

Developing the Animacy Beliefs Scale:  
A Counter to the Western  
Environmental Worldview

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"Only when we can hear the languages of  
other beings will we be capable of  
understanding the generosity of the earth and  
learn to give our own gifts in return."  
- Robin Wall Kimmerer

INTRODUCTION

We explored new ways of knowing nature,  
beyond Western philosophies, by studying an  
alternative philosophy of *animacy*, which is  
demonstrated with a newly developed measure  
of animacy beliefs.

*Animacy*: the belief and acknowledgment of  
more-than-human beings (e.g., animals, plants,  
land, water, earth, sky) as volitional and  
communicating subjects who exist in an equal  
and reciprocal relationship with humans (Barrett,  
2011; Barrett & Wuetherick, 2012).

STUDIES 1 & 2

- Created 48 scale items and validated with experts (S1)
- Confirmed a 4-factor structure with student  
respondents (animals, plants, land, water) and reduced  
scale to 28 items (S2)

STUDY 3

- Sample: N = 654: 405 non-animists, 249 animists  
recruited on Prolific to replicate Study 2 and test the  
validity of the measure.

BROADER IMPACTS

*Theoretical*: Provides a new theoretical lens and  
measurement tool to further theory on  
perceptions of and relationships with nature

*Practical*: Provides a measurement tool for  
practitioners to use in fieldwork (e.g., outdoor  
education)

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Do you believe that animals, plants, land, and water are  
animate beings?

1. The 4-factor model remains the  
best fitting model and has strong  
internal reliability

Subscale Reliabilities

- Animal Subscale:  $\alpha = .88$
- Plant Subscale:  $\alpha = .92$
- Land Subscale:  $\alpha = .93$
- Water Subscale:  $\alpha = .93$

Scale Items

-3 (Strongly disagree) to +3 (Strongly agree)

- Entities\* have a spirit.
- Entities have a sacred energy.
- Humans can learn a lot from the wisdom  
of entities.
- Entities can consciously give us gifts, just  
like a friend would.
- Entities should be treated as living beings  
rather than objects.
- Each entity is an important individual.
- Entities play an intentional role in creating  
the natural world.

\*In each subscale "entity" is replaced with  
animals, plants, land, or water



Scan QR code to take the scale and  
compare your ratings to our sample!

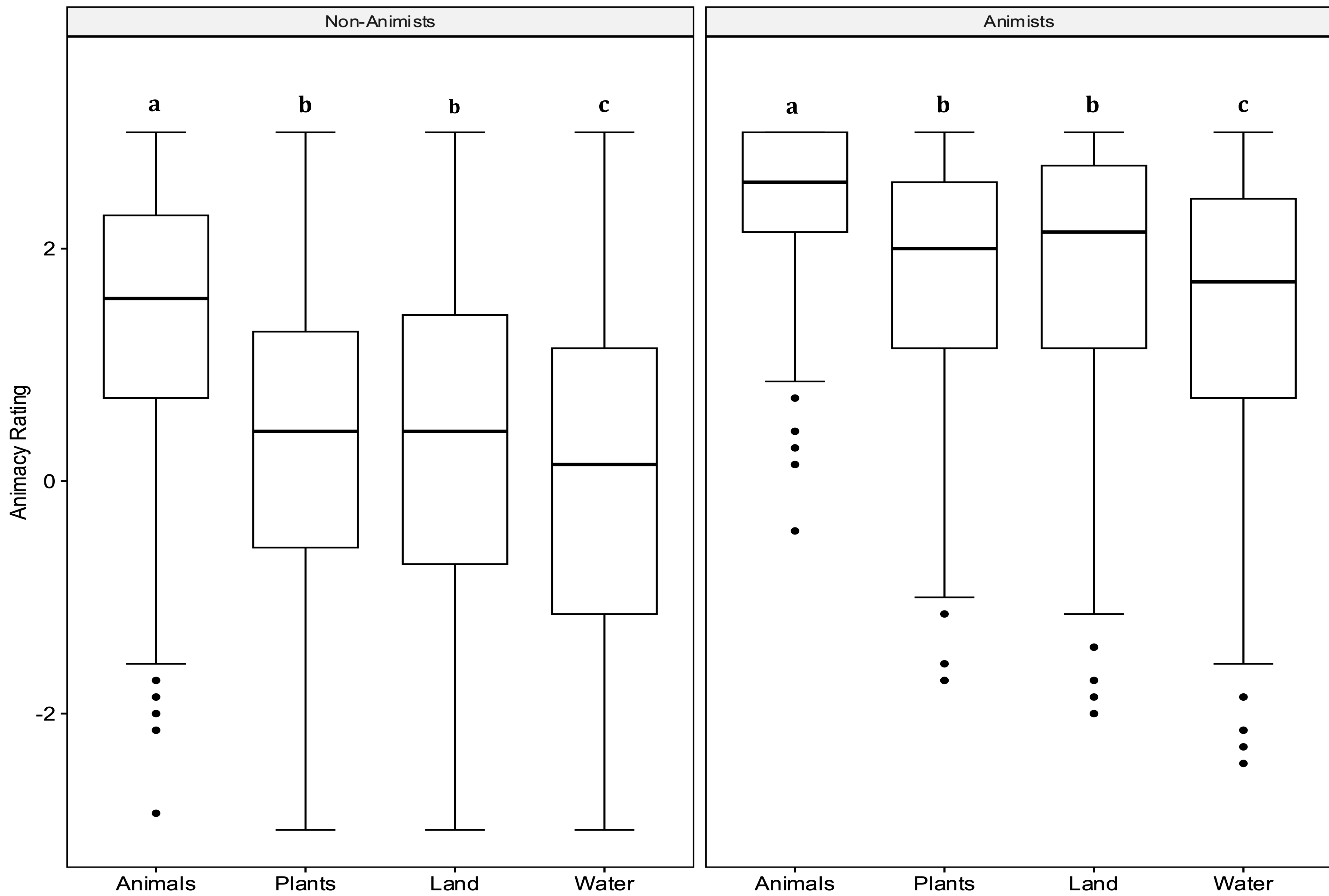
2. The scale measures the same  
construct for non-animists and  
animists, so it can be used for  
both groups

(i.e., known group validity)

- Configural, metric, and scalar invariance  
was met:
- factor loadings, beta coefficients, and  
latent means were comparable for  
non-animists and animists.

3. Differences in endorsement of animist beliefs are consistent with group  
identities (i.e., known group validity)

Figure 1. Medians and mean differences for each entity by group



Notes. Bars in boxes represent median. Letters indicate mean differences between entities within group at  $p < .05$ .

- Between groups, animists rate all entities as more animate; Within groups, animals are rated as  
the most animate followed by plants & land then water

4. The Animacy Beliefs Scale was associated with existing measures in expected  
ways (i.e., predictive validity)

Table 4. Correlations between animacy beliefs subscales and selected scales

	Mean	SD	Animals	Plants	Land	Water
Anthropomorphism	-0.99	1.12	.57**	.65**	.62**	.64**
Reciprocal Relationships w. Nature	1.28	1.25	.73**	.75**	.72**	.70**
State of Interdependence w. Nature	1.62	1.18	.64**	.64**	.60**	.59**
Ecological Grief	1.18	1.28	.49**	.47**	.48**	.43**

Notes. \*  $p < .05$ ; \*\*  $p < .01$ .

- Those who see animals, plants, land, and water as animate beings also report  
anthropomorphizing, having reciprocal relationships with nature, seeing themselves as  
interdependent with nature, and experiencing ecological grief.