



Thinking Like a Social Scientist



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U.S. Fish & Wildlife Service
Human Dimensions Branch



Partnership and Community
Collaboration Academy

Managing by Network: May 14-15, 2025

Human Dimensions Branch



NATIONAL
WILDLIFE
REFUGE SYSTEM



Where We Work...

Natural
Resource
Program Center



NATIONAL
WILDLIFE
REFUGE SYSTEM

What We Do



Foster social science *literacy*



Increase social science *capacity*



Increase *application* of social science



Transform conservation approaches through adaptive *planning* and *evaluation*



Why Social Science in Wildlife Conservation?

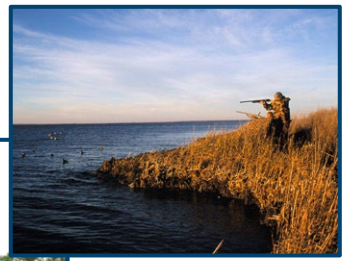




Working with others



to conserve, protect, and enhance fish, wildlife, plants, and their habitats



for the continuing benefit of the American people



Mission of the U.S. Fish & Wildlife Service

“Human Dimensions of Wildlife Conservation” aka “Conservation Social Science”

What it is...

- An applied science focused on the human/social aspects of wildlife conservation
- Application of theory and methods from the social sciences to inform adaptive decision making

What it is NOT...

- Wildlife management by popular vote



RRS Sir David Attenborough



Photo Credit: U.K Government, National Environment Research Council

AKA... Boaty McBoatface

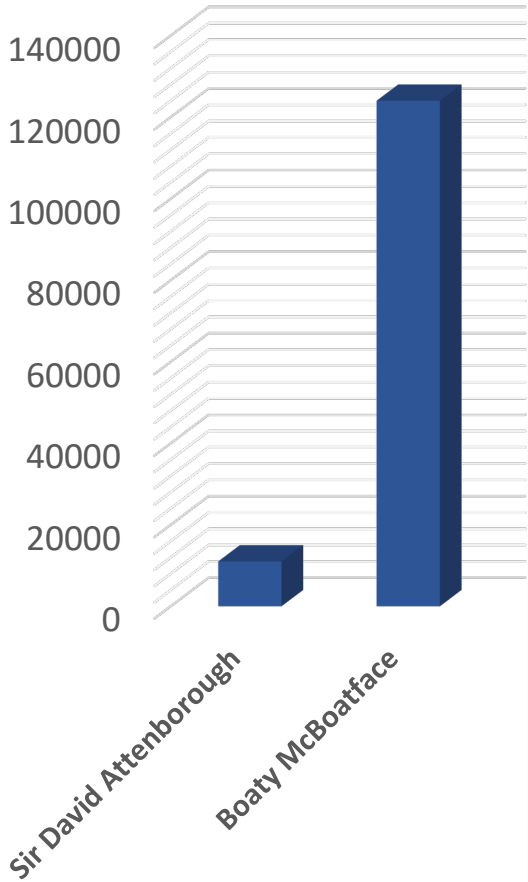


Photo Credits: BBC, U.K Government, National Environment Research Council

“Human Dimensions of Wildlife Conservation” aka “Conservation Social Science”

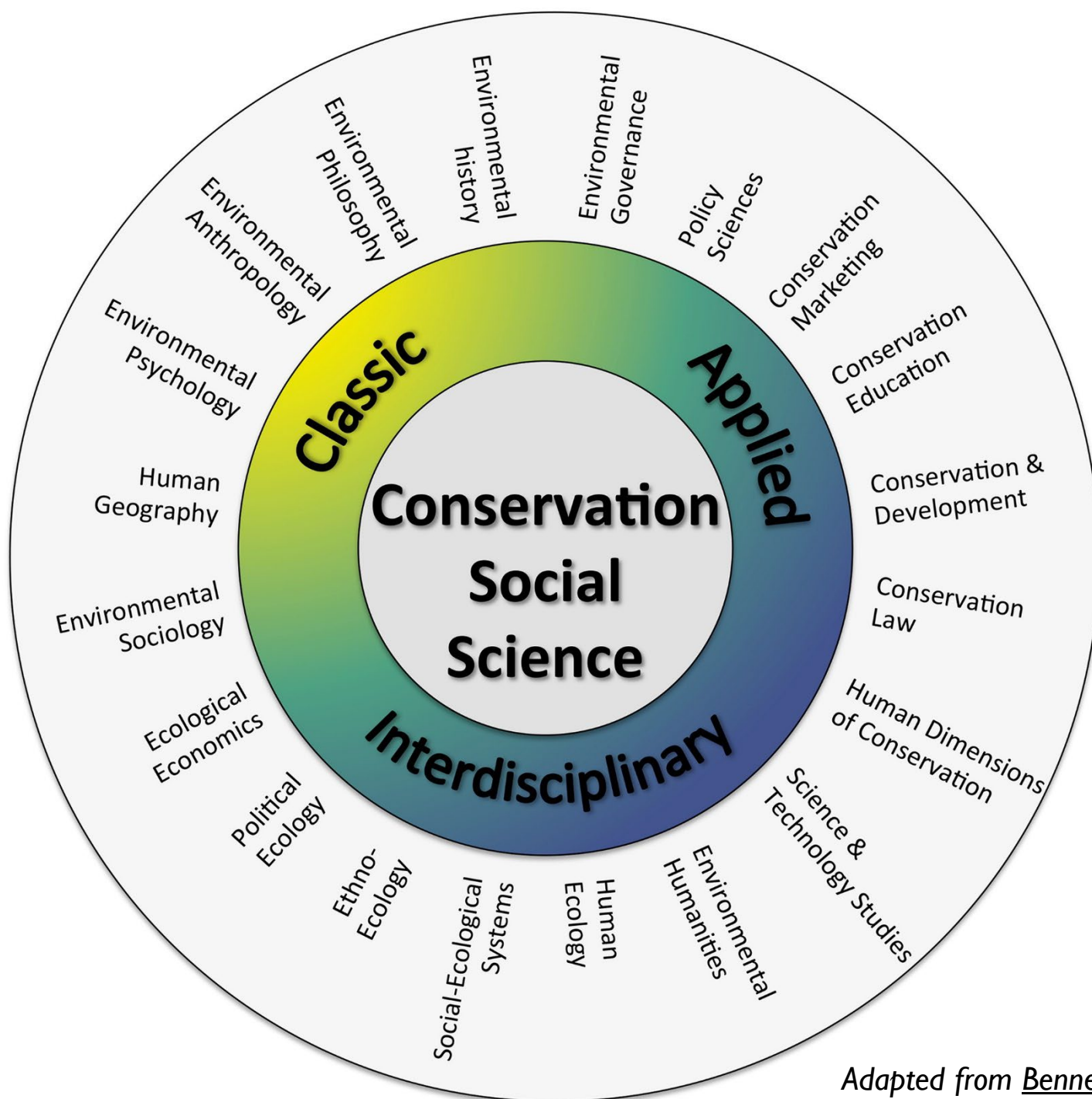
What it is...

- An applied science focused on the human/social aspects of wildlife conservation
- Application of theory and methods from the social sciences to inform adaptive decision making

What it is NOT...

- Wildlife management by popular vote
- “Soft” science





Social Phenomena

- Norms
- Demographics
- Economics
- Governance

Social Processes

- Communicating
- Marketing
- Educating
- Decision Making

Individual Attributes

- Values/Beliefs
- Knowledge
- Perceptions/Preferences
- Behaviors

Adapted from Bennett et al. 2017

Conservation Social Science Toolbox



- Surveys – mail, phone, web
- Interviews
- Focus groups
- Behavioral observation
- Stakeholder analysis
- Content analysis
- Participatory mapping
- Social network analysis

Social Science in the Service

- Increase expertise
- Grow through a network strategy
- Increase social science literacy
- Deepen a community of practice

Contact:

human_dimensions@fws.gov

Tools and Resources:

[Engagement Wayfinder](#)

[Socio-economic Profile Tool](#)



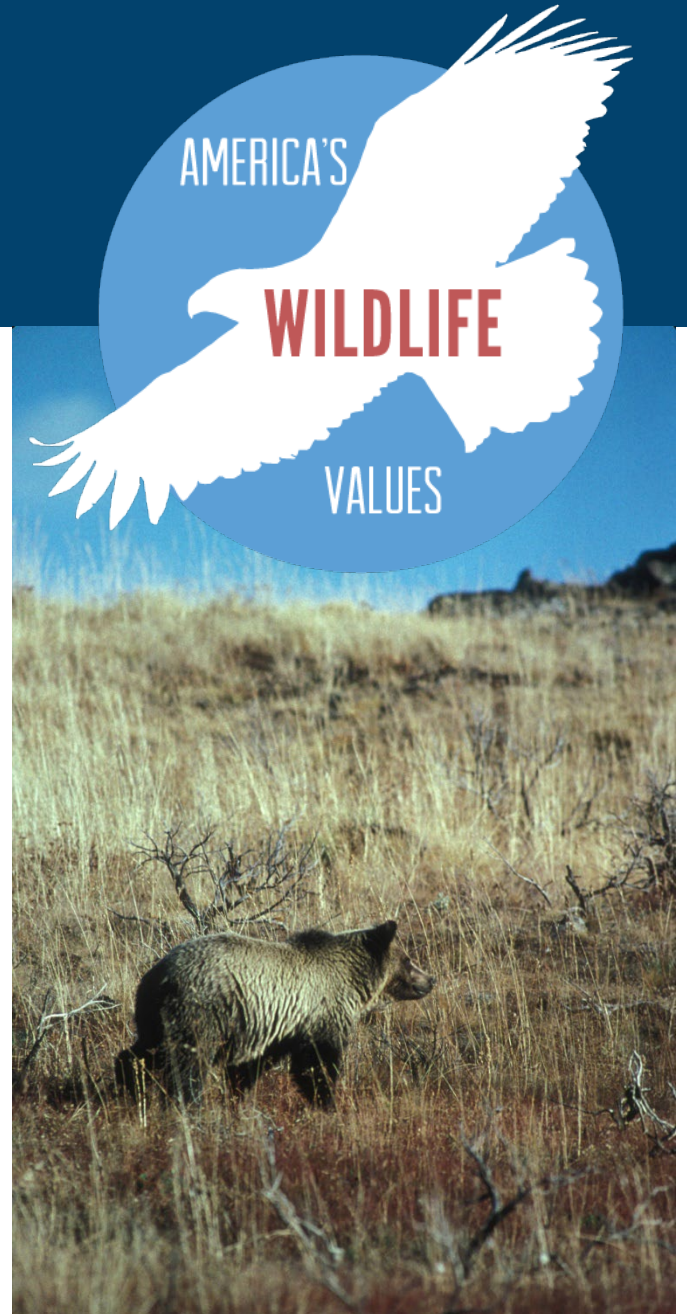
Two screenshots of U.S. Fish & Wildlife Service web tools. The top screenshot shows the "Rocky Mountain Arsenal National Wildlife Refuge" Socioeconomic Profiles tool, which includes a map of the refuge area and a sidebar with options to view boundaries by census tracts, cities/towns, counties, American Indian areas, and states. The bottom screenshot shows the "Engagement Wayfinder" tool, which provides an orientation to public engagement, including a list of resources and a three-step interactive path: 1. New to the process? Begin with 'What is Stakeholder Engagement and Why Do it?', 2. Orient yourself to the framework on the Stakeholder 'Spectrum of Engagement' page, and 3. Navigate to 'Getting Started' and conduct a Situation Analysis.



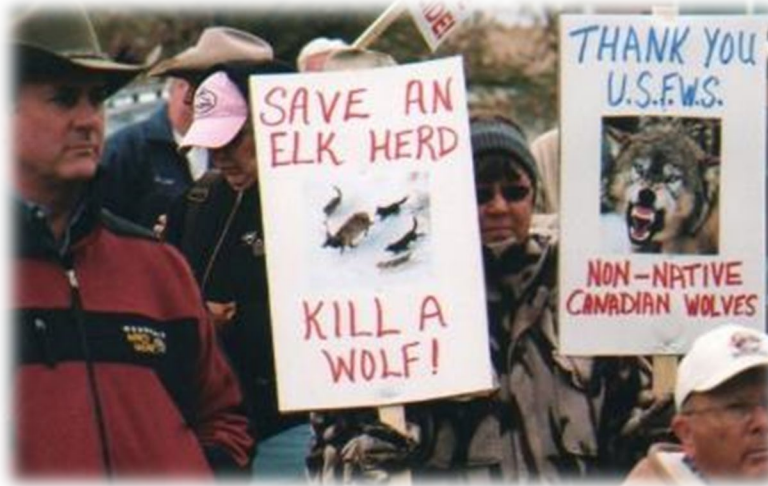
Social Science Theory in Practice

Case Study:

Wildlife Conservation
and Societal Change in the U.S.



The challenges of wildlife management in a changing society...



Changes rooted in abrupt cultural shift



Cultural Shift is Reflected in *Social Values*



Values Are Motivational Goals That Direct Behavior

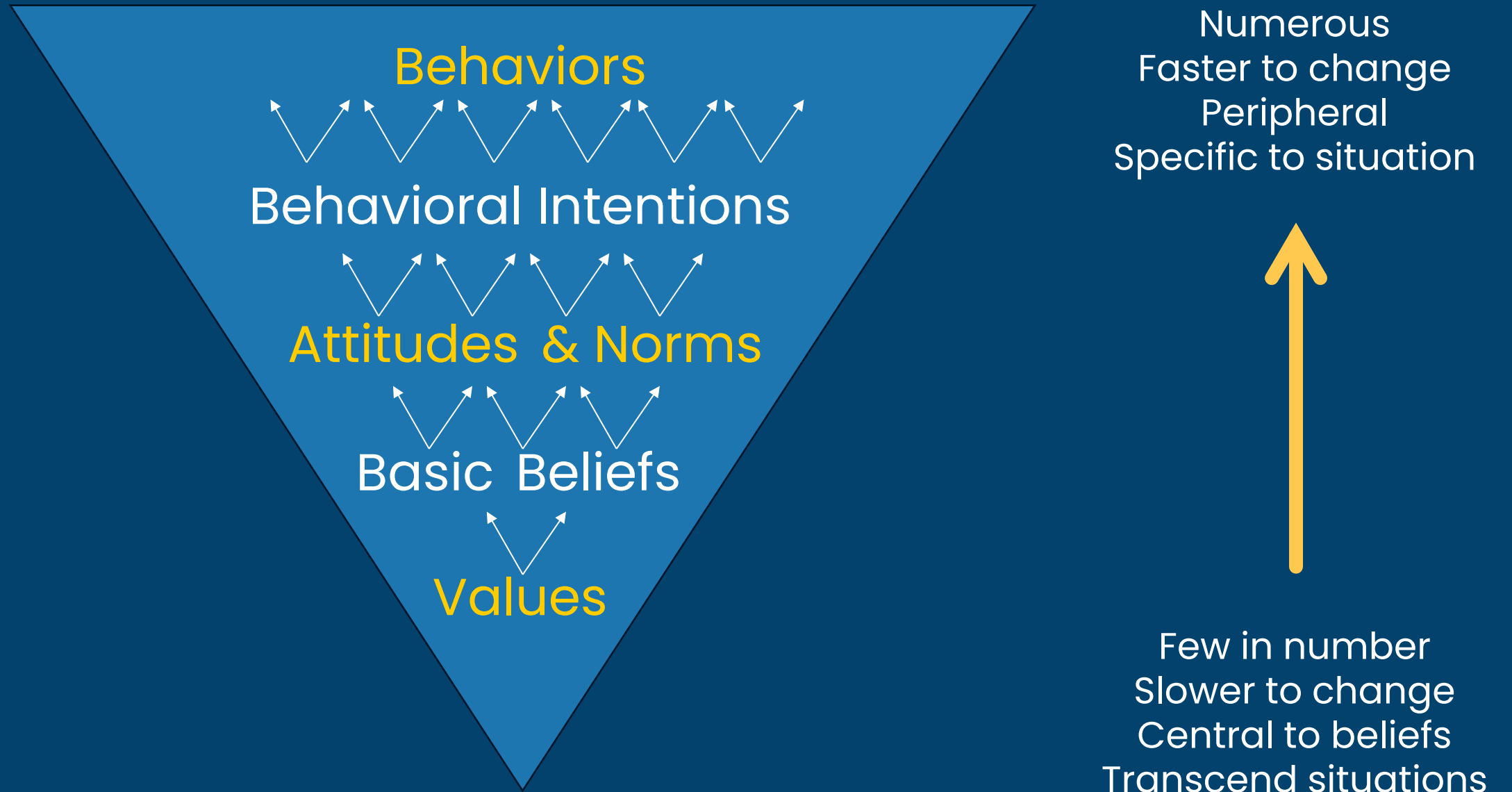
Values Are Formed Early in Life and Do Not Change in an Individual

Values are Embedded in Everything Around Us

Values adapt Us to Our Social and Environmental World

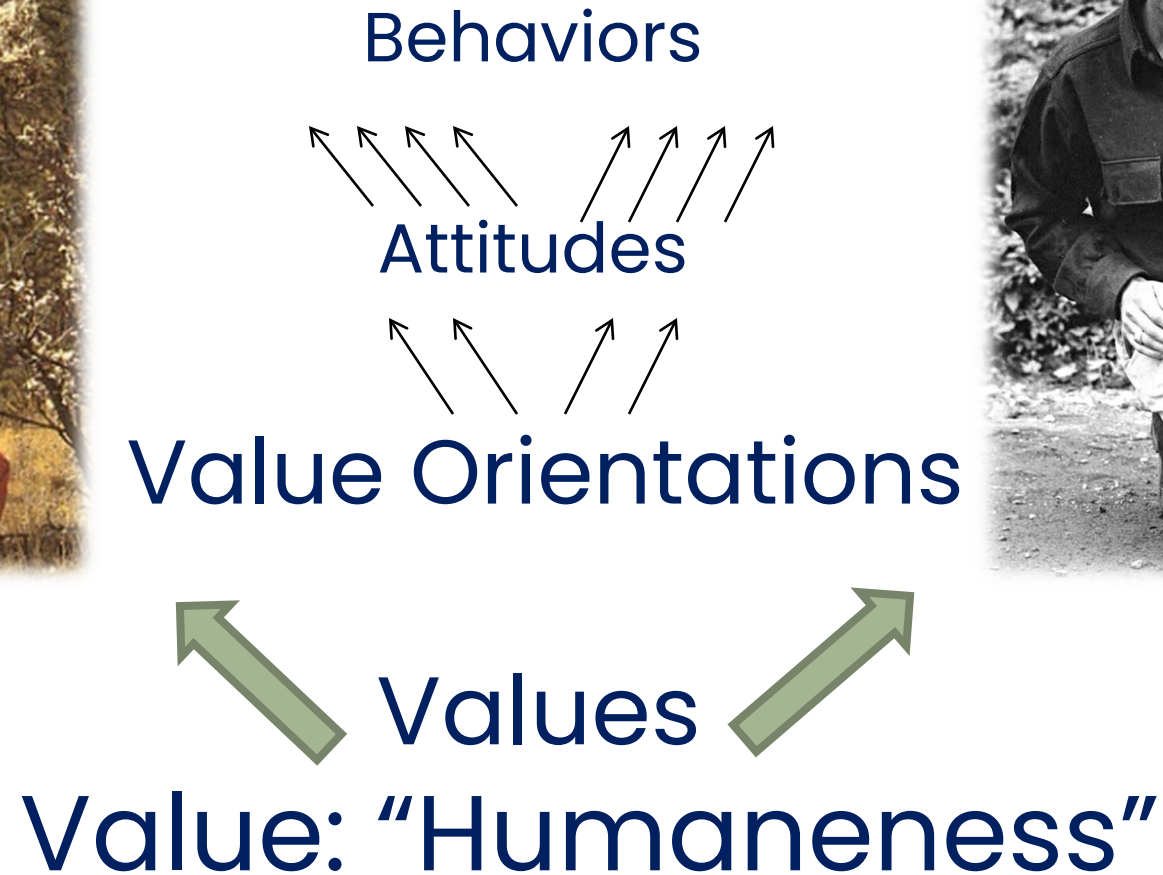
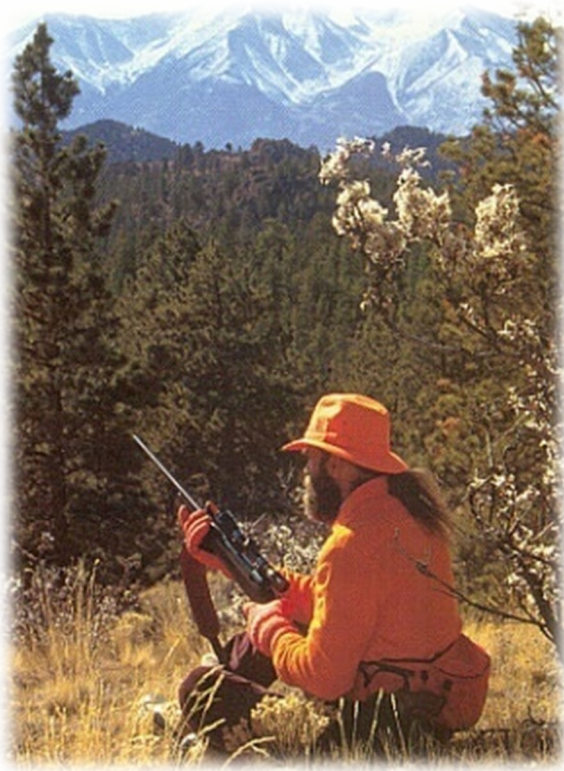


The Cognitive Hierarchy

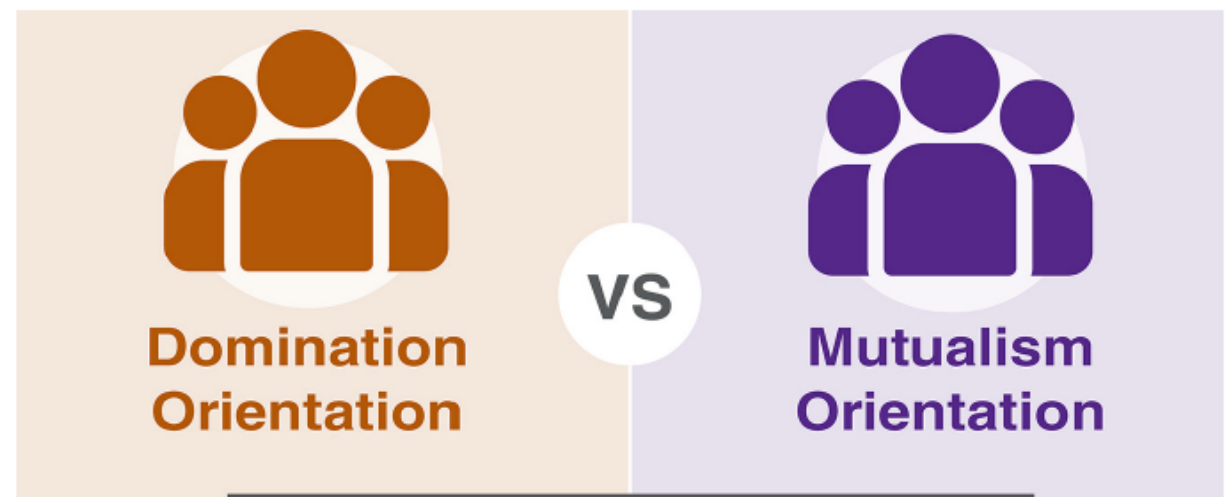


(Homer & Khale, 1988; Fulton, Manfredo & Lipscomb, 1996)

The Hierarchy of Cognitions in a Wildlife Context



Wildlife Value Orientations



Manfredo, MJ, Berl, REW, Teel, TL, & Bruskotter, JT.
(2021). Bringing social values to wildlife conservation
decisions. Frontiers in Ecology and the Environment.





Office of
**CONSERVATION
INVESTMENT**
Partnering to fund conservation
and connect people with nature

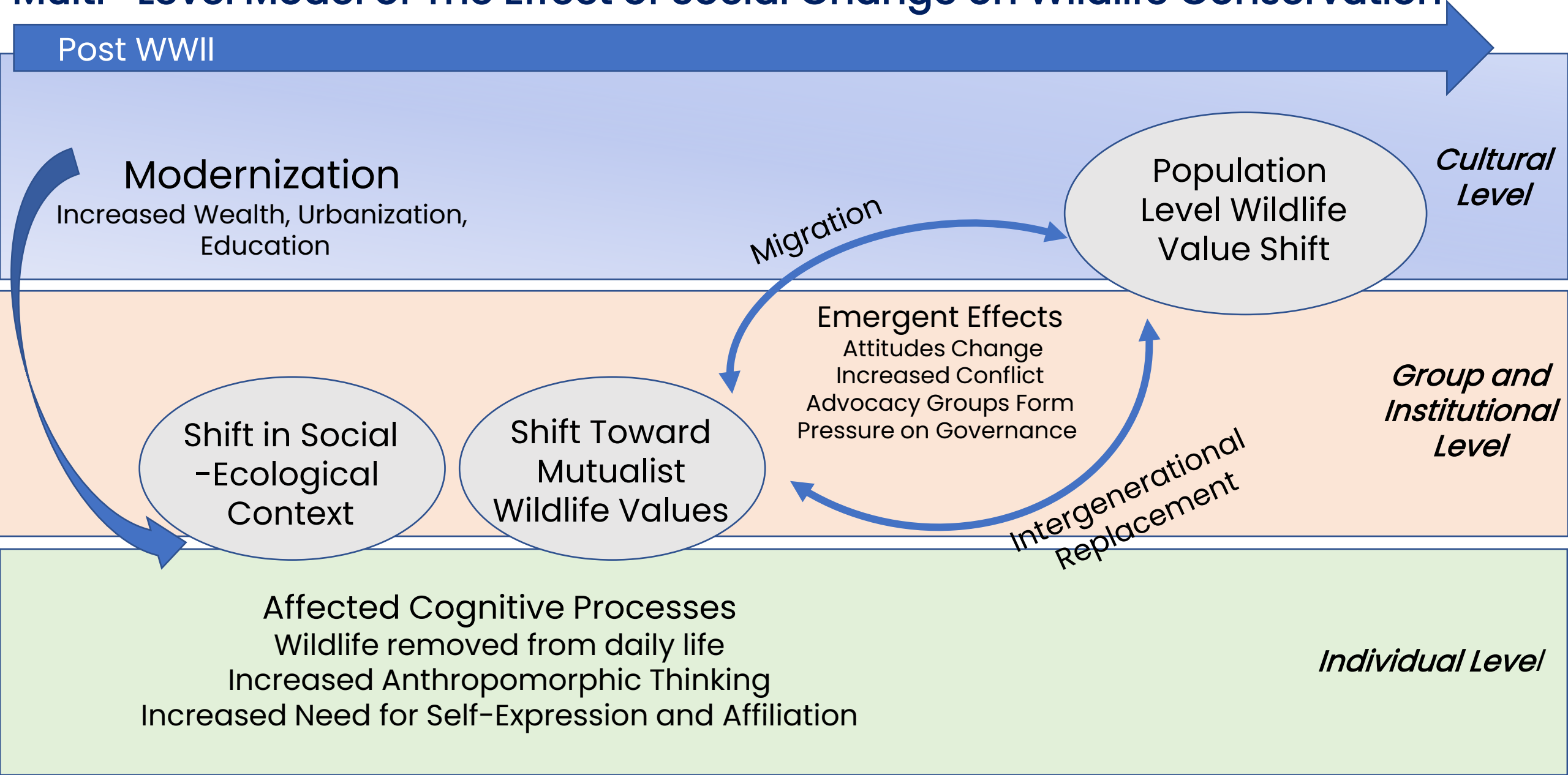


**HUMAN DIMENSIONS OF
NATURAL RESOURCES**
COLORADO STATE UNIVERSITY

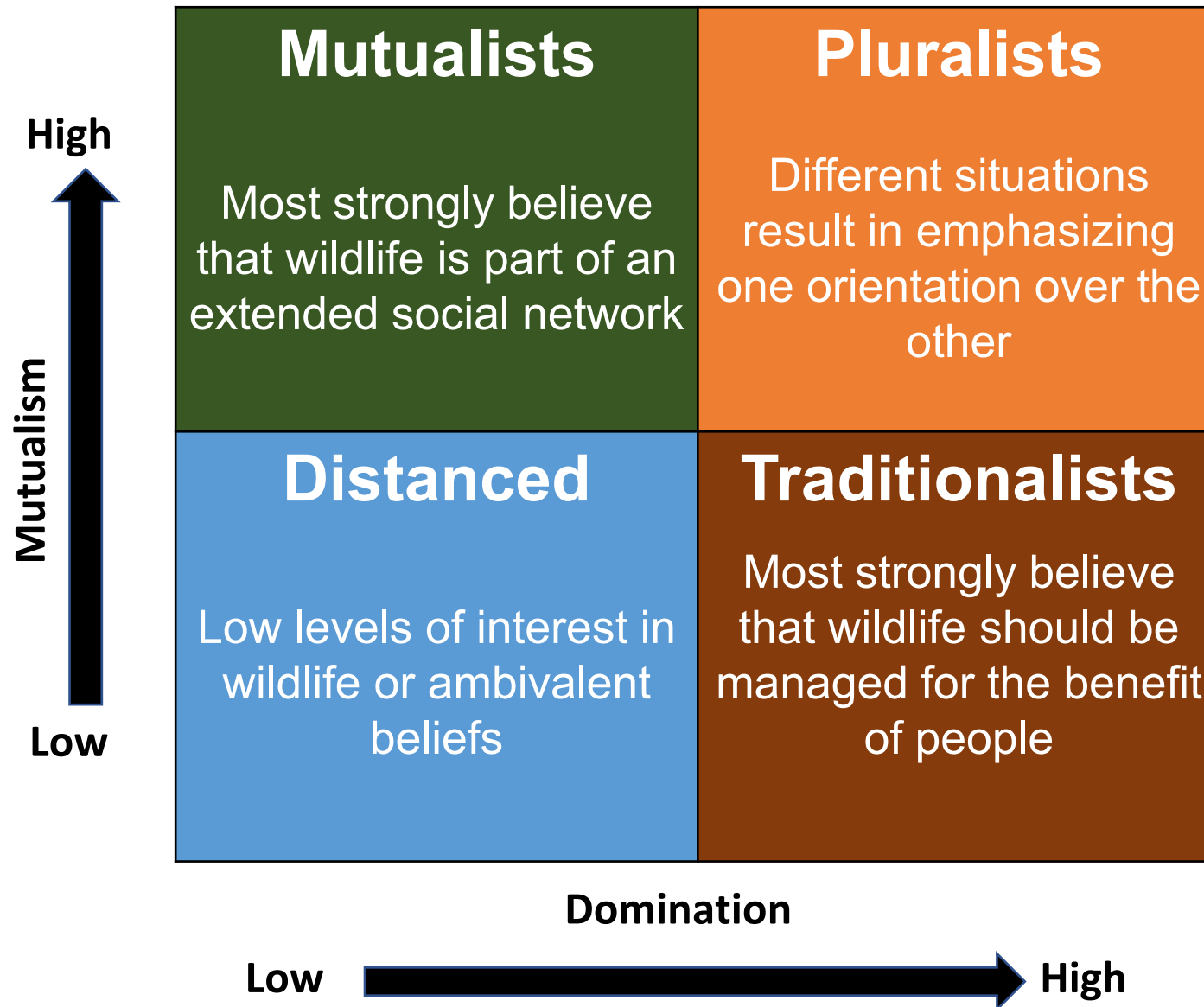
Key Question:
Have wildlife value
orientations changed in the
US since World War II?



Multi –Level Model of The Effect of Social Change on Wildlife Conservation



Wildlife Value Orientation “Types”



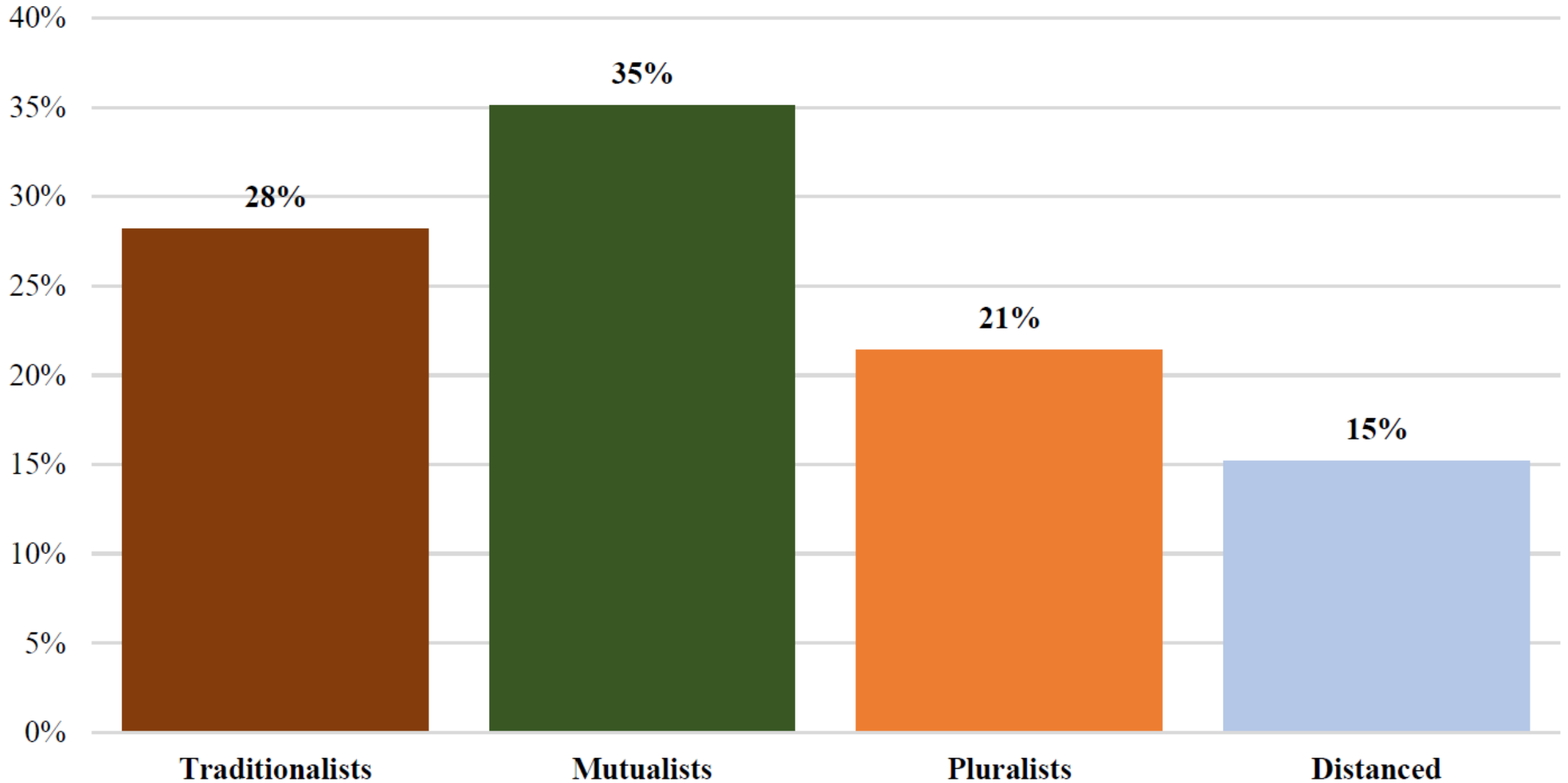
“Humans are animals and part of Nature”

“I don't feel like the survey accurately captured my feelings.”

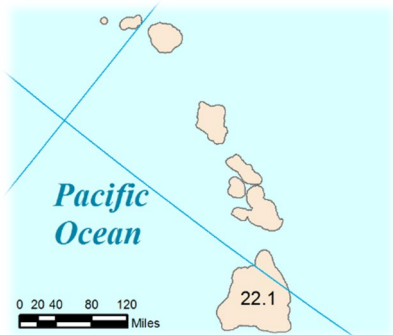
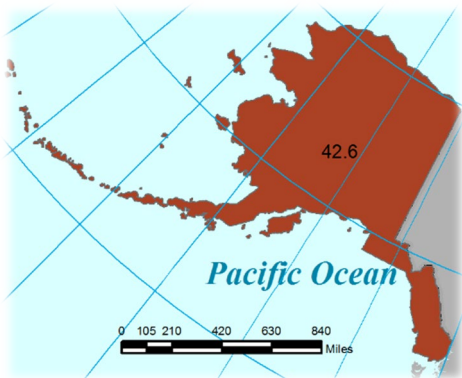
“I noticed that I lean towards the middle on most of the questions, I think I try to find the balance of human activity with wildlife”

“I found myself thinking about wildlife as resource”

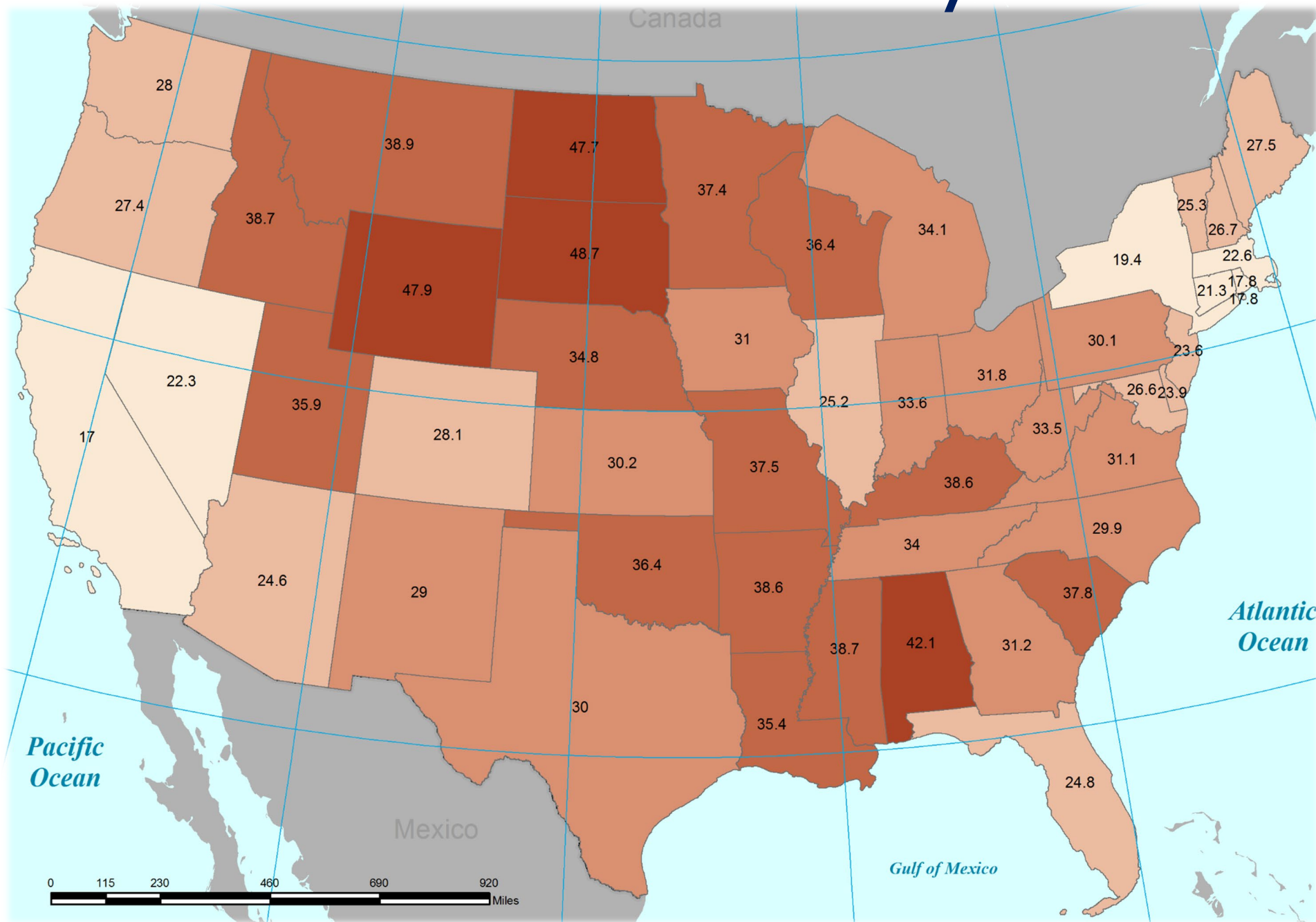
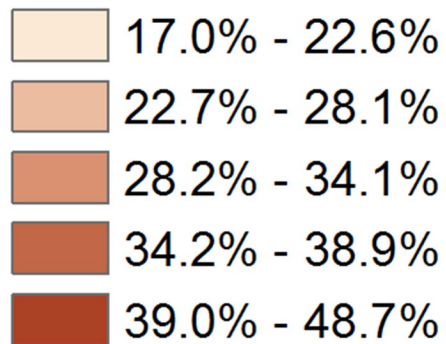
Distribution of Wildlife Value Orientations in the U.S.



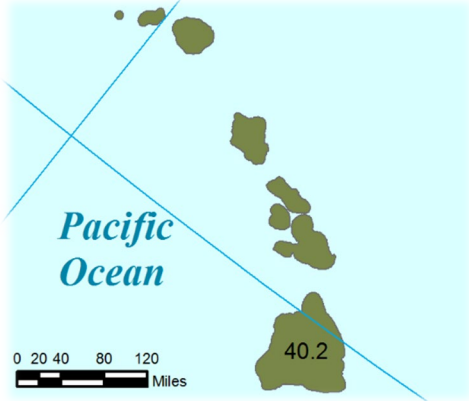
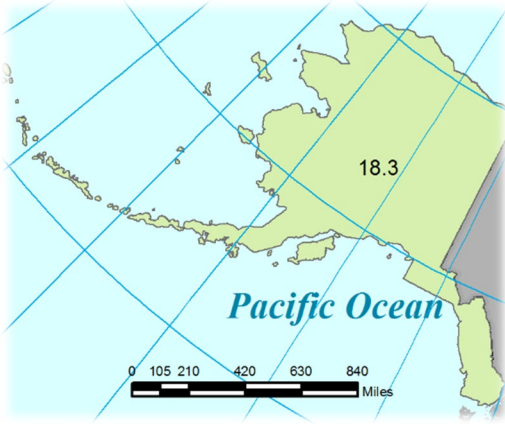
Percent *Traditionalist* by State



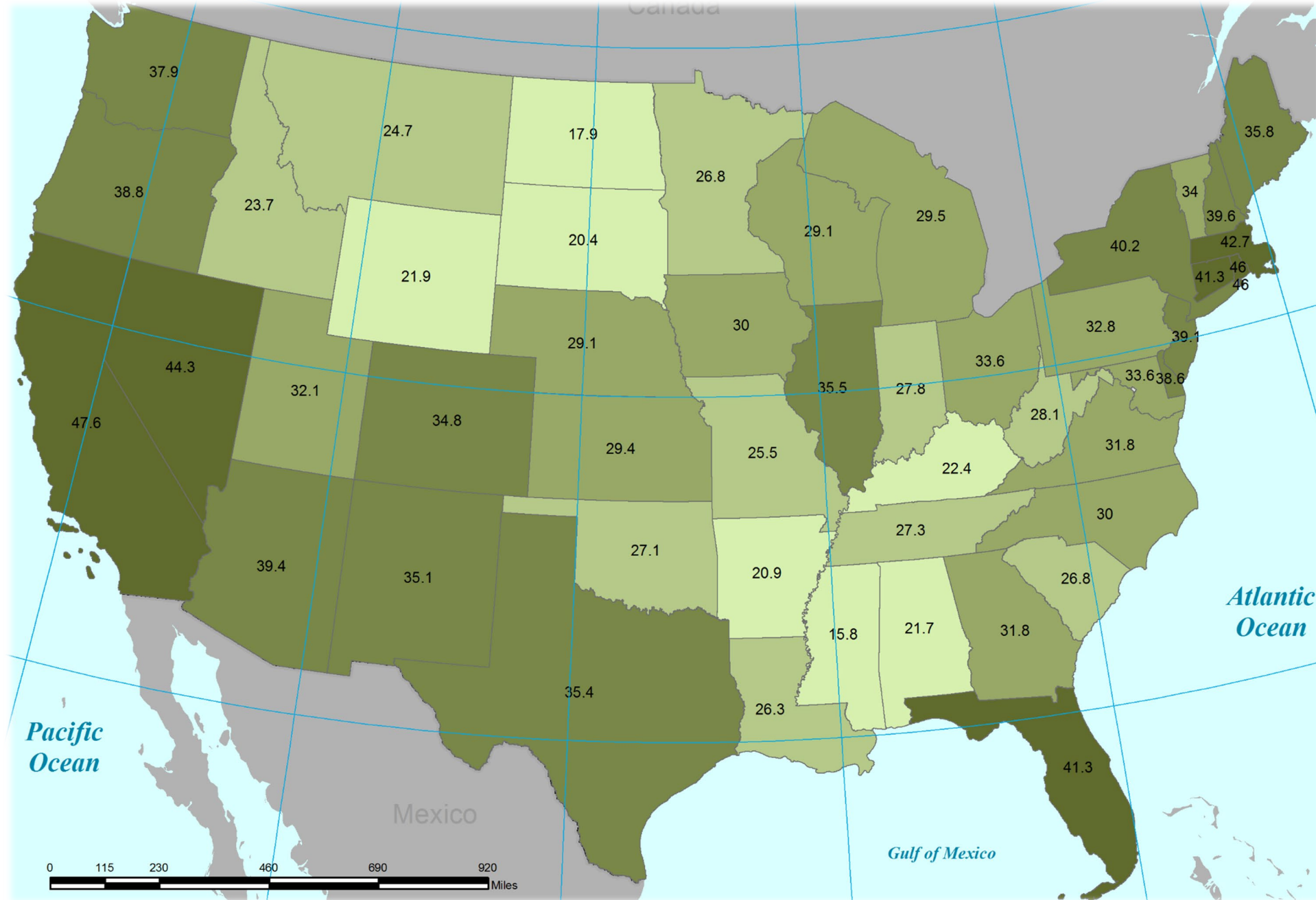
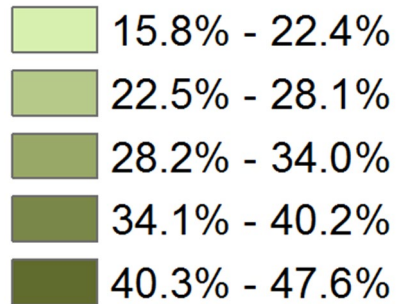
Traditionalists



Percent *Mutualist* by State



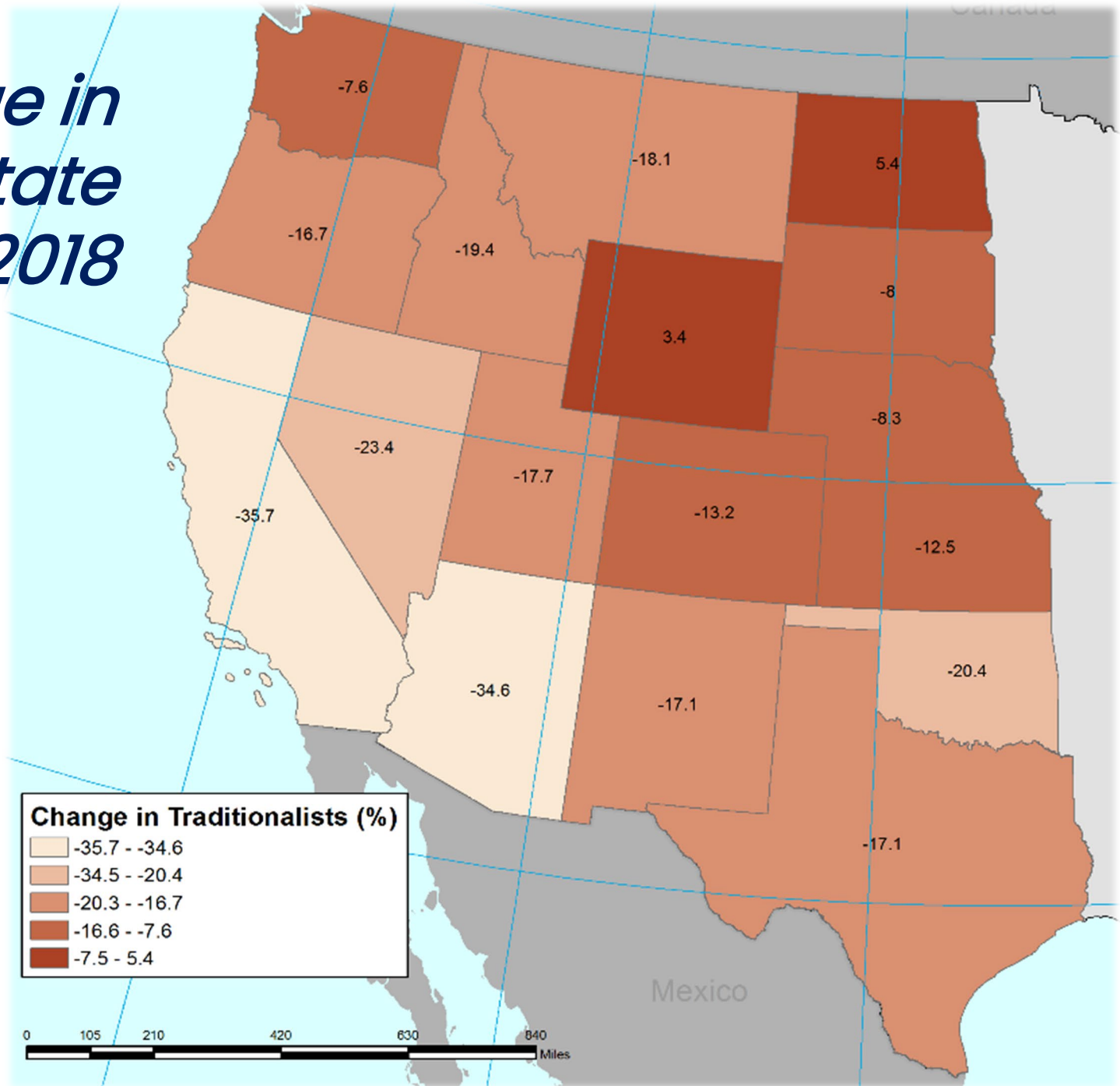
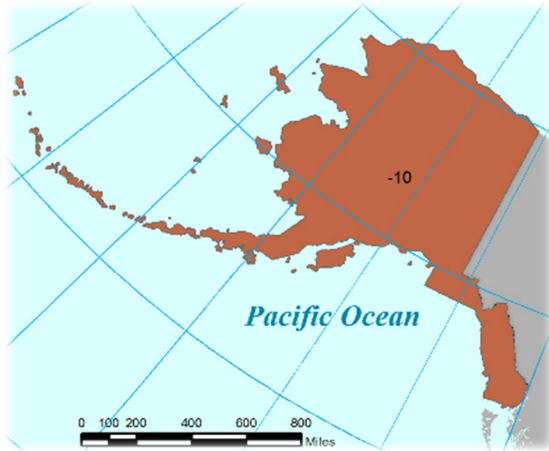
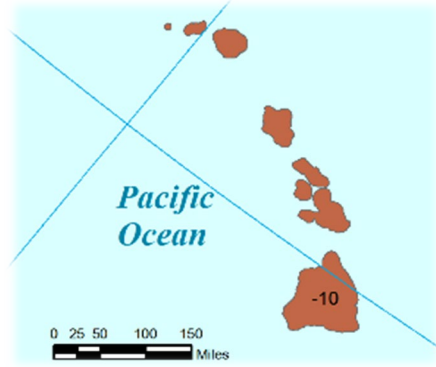
Mutualists



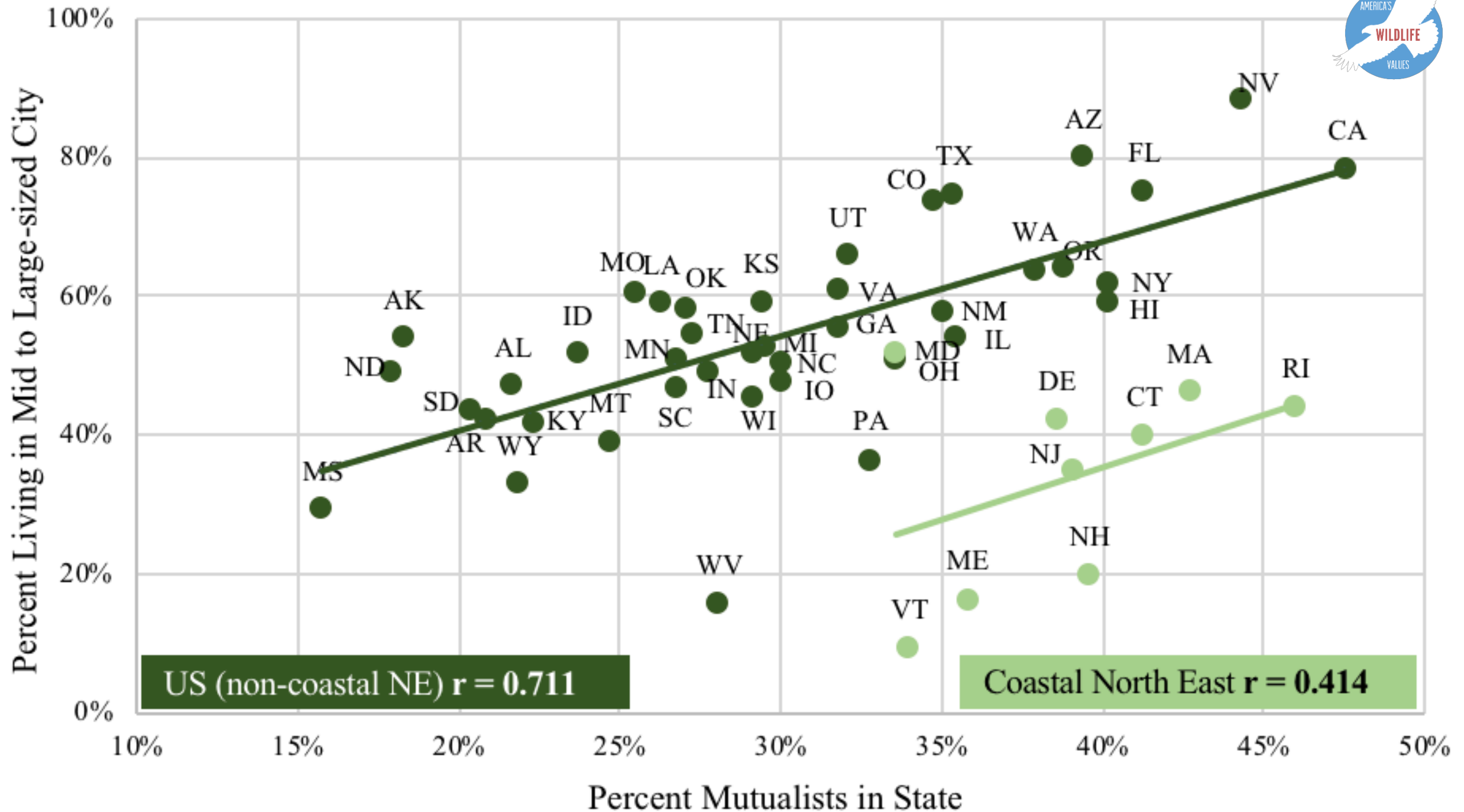
Wildlife Values are Changing in the U.S.



Proportional Change in Traditionalists by State 2004 - 2018



Modernization influence on the growth of Mutualist Wildlife Value Orientations



Value Shift Affects the Social Context of Modern-day Wildlife Conservation



"Late again! ... This better be good!"

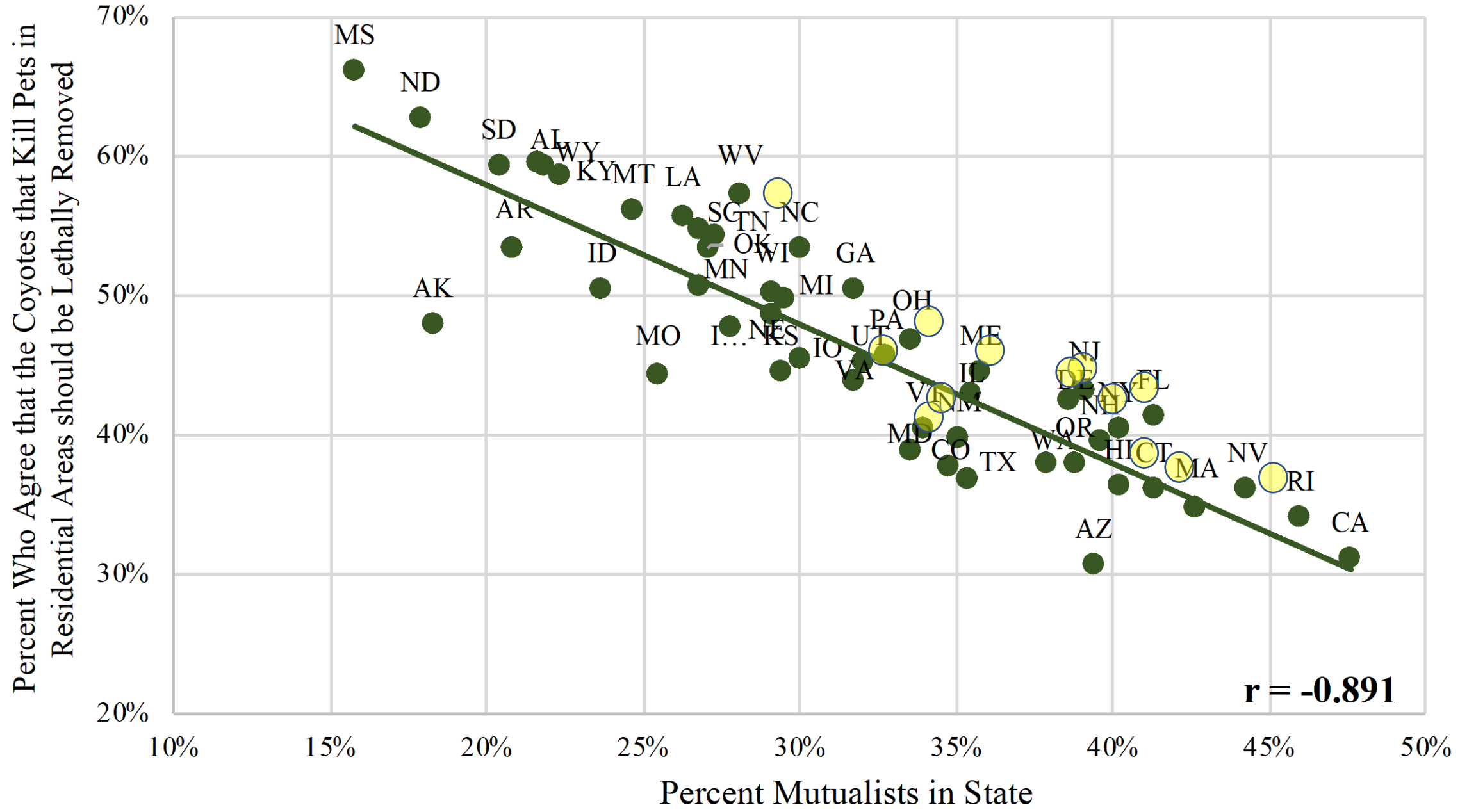
"Late again! ... This better be good!"



ATTITUDES TOWARD CONTEMPORARY MANAGEMENT ISSUES



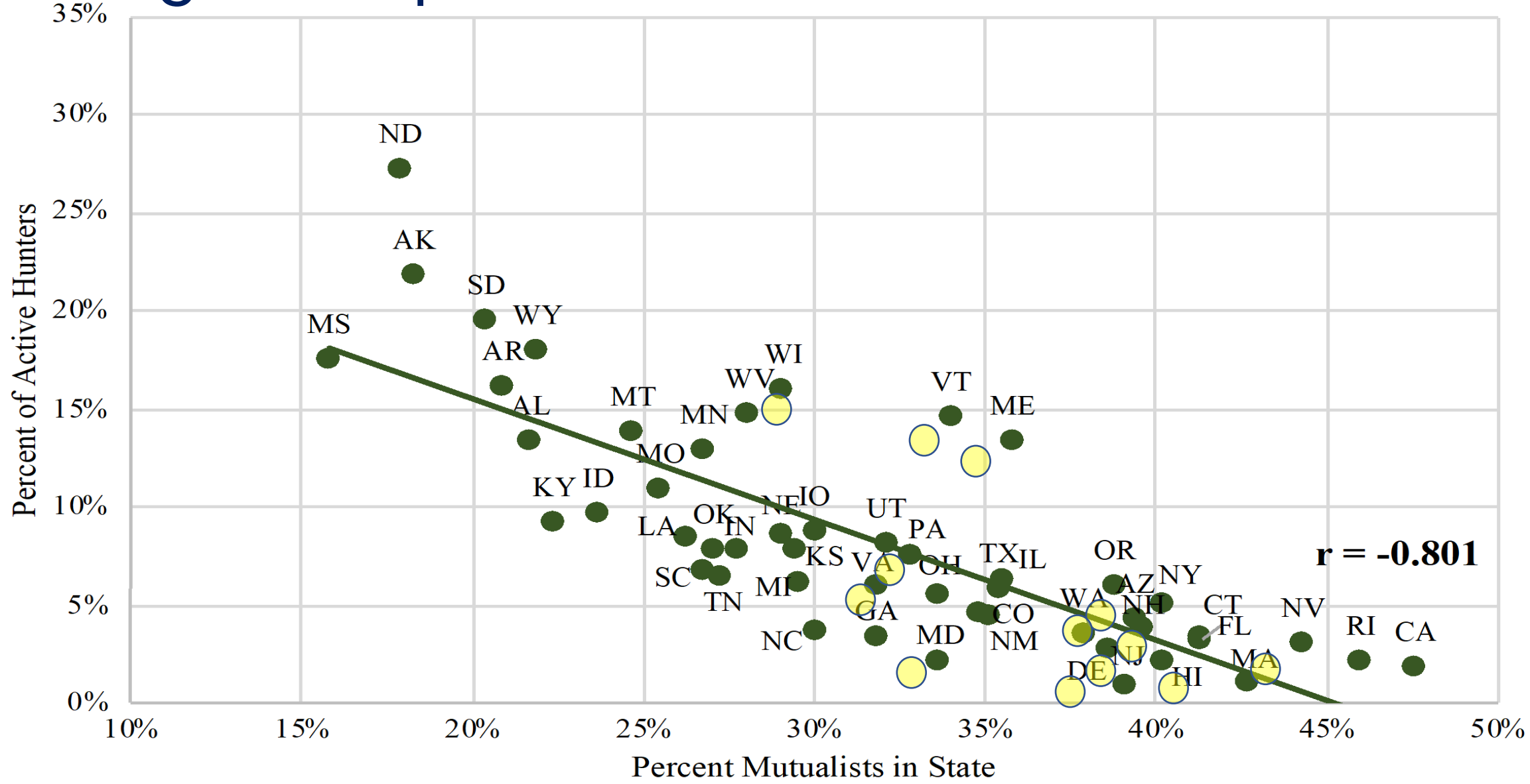
Urban Carnivore Management



WILDLIFE-RELATED RECREATION



Hunting Participation

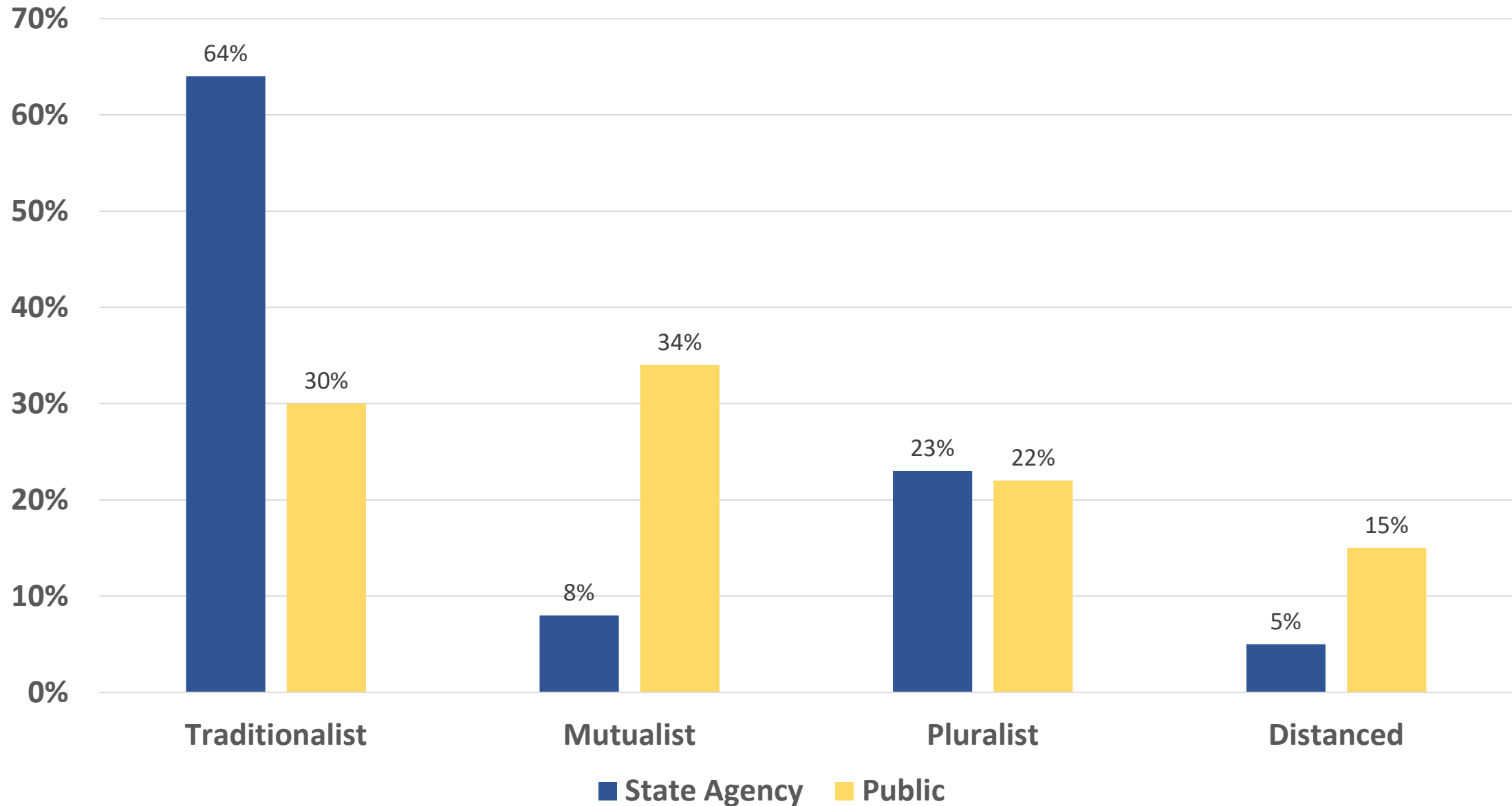


active hunters = hunted in the past and hunted in the past 12 months.

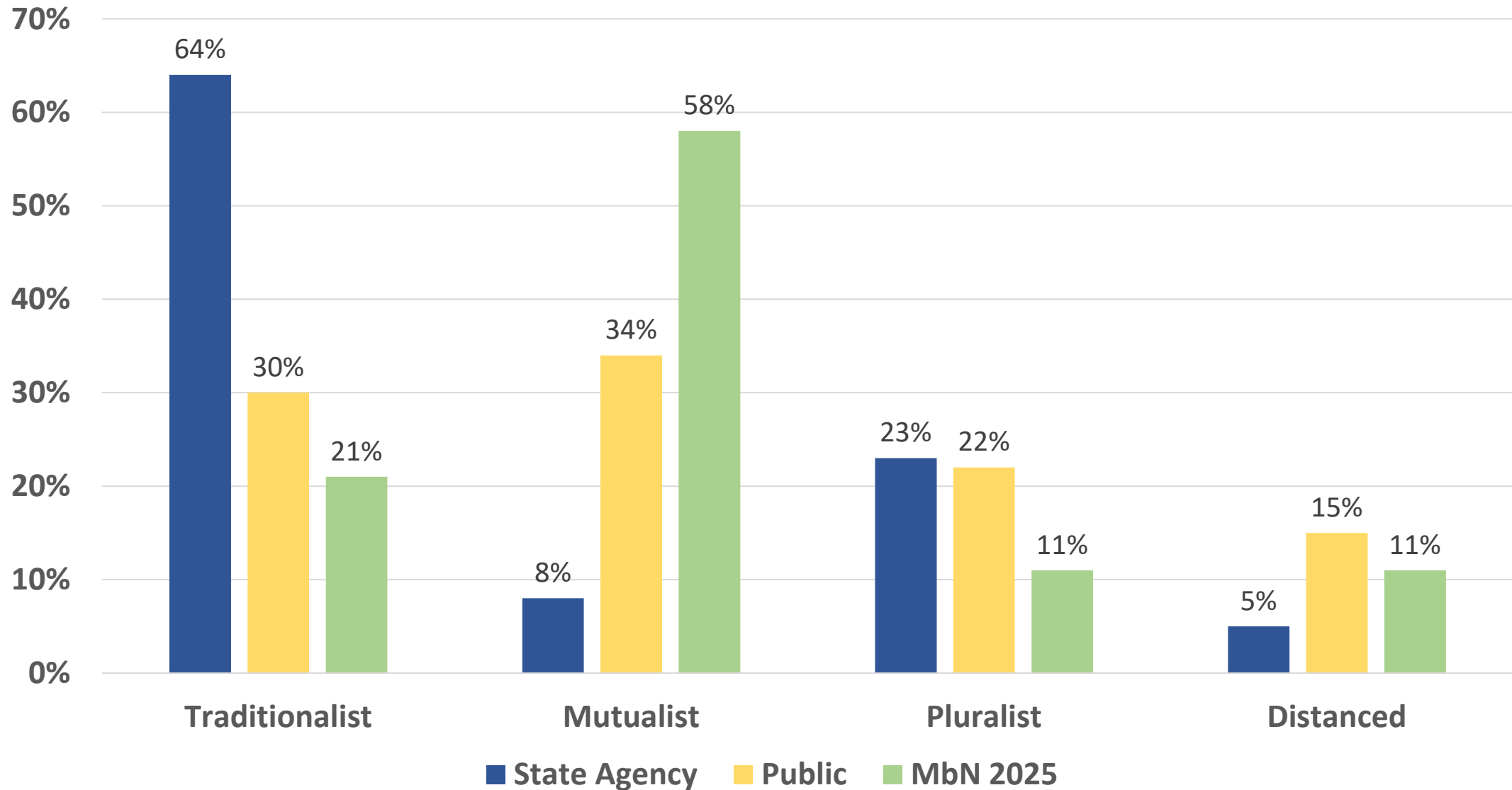
FISH AND WILDLIFE AGENCIES IN AN ERA OF RAPID CHANGE



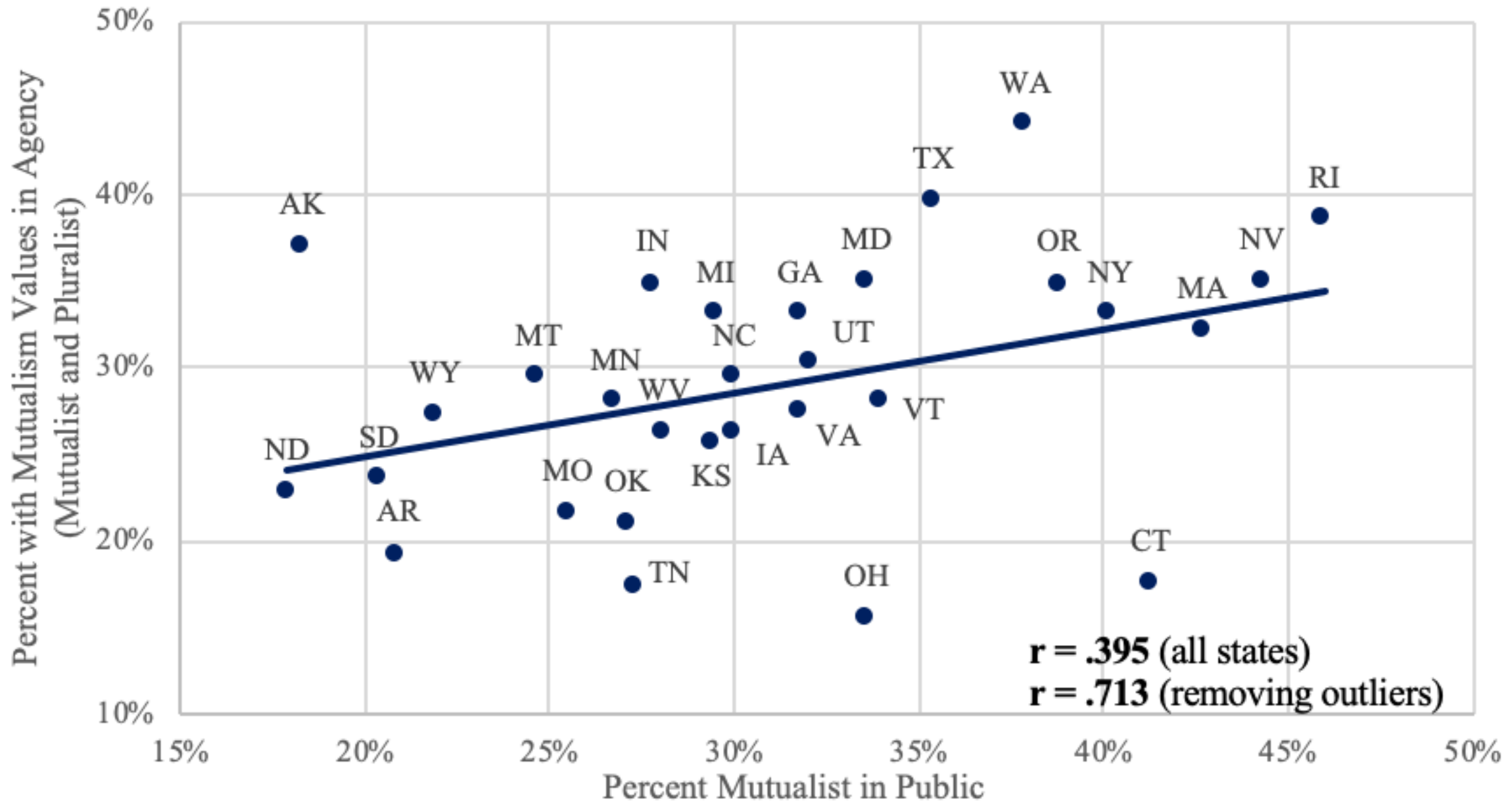
Comparison of Wildlife Value Orientation Types in fish & wildlife agencies and the public for 28 U.S. States



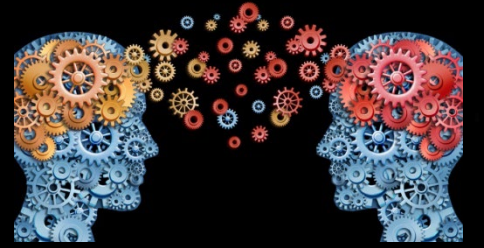
WVO Types: State F&W Agencies, Public Survey, & MbN 2025



Does a More Mutualist Public = More Mutualist Wildlife Agencies ?

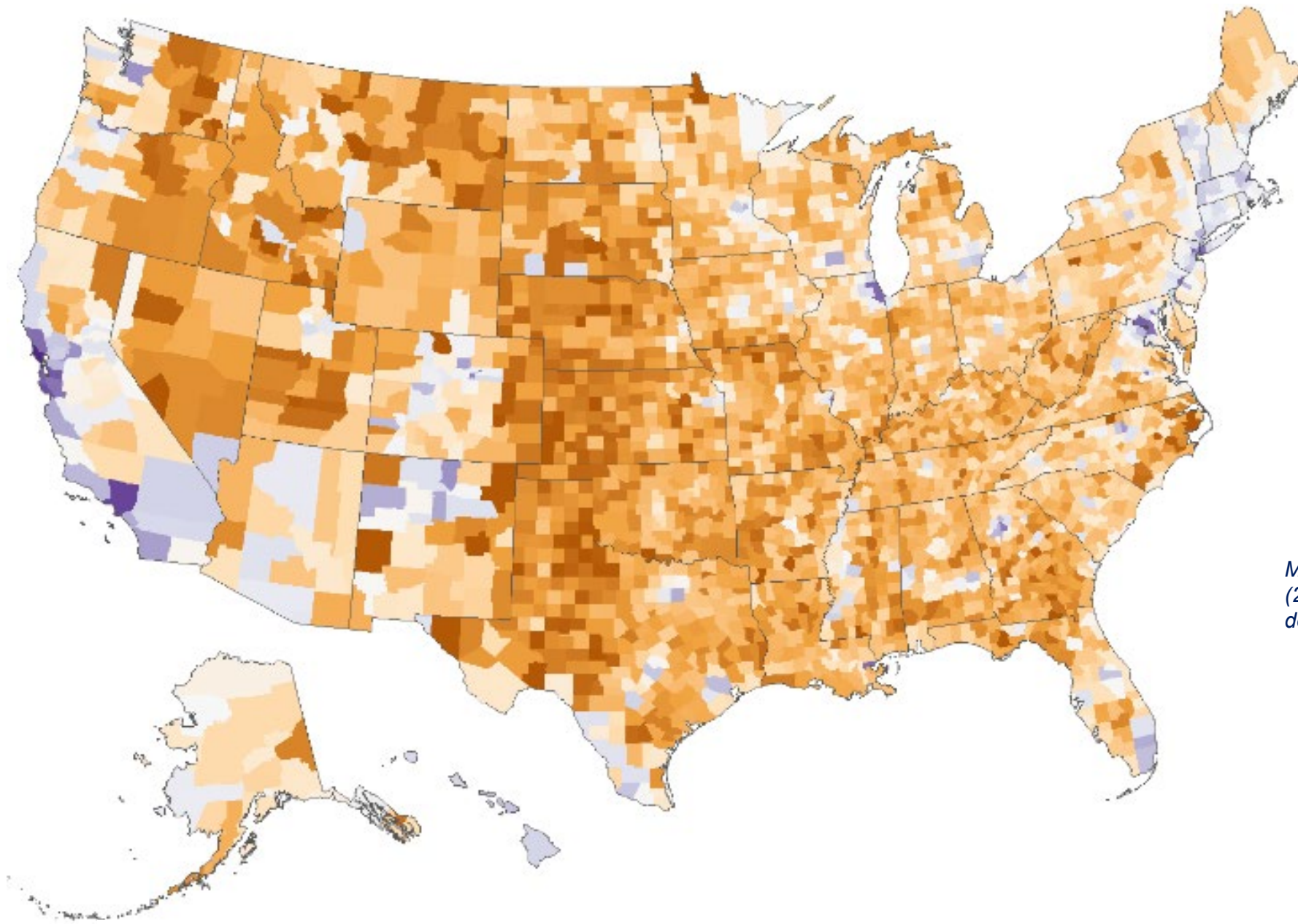


WILDLIFE VALUE ORIENTATIONS AT FINER SPATIAL SCALES

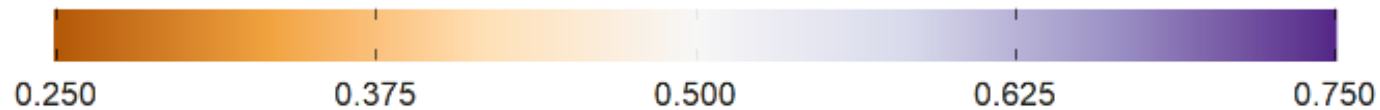


Advancing Spatially Explicit Applications of Wildlife Values Information – Sociocultural Index

*Manfredo, MJ, Berl, REW, Teel, TL, & Bruskotter, JT.
(2021). Bringing social values to wildlife conservation
decisions. Frontiers in Ecology and the Environment.*



Predicted sociocultural index



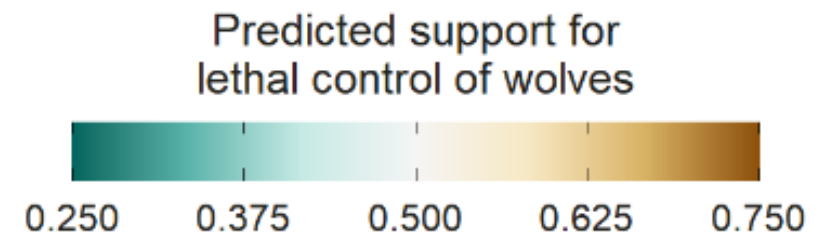
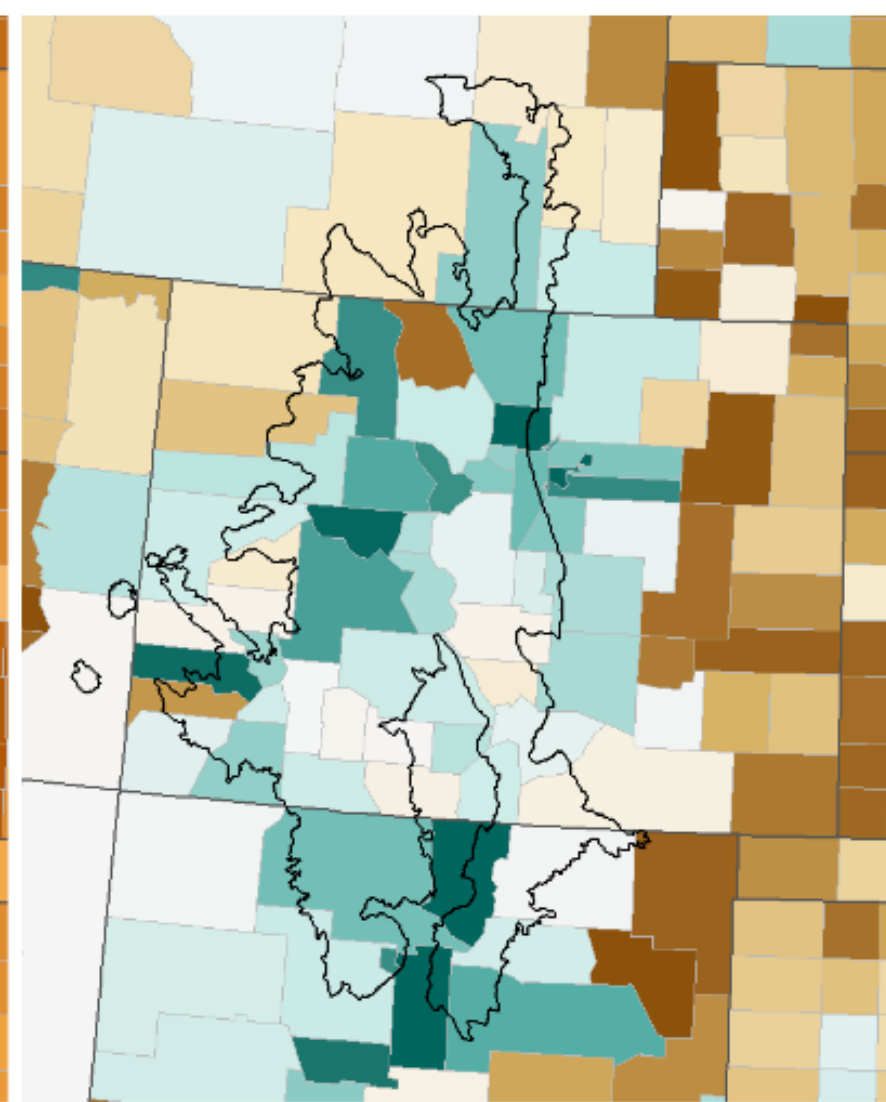
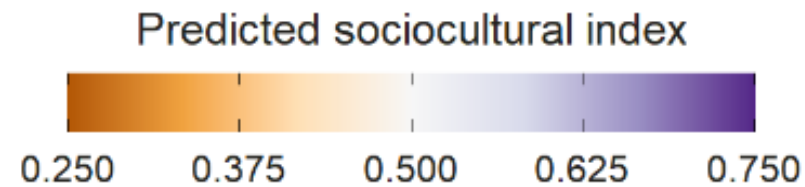
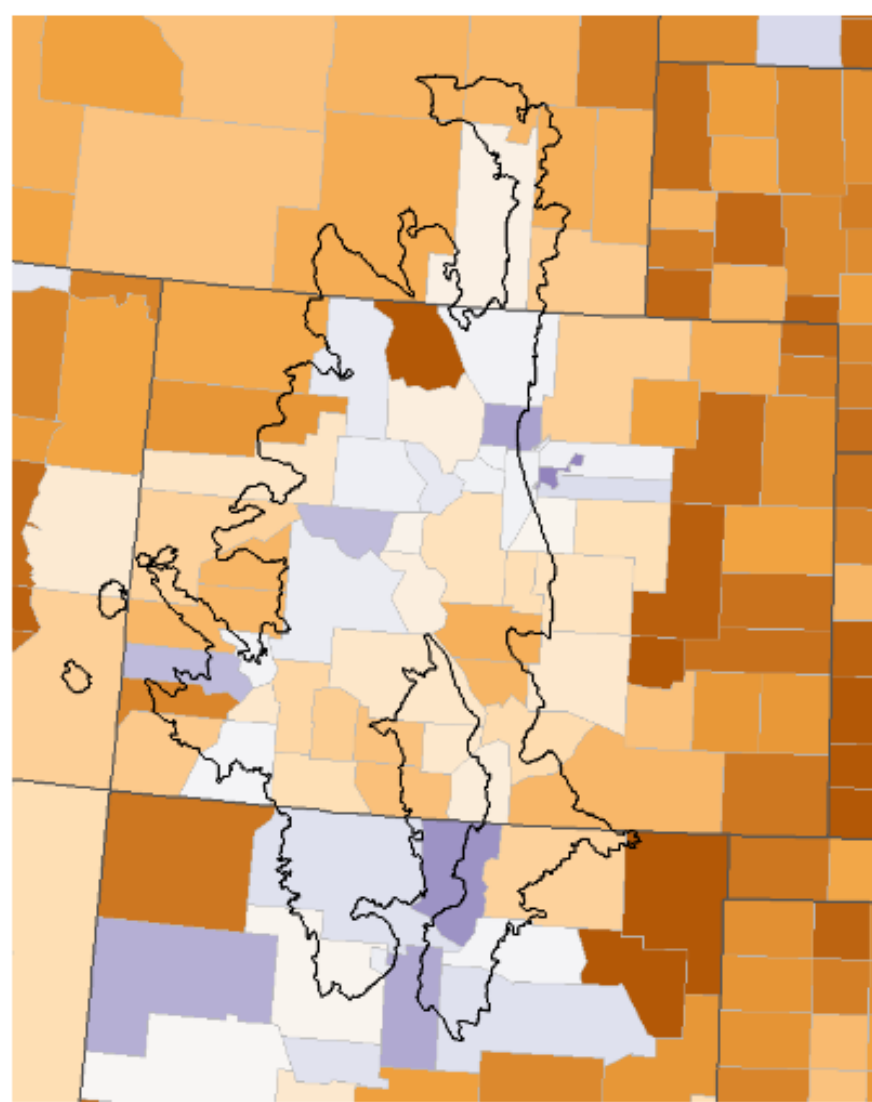


**“WOLVES ARE EASY;
PEOPLE ARE HARD.”**

-Ed Bangs, USFWS

Sociocultural Index Applied to Wolf Recovery in Colorado

Manfredo, MJ, Berl, REW, Teel, TL, & Bruskotter, JT.
(2021). *Bringing social values to wildlife conservation
decisions. Frontiers in Ecology and the Environment.*





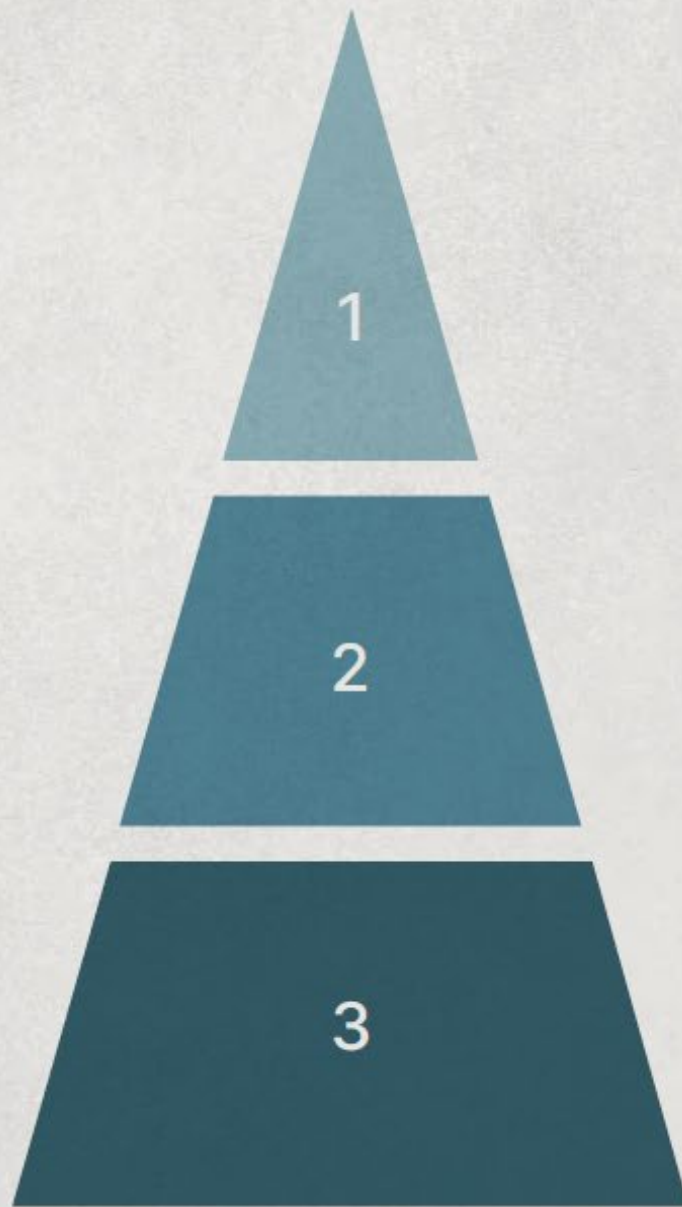
Arapaho National Wildlife Refuge, Jackson County, Colorado



**IF YOU VOTED FOR
RE-INTRODUCTION
OF WOLVES**

**DO NOT RECREATE
HERE. YOU ARE
NOT WELCOME!**

Levels of Conflict Over Wildlife



Dispute

Losses of crops, livestock, income, safety

Underlying conflict

Losses of crops, livestock, income, safety

+ **History** of recurring issue not satisfactorily resolved

Deep-rooted conflict

Losses of crops, livestock, income, safety

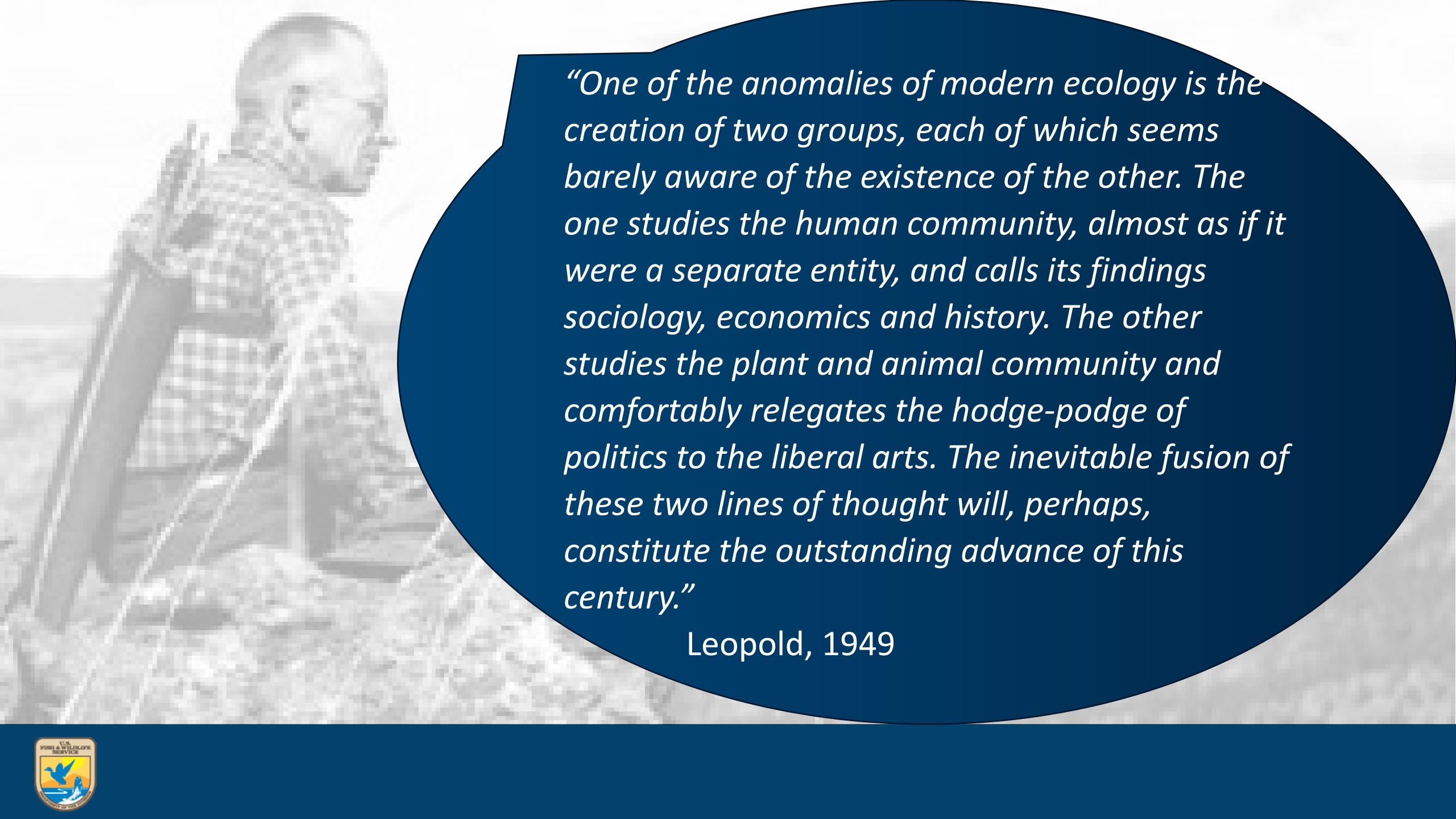
+ History of recurring issue not satisfactorily resolved

+ **Social identity** or values threatened



IUCN (2023). IUCN SSC guidelines on human–wildlife conflict and coexistence. First edition. Gland, Switzerland: IUCN

Zimmermann, A., McQuinn, B., & Macdonald, D. W. (2020). Levels of conflict over wildlife: understanding and addressing the right problem. Conservation Science and Practice, e259.



“One of the anomalies of modern ecology is the creation of two groups, each of which seems barely aware of the existence of the other. The one studies the human community, almost as if it were a separate entity, and calls its findings sociology, economics and history. The other studies the plant and animal community and comfortably relegates the hodge-podge of politics to the liberal arts. The inevitable fusion of these two lines of thought will, perhaps, constitute the outstanding advance of this century.”

Leopold, 1949





THANK YOU!

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