



Department of Forestry
MICHIGAN STATE UNIVERSITY

Cultural ecosystem services in Michigan, USA: Cultural heritage, cultural identity, and spirituality concepts and mechanisms

ACES, Washington, D. C.

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Introduction

Background

- Dearth of research on CES and their connections to biophysical spaces

Research questions

- Social-ecological systems and Ecosystem Service Science
- How are these benefits products of biophysical and/or social systems?
- How do people of Michigan experience and identify the ES of spirituality, cultural heritage, and cultural identity?

Methods: Respondents

Demographic	Respondents
Gender	58.8% F / 41.2% M
Age by Gender	67 years F / 72 years M
Number of Children	zero, 32.4%; one, 11.8%; two, 17.6%; three, 35.3%; seven, 2.9%
Average Income	\$72,000
Race	94% Caucasian
Lived in Michigan	56.3 years
Identify with Religion	No, 56%; Yes, 44%
Believe in God (or by another name)	No, 26.5%; Yes, 71%

Results: Major themes in experiencing and identifying spirituality, heritage, identity

- Spirituality: connectivity, connectedness; isolation
- Cultural heritage:
 - From past: many benefits
 - Intergenerational
- Cultural identity: collective, personal
- Overlapping and otherwise



Results: Experiencing and identifying spirituality

- Spirituality + connectedness

“... [the woods] give me a connection to the creative force in the universe on a daily basis and also on, for this part of the world, a very natural basis and that’s the biggest spiritual benefit there is for me, the connection to the natural world in a location that is surrounded by very unnatural circumstances and land covers.”

“I know one of [the stones] has an actual, honest to god, thumbprint of the person who made it from 2000 years ago.”

Results: Experiencing and identifying heritage

- Heritage as intergenerational process

“...my grandparents came to this property in 1900 and they were hired to run the sugar bush that’s in the woods. It was owned by our neighbor and I was born July and in March when they were doing the sugar bush, that’s when I got acquainted with the woods cause they took me down and put me in a box while they did the sugar bush. Ha ha!”

“We’ve raised our kids to enjoy and take advantage of the quiet, peaceful, non-judgmental backwoods.”

Results: Experiencing and identifying identity

- Identity:
- Individual: *“And you know when I was younger, living in the city, I lived in the city, but I’m country. I thrive here.”*
- Collective: *“... a lot of Jewish people for whatever reason seem to have a strong sense of social responsibility. So wanting to do the right thing with respect to future generations or nature might connect with that heritage”*

Results: forest plots

Figure 1: Shannon Index

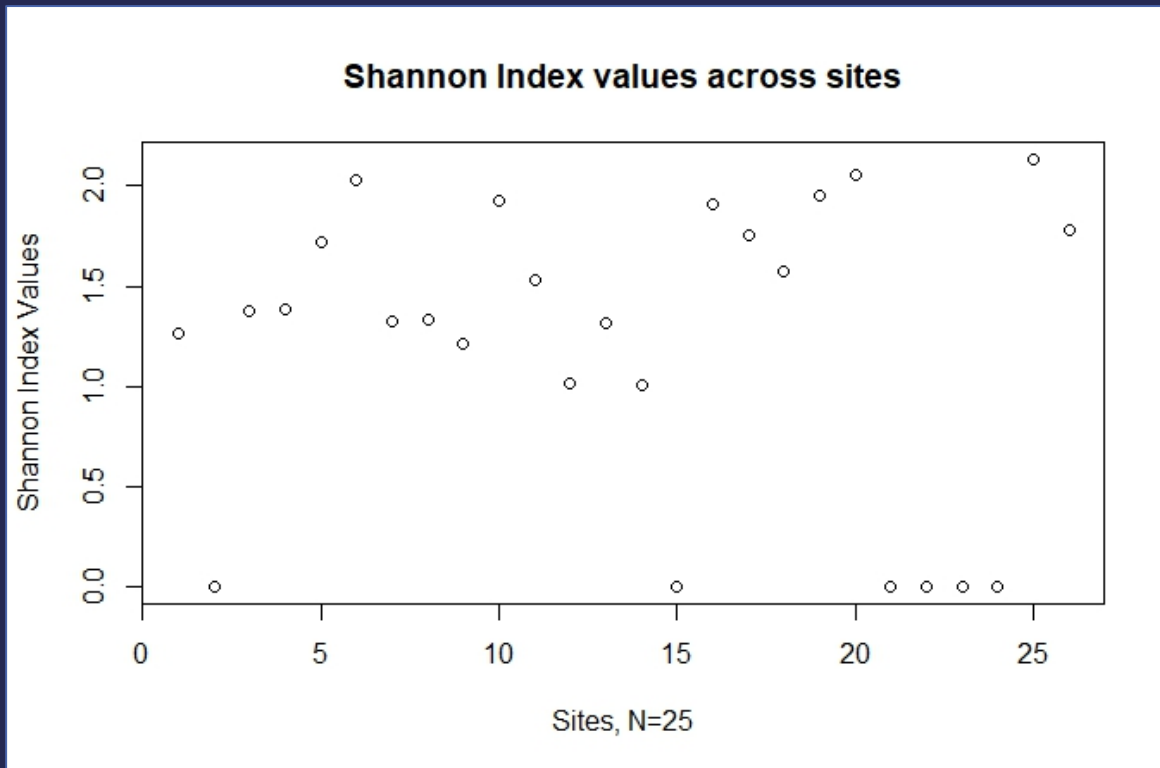
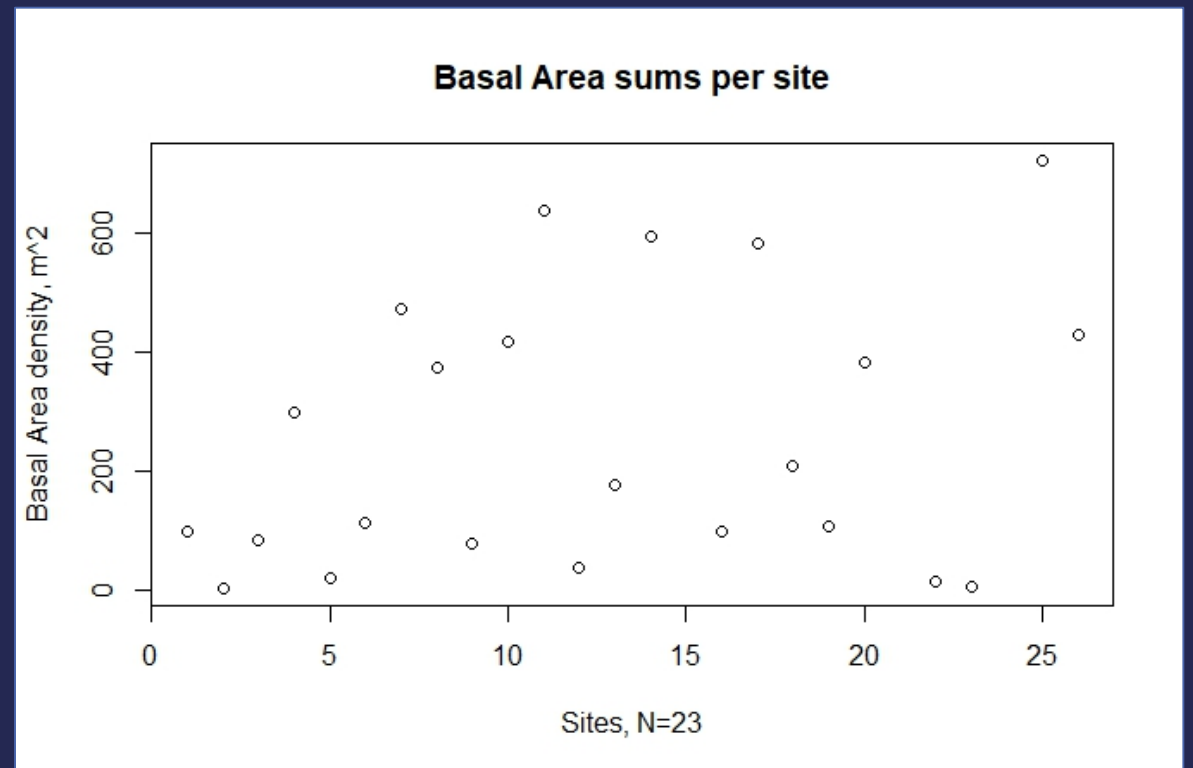


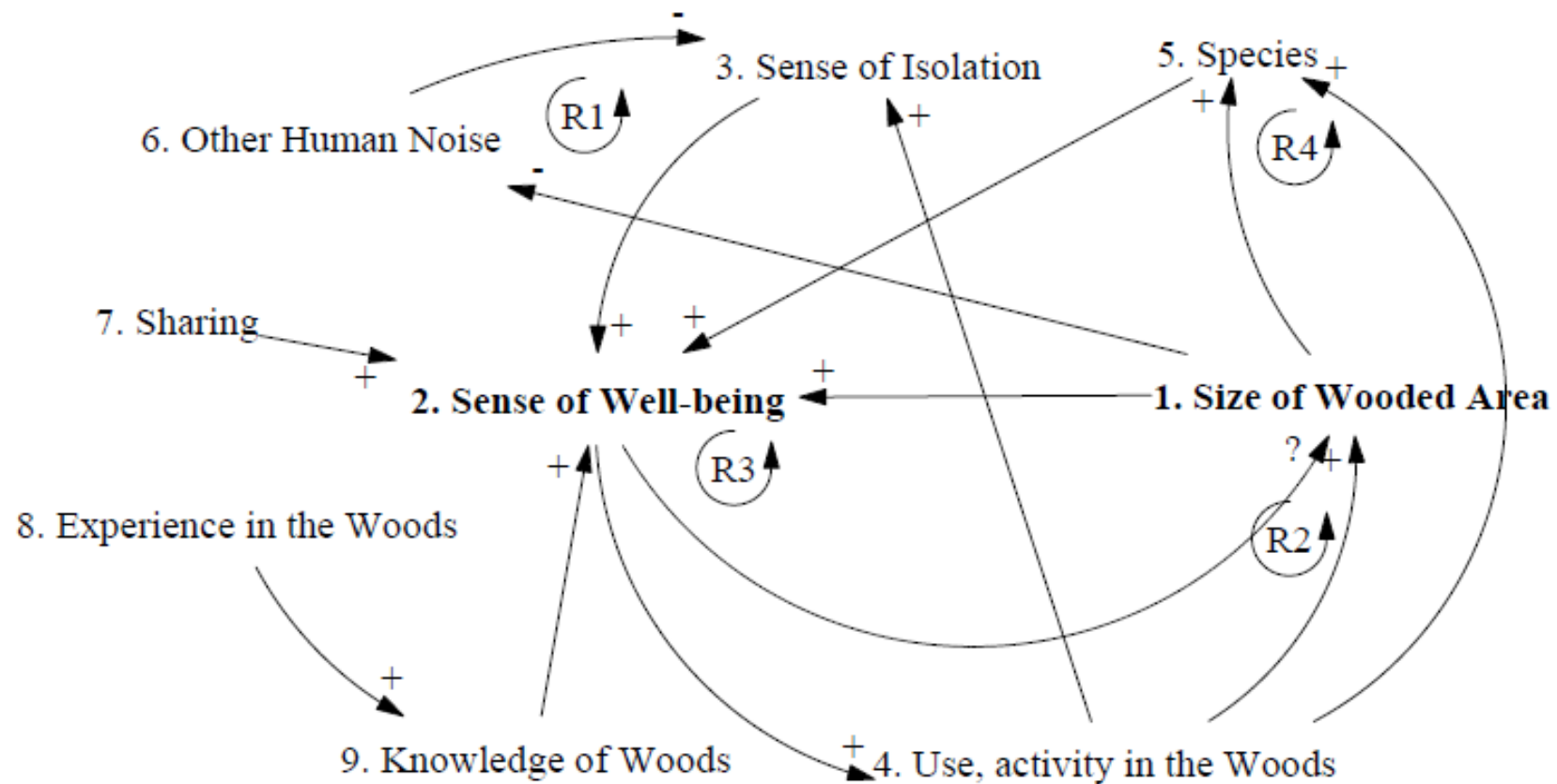
Figure 2: Basal area density (m²)



Results: mechanisms

“...if a woods is small enough that even when you’re in the very center of it, you’re fully aware of non-woods space beyond your boundaries, then that’s a distraction for most people. Whatever a person is looking for in a woods, the ability to see a house or hear somebody's lawn mower outside the boundaries detracts from that. So it needs to be big enough that you can exclude some significant degree of those non-woods external phenomena.”

Results: causal loop diagram



Discussion

- Themes and details of spirituality, cultural heritage, and cultural identity
- Social---ecological
- Systems thinking and relevant hypotheses about CES
- Calling for brainpower!



Thank you!

- Emily Huff, PhD
 - And lab colleagues!
- Michigan State University
Department of Forestry
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- Mid-Michigan Land Conservancy
- Historic Idlewild Preservation
Society
- NAACP –Lansing Branch
- ACES organizing committee



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Questions?



The connectedness to nature scale: A measure of individuals' feeling in community with nature ☆

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Appendix A

Please answer each of these questions in terms of *the way you generally feel*. There are no right or wrong answers. Using the following scale, in the space provided next to each question simply state as honestly and candidly as you can what you are presently experiencing.

- | 1 | 2 | 3 | 4 | 5 |
|-------------------|---|---------|---|----------------|
| Strongly disagree | | Neutral | | Strongly agree |
| ___1. | | | | |
| ___2. | | | | |
| ___3. | | | | |
| ___4. | | | | |
| ___5. | | | | |
| ___6. | | | | |
| ___7. | | | | |
| ___8. | | | | |
| ___9. | | | | |
| ___10. | | | | |
| ___11. | | | | |
| ___12. | | | | |
| ___13. | | | | |
| ___14. | | | | |