

*Finding ourselves in nature:
The human connection to the
natural world*

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Human behaviour is threatening the
health of the natural environment

- This concerns social science because we may be able to understand and affect human behavior
- This is important because the environment has value
 - It enables us to survive and thrive, with a large impact on health and well-being
 - It has economic value, providing us with ecosystem services

Nature is not only valued for its services.
It has personal meaning.



*Evidence for this personal meaning
can be found in a Sierra Club survey
of environmentalists*

- My motivations for protecting the wild earth are fairly selfish.
- [There is a] sense of myself that I feel when I'm outdoors and nowhere else.
- [nature] is connected to the inner core of our being.

(<http://www.sierraclub.org/sierra/boozing/inspire.asp>)

Is nature relevant to our identities?

- And why?

- Identity is "An abiding sense of the self and of the relationship of the self to the world"
(Northrup, 1989)

- What contributes to this sense of self?

Significant experiences



Self-knowledge and reflection

- Nature... makes me feel like myself.
- I feel much more independent out here.
- Here in the forest, I feel more like a person. I can be myself, no one here will judge me.

(student comments)



Sense of connection

- I feel like I belong.
- I no longer think of myself so much as an "I" or an individual [but as] part of everything else.
- I feel like I get to see... life, a community all interrelated and tied together. I am part of that.
- ...Something deep within all of us connects us to the natural world. ...I feel so connected to that circle [when I am out in the wilderness]

(student comments)

(Sierra club survey)

Environmental Identity (EID) scale:

Appreciation of nature

- "I feel I receive spiritual sustenance from experiences with nature"

Involvement with nature

- "I spend a lot of time in natural settings"

Environmentalism

- "Behaving responsibly toward the earth -- living a sustainable lifestyle -- is part of my moral code."

Self-concept

- "I think of myself as part of nature, not separate from it"

Environmental identity predicts...

- Self-reported behavior and concern
(Clayton, 2003)
- Sustainable gardening practices
(Kiesling & Manning, 2010)
- Support for species conservation
(Clayton, Fraser, & Burgess, 2011)
- Support for managing natural areas to protect nature
(Winter & Chavez, 2008)
- Perceived similarity of zoo animals
(Clayton, Fraser, & Saunders, 2009)

Why does identity matter?

- Well-being
- Attention and understandings
- Motivation and behavior

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- Well-being
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Damaged environments can damage identities, leading them to be negatively perceived

Love Canal



Loss of place can threaten identity



Loss of trust in group leaders can diminish the value of a group identity



But an environmental identity can also be a source of resilience

- There is a link between connection to nature and subjective well-being.

Why does identity matter?

- Well-being
- Attention and understandings
- Motivation and behavior

People may not pay attention

- If topic is not self-relevant
- If topic is threatening to their identity



Motivated perceptions: People may interpret information in a way that protects group identity

- A recent national survey of over 2000 Americans found that party affiliation was the strongest predictor of belief in climate change, with a greater impact than gender, race, educational level, or age (Borick & Rabe, 2010).

Studying the influence of identity on perceptions of climate change

- 378 American participants
- Recruited via Amazon's MTurk
- Online survey

How harmful will climate change be?

<u>Perceived harm</u>	<u>Beta</u>	<u>p</u>
• EID (high)	.40	<.001
• political affiliation (more liberal)	.20	<.001
• gender (female)	.19	<.001

How much responsibility do we have to address climate change?

<u>Perceived responsibility</u>	<u>Beta</u>	<u>p</u>
• political affiliation (more liberal)	.35	<.001
• gender (female)	.28	<.001

What negative emotions are felt in response to climate change?

<u>Negative affect</u>	<u>Beta</u>	<u>p</u>
• EID (high)	.38	<.001
• gender (female)	.22	<.001

Group identities predict responses

- EID may increase self-relevance of topic
- Political affiliation suggests group-based interpretations
- Gender norms may suggest a more empathic response

Why does identity matter?

- Well-being
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Identity can motivate *behavior*

Top reasons customers cited for buying a Prius		
	46.07	100%
"Makes a statement about me"	57	34%
Other (including security, business, etc.)	42	42
Higher fuel economy	36	27
Distinctive styling	33	41
Lower emissions	25	36
New technology	7	19

Source: 2009 Marketing Research

Buying something in order to make a good impression



"Adopting" something to enhance a personal connection

- **Adopt-a-Highway:** "Personal involvement has proven to be the best way to keep our roads clean..."
—Billy Black, Co-Founder, Adopt-a-Highway



Where does environmental identity come from?

- Personal experience
- Culture and shared heritage
- Social experience



Personal experience is decreasing.



A study of 50 years of Disney movies found reduced representation of biodiversity over time

- Culture and shared heritage

- I have found a positive correlation between national and environmental id in Turkey and China, though not the U.S.



Social experience, such as zoos

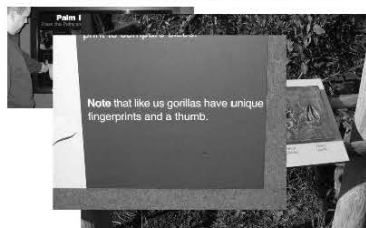
AZA zoos and aquariums are places where people connect with animals. We are therefore dedicated to excellence in animal care and welfare, conservation, education, and research that collectively inspire respect for animals and nature.



The potential of zoos

- Knowledge: People trust zoos
 - They are seen as informed and unbiased information sources
 - Their mission of conservation and education is recognized
- Norms: People visit in social groups
 - Creating shared values and norms as well as memories
- Personal relevance: People have emotional experiences
 - Thus paying more attention and remembering the event
 - And possibly enhancing connection to the animals

Zoos encourage comparisons between humans and other animals



In zoo visits, people also communicate social norms that value nature



Observational study of 1891 zoo visitors

- Looking for evidence of connection to animals in their comments

25% made some inference about the animal's mental state

- *Those bears are hugging – they love one another. (brown bear)*
- *Looks so sad. (baboon)*
- *He wants you to feed him. (seal)*
- *He doesn't want to be displayed. (gorilla)*



15% made some attempt to interact with the animal:

Hey elephant!!



4% imitated the animal

6% made some comparison to humans

- *They have fingers just like we do. (squirrel monkey)*
- *He looks like Daddy. (gorilla)*
- *He's got his blanket just like Madeline and her baby. (chimp)*
- *He's just like a little human! (swamp monkey)*



4% spoke as if from the animal's perspective



- *Hi you guys! Did you bring me a snack? (giraffe)*
- *No means no. (brown bear)*
- *I'm done with these people. (gorilla)*
- *I bet he's thinking, "They should be the ones in cages." (chimp)*

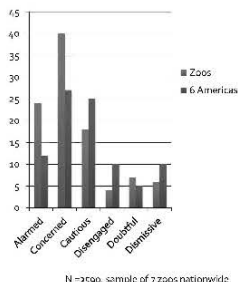
Shared identities may promote empathic responses



Zoo members are higher in EID

Zoo members show more concern about environmental issues

- 64% of zoo visitors, as compared to only 39% of a national sample, are concerned or alarmed about global warming.
- 17% as compared to 35% of the general public, are either disengaged, doubtful, or dismissive with regard to global warming



Can identities be used to promote wildlife conservation?

- Challenges to wildlife conservation are based in part on public consumption of wildlife products
- There seems to be only a low level of public concern about endangered species in China (Liu & Leiserowitz, 2009)
- Indigenous Chinese animals are much-loved and even iconic



- Social norms are highly influential factors encouraging behavior, including pro-environmental behavior
- Conservation goals can be tied to factors that are more personally relevant

Project description

- Stage I: survey 524 visitors to the Panda Base and Chengdu Zoo to establish baseline attitudes and knowledge (Summer 2012)
- Stage II: design and implement educational intervention (Spring 2014)
- Stage III: assess the effects of the intervention (Summer 2014)

What psychological factors predicted concern in stage I?

- Environmental identity
- Feeling of connection
 - Would you say you feel a sense of connection with the animals you see [at the zoo]?
- National identity
 - I feel proud of my country
 - I feel strong ties to other citizens of my country
- Self-efficacy
 - I can't help protect wild animals from becoming endangered (reversed)

Stepwise regression results

Predicting concern about the wildlife trade:

$R^2 = .34$
total $F_{(4,492)} = 51.2, p < .001$

	Beta
EID	.28***
Connection	.28***
Knowledge	.14***
Self-efficacy	.14***
National identity	.10*

Predicting concern about animals:

$R^2 = .26$
total $F_{(4,492)} = 43.9, p < .001$

	Beta
EID	.29***
Connection	.12**
Knowledge	.13*
Self-efficacy	.17***
National identity	.03, n.s.

Goals for educational intervention

- Increase knowledge
 - Emphasize existing laws
 - Provide information about available actions
- Provide context for action
 - Emphasize connection to animals
 - Emphasize social norms for supportive action
 - Provide opportunities to feel sense of shared national pride



Broader goals for sustainability

- Encourage personal relevance to environmental issues
- Promote environmental identity

How?

- Personal experience
 - Time in nature
- Culture and heritage
 - Place-based education
- Social experiences
 - Design to promote opportunities

- Thank you!
- Contact me at sclayton@wooster.edu