured interviews with students to demonstrate that ocean literacy programs cultivate relational values and willingness to protect nature. Admiraal et al. (2017) and van den Born et al. (2018) find that eudaimonic values and other relational values are a key motivational component of people who are highly committed to action for nature across several European countries. Mould et al. (2020) find that relational values often explain landholders’ river-management practices in southern Australia; specifically, relational values often motivate sustainability-supportive management. Chapman et al. (2019) find that lack of participation in a conservation incentive program in the northwestern United States is often driven by program conditions that appear to threaten relational values; they suggest ways that accommodating RVs could lead to greater program participation without compromising ecological integrity.

Results such as these demonstrate the importance of relational values. However, most of the previously noted studies assess participants’ agreement with, or ranking of, statements of relational values rather than analyzing relational values as articulated by the participants. As of yet, rich, nuanced examples of how relational values are expressed and what that means for the relational-values concept are still relatively uncommon. Though Mould et al. (2020) and Chapman et al. (2019) provide examples of in-depth analyses of values articulated by participants, both orient their analyses toward management implications rather than core aspects of relational values.

### Research questions

We responded to the gaps identified previously via an interview-based exploration of empathy and relational values. Our research questions are:

1. What relational values do residents of Vermont’s Winooski River watershed express, and how do these expressions inform our understanding of relational values?
2. How do relational values concepts interact with the social-psychological theory of empathy?

### METHODS

#### Study location

Vermont is a heavily forested (78% forest cover) state in the Northeastern United States, located within the temperate broadleaf and mixed forests biome. The Winooski River watershed drains about 12% of the state’s land area encompassing

its largest city (Burlington; 42,000 people), capital city (Montpelier; 8000 people), tallest mountain (Mount Mansfield; 1340 m), farmland, and large tracts of public and private forest. The river then terminates at its confluence with Lake Champlain, a 172km-long lake that stretches from the Canadian border south and forms much of Vermont's western border with New York state.

### **Motivation for our approach**

This study was designed to elicit and analyze diverse relational values using semi-structured interviews and subsequent thematic techniques to analyze qualitative data (Braun and Clarke 2006). Qualitative data are well suited to the exploration of new topics (e.g., the interaction of relational values and empathy), as well as the exploration of established concepts applied to new situations (e.g., relational values in Northeastern U.S. watershed) (Barclay et al. 2017). Qualitative data are also useful for uncovering mistaken assumptions, discovering new interactions between concepts and phenomena, helping refine future quantitative data collection instruments, and helping decision-making and theory more accurately reflect perspectives and values of the assessed population (Barclay et al. 2017).

This study's central strategy was to ask people involved with nature-based passions and/or careers to take the interviewer to places within the watershed of particular personal importance, and then ask them questions about their relationship to that place and its meaning to them. By conducting our interviews while walking "in the field," we hoped to put participants in contact with aspects of nature that they find meaningful, and that this contact would spark contextual memories and emotions, as well as facilitate more effective conversation and inquiry. Walking interviews such as these have been used in Cultural Ecosystem Services (CES) and other social-science research and are suggested to be useful for producing preliminary qualitative data that aid further assessment, prompting responses that researchers might not find using more conventional (i.e., stationary) techniques (Anderson 2004, Teff-Seker and Orenstein 2019).

### **Participant selection**

After receiving ethical approval from the University of Vermont's Institutional Review Board, we used purposive selection to assemble a participant group of 16 watershed residents with a diversity of relationships with the landscape. Specifically, we sought participation from farmers, natural-resource professionals, hunters, foresters, business owners, teachers, members of the locally Indigenous Abenaki communities, and lay-members of conservation groups. We attended to gender diversity in selection, aiming for roughly equal representation of women and men. Because the purpose of our study was exploratory, we stopped looking for new participants after securing participation from at least one person from each category of relationship listed previously. The results of our analysis confirm this sample as appropriate for our study, as no single interview added notably unique content to our findings, which suggests data saturation – i.e., our results would likely not fundamentally change with the addition of further interviews (Saunders et al. 2018).

The first author contacted local conservation groups, foresters, and representatives of two Abenaki (i.e., local Indigenous) communities via email and asked if they would be willing to invite

some of their members and contacts to participate in a place-based interview focused on understanding different relationships and values associated with biodiversity, the natural world, and conserved land. Some participants were recommended by name, while others responded voluntarily to group emails. Potential participants were informed that the interview would take place on the participant's property or another personally meaningful landscape, and the participants would be asked to walk with the interviewer to natural places of particular importance to the participant.

We conducted 14 interviews with individuals and one interview with a couple. The 15 interviews took place between June and October of 2019. Demographic information was requested from all participants. Nine of the participants identified as male, and seven as female. Two participants identified as Abenaki and the others as white/Caucasian; our participant group thus largely reflects the racial makeup of the state of Vermont, which is 93% white. All participants were adults, and all but one were over 40. Twelve of the 15 households represented (80%) were homeowners, which is higher than the 2019 Vermont homeownership rate of 71% (Mateyka and Mazur 2021). All participants shared a high level of willingness to engage with a one- to four-hour environmental social-science research project. As such, the results from this study are likely not representative of a larger population. They represent the views of people particularly willing to talk about their local place. Our results and analysis might best be viewed as exploratory articulations of nascent theoretical concepts and connections, derived from conversations with people near one end of a spectrum of engagement with, and care about, nature (Yin 2014).

### **Interview protocol**

The interview protocol followed a semi-structured interview design and included 29 open-ended questions about participants' relationships and values associated with biodiversity, the natural world, and conserved land. We developed the interview protocol using three primary sources of inspiration: the academic literature on relational values and empathy, as described in the introduction, and two question sets created by Vermont natural-resource practitioners to understand communities' and individuals' place-based relationships and values (described in Appendix 1) (Sopher 2019).

We began each interview by asking participants six general questions about themselves. Next, we asked participants 17 questions about their relationship to the land, conservation, and biodiversity in general. Next, we asked participants to take the interviewer to one or more places of particular meaning or interest to the participant. At each location, we asked six questions. After we finished visiting places of interest, we asked participants seven questions reflecting on the land as a whole. We designed the final question in the interview to prompt nature-oriented perspective-taking in order to induce – and thus more explicitly explore – empathy with nature. At the end of the interview, we gave participants the opportunity to answer a few more optional questions about a local conservation plan, and most declined (Appendix 2, for full interview protocol).

**Table 1.** Necessary criteria for coding a passage as an expression of relational values. Here we define relational values as “preferences, principles, and virtues about human-nature relationships” (Chan et al. 2018: A1).

Object-oriented	“RVs can take the form of a held value as applied to a thing or things (e.g., equality with other species; solidarity towards a particular fox; responsibility toward living nature)” (Chan et al. 2018: A4).
Relational in content	Relational values must be relational in content (as opposed to relational in process), meaning the relationship itself matters, not just as a means to an end (K. M. Chan et al. 2018, Himes & Muraca 2018).
Non-substitutable	Relational values involve objects of value that are at least partly non-substitutable (Chan et al. 2018). Knippenberg et al. (2018) describes this non-substitutable quality of relational values as when nature, or a specific aspect of nature, is constitutive (integral) to a relational whole (made up of people, nature, and their relationship) that is valued intrinsically, like a flourishing life (nature-inclusive eudaimonia), partnership (Knippenberg et al. 2018), or a sense of identity (James 2016). To judge this criteria while coding we asked, “Could the quality of value derived with nature remain the same if the relevant aspect of nature were substituted with anything else, including another similar natural feature?”

### Data analysis

We transcribed the interviews verbatim, then coded them using the qualitative software NVivo 12. We then used counts of each code and the open-source software R to produce figures. Consistent with our qualitative data analysis approach, we report numerical data in our results to give precision to our descriptions but make no claims of statistical significance or population representation (Maxwell 2010). To strike a balance between providing as much detail as possible and easing readability, we have removed some of the pauses and stutters in the quotations reported in the results and provided these quotations verbatim in Appendices 3 and 4 (Oliver et al. 2005).

To address the difference between what a person communicates and how we have organized these communications, we differentiate between the term “expression,” which we use to describe what participants said, and the term “reference,” which we use (following NVivo software) to describe a coded expression of relevant themes. Next, we describe the process of coding in greater detail.

We coded the interviews using a three-step process. For Step One, the two authors jointly designed a first-draft codebook that included definitions of RV in general (Table 1), and empathy for nature (Table 2), along with ten RV themes found in the literature (Table 2). Using this codebook, EJH analyzed all transcripts and coded every discrete instance of relational values and/or empathy, and created a “reference” in NVivo. Coding decisions tended strongly toward inclusion: If there was doubt as to inclusion in a given theme, EJH coded the statement to that theme (this inclusive approach was important given our coding process; Step Two). During Step One, we iteratively modified the codebook; new RV themes were added as patterns emerged, and others were adjusted and reconfigured. For example, the RV theme “friendship” was created after descriptions of nature as a friend arose in multiple interviews.

In Step Two, RKG reviewed a random selection of references in all coding themes and noted areas of disagreement (i.e., statements coded to a theme that RKG did not agree should be coded to that theme) and areas of agreement (i.e., RKG agreed with the coding). The two authors then used this sample of the data to refine the coding, add and remove themes, and standardize the codebook together.

In Step Three, EJH used the updated codebook to refine the coding by re-analyzing all text coded as either empathy or

relational values during Step One. Selected text captured the essential components for each coded theme while being as short as possible. During this final coding step, both authors consulted on passages that were borderline, confusing, or otherwise difficult to code. The final codebook is depicted in Table 2.

### Public sharing of interview content

This research was conducted as part of a collaboration with the Vermont Alliance for Half-Earth (VAFHE), a volunteer non-governmental organization focused on biodiversity conservation. VAFHE had no influence on interviewee selection, research design, interview guide development, data analysis, or the writing of this manuscript, but they did suggest the idea of interviewing residents of the watershed and sharing their stories with the public. We agreed with this public sharing and created outreach material in the form of ESRI Storymaps and a related book (published by VAFHE and other NGO partners) that highlight six interviews (among other content). After each interview, we asked the participant if they would like to have segments of their interview published as part of the outreach materials affiliated with VAFHE; we included only those who agreed, and these participants reviewed the materials before they were made public. Appendix 5 provides further details.

## RESULTS

### Expressions of relational values and three emergent qualities

From the 15 interviews conducted, we coded 667 discrete expressions of relational values, which often contained multiple overlapping references to relational values themes (1003 total RV theme references). Figure 1 depicts the total number of references for each RV theme across all interviews, along with the number of participants with references for each theme. In general, within our participant group, RV themes were expressed proportionally such that themes that were expressed by more people were also expressed more frequently in total. This numerical summary is useful for giving overall impressions of the data, such as how many people expressed each theme, and how many times each theme was expressed in total. For example, “stewardship (care for)” and “care about” were coded for every participant and were also the most coded themes overall. Other themes were not coded frequently nor coded in many interviews but still represent RVs of importance. The following quote, from a participant who grows produce for his restaurant, demonstrates this pattern for the RV theme “friendship”; though we used this code infrequently, it clearly encompasses a rich and important type of value:



**Table 2.** Final Codebook. Empathy and relational values themes.

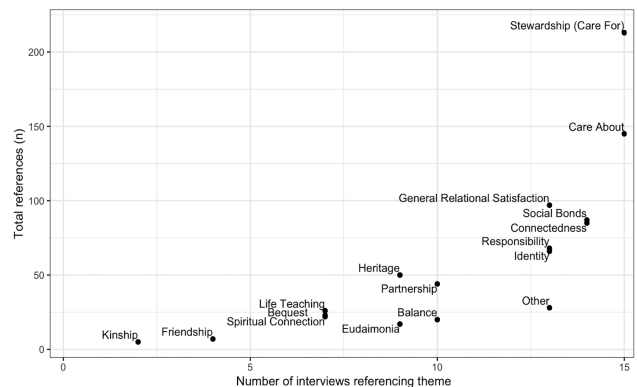
Theme	Definition	Source
empathy	An emotional response congruent with the perceived welfare of another. If the other is in need; empathic feelings include sympathy, tenderness, compassion, etc. If the other is experiencing happiness or wellbeing; empathic feelings include goodwill, affection, etc. This code was only used for empathy towards nature, not towards other humans.	Batson et al. (2002), Telle and Pfister (2016)
<b>Relational Values Themes</b>		
balance	Finding virtue in being in balance or harmony with nature, as well as considering equity between human and non-human needs.	Emergent theme
bequest care about	Placing importance on preserving or maintaining aspects of nature for future generations. Feelings of concern or love for aspects of nature that matter to the respondent.	Oleson et al. (2015) Britto de Santos and Gould (2018)
connectedness	Feeling a part of, or connected to, nature.	Britto de Santos and Gould (2018)
eudaimonia	Nature-inclusive eudaimonic value. Human flourishing. Relationships with nature lead to a good, meaningful, and worthwhile life. The relationship itself matters, and the relationship is not wholly substitutable. Many relational value themes are characterized by their eudaimonic value, but this code is used when eudaimonia is spoken about specifically.	Knippenberg et al. (2018); Chan et al. (2018)
friendship	Feeling that ecosystem components are like friends. Coded only when participants use the term “friend” or similar.	Emergent theme
heritage	Perception that intergenerational relationships with nature contribute to personal and/or cultural identity.	Gould et al. (2014)
identity	Perception that aspects of nature are constitutive to one's sense of self. Or a perception that feelings or views about nature are part of who a person is.	Britto de Santos and Gould (2018); Knippenberg et al. (2018)
kinship	Feelings that ecosystem components (e.g., plants, animals, water, soil) are like “kin” or family.	Britto de Santos and Gould (2018)
life teaching	Perception of nature as a teacher of life lessons and values.	Gould and Lincoln (2017)
other partnership	Expressions of relational value that don't fit well into the other themes. A sense of working with nature to mutually benefit people and nature.	Emergent theme Knippenberg et al. (2018)
responsibility	Perception of accountability for what happens with ecosystems.	Britto de Santos and Gould (2018)
social bonds	Perception that nature contributes to social bonds and the identity and cohesion of human groups (such as within or between families, friendships, communities, and cultures).	Britto de Santos and Gould (2018)
spiritual connection	Relationships with nature are integral to one's sense of spirituality.	Gould et al. (2014)
stewardship (care for)	Acting to take care of ecosystems, where the act of caring itself has value.	Britto de Santos and Gould (2018)
general relational satisfaction	Delight in having intimate familiarity and interactions with components of nature.	Emergent theme

*Well, I'm going to say something that is going to come off as hopelessly odd, but, I, at this moment I get to stand among friends. There's... millions. And one of the things that I've come to appreciate is that it's not just the megafauna and flora that are integral to my life. It's the uncountable trillions of little guys in the soil that are absolutely essential to my well-being and to the well-being of everybody else, that I appreciate and find beauty in, and I find peace in.*

[Themes coded: friendship, eudaimonia]

We organized the rest of our findings as related to our first research question into two sections. First, we demonstrated how the expression of RVs in our sample was highly variable between participants. Second, we distilled three overarching messages that emerged inductively from the data and that incorporate and holistically encompass many of the more specific types of RV for which we coded (i.e., that are listed in Table 2).

**Fig. 1.** The number of interviews (out of 15) that referenced a relational value theme, and the total number of references of the theme throughout all interviews.



### *Expression of RVs is highly variable person-to-person*

Though Figure 1 shows that RV themes were generally distributed proportionally across the interviews, the distribution of expressed RV themes within each interview (Figure 2) reveals that expression of RV themes among the participants was highly variable and individually unique. Many participants frequently expressed codes that were infrequently expressed on average, as well as the opposite. In the following paragraphs we provide multiple quotes and their context from one interview that exemplifies this result.

Though “heritage” was a relatively infrequently discussed RV theme among all participants (mentioned 50 times across nine interviews), for the participant in Interview 12 “heritage” was the most commonly expressed theme. This participant grew up near the mouth of the Winooski River, which is where she chose to locate the interview. She spoke of her parents raising her in her Abenaki heritage, and how she grew up playing with her sisters in the meadows and forests nearby. While walking through the fields and forests of her childhood neighborhood, she described the constitutive value of those places to her sense of identity: “So I think I wouldn't have a sense of myself if I didn't have this place. Does that make sense?”

Part of the interview took place next to a field where as a child she would pick medicinal plants for her mother, which was an important connection to both her mother and her Abenaki heritage. As she grew older she lost her mother and struggled to hold onto her heritage; the field was also developed into a subdivision. She explained the impact of the loss of the field and what it represents for her and her children:

*You know what, those plants are gone. Where are they? Where can I find those plants now? For a while, a period of my life, I walked away from all of that because I tried to fit into the White world, still trying to fit in. But I totally walked away from all of that. And in the process this happened [the field was developed into a subdivision]. So I think that's also, you know I'm now getting back to an age where it's like, this is important – instead of chasing what everyone says we're supposed to chase. And it's not here to pass on to anybody. It's not here to pass on to my kids.*

[Themes coded: heritage, bequest]

### *Empirical data on three common qualities of relational values*

From our interviews we identified three common qualities of relational values. Next, we briefly describe these qualities and offer an exemplary quote for each. Quotes that exemplify each coded RV theme can be found in Appendix 3.

The first common quality is that relational values can involve complex layering of different relationships with nature. The following quote comes from a participant who spends much of his free time restoring a wetland in what used to be part of his lawn. During the beginning of this interview, the participant described how he is restoring his yard, and how he derives value through this stewardship relationship and the connection he has built with the land. In the following quote, he pivots and explains how his personal relationship with the land is intertwined with

the constitutive aspect the land plays in his connection with his daughter, as well as the role it plays in his preparation for the good future of his daughter and soon-to-be-born child:

*I don't ever want to move again, you know, it's nice to be tied to it [the land around his house]. And then sharing it with the little one, or soon-to-be two, and seeing what they're interested in and not. And having her just grow up with a wetland next to her house, like how cool is that? I mean maybe she'll be like, “ugh, Dad, you and your weird wetland,” but maybe she'll be like, “yeah we had a wetland, and like, you know, it's not some stinky thing, it's really cool. And, you know, we did this and did that.”*

[Themes coded: connectedness, social bonds, bequest]

The second quality is that relational values can involve deeply important sources of life richness, or what the literature refers to as the good life. Throughout our interviews, this eudaimonic quality was often an implicit component of other expressed relational values, but in the following quote, a participant explicitly describes his love for his property and how his relationship to the land adds to the richness of his life. This participant recently bought an environmentally-degraded property that he is actively restoring:

*And then it's also just like, I just love it. You know, I had a dog who used to work with me all the time ... and I loved him so much. And then he just, like, died. And you know, I felt like I didn't lose the capacity to love that thing. I didn't lose, like, any space in my body where I would hold that love, you know? I just didn't have that anymore. And I think I sort of feel this way about this place, where here is this thing that I love so much, and I just, like, expanded to meet the challenge of being the steward of this, of getting to be the steward of this place. And if I didn't have it I'd probably be okay, but my life wouldn't be as rich.*

[Themes coded: care about, eudaimonia, stewardship (care for)]

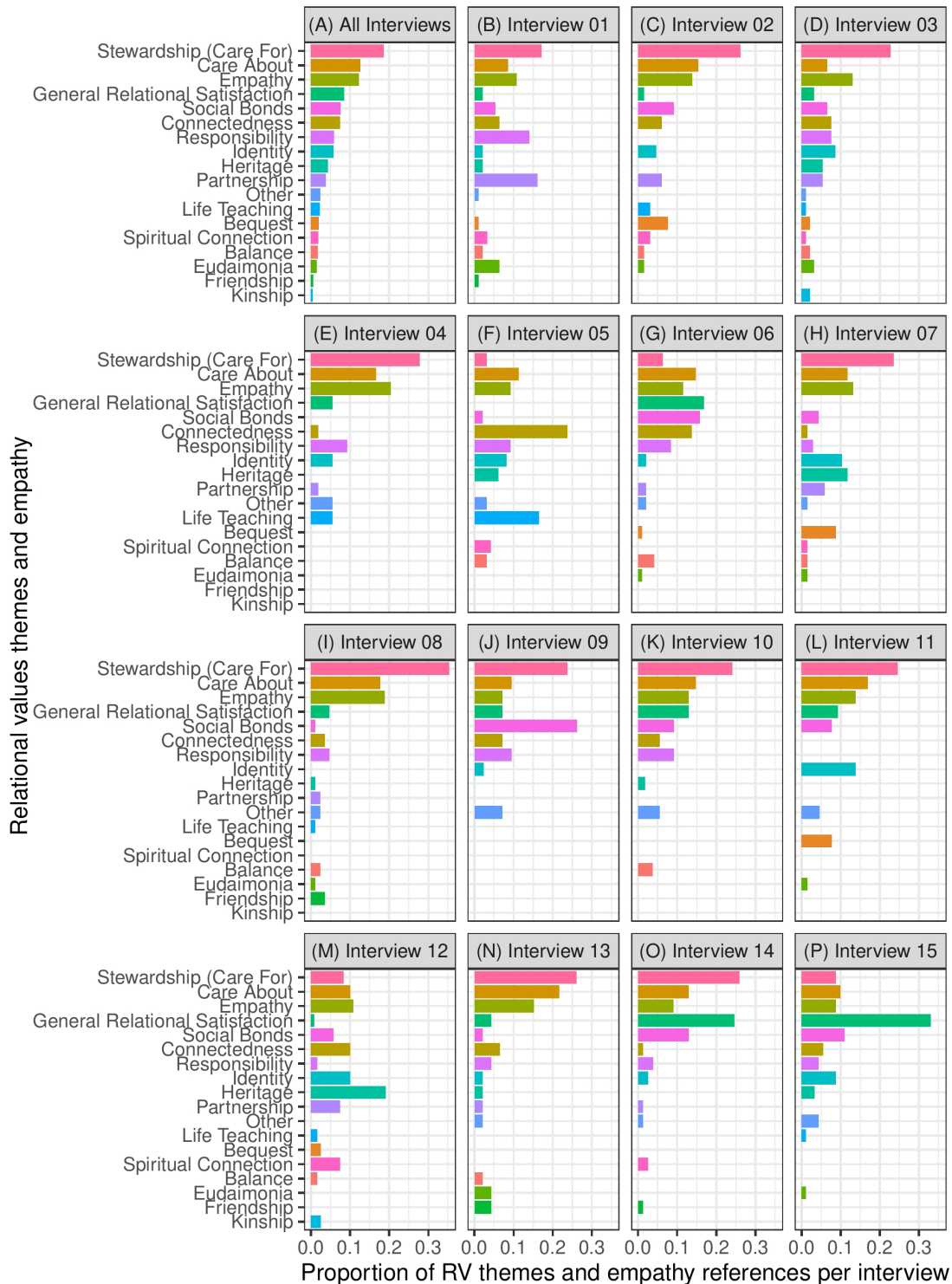
Here the participant clearly explains the strength of his emotional connection to the land, and how caring for the land is an integral component to his sense of a good life.

The third quality is that relational values can be difficult to articulate, yet still extremely important. Throughout the interviews, participants often expressed how difficult it is to adequately describe the importance of their relationships with nature (Gould and Schultz 2021). The following quote about a participant's relationship to the forest and pond around her home exemplifies how the difficulty of adequately articulating relational values should not be mistaken for their lack of importance:

Interviewer: So, how would you describe your relationship to the land here?

Participant: *Oh man! [laugh] Really?! It's like, uh, it's everything. I'm not sure I can do that. I don't know what to say about that because it's really everything. It really feels like, um, it feels like where I belong. And, the more I live here the more I realize that I don't know much yet.*

**Fig. 2.** Proportional representation of RV themes and empathy for all of the interviews together (A) and within each interview (B–P). Proportions for (A) were calculated by dividing the number of references for each theme in the dataset by the total number of references for all themes in the dataset. Proportions for B–P were calculated by dividing the number of references for each theme within that interview by the total number of references for all themes within the same interview.



*And, um, the more there is to know. And the more things I'm excited about learning. And the happier I am about, about... I love it here... I think every year you spend in the same place it gets deeper. I have been coming here since I was a small child and I fell in love with it... I'm connected to the prairie landscape as well, where I spent most of my childhood, really... But I've been here, and living here for my whole life since then, so I feel a much stronger connection here. Especially with the pond. Not very articulate on this subject [laugh]. It's too important to talk about!*

[Themes coded: identity, general relational satisfaction, eudaimonia, connectedness]

### Empathy and relational values

#### *Close alignment between empathy and relational values*

To address our second research question, we explored interactions between empathy and relational values. In the previous examples, we intentionally chose passages in which we did not also code for empathy (for simplicity). Yet empathy was commonly expressed throughout the interviews, and it always coincided with expressions of relational values, i.e., 100% of empathy references were also coded as RV. Conversely, 21% of all RV references coincided with coded empathy (Table 3).

**Table 3.** Number of relational value, empathy, and co-occurrent references across all interviews.

	Relational value	Empathy	Empathy and RV together
Number of discrete occurrences	667	141	141

As described earlier, empathy involves an emotional response congruent with the perceived welfare of another (Batson et al. 2002). In our interviews, these emotional responses reliably revealed a value held by, or value experienced by, the person regarding their relationship with nature. Next, we provide two examples of the interaction between empathy and relational values.

The first example comes from a wildlife biologist who was explaining her relationship with the bobcats that live in her study area:

Interviewer: Do you think they [the bobcats] distinguish you from other people?

Participant: *Probably. Yeah, I've had them walk on my back trail just minutes after my passing. I don't, you know, I know – maybe they know I love 'em [laughs]. When I was younger, I used to climb up the cliff faces and take pictures of the dens and stuff. All kinds of intrusive stuff, which I now, you know, am ashamed about, really. But... I've got the pictures [said with a smile].*

[Themes coded: empathy, care about]

The love she expresses is a clear indication of the RV theme “care about,” but so is the shame she feels for her intrusion into their

private kit-rearing den site. This statement simultaneously depicts empathy, because her shame is an emotional response caused by her infringement upon her perception of the bobcats' welfare.

A second example of the interaction of RVs and empathy comes from a participant who grew up in the headwaters of the Winooksi River, where we waded around the river and looked for insects and birds like he did as a child:

*One of the most valued things that I did as a child, this was my playground. All day long, man. This wasn't a study, this wasn't class, this is where I went to get the hell away from bullies. This is where I went to get away from my father who was kind of a jerk. And to, you know, I was safe here, this land, this [gesturing to the surroundings] didn't judge me. Just by spending a lot of time there I started forming this relationship, so now I value this differently, right?... So, when you allow a child to form relationships that are really personal, then that becomes a value system. Why would I want to hurt this? This wasn't the bully, you know? So I have a dear spot for this, and that's probably why I am the way I am. In part... That's where the love of it comes from.*

[Themes coded: empathy, care about, identity]

Here, the participant explains how his relationship with nature in this place was immensely important to him as a child, and how this relationship built in him values that shape his identity and actions today. This is an example of empathy that isn't as explicitly expressed as in the first example but still warrants coding. Empathy is defined as an emotional response congruent with the perceived welfare of another (Batson et al. 2002). This participant's statement of affection for, and desire to not harm, the river, constitutes an emotional response that is congruent with his perception of the river's welfare. Appendix 4 provides additional examples of the co-occurrence of RVs and empathy.

#### *Perspective-taking, empathy, and relational values*

To more directly explore the effect of inducing perspective-taking on empathy and relational values, we asked participants a closing question: “If the land could talk, what do you think it would say?” This question yielded a diversity of rich responses, which often differed from responses to other questions. One participant, a retired agricultural specialist who spends much of his time caretaking his ancestral family farmland, replied as follows:

*[Breathes out through nose]. Wow... Um... I don't know. "Crazy old bat?" [five second pause] I don't know. "You done well? You tried." Maybe that's the word. "You tried. You left it better than when you started." I don't know. Maybe "you haven't done enough." Probably, I think it's all of those. "You haven't done enough." I know I haven't done enough. I can't do enough. I want to do a lot more but I can't. I'm alone! And I've got a wife and kids and grandkids, but I'm alone. You know, they don't have the same values I do... I think "you tried. You did alright. You haven't done enough." All of that! "I'm better off than when I started." Um. "Keep going, pass it on."*

[Themes coded: empathy, bequest, care about, stewardship (care for)]



Here, in a display of empathy, the participant expresses his distress at not being able to do as much for the land as he perceives the land would want. But he also relays appreciation from the land for doing what he could – for trying – along with a plea to pass on his caretaking values and concern for the land to others.

The response to the perspective-taking question involved empathy, but other responses did not. For example:

*Hmm. [brief laugh] I don't know. Again, I don't – I, uh, I'm sorry I don't have any answer for that. It isn't that, ah. I – I guess I just don't really think about it that way. You know, it's probably a shortcoming on my part, but. Ah, I mean, I think, if we could listen, not so much if the land could – the land is talking, in its many many multitudinous ways. But if we could listen better we'd probably do a better job at living life. [pause] You know, we'd learn a lot more about patience, and, you know, sharing, and, you know, we'd learn, we'd learn to recognize greed for what it is and waste for what it is. If you think about it, there's no waste in nature. Why is it that there's so much waste in what we do? What's that tell us?*

[Themes coded: life teaching]

The perspective-taking question caught many participants off-guard but, as shown previously, also often prompted insightful instances of introspection and sharing. When we asked this participant to take the perspective of the land, she relayed lessons that nature has to teach us, if we would only bring more listening into our relationship with nature. Further examples of responses to this question can be found in Appendix 6.

Though only 8 out of 15 interviews included codable expressions of empathy in their response to this perspective-taking question, the prevalence of empathy was greater in response to this question compared to the rest of the interview questions (Figure 3).

## DISCUSSION

Our results are organized into two lines of inquiry: an exploration of the abundant expressions of RVs in our interviews, and alignment between empathy and relational values. In our exploration of RVs, we provided an approach for organizing expressions of RVs into themes in order to help illustrate patterns. One outcome of organizing expressions of RVs into themes is the demonstration of patterns of variability in RV expression among participants. We also distilled three overarching qualities of RVs in our data and provided quotes that exemplify each. Next, we showed the close alignment between empathy and relational values in our interviews, with around 20% of RV references coinciding with empathy, and 100% of empathy references co-coded as RV. When we attempted to induce empathy in our participants by asking them to take the perspective of the land, all of our interviews included expressions of RV in their responses, and about half of the responses also included empathy. Next, we discuss each of these results, then comment on the role of RVs and empathy in creating more sustainable futures.

### Expressions of relational values

Distilling interviews into themes, and themes into counts, progressively removes the contextual meaning of relational values

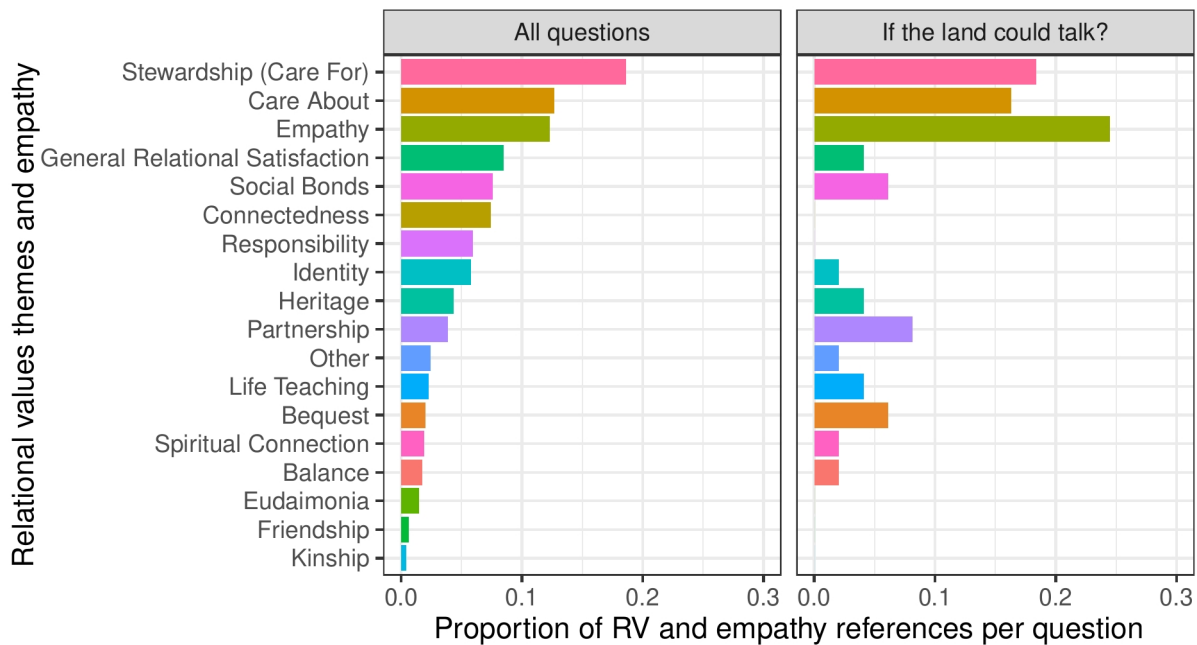
present at the time of expression. Yet organizing expressed relational values into thematic codes can help visualize broader patterns within an interview, or within a population. In our data, for example, “stewardship (care for)” and “care about” were expressed by every participant and were also the most expressed themes overall. Yet numerical summaries must be interpreted with caution (Maxwell 2010). Frequency of expression is not equivalent to importance of a value, because people can have difficulty expressing some of their deeply held beliefs (Gould and Schultz 2021) or may filter their responses according to their perception of social acceptability (Fisher 1993).

Yet another complication with numerical analysis is that some themes are discussed more frequently because interview questions more directly prompted their expression; this issue of “leading” interviewees is a fundamental concern and tension in social-science research (e.g., Maxwell 2012). Stewardship, the most prevalent theme in our data, provides the most obvious example. One question that we asked at every site we visited with participants was “Why did you choose to manage this place as you have?” This question often elicited the description of acts of stewardship and their importance to the participant. Another question we asked was “Thinking about your [or the] whole property, what are some of the things you love about this place?” This question was designed to signal to participants that it was acceptable to include emotions in their responses, but it also can be seen as quite leading. It explicitly asks participants for expressions of love, which we considered to be an aspect of the RV theme “care about.” In other words, our two most prevalent RV themes were almost directly addressed in the interview questions. The only other RV theme that was similarly addressed in an interview question was ‘social bonds’ (with the question “how might this land be important to other people?”). Social bonds was the fourth most prevalent theme (empathy was the third-most coded theme, and empathy was intentionally prompted by an interview question). Thus, especially for the four themes that our questions addressed more directly (stewardship, care for, empathy, and social bonds), the prevalence of mentions is far less important than the nuances and details of peoples’ responses (Maxwell 2010).

Our interview questions, though they sometimes referred to well-known RVs (either implicitly or explicitly), also allowed for wide-ranging responses from which previously undiscussed RV themes emerged. As one example, the more modest amount of expressions of “friendship” that we coded all arose unprompted from more open-ended questions. And though expressed relatively infrequently, this friendship was important to many participants.

Coding expressions of RVs into themes also allowed us to visualize patterns of variability among our interviews. For example, for the participant in Interview 12, “heritage” was the most commonly expressed RV theme, though it wasn’t a significant part of most other interviews. Of note, is that the participant in interview 12 is Abenaki and, therefore, part of a minority community in Vermont. This speaks to the role of RVs in daylighting values that are crucial to certain people or groups of people, particularly those who are non-dominant (Pascual et al. 2017, Himes and Muraca 2018, Gould et al. 2020). It also underscores the importance of seeking diverse participation in

**Fig. 3.** Distribution of RV themes and empathy references in participants’ responses to the question “if the land could talk, what would it say?” Distribution of themes across all interview questions included for comparison.



studies of RVs and other nonmaterial value (Zander and Straton 2010, Tauro et al. 2018, Riechers et al. 2018); without this person’s participation, we could have falsely concluded that heritage is not an important component of RVs in our study area.

We also identified and provided examples of three common qualities of RVs. The first quality is that RVs can involve complex layering of different relationships with nature. In our example, a participant’s restoration of a wetland in his yard is an opportunity to engage in stewardship, as well as connect with his children and provide a nourishing environment in which they can grow up. This quality is connected to the “bundling” of nonmaterial values seen in CES literature (e.g., Gould et al. 2015), and exemplifies how a relational values framework can shift the focus of value accounting toward understanding the complex interactions that create a larger story of meaning for those involved (Himes and Muraca 2018).

The second quality we identified is that RVs can involve important sources of personal meaning. This is an articulation of the eudaimonic quality of many RVs (Pascual et al. 2017, Knippenberg et al. 2018, Chan et al. 2018). Eudaimonia characterized expressions of RVs throughout our interviews, but in the example we provide, the participant articulates the link between relationship and personal meaning with exceptional clarity, explaining how the love he has for his land and his stewardship of the land are intertwined, and how this relationship adds to the richness of his life. Here, along with the earlier quote displaying the RV theme ‘friendship,’ we see an example of how RVs can help broaden our perspectives about whom or what we can have meaningful relationships with, and what those relationships can look like (James 2016, Knippenberg et al. 2018, Jax et al. 2018). These qualities can inform efforts to embrace

diverse visions of a good life (Chan et al. 2020, leverage point 1) and foster pro-environmental values (Chan et al. 2020, leverage point 3).

It is not always possible, however, for people to verbally express the importance of their relationships with nature. This relates to the third overarching quality we identified: RVs can be difficult to articulate, even as participants identify these values as extremely important to them (Himes and Muraca 2018). When asked to describe her relationship to the land she lives on, the participant in this example responded by saying it was “too important to talk about!” Thus for researchers attempting to elicit and categorize RVs, paying attention to what is said may be as important as paying attention to what is extremely difficult to say or cannot be said due to a quality of ineffability. Researchers can attempt to facilitate articulation of these values in various ways (Gould and Schultz 2021); our perspective-taking question provides one example.

**Close alignment between empathy and relational values**

It is well documented that people can have empathic responses to non-human beings and even whole landscapes (Schultz 2000, Walker and Chapman 2003, Sevillano et al. 2007). Our results are consistent with these findings; our participants expressed empathy for animals, plants, rivers, and ecosystems.

An expression of empathy reveals an emotional preference for the welfare of another (Batson et al. 2002). In our interviews, expressions of empathy always coincided with an expression of RVs. Conversely, about 20% of RV references in our interviews coincided with coded empathy. Though perspective-taking is a commonly used technique for inducing empathy, research has not (to our knowledge) explored whether perspective-taking can

induce or elicit relational values. When we attempted to induce empathy by asking participants to take the perspective of the land (“if the land could talk, what do you think it would say?”), every response included expressions of RV. This suggests that perspective-taking may play a role in evoking, producing, and/or internalizing RVs. This finding could have implications for both research and practice. It could aid efforts to understand relational values in environmental decision-making and research by offering a novel way to help people discuss these values, especially if techniques are careful to not lead respondents into certain types of answers. It could also aid practical efforts to foster latent values (Chan et al. 2020, leverage point 3) by offering people a novel way to reflect on their values.

Our results clearly suggest a close relationship between empathy and RVs. Part of this relationship could be that experiences or expressions of empathy toward nature may reveal or include relational values. Interpreted another way, it may be that empathy is a significant component of some RVs, or, as we will argue, it may be that empathy is itself a relational value. Relational values are, again, “preferences, principles, and virtues about human–nature relationships,”(Chan et al. 2018: A1). Next, we describe how empathy could be considered a preference or a virtue.

Schultz (2000) lays the groundwork for understanding empathy as a preference. According to Value-Belief-Norm theory, concern is based on a perceived threat to a valued object, which could be the self, other people, or nature (Stern and Dietz 1994). Schultz argues that this value is dependent on valuing our relationship with the object; i.e., nature, in the case of environmental concern (Schultz 2000). Schultz recognizes that environmental concern resonates strongly with the concept of empathy, and proposes that they are associated. If we consider empathy for nature as intertwined with concern for nature, empathy can be seen as (at least in part) dependent on being in a valued relationship with nature. It reveals a preference for the well-being of a constitutive component (i.e., nature) of that valued relationship.

In an almost entirely separate literature, many scholars argue that empathy is a virtue and that it is necessary for moral functioning (Simmons 2014, Peterson 2017). It is worth noting that empathy is a vigorously debated concept, with as many as 43 distinct definitions, and plenty of philosophers who argue that empathy is not a virtue (Battaly 2011, Cuff et al. 2016, Clark et al. 2019). One salient aspect of the “is empathy a virtue?” debate relates closely to the conceptual core of relational values (Coplan and Goldie 2011). Arguments against empathy as a virtue claim that empathy may result in action that is too context-specific (e.g., too oriented toward one individual). This context-specific action may not, the empathy-is-not-a-virtue camp argues, be what is best for society, which means empathy can be societally detrimental. One philosopher encapsulates this argument as “tugs of empathy must be resisted so that moral principles may be served” (Peterson 2017, p. 232, summarizing Bloom [e.g., 2016] and Prinz [e.g., 2011]). This argument relates closely to the conception of morality as abstract and decontextualized (the canonized Western philosophical understanding; e.g., Kant 1797) versus as relational and contextualized (a feminist understanding; e.g., Gilligan 1993). One fundamental aspect of the relational values concept is that values are intertwined with relationships, and thus are often context-dependent (e.g., Muraca 2011, 2016). Considering empathy as a relational value is, therefore, consistent with the

relational values scholarly conversation; empathy’s context-dependence does not disqualify it as a virtue but instead supports it as a relational virtue.

Importantly, the expansive literature about empathy, which involves primarily psychology and philosophy (e.g., Coplan and Goldie 2011), addresses almost exclusively human–human empathy. The strong importance of human–nature empathy in our exploratory analysis of the associations between empathy and relational values suggests an exciting, promising new area of inquiry. We propose that there is strong reason to consider empathy as a relational value and that future research can explore, conceptualize, and test this relationship further.

#### **Transformative change, empathy, and (other?) relational values**

The transformative changes that IPBES calls for include not only a global economic transition away from ever-increasing material consumption but also a total overall reduction in material consumption (IPBES 2019). To make this transition both effective and equitable, the world’s richest people will have to consume less, while the poorest among us should be able to consume more (Wiedmann et al. 2020).

The required reduction in consumption is often spoken about as a dwindling standard of living, but relational values may point to a path where global resource consumption dwindles but quality of life not only stays constant, but increases (Muraca 2016, Chan et al. 2016, IPBES 2019). In line with Chan et al.’s (2020) first leverage point, embracing diverse visions of a good life, the lost value associated with a global reduction of material consumption could be partially replaced through the intentional promotion of relational values among humans and between people and nature. In other words, what if those of us who have our basic needs met relied more on cultivating fulfilling relationships to provide ourselves with a good life, rather than on luxury consumption? Quantitative research has shown that perspective-taking and empathy have been shown to positively affect pro-environmental attitudes and behaviors (Berenguer 2007, Swim and Bloodhart 2015), and our results suggest that they may also be able to promote expression of relational values. This in turn, suggests that perspective-taking and empathy may be important tools in both embracing diverse visions of a good life (Chan et al. 2020: leverage point 1) and in promoting latent pro-environmental relational values (Chan et al. 2020: leverage point 3).

#### **CONCLUSION**

Qualitative analysis of interviews using a relational-values framework can reveal important, non-substitutable sources of meaning, well-being, and emotional connection that are derived through relationships with nature. Further, our results suggest close connections between empathy and relational values, and perspective-taking may play a role in evoking, producing, and internalizing relational values. We also argue that there is strong reason to consider empathy as a relational value. Relational values, perspective-taking, and empathy may all be powerful (and interrelated) concepts and tools in increasing the equitability and desirability for environmental decision-making and conservation outcomes; they may offer a path toward increasing human well-being while decreasing the consumption of resource-intensive goods and services that fuel the global trajectory toward further environmental crises.

Responses to this article can be read online at:  
<https://www.ecologyandsociety.org/issues/responses.php/13406>

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#### Data Availability:

*The data/code that support the findings of this study are available on request from the corresponding author, E.J.H. None of the data/code are publicly available because they contain information that could compromise the privacy of research participants. Ethical approval for this research study was granted by the University of Vermont's Institutional Review Board, STUDY00000393.*

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## **Appendix 1. Interview protocol development**

Along with the academic literature on relational values and empathy, we developed the interview protocol using two question sets created by Vermont natural-resource practitioners used to understand communities' and individuals' place-based relationships and values. The first source of inspiration was Nancy Bell's Community Forum Method (personal communication), and the second was Lauren Sopher's 2019 MS Thesis from the University of Vermont Field Naturalist Program titled "The Greensboro Bend PLACE Program & Socially Just Conservation."

The Community Forum Method involves six questions:

- What do you love about where you live?
- What is your vision for its future?
- What do you see as threats to that vision?
- What do you see as solutions?
- Who would you need to be to fulfill your vision?
- What is one action you are willing to commit to fulfill that vision?

Relevant questions from Sopher's interviews include:

- What's important to you about your relationship to this place?
- What are some places [here] that are important to you?
- What are your thoughts about conservation in Greensboro Bend?

## Appendix 2. Interview protocol

### Biodiversity and Water in the Winooski Watershed – Stories of People and the Land | Interview Questions

Thanks for your time and your willingness to show me around. You know this area better than most, and I'm curious to learn about it from you.

1. To start off with, I'm going to ask you a little about your life, but first could you tell me your name?
2. Great, thank you.
  - a. Where do you live? (if not obvious, like right there)
  - b. How long have you lived here?
  - c. Where have you lived before you came here?
  - d. What is (or has been) your profession?
  - e. What has been a defining passion of your life?
3. How would you describe your relationship to the land here? I know that's a really general question! You can interpret it however you'd like.
4. Thinking about your (the) whole property, what are some of the things you love about this place?
5. What about the other end of the spectrum, what are some things you don't love about this place?

Great, thank you. Before we walk around I'd like to get your thoughts on conservation and biodiversity.

6. So, are you (or this property) a part of the Current Use program or any other conservation measures?
  - a. Why did you decide to conserve this place?
  - b. How was that process for you?
    - i. [prompts if they don't understand or don't answer]
    - ii. How did you feel going through the process?
  - c. [Or, if not conserved]
    - i. Why not?
    - ii. What do you think of Current Use and other conservation efforts?
7. What does your relationship to the other organisms on Earth look like?
  - a. To the degree that you care about them, could you explain to me why?
  - b. [if they do care about them]
    - i. What are your hopes and fears for them?
    - ii. What solutions are there to your fears?
    - iii. How would people have to change to get to those solutions?
8. Not everybody knows what biodiversity is. Are you familiar with that term?
  - a. Two possible answers:
    - i. If yes: Great, could you explain it to me? This is not a test! Just curious how you think about it.



- ii. If no: Ok, well biodiversity is a measure of the entire variety of organisms that live in an area. So all of the animals and plants and fungi. Conserving biodiversity means trying to plan human activities so that species and their habitats don't disappear from the landscape or go extinct. Does that make sense?
- b. I'm trying to understand the different reasons people do or don't value biodiversity. Could you tell me a little about your perspective?
  - i. [I won't ask these to every person, they will just be added to various conversations when it makes sense].
  - ii. Have you thought about this for a long time, or is thinking about biodiversity a new thing for you?
  - iii. [If they are talking about values broadly construed ... maybe ...] How do values (like, morality or principles or ethics) play into what you think about biodiversity?
  - iv. Do you encounter people who feel really differently about biodiversity than you do? Can you tell me about that, and what that's like for you?

Ok, great, thank you so much. How about we move on to something a little different.

So, I'm hoping that you'll take me to some of the places on your property that are particularly meaningful or interesting to you, whatever the reason might be.

I'm especially interested in natural areas on the property that

- you see as ecologically important. Or maybe,
- places that you manage in some way.
- If you hunt, or fish, or go bird watching, maybe we could visit one of your favorite spots.
- Or maybe you've got a place that you treasure for some other reason.

Really, whatever is important to you – I'd love to go there! We can go to as many or few places as you would like, but two or three stops would be totally fine. Why don't we take a five minute break, and then head off.

- 9. Alright, great, do you have a spot you'd like to take me? [I may start asking questions 10-13 during the walking]
  - a. Why did you choose to take me here?
  - b. Optional questions if appropriate:
    - i. What does this place mean to you?
    - ii. Do you have any strong memories from this place?
    - iii. Why did you choose to manage this place as you have?
    - iv. What would you like me or other people to understand about this place?
    - v. Does this place relate to your answers to the biodiversity questions we talked about XXX [at the house, on the porch, wherever], or not really? Totally fine if it doesn't.
  - c. Are there any other places you would like to take me?
    - i. [If we haven't visited a natural place I will ask]: Are there any places with wild animals or plants that you could take me?

OK, let's start walking back. I've got some more questions to ask you along the way before we wrap up.

10. Back when we started talking, you described your relationship with this place. What would your life be like without your relationship to this place?
11. So we've talked a fair bit about how important this land is to you. [Other folks have come up a number of times. I'm curious if you have any general thoughts about:] How this land might be important to other people?
12. What does the future of this place look like after you (or the current landowner) are no longer the landowner?
  - a. Who do you think the land will go to?
  - b. What are your hopes for this place? [code: What are your hopes and fears for this place?]
  - c. What are your fears?
  - d. What do you think the solutions might be to those fears?
13. If the land could talk, what do you think it would say?

You have been really kind to talk with me about the land here and your relationship to it, and that's it for my interview questions, I really appreciate the time and energy you've shared with me today. If you are interested though, I've got a bit more to ask and say about Vermont Conservation Design. It's something that I'm interested in, but we can also totally just be done right now.

14. What do you know about Vermont Conservation Design?
  - a. Are you interested in hearing about it from me, and looking at how your property fits into the ecological function of the wider area? No pressure ... it's just something I'm interested in.
    - i. Answer: No.
    - ii. Answer: Yes.
      1. Great...[At this point I will explain Vermont Conservation Design and show them the elements of their property that are important to the ecological function of the state.]
      2. Could I go to some of these places on your property and take photos of the natural features?
      3. Is there anything you'd like to tell me about these places before I go?
15. Is there anything else you would like me or other people to understand that we haven't touched on yet?

Thank you so much, It was great to meet, and I really appreciate everything from today. We're officially done with the research interview [nothing recorded after this point will be used in the research study]. I couldn't bring this up before because I didn't want to bias your answers for research purposes, but outside of my research I'm also working on putting together education material for a local biodiversity organization. I'm trying to help school children and other people

understand why biodiversity, conservation, and the natural world are important. If it's OK with you I'd like to go take some pictures of the places you took me today, and use some of the stories you told me during the interview. Is this something you would be interested in? It's totally OK if not. [If they are OK with it I will ask them to review and sign a consent form.]

Great, well thank you so much again, take care.

**Appendix 3.** Examples of each relational values theme coded in our study

Table A3.1

<b>Relational values theme</b>	<b>Examples</b>
balance	I mean I think any time we take stuff out of the woods, we were talking about that before a little bit, I think there's some loss of ecological integrity. And, you know, if, and to me it's just a balance of how do we decide where the best places are to harvest. I think we should get all of our, we have a lot of things we do with wood and wood products, and I think we should do all we can to get those locally. But we should do it in a way that we harvest so mimic as many of those natural processes as we can. Including leaving dead wood and standing dead.
balance	I guess what I hope is that, going forward, more people can do as we're doing in the Green Mountain Club, for example, and give back. Find ways. And I, I say this as a hunter. I'm a deer hunter. But you can't just be out here popping off deer. You've got to give back. You've gotta somehow make it better for animals. And that's what I hope more people will do. And part of making it better for animals is, is to recognize that, you know, their, their -- refugia, their quieter habitats, their bigger, wilder places like this -- really work for them. And it's, it's not appropriate for us to be everywhere. So. Part of giving back is to say, "here's where I won't be." You know. "Here's where I won't insist on a lot of recreational infrastructure."
balance	Like there's the, this is the kind of thing we'd stop and talk about when we're doing firewood gathering. Like there's a tree that snapped off up there, and it's all sound maple. And like do we leave that one, leave it for woodpeckers, and it'll be good in 10 years or 20 years, or do we cut it for firewood? This one we'll probably cut for firewood because, you know, there's one, there's some others, there's another one that will be ready soon. So we try to leave a bunch of snags around, but that one's ours for firewood [chuckle].
balance	And you can see, this is a good example of that three dimensional structure of the landscape, and these big broken tree that came down. And that, for decades and decades, if a tree like fell on this land it would be removed. And... that's not wrong from the farm's point of view, but, it's not as good from the wildlife's point of view. And so, what we're trying to do here is to say, well, what's, where's the balance?
bequest	I don't, I don't ever want to move again, you know, it's, like, nice to be tied to it. And then sharing it with the little one, or soon-to-be two, but, you know and seeing what they're interested in and not. And having her just grow up with like a wetland next to her house, like how cool is that? I mean maybe she'll be like, "ugh, Dad, you and your weird wetland," but maybe she'll be like, "yeah we had a wetland, and like, you know, it's not some stinky thing, it's really cool. And, you know, we did this and did that."



- bequest            You know what, those plants are gone. Where are they? You know, where can I find those plants now? You know, for a while, a period of my life I walked away from all of that because I tried to fit into the white world, still trying to fit in. But I totally walked away from everything, all of that. And in the process this happened. So I think that's also, you know I'm now getting back to an age where it's like this is important instead of chasing what the what everyone says were supposed to chase. And it's not here to pass on to anybody. It's not here to pass on to my kids.
- bequest            I don't know. 'You done well? You tried.' Maybe that's the word. 'You tried. You left it better than when you started.' I don't know. Maybe 'you haven't done enough.' Probably, I think it's all of those. 'You haven't done enough.' I know I haven't done enough. I can't do enough. I want to do a lot more but I can't. I'm alone. And I've got a wife and kids and grandkids, but I'm alone. You know, they don't have the same values I do. Uh, that is, my wife doesn't. I think the kids, two of the kids do. The third one is off and running. I think 'you tried. You did alright. You haven't done enough.' All of that! 'I'm better off than when I started.' Um. 'Keep going, pass it on.' I think all of that.
- bequest            There's a reason why you own land, it's not because you want to make a lot of money. It's not a money maker, you just, it's part of your happiness. It's a big part of the happiness in your life. There's landowners love to walk on their land. Unless you're a developer. If you want to own some land to develop, that's different. I'm a developer, I've developed the back corner. I brought a project through Act 250 in Vermont. Which is a toiling process. But I recently sold fifteen building, fifteen units, building lots. But I understood that I had to do that in order for me to keep the rest of the farm and give it to my kids. I had to sell a piece, I had to develop a piece, so I'm a developer but, I had to do that, it was almost like cutting my right arm, selling some of our property that way, but um, I knew I had to do that to be able to live in Chittenden County and keep the rest of the farm as is. So I'm ok with that.
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- care about        And then it's also just like I just love it. You know it's just like I had like a dog who used to work with me all the time – it's going to be a good beechnut year – and uh, I loved him so much, and then he just like died. And you know I felt like I didn't like lose the capacity to love, that thing I didn't lose like any like space in my body where it where I would like hold that love, you know, it's just I just didn't have that anymore. And I think I sort of feel this way about about this place where like here is this thing that I love so much, and I just like expanded to like meet the challenge of being like the steward of this, of getting to be the steward of this place. And I didn't have it I'd probably be okay, but my life wouldn't be as rich.
- care about        And there's just something about playing and learning in that. There's no way that you can't develop a love for it. You know, it's hard to abuse something that you know is an extension of yourself.
- care about        Interviewer: How would you describe your relationship to the land here?  
Participant: I love it. It's very simple.

- care about Yeah, everything like I sort of feel like this property in some ways is like this like injured compromised thing that I'm like like trying to take care of but it's everything about this place is hard. You know and it's like a place a place that only a forester could love really. And a forester who is it who is actually into like timber production and like making money off the land would not love it.
- care about Interviewer: Do you think they distinguish you from other people?  
Participant: Probably. Yeah, I've had them walk on my back trail just minutes of my passing. I don't, you know, I know – maybe they know I love 'em [laughs]. When I was younger, I used to climb up the cliff faces and take pictures of the dens and stuff. All kinds of intrusive stuff, which I now, you know, am ashamed about, really. But, I've got the pictures [said with a smile].
- care about I grew up on this land, so, you know, there's deep roots. So I love my land, if that's what you're asking. And, as far as, um, you know, it's all pasture and grass. So I know I'm not a polluter. Um, you know, so, um, in my job, I can, I see a lot of different land and landowners and see what is out there, and when I compare my own farm and forest, I know, like I say, I'm not a polluter. And I, I've been doing different things to enhance wildlife on my property. That's important to me. So, um, that's, you know, it's like, I know my land like the back of my hand. You know, that kind of thing. I'm a hunter, so I hunt my land. I make maple syrup. So I'm, you know, so I'm using it in those ways.
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- connectedness I keep saying it again and again. This is you. This is you. And it's me. And you know, and so it's, don't be afraid to sink in. Don't be afraid to like just kind of, be part of it. And don't be a tourist. And don't just be an academic. Be better than that. Be better than all of those things. And I think that if you really want to have a sense of what the land is don't be afraid to depend on it a little bit. Don't be afraid to give it an elbow. It's made for that.
- connectedness There are, you know, there are philosophers that say we love ourselves, I mean maybe above all we love ourselves. And, and, when, when you consider yourself only an extension - extension? - or part of, the land, you can't help but love it. And you can't help but feel what it has for its own intrinsic value is given to you if you, if you pay attention. Much the same way as the fortunate ones of us get from our parents their values and strengths and beliefs.
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eudaimonia	<p>Participant: [sigh] Well I think that one of the most important things that we can achieve in a life is happiness, and that comes from Democrates, one of the Ancient Greeks. And a hundred years after Democrates came to that point of view Plato was exploring it and said well if that is true how do we get to happiness. And his conclusion was that we get to happiness through virtue. And that we get to virtue by simply doing one good thing after another, and that after a while we will create a string of good things that will have more value than any string of pearls or chain of gold we might ever hold. And so, the happiness that is one of my passions is not a hedonistic happiness, but it is a deeper sense of peace with the world and with myself.</p> <p>Interviewer: And that's come from pursuing those, that string of good actions?</p> <p>Participant: Yes, yeah, yeah. And so, in that way, the part of the work of the life is to try to do things that are meaningful, and largely that has been about how do we create meaningful food? How do we create food that is a joy to eat but is also responsible to the health and well-being of the people who eat it, and is responsible to the community, and responsible to our environment.</p>
eudaimonia	<p>There's a reason why you own land, it's not because you want to make a lot of money. It's not a money maker, you just, it's part of your happiness. It's a big part of the happiness in your life.</p>
eudaimonia	<p>Interviewer: To the degree that you care about them, could you explain to me why?</p> <p>Participant: I just, to me it's almost an impossible question. But I, um, this is sort of a circuitous way, but I used to have a lot of problems with depression. I don't anymore. But always the one thing that could, I realized could make me feel better was the natural world. And also just beauty, which I find mostly in the natural world, whether it was a sunset or a walk or digging in the dirt. And to me it's like, it's what gives life meaning. It's what makes it valuable. You know that, I mean, for me to live in a city that's all concrete and people, you know? If the liveliest creatures you have are pigeons and cockroaches. You know, that's really sad. You know, and I also, well I guess you know to me it's all the richness that keeps me going. I mean every morning I go and let the chickens out. And sometimes the weather's horrible and it's hard, but I'm always glad to do it because of, whether it's experiencing the weather, or what birds are singing, or what things smell like, that's the richness of life. You know it's like, you know, we could eat some gross food that gives us all our nutrients you know out a tube, but all of the joy of flavors and eating and, you know, the smell of things, the social experience, would all go away if we ate like that. And to me, you know, life in a masonry box would be bad. Because all the richness is in the world around me.</p>
friendship	<p>Well, I'm going to say something that is going to come off as hopelessly odd, but, I, at this moment I get to stand among friends. There's... millions. And one of the things that I've come to, uh, appreciate is that it's not just the, the megafauna and flora that are integral to my life. It's the uncountable trillions of little guys in the soil that are absolutely essential to my wellbeing and to the wellbeing of everybody else, that I appreciate and find beauty in, and I find peace in.</p>
friendship	<p>And this painted turtle became my buddy, [hahaha], he would almost eat out of my hand. It's just nice to know a turtle.</p>

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friendship	I hope that there are some people who really like red maple because of it's often it's a species that I'm like I'm like cutting red maple to thin around red oak cuz I like red oak, especially with the with this land because they basically cut all the red oak and now I've become obsessed with releasing each remaining red oak and then trying to regenerate red oak in all these really intensive ways. I look at red oak and I'm like, ahh, the ultimate tree. [laughter]. And I look at red maple and I'm like pbhh. But, like, I still really love them. You know I think that they're I still think that they're amazing it's just sort of like like red oak is like that person that you like really respect and you like are about and red maple is like the friend that you have who is like can't get his shit together. You know and you still like you love him cuz you like grew up together or whatever but you're still like gahhd, I wish he could just get it together [laughing].
friendship	You know, between climate change, sea level rise, and all that sort of stuff, um, you know, any of this land that you totally make so it can't be developed or used in any way, um, you know, there's going to be a lot of people in New York City and Boston that need some place to live [laugh]. Whether it's going to be here or just further out in the countryside I don't know, but if you believe in global warming and sea level rise and, and the changes to drought, the heavy rains, the flooding, you know, this is high land. It's, it's not dry land, but some of it's dry. So, um, you know, do I have an obligation, five hundred years down the road, to have land here that's buildable? Um, or do I have an obligation to all my salamander friends [laugh]?
heritage	Protection goes back to it's been in [his] family for so long that he feels a need to honor the family's tradition of keeping the land together in one piece and taking care of it. And that's been kind of an overriding thing for you in your decision making. It's been a responsibility that was handed to you from your parents, and his parent's parents, you know, since his great grandfather, it's uh, yeah, it's a responsibility in that way as well as it's just a responsibility to maintain it, to finance it, to uh, yeah.
heritage	They criticize me highly because I'll say to them what if you were that tree and then they like see that's my point you're worshiping the tree and I'm like I am not worshiping the tree I am trying to tell you that if you weren't who you were and you were thus and so, do you think you would have any thoughts or feelings about that? Because my heritage says that is a living being.
heritage	He doesn't unfortunately know the Abenaki words because my father passed away. He would have taught them to him. because I was his plan, and, but he does say thank you. So we still have taught him that the English version of that is that you're thanking that animal for having given its life for you to live and to have, you know. And so he does he does at least say thank you, he, but he doesn't know the Abenaki words. Which is, that's also sad.
heritage	So that's a little bitty patch of rich woods right there, but it's also Uncle Walter's dump. So you know, tin cans, glass bottles, maidenhair fern [laugh]! Toothwort [laugh]!
identity	So I think I wouldn't have a sense of myself if I didn't have this place. Does that makes sense?



identity	One of the most valued things that I did as a child, this was my playground. All day long, man. This wasn't a study, this wasn't class, this is where I went to get the hell away from bullies. This is where I went to get away from my father who was kind of a jerk. And to, you know, I was safe here, this land, this didn't judge me. Just by spending a lot of time there I started forming this relationship, so now I value this differently, right?...So, when you allow a child to form relationships that are really personal, then that becomes a value system. Why would I want to hurt this? This wasn't the bully? You know? So I have a dear spot for this, and that's probably why I am the way I am. In part.
identity	<p>Interviewer: So, how would you describe your relationship to the land here?</p> <p>Participant: Oh man! [laugh] Really?! It's like, uh, it's everything. I'm not sure I can do that. I don't know what to say about that because it's really everything. It really feels like, um, it feels like where I belong. And, the more I live here the more I realize that I don't know much yet. And, um, the more there is to know. And the more things I'm excited about learning. And the happier I am about, about... I love it here. I don't, um, and I don't think you, I think every year you spend in the same place, um, it gets deeper. I have been coming here since I was a small child and I fell in love with it, at first, and... I'm connected to the prairie landscape as well, where I spent most of my childhood, really. But then hadn't been back for 50 years, and so that was, so last year I went back to Iowa for the first time in 50 years and that felt, that felt really powerful. But, but I've been here, and living here for my whole life since then, so, so I feel a much stronger connection here. Especially with the pond. Not very articulate on this subject [laugh]. It's too important to talk about!</p>
identity	Sorry about the emotional part of it, earlier, but you've got to get used to the idea. But, no, 1797, and we really, uh, enjoyed it, and it's been in the family. And I've done a lot of research on that. The, and uh, born here, married here, live here, and I'll die here. I'll get buried here. I may not die here, but I'll get buried here. So. Circle of life. How's that for an interesting thought? Talk about a stubborn old Vermonter.
kinship	I still believe and was raised that these are all our ancestors [later clarified to mean relations], these these are all living, you know beings, that building isn't but you know the trees, the plants the animals.
kinship	I'm not a virtual treehugger, I'm a literal tree hugger. They're just cousins, they're not trees, for instance, for me.
life teaching	<p>Hmm. [little laugh] I don't know. Again, I don't -- I - uh - I'm sorry I don't have any answer for that. It isn't that, ah. I -- I guess I just don't really think about it that way. You know, its probably a shortcoming on my part, but. Ah, I mean, I think, if we could listen, uh, not so much if the land could it, if we could -- the land is talking, in its many many multitudinous ways. But if we could listen better we'd probably do a better job at living life. [pause] You know, we'd learn a lot more about patience, and, you know, sharing, and, you know, we'd learn, we'd learn to recognize greed for what it is, and waste for what it is. If you think about it, there's no waste in nature. Why is it that there's so much waste in what we do? What's that tell us?</p>

- life teaching So, um, I think it made me a better person. I think it made me a softer and more compassionate person. And just in like when I'm walking around. I also know that it's a skill. If you stop doing it, you'll get rusty. And uh, so like having some kind of relationship with the land kind of forces you to know your feet. To know what is. Know how to live in a place with variables. Where things are messy and confusing and different from one day to the next. It gives you problem solving skills and awareness that I probably wouldn't have otherwise. But if you imprint that way as a little kid then you're kind of like the salmon in the stream. You come back to it. You imprint on that as a fry. It becomes part of who you are, and somehow you just instinctively know how to move in and out of that state. That state of going back upstream to your roots is something that you can do if you have that as a child. So I feel that a lot now.
- life teaching Mhmm. Yeah. Yeah I mean it's, it's just the same way that like everybody feels busy all the time, you know. Like no matter how much stuff you're doing or how much stuff you've got in your schedule, everybody feels really busy all the time. And then you're like 'I'm, you know, maximum busy. I couldn't be busier.' And then something happens and you know, your life adjusts and you fill it up with stuff. You know, and then, it's amazing, sort of the capacity of the human being to like absorb extra responsibility like this. I think it's made me a better person. In a lot of ways, you know, like having to be responsible for something like this, which is totally not about me. You know? it's cool. I think everybody should do it. The problem is it's expensive.
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- other I'm a guest. They live here. [laughs, ha ha ha] In my head, that's how it is.
- other Other organisms on Earth... I guess my relationship is of deep respect. I, I grew up hiking the Sierras, and I was taught every cloud formation, every rock type, every wildflower, every tree, every track, and I think, I didn't appreciate it then, um, but I think that that is what connected me to that place, and just comparing, you know, this place that I feel pretty connected to and Vermont in general, compared to what I grew up with, um I just have a respect of the landscape and everything on it, and I feel strongly that we should do everything we can to conserve what we have. Especially considering climate change and um species populations also decreasing.
- other Well I think it has so much to do with this, uh, interdependence. This understanding that I cannot be successful without them. And it's, it's a little bit of a one-way street. They can be very successful without me [laughing]. Um, so, I'm in the humbled position in this relationship [haha], which is, which is really sort of turning the world on its head. Because in a lot of ways, um, the human experience has seen itself at the pinnacle at, of, of life on Earth. And, that point of view suggests that we're actually, that it's an upside down pyramid. That, we're, uh, we're sort of at the bottom, we're the least, the irony is that we are simultaneously the least important species and the most influential species. And that's a paradox that I think, um, that we haven't resolved yet.
- other But, mostly, I mean, right now because my mobility is more limited, I do this walk every day, or almost every day. And um, and it just is a, kind of an emotional, psychological relief to be in the woods. Even though my house is in the woods. I mean it's not the same. And I can't, I can't snowshoe anymore in the winter, so, like when the mud finally subsides it's just, an incredible relief to be able to get back out.
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partnership	And I start to see the lives around me as my partners in this journey. And that, as partners, as a partner with them I have both the responsibility and the opportunity to either be constructive to the lives of others or to be hurtful to the lives of others. Or to simply turn my back on them.
partnership	And and I feel like the mindset that I'm approaching this place with like is it's going to be mutually beneficial cuz this place also makes me feel amazing all the time and I love it, and it's just a wonderful place to sort of be in partnership with. But I think we can benefit each other. And I wish that everybody who owned forested land like cared about it and thought about it as much as I do about this place. Cuz if they did they'd be there'd be, you know, most of the problems that we have to just go away.
responsibility	And then something happens and you know, your life adjusts and you fill it up with stuff. You know, and then, it's amazing, sort of the capacity of the human being to like absorb extra responsibility like this. I think it's made me a better person. In a lot of ways, you know, like having to be responsible for something like this, which is totally not about me. You know? it's cool. I think everybody should do it. The problem is it's expensive.
responsibility	You want to make sure you're doing that in a good way. Because that has one outcome, you know, that's a lot of responsibility. It's a good one though. So I think of 'I'm a moose, how do I want to die?' How do you want to die? You've got a choice, you're going to die today. What's your choice? Slow and miserable, dieing partially of bloating and infection, I mean, or you were just walking down the path, thinking about the hottest chick you ever met, and you're just gone. I don't know where they go. But I know they didn't suffer. Couldn't. I didn't allow that to happen. So that's values. And uh, I try to convey that to a lot of people.

responsibility It's just amazing. It's just I mean to me it's like strikingly beautiful. And then it's just also when I come out here it's like, I can't own this. What an absurd idea! You know like I'm the owner of this piece of land. Like, do I own this rock? you know like, it doesn't make any sense. That's what I'm usually struck by and then it's also sort of like, working in Chittenden County it's it's comforting to be among forested mountains like this. Sometimes where you're like you know you'll be working all day in Shelburne on little like 25 acre lots or whatever. You come out here and it's like big woods.

[10 second pause]

So it's just amazing. You come into these places and I'm just like feel so much like responsibilities also it's like, not that I think that I own them or that yeah that they belong to me or that I'm like smarter than them or better than them in any way but just like responsibility just like take care of all of this. Like all the organisms here. And then, you know looking back and being like man oh man have we like to changed this Earth. You know, it's like a pretty amazing opportunity to get to get to be sort of in charge of one little pretty cool chunk of it. And just try and really take care of it, with the idea that we're not the only thing that matters here, you know? I feel like that's an important like, there are people who are really good land stewards that do a really good job from the perspective of managing it purely for them. You know, managing it purely for humans. And there are people who are who do you know actually treat the forest really well, I think operating from that mindset. But I think there will always something be something lost unless you're also managing for the intrinsic value of all these, the intrinsic value of these systems and the organisms that occupy them.

responsibility I'd like to give them, without them feeling shamed, and without them feeling like it's something that they could never do. But we make a list of all the little things that we can do and there are hundreds of things that we can do. And let's choose five, let's try that out for the next week, see how that goes. Come back, report out how, you know, how we did. So having those conversations. Will all kids follow through? No, but most will. Really try something out, and really think about that. Um, the balance is not having like an ominous forecast and having kids get that sense of fear, and we're doing this out of fear, but doing it out of responsibility, and taking initiative and being proactive as opposed to feeling shamed and being reactive. Does that make sense?

responsibility We have to get past that idea of we can keep doing developments if we want to end up with stability. And I think stability in the land base is what we need now. That some places aren't going to be developed. That some places are going to stay whether it's wild or well-managed that we need to have we need to have those places stay the way they are. so it's it's a it's a landowner concession. It's the landowner kind of giving up something that I think it's there's a societal responsibility to to support it. You know, that we need, because it it can't be a responsibility that just landowners take on if it's if the benefits of conserved land are so much larger than just the one piece of land.

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social bonds It's nice to see the hawks circling. I think of my dad watching over me. And my brother will be watching over before too much longer. Um, but it's [a little choked up], so you try to, eh! It's all intermingled.

social bonds	<p>We've got children here who's parents met here, and some of whom even got married here, who were brought here by their parents when they were little munchkins. How does that change our life? It just adds to the fabric of it, they're part of the fabric of our life. One couple wanted to be married on the top of Goose Hill. Another wanted to be married on the flank there where the 540 foot elevation of the sea of Champlain was. Others have asked to be married in the meadow out here. I think that's how important it is to them, but again, that's how important it is to us. That's part of our fabric of us. That's how it's changed our lives.</p>
spiritual connection	<p>Um... why do I care about other organisms? Cuz I think that every organism is like a story of, you know I mean I can try to explain like spiritual things that I don't even know how to explain, but beyond that, like every organisms is like this unbroken line back to however and whenever life started. It's like this collection of stories, you know, of how it got to be there. And its genes and it's ancestors and it's evolution. And like, you know, if we decide to remove some tiny species that noone seems to care about then it's like that whole story's gone and we can't get it back. And even if we dug up its genes and cloned it we can't really get it back because you're losing a whole bunch of other...behavioral and habitat and everything else, and its relationship with microorganisms and everything else. So I guess it's, you know, I think it's broader than just one given thing. And like, I guess part of why I try to do with this what I do is this idea that it just builds resiliency, so that these species, these fireflies that are here aren't just something cool for our kid to see, they're also like this amazing story...this amazing thing. And like, if a plant, that maple tells you that... it tells you something really interesting, it tells you that for whatever, I don't think it's a hundred years old, for like the last 80 years a maple can survive there. Because if for one minute it would have been enough to kill a maple it would have been dead. So like, every plant that's been there awhile has this really interesting story, especially when you gather them all together. So...</p>
spiritual connection	<p>He doesn't unfortunately know the Abenaki words because my father passed away. He would have taught them to him, because that was his plan. But he does say thank you, so we still have taught him that the English version of that is that you're thanking that animal for having given its life for you to live and to have, you know, and so he does he does at least say thank you. He, but he doesn't know the Abenaki words, which is, that's also sad.</p>
spiritual connection	<p>But that sense of awe, that went away for me for a while. I think that when you get really busy, especially if you go through like, my dad died in a helicopter crash, and I got divorced, and I was super depressed and I'm finally pulling out of that, but that sense of awe can go away as you get older. And I'm realizing that I was really missing that. I don't know if that's just part of the depressed mentality or what but, these places, particularly when it's nice out, you know, it's easier for me, these remind me that everything is ok. You know. But also too to be like, 'oh yeah', just get out of your thinking mind sometimes. Just be like, bleah, what is that? Isn't that weird. It's just off a tree here. Your hands are all sticky. What's that? It's like, oh, this is the universe talking to me.</p>
spiritual connection	<p>Well, as I said we, we grew up with it. This is crazy [tearing up a little]. Anyway, I grew up with it. Oh, 1797. Bought my brother out. Now I raise christmas trees [sniff, laugh]. So, really enjoy it. It's a good pastime. Getting me out of the house. I get a chance to, ah, some say this is your church. And, it is in a way. I never thought I'd be, be so emotional about it. But being on the property, you know, it makes a difference. That's what it's all about.</p>

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- stewardship  
(care for) This particular site? Um, I have a long history with this particular site. I've been bringing students here for about 20 years. Um, it's the first and the last trip that I do with students. Um, and they come here a couple of times in between during the school year too. I like that this is a rare floodplain forest. I like that this place is ever changing, just because of what the water does. How it really sculpts the land. Um, this place is unique in that we can see bald eagles, and we can see um, rare migratory songbirds in May that use this floodplain as a stopover point. Uh, we've also seen otter and mink and beaver and all kinds of really interesting animal evidence here in, in our trips here as well. So, um, and there's lots of really cool edibles at this site too, so it's just so interesting. Sort of a package deal, in that um, it sort of, I introduce this place in terms of our watershed, but it's a place that we come to to look at wildlife in winter, and migratory birds in spring, and my team has been responsible for getting rid of the vast majority of the knotweed here along this stretch here, all the way to the round church. Over the past, I'd say, fifteen years. We've been removing barberry and knotweed here. And recently honeysuckle?
- stewardship  
(care for) I'm frustrated with a lot of things about how the world is, or at least how whatever our Colonial, broken, feudal society, whatever you want to call it is, and so like, just trying to both heal something in a very small sense with like this land, which we have, which is only been recent, and then in a more broader sense, i'm really interested in just kind of witnessing, or, um, documenting what's here because even if I can't you know solve certain problems, then I can at least document what was here so that if someone else you know wants to change or fix things after I'm gone, then it'll still be there.
- stewardship  
(care for) Oh, a lot of insects are really really cool! Yeah, yeah. I recently um, created multiple pollinator gardens on my own landscape at my own house, and I've had to really develop an appreciation of wasps. Building wasp houses and, you know, plants for wasps, and things like that. That's been a leap for me. So. I think they can do it too. Yeah.
- stewardship  
(care for) So, this is a little brook, that, I diverged. I split it. And some of it goes to the, uh, south, and into what I, is a restored wetland that we developed. And we're now naturalizing that. And you can see, this is a good example of that three dimensional structure of the landscape, and these big broken tree that came down. And that, for decades and decades, if a tree like fell on this land it would be removed. And... that's not wrong from the farm's point of view, but, it's not as good from the wildlife's point of view. And so, what we're trying to do here is to say, well, what's, where's the balance? You know, what can I do that would be responsible to the agricultural interests of the farm and its food production values, but also responsible to wildlife. And so this is a wetland that, my guess, was diverted. You know, right now it runs along the edge of this field. And there's a hill right here, with a wooded hill. And, in the reading I've been doing on beaver and the effects of beaver, and beaver dams and ponds, um, parti..., and what the landscape was like before the Europeans came and, uh, trapped them out, largely, is that, little streams like this probably didn't go along the edge of the field. You know, it spread out, and that, this whole farm could have been beaver meadows and beaver ponds, and a series of beaver ponds. And, so, the aquatic conditions were very very different. And the habitat conditions were very different than what we have think of now as normal. And so one of my interests here is, well, can we create more, uh, wetland habitat on the farm, to restore some of what was lost. And so that was the work that was happening there, and it's about allowing this to spread out and, you know, giving it the space that it needs to, to develop as it can.



- stewardship  
(care for) Absolutely, um, you know, I have a, the only economically valuable stand of trees I have is an ash, a group of ash trees that, um, you know, maybe they're not ready for timbering for five years or so but they could be taken out now, and I'm not going to take them out for exactly that... you know, because I have um, what's, that beech tree disease? So I have this huge beech tree up by the vernal pool that I have that's maybe a quarter of a mile up that way, that um, I was walking up there with someone from the state when I was working on an Equip Program, and um, and they said whatever you do don't take this tree out because it was perfectly healthy, and all around it were these dying beech trees. And you never know which tree it's going to be, like in terms of the ash borer, yeah.
- stewardship  
(care for) You know it's good that we're banning plastic bags but, yeah? Like, I don't, I don't know. It's um, it's the kind of cause I would have been very involved in forty years ago, fifty years ago, and the old lady feels like she's paid her dues in some ways and doesn't have the energy to do much more than little things around the edges. I mean I'm on the conservation commission, I work for, I work for preserving our town forest and helped buy the land that we just bought to increase the size of our town forest. I mean those are, but those are like matchstick things to do, they're not, they're not going to change our carbon footprint very much. But they might help people who use the town forest bring their kids and have their kids care about the land a little more. Which, I think is important.
- stewardship  
(care for) I grew up on this land, so, you know, there's deep roots. So I love my land, if that's what you're asking. And, as far as, um, you know, it's all pasture and grass. So I know I'm not a polluter. Um, you know, so, um, in my job, I can, I see a lot of different land and landowners and see what is out there, and when I compare my own farm and forest, I know, like I say, I'm not a polluter. And I, I've been doing different things to enhance wildlife on my property. That's important to me. So, um, that's, you know, it's like, I know my land like the back of my hand. You know, that kind of thing. I'm a hunter, so I hunt my land. I make maple syrup. So I'm, you know, so I'm using it in those ways.
- stewardship  
(care for) I like watching things happen over time. We sugar a little bit. We used to cut firewood here. I haven't, my, we haven't, my idea of owning land is to not do anything to it. You know, just let it grow. When I hear people talking about 'oh you need to thin your woods, oh you need to manage that place.' I'm thinking well, it manages itself pretty well [laugh]! So, I like watching just what happens. So it's worth having just to protect it. I'd like that, that to go on forever. Nobody doing anything. But, I don't know what will happen.

stewardship  
(care for)

It takes care of itself. It knows what it's doing. There's a lot going on there, and, and we don't know half of it. We don't know a tenth of it! It's so complex. The minute you start, you know, you find a bug, and you start figuring out how that bug lives. And it ends up being connected to everything. I didn't understand, when I was just, when I was mostly looking at plants, um, that it all depends on the geology. And if, and how the water works. You know, and how, you know, where the water is. And what the bedrock is like. And how the soils are, and you can't, you know, those things, uh, they make for, and just the fact that it's been woods, except for a very brief period of farming, um, since glaciation it's been woods, it's, and so there's, there's the ecosystem within ecosystem within ecosystem, and um, connected in ways that we have no idea of. So I think that's just important, a good reason to leave it alone. If you don't know what's going on and it seems to be working you need to let it be. It drives me crazy when people start talking about management [laughter].

stewardship  
(care for)

I mean I think just sort of what I was talking about earlier with you know ultimately biodiversity is not something that has an economic value. Which is sort of our, you know in our current economic system, is the way that we, for things that are not widely held morals, moral values or ethics in our community, you like, economics is the way that we promote things we like, and get rid of the things we don't like as a as a society, and so because there's not because it's not valued economically, in order to really manage for biodiversity and promote biodiversity you need to do it from a moral, essentially a moral perspective. You just have to you just have to understand why it's important, and like it, and want to do it. And it in some ways forgo economic opportunity in the promotion of biodiversity because the promotion of biodiversity will necessarily, probably entail that you don't manage ecosystems entirely as assets. That you're managing for this other stuff, which is which is not valued. And so that's another really important part of my job is helping people, so talking about internalizing all those other non non commercial values, and essentially fixing that in people as morals you know. And then with those more with those morals or that ethic intact they will then make decisions on their land. You know. And and hopefully be willing to say okay well this isn't the most economically fruitful decision but it's one that is the best decision for me when I internalize all this the other components of this ethic that I felt. So you know until we get like some sort of like public payment for biodiversity process, the promotion of biodiversity will be strictly essentially moral or ethical.

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general  
relational  
satisfaction

I don't know if I really have any words that are sort of adequate to describe it. You know a place, like you know the corners and you know the trees and you know the rocks that stick out, and you can kind of picture all of it. But I don't really, you know I do come back to it being kind of scrappy land. You know, things tilted all over. Rocks sticking out. That's kind of the charm of it to me, too. I think that one of the things that's cool about land and being a land owner is that you know this place is super special to [my wife] and me, but you know someone else might come here and say, 'really? This is what you think is so cool?' And it's partly because you grow to know it and appreciate it, and see the things that change on it.

general  
relational  
satisfaction

I think it's more personal than that. In some ways biodiversity is something I know we need, and it's a professional sort of charge, and this place, I mean I think [my wife] and I own it and love it because of it's feel in the woods. And we recognize biodiversity as being part of that, but it's not the day to day feeling. The day to day feeling is 'oh did you know that the pine fell down up there,' or 'did you hear the red eyed vireo singing,' or 'did you see the broad winged hawk nest?' That kind of thing. This is that stretch where this was sort of dense mature sugar maple and cherry and ash, up to the top of the hill, and a lot of it blew down in that event. Still working on stuff, some more logs to lug.

general  
relational  
satisfaction

Uh, cuz like I told you, it's the center of life [laugh], for me. It's why I'm so stuck here. Cuz I don't know of any place else that I love as much as this pond. It's um, it's just a good place to be. There's lots to see. Lot's to learn about. We're kind of stuck in the middle of the lily pads, I'm paddling really slowly because there's just enough friction so it slows us down a little bit. And, one of the things I'm noticing is that there's been something in the pond, probably a muskrat, because we don't have beavers right now, who's been eating some water li... some of the water lily roots, so you see long stems and leaves just floating loose.

general  
relational  
satisfaction

Well, it's one of those places I think that, um [pause] exemplifies an opportunity that we have, or not exemplifies, but embodies an opportunity. It's an opportunity to, you know, let nature be the infrastructure here. Let nature manage herself here. Let, you know, ah, let nature, ah, enjoy the quietude of the remoteness of this place. I guess - I guess that's it. You know, that doesn't say someone couldn't come here, much as we're doing today. But, I mean, for this to suddenly be developed with loop trails, and all this and that, would ruin it. You know, those guys [motioning to the herons] wouldn't like, be happy with it. [little chuckle]. They're wondering what we're doin'. [another chuckle]. I've never seen that. Never. But then, I've never seen two lodges.

general  
relational  
satisfaction

This little spot here doesn't look that special, you know, a few beech and sugar maple and there's a black cherry in here somewhere. When [my wife] and I first came here and we were thinking about - friends owned the property and let us know that they were going to leave and wanted to know if we were interested. And when we first came here and I think [my wife's] first reaction was when she drove down the road was something like 'no way in hell am I going to live here,' and then we came out and this little patch was one of the first places we walked in the woods and it was covered in spring beauty and we both said 'yup, we want to live here.' And we bought it. We bought it for the spring beauty, not for the road.

general  
relational  
satisfaction

So um, I can't think of any other thing I want to say about that except the white tail deer is such an awesome animal. You know, just the, the um, the will to survive. And the um, the challenge to even see them in the woods while you're hunting. Um, they're just such a smart animal. So.

general  
relational  
satisfaction

Um, I've seen hawk. There's a hawk that lives here, I haven't seen him this fall, and I know he's the same hawk, but he hangs out on these powerlines year round. And he's been in my, people that live in my development have seen him too, but it's kind of cool to know a hawk lives here year round and he's been hanging out for three or four years. So those are kind of cool things.

general  
relational  
satisfaction

I mean, that's a great, if you take time, you know that's why my greatest sadness is I don't spend enough time up here. If you take time to wander around you just see all kinds of things.

general  
relational  
satisfaction

Um, well, it's, it's what's really special is the wonderful vernal pool. I mean it is deafening when you come near here. But what's interesting about the frogs making all their noise: you get within about 200 feet, they all stop. I mean, one must see you and tells everybody [laugh]!

general  
relational  
satisfaction

Um, there's just something about it, um, you know, maybe because it's a flat spot with lots of pretty trees and stuff. Maybe because it's got the ditch, so to speak, the wetlands and so forth behind it. Um, but we always just find peaceful. And maybe because it's almost pure hemlock. And I don't know why that would make me happy [laugh] but... And it seems to be, you know, another healthy place. Hey, look at that, a purple mushroom.

general  
relational  
satisfaction

And mostly in the fall, not so much in the spring I don't know why, not so much in the spring but in the fall that can literally have 75% of the surface area covered with canada geese. And it's awesome hearing them come in. Early morning down there talking about "is it time to take off yet, or not. Or did you get enough to eat? Or wake up, damnit, we gotta get moving," or who knows.

general  
relational  
satisfaction

They'll use that, but if they can, my research has taught me that they do a lot of precision jumping, and vertical precision jumping from ledge to ledge, catwalks, jump. And they get to a place where nothing can get to. So they're safe. They're safe from their enemies, which include coyotes and fishers, primarily. Dogs and people, secondarily. So if they can get to a place like that, in the winter, when it's 35 below, facing the south-southwest, the sun can warm them, save energy. They're not gonna hunt under conditions like that. They can't. So the best way to save energy is not use it. But to do so and be safe, they've gotta get in a habitat where they're 1) safe, and 2) because they're cats, comfortable [chuckles]. You know. [chuckles]

general  
relational  
satisfaction

The best way to see otters and take their pictures, even, ah, is, ah, get in a maze of beaver flowages and slow-moving beav--streams that beavers are bank-beaving [??] within. Ah, as well as maybe creating ponded habitats in parts of them. And you can just float along in a canoe and become part of the landscape. You could even drape some foliage over the bow, and wear camo, and on and on. And, what you'll see, if you're still enough, and you're playing the wind right -- and I always carry a lighter, 'cause I can light the flame, and if the wind is coming to me, the flames coming to me, I'm good, but if ...[mumbles, bla bla bla]. But I watched a mother the other day repeatedly going out into the water, followed by her three youngsters. And she would herd fish into the shallows, into the rocky shallows, and catch fish. And those kids were saying, 'oh, is that how it's done?' It was really cool. [laughs]. Yeah.

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#### Appendix 4. Examples of co-occurrences between empathy and one or more relational values theme

Table A4.1

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##### Examples of co-occurrence between empathy and one or more relational values theme

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The more I work on it like with those, I experience some anxiety thinking about regenerating those patches and what's going to happen if it's going to happen. When it's going to happen. But you know working in between the patches and seeing like that there I'm like oh there a healthy trees here. There is hope here, you know.

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I'm frustrated with a lot of things about how the world is, or at least how whatever our Colonial, broken, feudal society, whatever you want to call it is, and so like, just trying to both heal something in a very small sense with like this land.

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I'm hoping for the time being just to keep it on this trajectory and see how many more pollinator species and native plants, and see what the wetland will do as things change. And try to keep them from wrecking that side. So. Um. I think hopefully it keeps getting better. I'm sure there will be challenges. I'm sure there'll be invasive species that come in from elsewhere and, you know, there'll be the balance of letting the kids play on it totally fully and immersively and also, like, trying to prevent them from destroying certain areas that are more delicate or whatever, but, I mean, without making it feel like they can't use it and can't be a part of it. So, that'll be a feature I guess. And then when I'm dead who knows. Hopefully by then people will pay more attention to this stuff and somebody won't come bulldoze it.

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Spouse 1: Uh, there's an old beatnik – and you know I count myself as one of those, though at the time I didn't understand that I really was, and you're too young to know what a beatnik really is, probably – saying “I'm not my brother's keeper, I am my brother.” That's a relationship. You can call me crazy but, after a rainstorm, walking down the road or to the barn or, even just yesterday when I was cutting up some stacked logs, you know before the chainsaw, or the heavy left or right foot of mine killed them, I rescued half a dozen slugs and a bunch of earthworms and finally said “guys I have to much to do, the rest of you are imperiled,” [ha] but that's not just yesterday...

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Spouse 2: That's everyday [haha]. He also has this thing where we'll be driving down the road and he'll see some poor little thing that didn't make it across the road and he'll say “blessings to you beautiful cousin and all your generations [laughing].” So he, he feels bad for every one of them out there.

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Spouse 1: And the ones that are running across the road I go "get off the road! There's nothing but trouble out here for you!" [laughing]

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Um, this, this land they plan to kind of stay out of, in terms of logging and roads, and -- you'll be on the so-called Skid Trail in a minute, which is right now a beaver river [laughs]. And it's good! It does my heart good to see that [laughs].

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Interviewer: Do you think they distinguish you from other people?

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Participant: Probably. Yeah, I've had them walk on my back trail just minutes of my passing. I don't, you know, I know – maybe they know I love 'em [laughs]. When I was younger, I used to climb up the cliff faces and take pictures of the dens and stuff. All kinds of intrusive stuff, which I now, you know, am ashamed about, really. But, I've got the pictures [said with a smile].

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One of the most valued things that I did as a child, this was my playground. All day long, man. This wasn't a study, this wasn't class, this is where I went to get the hell away from bullies. This is where I went to get away from my father who was kind of a jerk. And to, you know, I was safe here, this land, this didn't judge me. Just by spending a lot of time there I started forming this relationship, so now I value this differently, right? I value this as a place of solitude. Of retreat. I think a lot happens, you know, when we spend time in these places that people talk about, and one of them is that we start to, whether we know it consciously or not, we all start getting a little bit of a, here, you notice as soon as we sat down, there's something [slaps rock]. We're just kind of here now, not really thinking about what time it is. You know, and not really thinking about my debt. The papers I have to write. Who I have to call back. Um, yeah, it's just, it's just something about that. You enter into something. Water's really good for that. Water and big views, off of mountains and stuff. It's like that perspective. So, when you allow a child to form relationships that are really personal, then that becomes a value system. Why would I want to hurt this? This wasn't the bully? You know? So I have a dear spot for this, and that's probably why I am the way I am. In part. But, also the, I think then as we get more informed, because that's love, really, that's where the love of it comes from. And when you see kids that grow up in highly urbanized environments and places, it's all like "ok, we're going to summer camp, alright, make sure you put this rock back, datada, don't be part of this." It's fun, but what about the kid who goes out with an old cool whip container and comes back with a pile of minnows and a bunch of bugs he doesn't even understand and it's just like, and he has them. "OK," they all died in the cool whip container because he didn't know how to maintain it, "but I learned a lot!" You know? "I know what little minnows are," and it was like, to me it was like catching a giant trout when I was a kid, going out with a coat hanger and making a little crappy net out of a rag and seeing what I could catch and getting water striders and all these things. Really key memories for me as a kid.

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Interviewer: If this land could talk, what would it say?

Participant: [Breath out through nose]. Wow. That's not in your list! Um... I don't know. "Crazy old bat?" [5 second pause]. I don't know. "You done well? You tried." Maybe that's the word. "You tried. You left it better than when you started." I don't know. Maybe "you haven't done enough." Probably, I think it's all of those. "You haven't done enough." I know I haven't done enough. I can't do enough. I want to do a lot more but I can't. I'm alone. And I've got a wife and kids and grandkids, but I'm alone. You know, they don't have the same values I do. Uh, that is, my wife doesn't. I think the kids, two of the kids do. The third one is off and running. I think "you tried. You did alright. You haven't done enough." All of that! "I'm better off than when I started." Um. "Keep going, pass it on." I think all of that.

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Everything about this place is like really challenging. The soils are bad, and borderline non-productive in many places. It is unbelievably steep. The access is poor. The lower section of it is essentially landlocked. Massive issues with invasive species. Massive issues due to past logging that just make it really hard to deal with. Huge deer overabundance issues that contribute to the problems caused by past logging. Yeah, everything like I sort of feel like this property in some ways is like this like injured compromised thing that I'm like like trying to take care of but it's everything about this place is hard. You know and it's like a place a place that only a forester could love really. And a forester who is it who is actually into like timber production and like making money off the land would not love it.

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My hope is that this place can be a place of, you know, the forest here can be healthy. You know and at least relatively free to pursue you know mostly natural processes of forest development, free of many of the sort of interfering factors created by humans like invasive species, and like development, fragmentation. And you know that the remnants of, or the legacy of the land use history of this place, yeah I just want I just want, I don't care if the forest is valuable or producing anything very valuable. I would like it to produce something because I think the production of forest resources is really important on a broader scale but I don't care if the forest is valuable, I just want it to be healthy, and just to be able to provide habitat and do all the important services that forests provide for us behind the scenes. That would be just my goal. I don't think it has to do anything for me really. I just want it to be healthy.

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Yeah I'm, there's just so many scary things coming down the pike for forests. Invasive species continue to be an issue. Deer browse here is an enormous issue that if unattenuated will just get worse. And really negatively impact all these other things, parts of what I'm trying to do. Terrified of development and that someday after I'm gone that this place will be developed and subdivided in just become like every other developed place on Earth. Terrified of some of the invasive diseases that we have, especially in the case of this place, especially like hemlock woolly adelgid and oak wilt. Because if we like the hemlock here has already been basically clear-cut, that there's a few of them and if we but I think it will be increasingly a part of this forest and then oak is just if we lost oak and hemlock, and we've got beech bark disease, it would just be really scary. And that stuff that I feel there's not that much that I can do about it. I'm just hoping that it's either that those problems are either solved or they just never get here. That's that's scares me. I would say also that increasingly I've realized zooming out from this property and just talking about Chittenden County in general, that bad logging, high-grading, just poor logging practices are bad and are scary, but the thing that keeps me up at night is development. Cuz forests can you know over a given enough time forests can recover from bad logging, development's permanent. Loss of forests. Permanent loss of forest land is what keeps me up at night. I would so much rather see a place that was just horribly high-graded, then a place that was developed.

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They criticize me highly because I'll say to them what if you were that tree and then they like see that's my point you're worshiping the tree and I'm like I am not worshiping the tree I am trying to tell you that if you weren't who you were and you were thus and so, do you think you would have any thoughts or feelings about that? Because my heritage says that is a living being. That, and then that's another whole argument that I've been discriminated against and harassed about. Yeah.

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Um, there's just something about it, um, you know, maybe because it's a flat spot with lots of pretty trees and stuff. Maybe because it's got the ditch, so to speak, the wetlands and so forth behind it. Um, but we always just find peaceful. And maybe because it's almost pure hemlock. And I don't know why that would make me happy [laugh] but... And it seems to be, you know, another healthy place. Hey, look at that, a purple mushroom.

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On my property I don't think I destroy nests, because I'm just grazing. And so the cows, I don't think that's a, that that doesn't really effect, umm, nesting and fledging as much as if I was, back in my dairy farming days where I'd have my equipment and I'd be mowing through these nests and mowing through fawns and stuff, like I used to do. And turkeys. I've cut turkey legs off by mowing, not seeing them and mowing right through. That wasn't, that was not a good thing.

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And they accidentally mowed part of our field. You know, the point isn't just to like whine about neighbors, but... I wish that these people were more involved with their field, and maybe some of them are but like, you know, it wasn't on purpose but it was when they were mowing too late, they hire someone to mow it, they don't mow it themselves, and then someone came through and plowed through the edge of my milkweed up there on accident. But you know, it was when, it was in September so you're not supposed to cut it before the frost so then we have less milkweed the next year and they chopped up some monarch caterpillars, and I was super pissed, and that's why there's posts up there so they don't do that again.

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And, you know, I wouldn't feel good if I was, if I was destroying my land. And not caring about it. And I probably would um, wouldn't even own it, if I was, if I was doing a poor job and there was no enthusiasm to be on my land, I probably would sell it. So I wouldn't even be an owner.

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The farm in our village is river bottom, sandy loams that are perfect for growing vegetables. So I feel good selling to this [farm name] farm, because they understand soil health. And they're resting, they're resting those soils these last couple years they're not growing anything. So they understand soil health too, so I'm happy to pass those soils on to them.

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But I'm just so worried, because of beech bark disease and deer browse and the amount of beech that was here I'm just really so concerned that I would have just cut a beech monoculture and grow another beech monoculture. Which is hugely disappointing. Which is another reason why I tried to make the patches as big as I could is because beech is less competitive in the open.

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Like I would rather die than do something to hurt this piece of land.

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So just, if you pick up a tuft of reindeer moss, just put it back. I try, I try not to come out here actually that much because I just sense that it's extremely sensitive.

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Um, but, the [family] up on East Hill are very efficient at cutting firewood. And so, we bought six cords of wood every winter for many years from them. They bring the dump truck a couple of times and dump it out in the yard. And I don't have to grieve over trees that I knew. [laugh]. Sometimes I stick them in the stove and look at the moss on them and think ooh! That was too bad, that was a nice one. But other than that I'm just as happy, I'm happier getting firewood from somewhere else.

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We have the kids pretend to be an, um, little ball gall fly egg hatching inside of the stem of the goldenrod, and chewing on the insides of the gall as it grows around them, and spending the winter inside sleeping and, then pupating, and chewing it. Actually they chew the hole almost to the edge of the outside of the gall in the fall when they've still got teeth, because after they come out as pupa they don't have teeth anymore, so what they have is this bulbous head filled with, they fill with fluid. And that they can butt their way open so they hang on to the inside of the tunnel and this swollen fluid head is sort of, uh, breaks that last membrane and they can walk out and dry their wings and then be gall flies for, what, two weeks. Cuz most of their life is as larvae. And the more you can, uh, feel, um, empathy, uh, or, even that you could imagine being some other organism, the more it, the more that question, what is it for, becomes irrelevant. Really. It's itself. It has its life. It's a wonder that here we are in a place that has gall flies.

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We're in that being's territory. We're only borrowing it, and it's not it doesn't know that this is a car. It's just another type of animal to them probably or they don't even know what it is. And I've had people tell me what they should know to hurry up. I'm like what? What?! you should know to slow down! I like, I just want to pull my hair out! Because there's that disconnect.

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## **Appendix 5.** Outreach material and partner group description

Material from the study's interviews were used by the first author to create outreach material for a local conservation group called the Vermont Alliance for Half-Earth (VAFHE), which can be found at <https://arcg.is/uaymH>, as well as in *Our Better Nature*, a book published by VAFHE and other NGO partners.

The Vermont Alliance For Half-Earth is an organization inspired by E. O. Wilson's call to dedicate half the Earth to nature in order to conserve the majority of global biodiversity. VAFHE was a partial sponsor of the first author's graduate studies, and we would like to thank them for their support and kindness. In order to address any potential conflicts of interest, we would like to note that VAFHE has no financial or legal ties to the Half-Earth Project®, and neither organization had any influence over the interview protocol or research outcomes. In recognition of the many ongoing conversations about the Half-Earth idea, we would like to make clear that VAFHE is a group of Vermont residents unaffiliated with the Half-Earth Project® who are trying to apply the global goal of biodiversity conservation to their local ecological and social context. The methods of conservation they promote include a mixture of protected and shared landscapes guided by regional conservation science, community values, and participatory governance.

**Appendix 6.** Selected full responses to the question "If the land could talk, what would it say?"

Table A6.1

<b>Selected full responses to the question "If the land could talk, what would it say?"</b>	<b>Relational values themes and empathy codes present</b>
Hmm. [little laugh] I don't know. Again, I don't – I, uh, I'm sorry I don't have any answer for that. It isn't that, ah. I – I guess I just don't really think about it that way. You know, its probably a shortcoming on my part, but. Ah, I mean, I think, if we could listen, uh, not so much if the land could, if we could – the land is talking, in its many many multitudinous ways. But if we could listen better we'd probably do a better job at living life. [pause] You know, we'd learn a lot more about patience, and, you know, sharing, and, you know, we'd learn, we'd learn to recognize greed for what it is, and waste for what it is. If you think about it, there's no waste in nature. Why is it that there's so much waste in what we do? What's that tell us? I just was reading this article. This horrific article on garbage. You can't recycle garbage. China no longer accepts our waste, so the whole recycling thing that we are pretending to do is a lie. In a lot of places. It's just not happening. So there are places in the world that are [hard to hear – I mean it's?] it's just unbelievable. Anyway, I just got finished telling you I try not to surround myself with this stuff. But, once in a while I have to get educated, I guess. [little laugh]. Anyway.	Life teaching

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[Breath out through nose]. Wow. That's not in your list! Um... I don't know. "Crazy old bat?" [5 second pause] I don't know. "You done well? You tried." Maybe that's the word. "You tried. You left it better than when you started." I don't know. Maybe "you haven't done enough." Probably, I think it's all of those. "You haven't done enough." I know I haven't done enough. I can't do enough. I want to do a lot more but I can't. I'm alone. And I've got a wife and kids and grandkids, but I'm alone. You know, they don't have the same values I do. Uh, that is, my wife doesn't. I think the kids, two of the kids do. The third one is off and running. I think "you tried. You did alright. You haven't done enough." All of that! "I'm better off than when I started." Um. "Keep going, pass it on." I think all of that. Um... go from there. You know, I've got work to do down there at the bottom because of the god dang poison ivy, poison parsnip, but I can keep it under control and go from there. And just, "don't hurt me," and the other thing is "don't hurt me too bad" when I use the poison, when I use the herbicide. "Don't hurt me too bad, little bit, ok," or when I use the commercial fertilizers, "ok, a little bit, but don't hurt me too bad." And I wasn't anticipating going to organic fertilizer. But as repellent also. And by gosh it works. So. It's not bad. It's three dollars a bag more expensive. I, for what little I use, I can spend three bucks. And it's a good selling point. Ok. Yeah. So "don't hurt me too bad, we'll treat ya." The roads up there, "yup, I need a haircut. Yeah, I need a haircut. But don't hurt me too bad. I need a haircut," doing a little thinning, it's like a haircut. Every ten years I do a haircut. And that's what it is. Haircut you need. But you don't need a buzz saw. And I try to do a haircut. When I was sugaring, uh, I didn't tap every tree. No way. Left a veneer. I tapped most of them, but I didn't tap every. Just like I did the ash, I didn't take them all. I left some, different sizes. I didn't take, oh I wanted to, I took some basswood, but I didn't take them all. Oh, oak, I left some. Maple, you know. Same way with the deer and all the rest of them. I didn't take them all. You need to get it under control, but... Go from there. And we cut the hay, you know, for, ten years we had a guy come in and he did the haying here and he was getting four cuts. But I left the hay up top. That was first of July. The birds had that place up there to do their nesting. The birds had this to do their nesting. Yeah, there was manure. But there was also commercial fertilizer. But we put the manure and we did the soil tests did all the rest of it here. So. Eh, I didn't hurt it too bad.

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Bequest, care about, partnership, stewardship (care for), empathy

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Participant: "Wake up!" Yeah, "wake up!" "See it! See me as I am. See yourself as other you are. You're here, we're here." You know. This is, this is really, you know it's, it's just, it's like, I don't know, it's everything. And everything is driven, everything is driven by, [chuckle] is driven by reproduction and thriving, and um, you know, it's, it's just like, it's saying "you look, look at what you are, look at what you are," but also understand impermanence. You know, it's like, we're blossoming, be we gotta get it all done now because the cold is coming. These temperate climates really teach you that. I think in the tropics you don't see that nearly as much. But like, in these areas where you're really struggling to survive, they're kind of teaching you about hardiness and all those things. But I think it's just inviting us to look around and kind of, but also to, the land is very neutral. It doesn't really care. That's one of the cool things about it. It it, it doesn't care if you die on it. You know, that's what life does, it dies on land. Land isn't attached to your outcome. So it allows you to formulate whatever philosophy you need to from it, and that'll be the right one. As long it's not a conquering mentality, you know, but like, there's a lot happening there, and the land is very brutal, it's a tough teacher, um, and when you get into some areas that will kill you, quickly, uh it reminds you that the land is powerful. Yeah, so, but you gotta have a lot of respect too. You know, one of the things that our ancestors were good about was not taking unnecessary risks. There's certain things that are just a bad idea. You might have to if your calories depended on it. But overall there was also an idea of "ok, don't be dumb, man, you know, it's a storm, we're not going out right now. We sit, we sit through a storm." uh, you still see it up north a lot. The reason why there's not more deaths on the land up north is because people are conservative. They have to be. You have to have a respect or you aren't going to last long. Here you can get away with it. But in other lands you can't get away with it. It doesn't take long. "Pay attention! Be alert!"

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Owww! It's just funny. It's like, it's been smacked around and now my only way to make it healthier is to hit it again. Harder. You know. Which is not ideal but at the same time it's just like you know so many of these forests just like an exercise in resilience, you know. And the resilience of these systems, that these systems. It's been cleared, it's been high-graded. You know it's been eroded and knocked around and it still it just keeps on growing through all these changes and the forest is pretty amazing in that way. But I also think that you know it doesn't like I feel like there's a lot of hope here. The more I work on it like with those, I experience some anxiety thinking about regenerating those patches and what's going to happen if it's going to happen. When it's going to happen. But you know working in between the patches and seeing like that there I'm like oh there a healthy trees here. There is hope here, you know. And and I feel like the mindset that I'm approaching this place with like is it's going to be mutually beneficial cuz this place also makes me feel amazing all the time and I love it, and it's just a wonderful place to sort of be in partnership with. But I think we can benefit each other. And I wish that everybody who owned forested land like cared about it and thought about it as much as I do about this place. Cuz if they did they'd be there'd be, you know, most of the problems that we have to just go away. With regards to the management of forested land. I like I wrote the forest management plan, I had to update the forest management plan this year. I sent it to the Addison County forester, [name]. And it was just so funny to do because I'm like if I could explain to anybody how I feel about this land, like the concept of me ever doing anything to harm this land is so crazy in my mind, it like does not make any sense. It's like, you know, so the concept of like me having to submit this management plan that has to get approved to make sure that I'm doing the right thing to the land, I'm just like, you know, for most people it makes a lot of sense. For me I'm just like you don't understand. Like I would rather die than do something to hurt this piece of land. You know, it's like a different a different level approach.

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Care about,  
stewardship (care for),  
partnership, empathy

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Participant: Um. Depends, like, like what was originally here probably can't say anything because it's gone. Right? You know, like, the northern hardwood forest and the little tiny fen. I think actually there's a whole series of springs along here and some of them are just under houses or ditched or piped or whatever, but there's some fen vegetation up the road a little too, I don't know, I think maybe it would just be watching and kind of, probably not saying anything, just seeing what we do [chuckle]. Kind of, something like that...I don't think it's going to like thank me or scold me or anything. It's just, it, this is what happens, you do this, this is what you get, you know. It just follows its rules. And, you know, you could look at a broader sense and say a lot of these questions are...I really do believe all I say about biodiversity and conservation and stuff, but the bottom line is it's also just a matter of does our species end up surviving and moving on to being something else and doing something cool? Or do we just kill ourselves off and you know, get rid of most of the organisms, like act basically like a comet, and then stuff comes back later and tries again. You know? But I think that's kind of a pathetic way for our species to be, so. Maybe the land won't scold us, or maybe whatever weird cockroach won't scold us later, but we'll at least scold ourselves while we're dying [laugh] if that happens. So hopefully it doesn't. But I'm optimistic, I think we've got a chance as a species. 50/50 maybe.

Bequest, care about, partnership

Haha, which is better than what I hear from a lot of people. People are just assuming we're all going to die in a horrible...I used to think that too, actually, I guess, I don't know. Maybe I just delude myself more because I have a kid and I don't want it to happen. I don't know. We'll see. We'll find out. Or we won't because we'll be dying of some disaster [chuckle].

Interviewer: That intermediate time is hard for me to understand why it's valuable. Like no matter what we do, in five hundred million years, there will be something vibrant here, right?

Participant: Right, yeah. Or, or for some reason the Earth will fall into the sun and there'll be something else on some other planet, or whatever, yeah.

Interviewer: Yet we care, a little bit, for some reason?

Participant: I think we're supposed to care, too, I think it's in our genetic programming to care because for a long history of the Earth people who didn't care just died. And I think that we somehow got away with not caring, or our part of, this branch of society, for longer because we got a bunch of tools we could use in different ways, but it doesn't work in the long run. Like if you look on an evolution time scale, this will either change or go away, like what we're doing now. Or what colonialism is doing now. So like, yeah. I think we're actually, I think we are adapted not to want to wreck stuff. I think people just get scared or they want to protect their kids, or they get greedy. You know. It's easy to judge other people, who knows. But. Yeah. I think we're adapted to want, I mean we're adapted to game the system for our own kids, and I don't think it's... any point to stop that, that's just how it works. But we're also adapted to, we're probably supposed to be some kind of ecosystem engineer or something, not just scraping everything off. And you know, supposed to be is, you know, how do you interpret that, I don't know. But yeah.

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