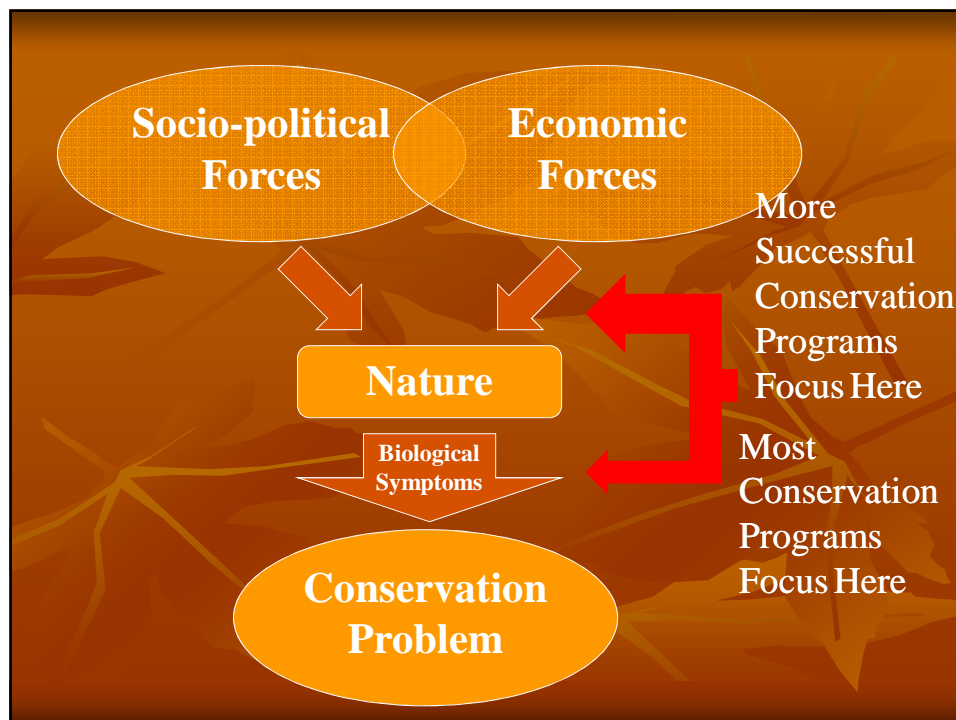
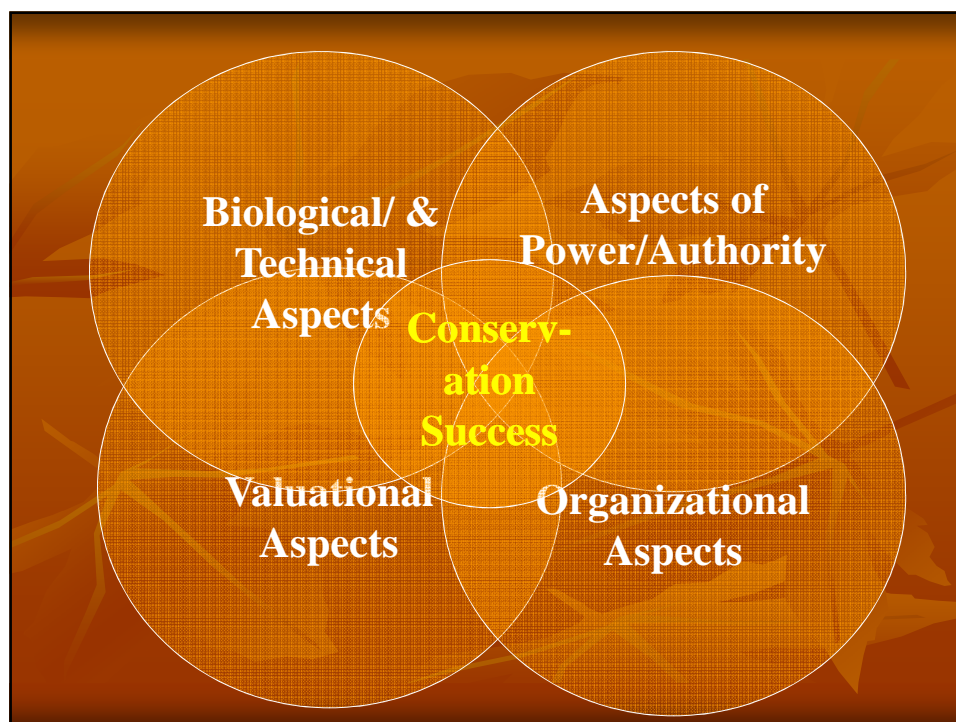
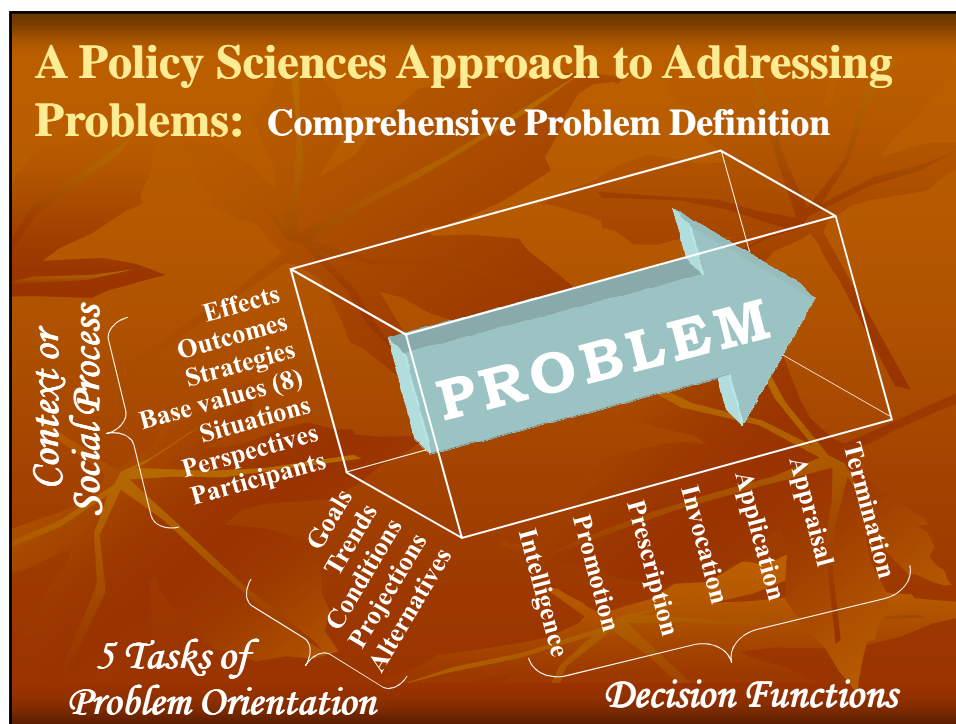
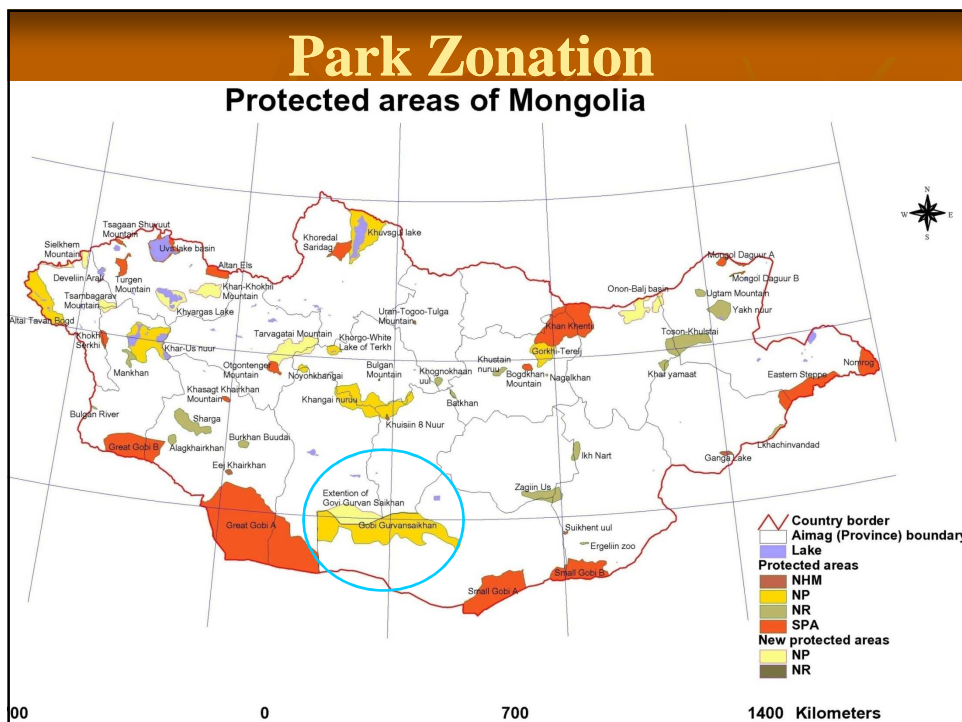
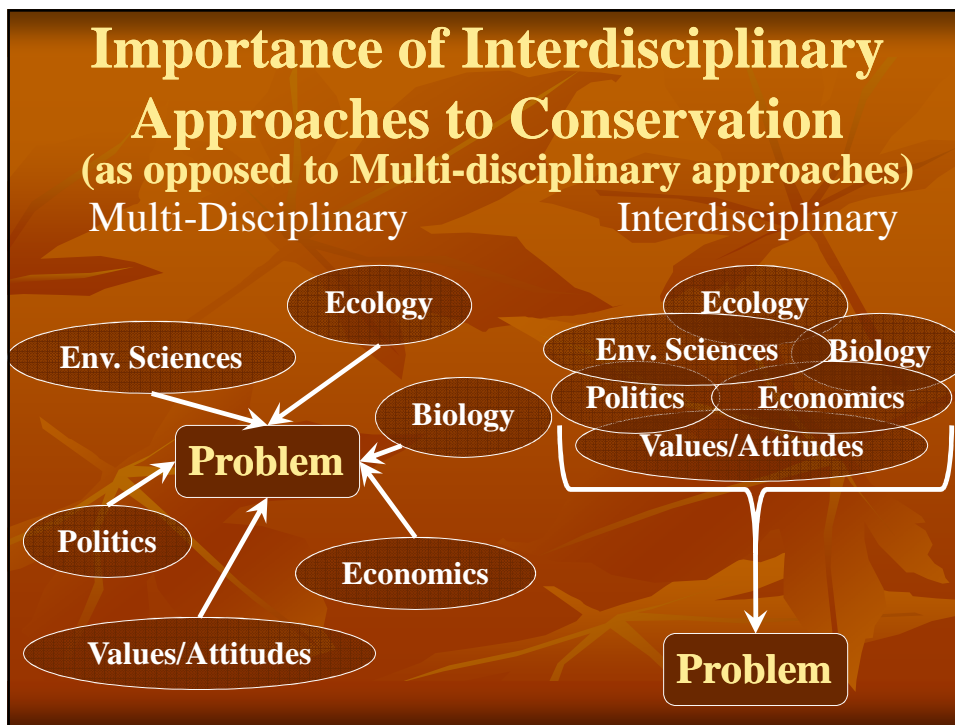


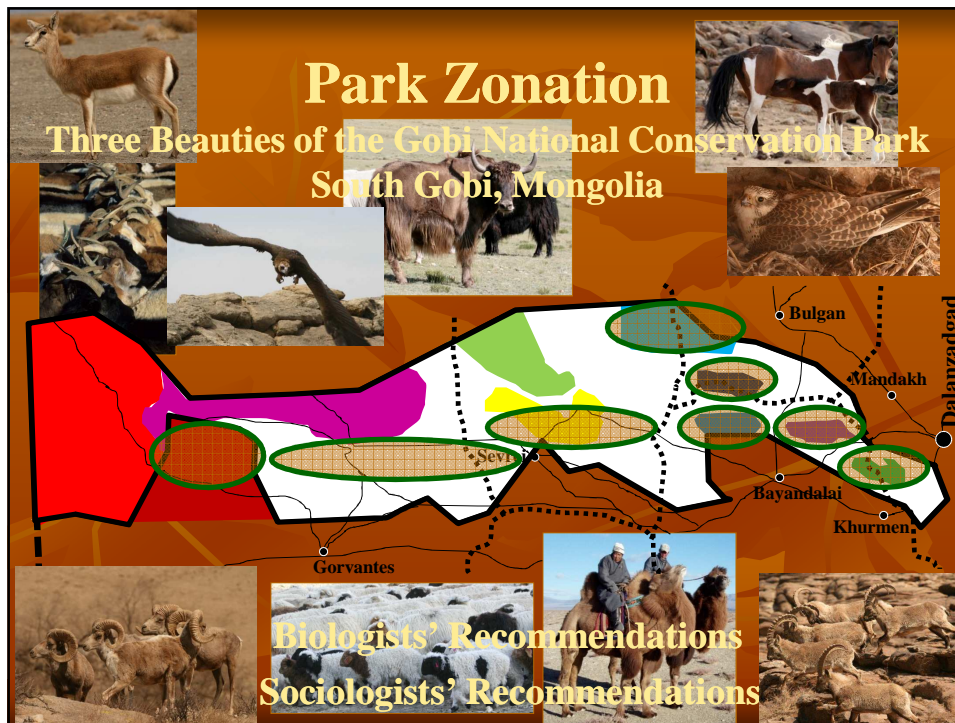
Integrating Social Science Considerations into Conservation Programs

Richard P. Reading
Denver Zoological Foundation









Importance of Values & Attitudes

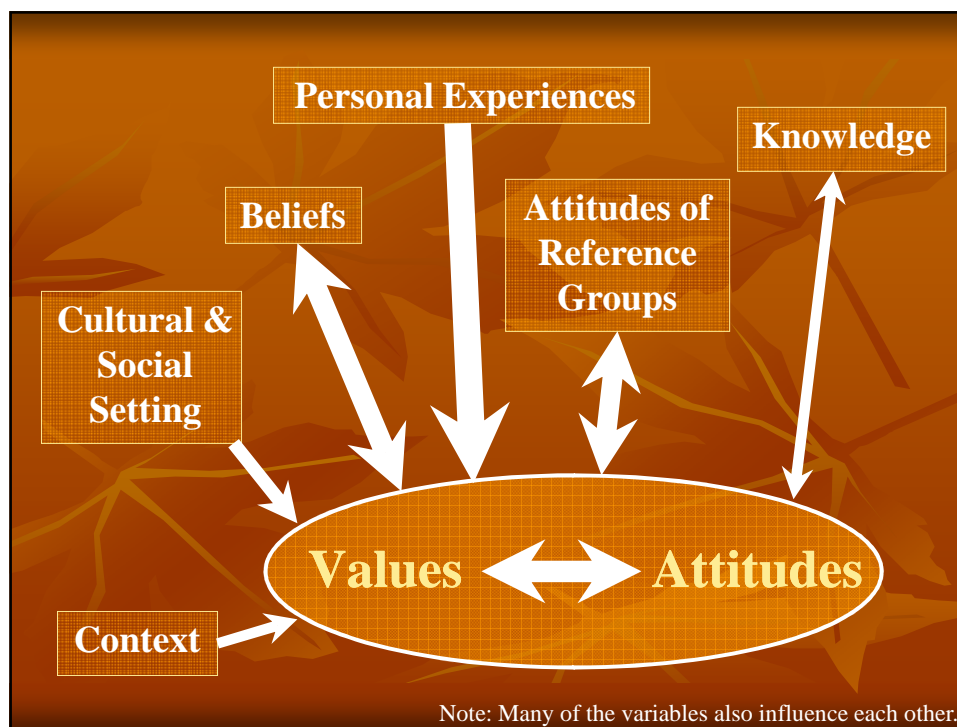
A Few Definitions:

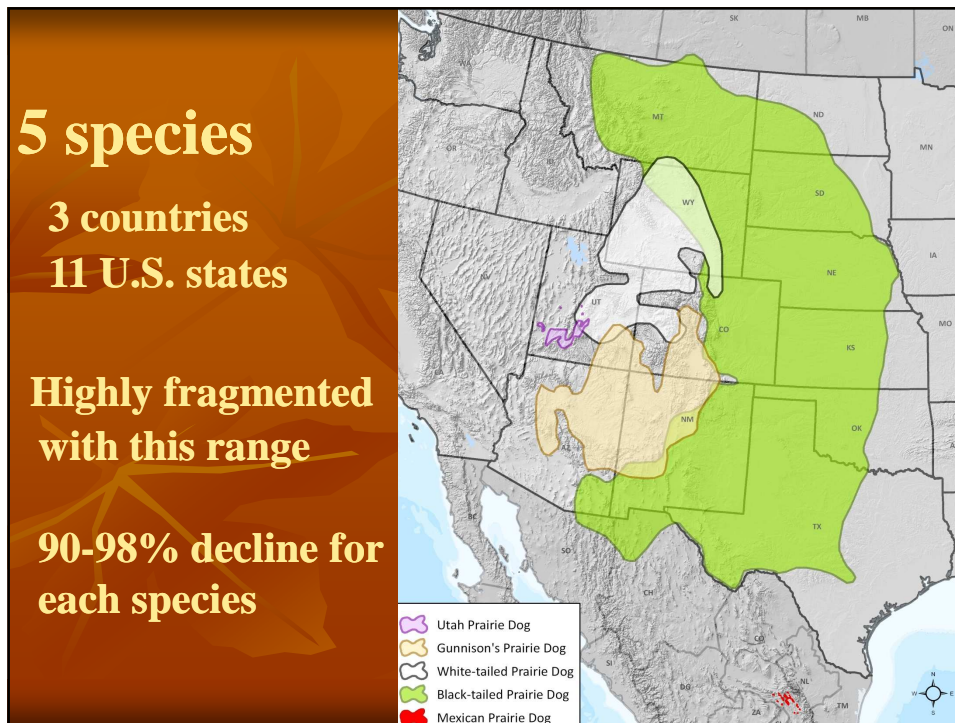
Value: A preferred mode of behaving (e.g., honesty) or existing (e.g., equality)

Attitude: Affinity or aversion toward an issue or entity (based on what a person senses and understands about how that issue or entity affects a given situation)

Context: A person's situation (frequency of exposure to an issue, customs, peer pressure, socialization by institutions, mood, and physical state)

Knowledge: The acquisition, comprehension, & retention of information (depends on exposure, receptivity, perception, interpretation, and memory)

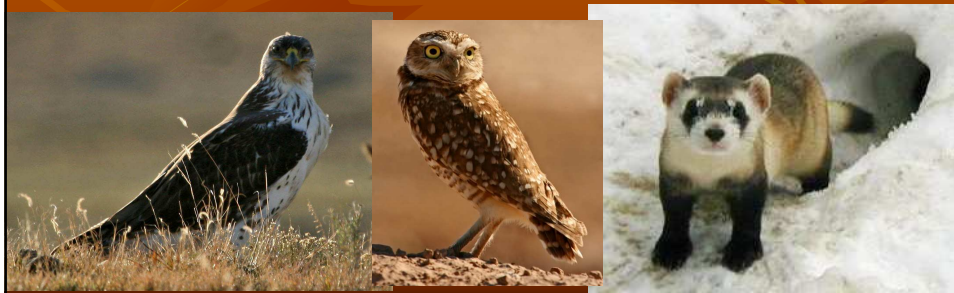


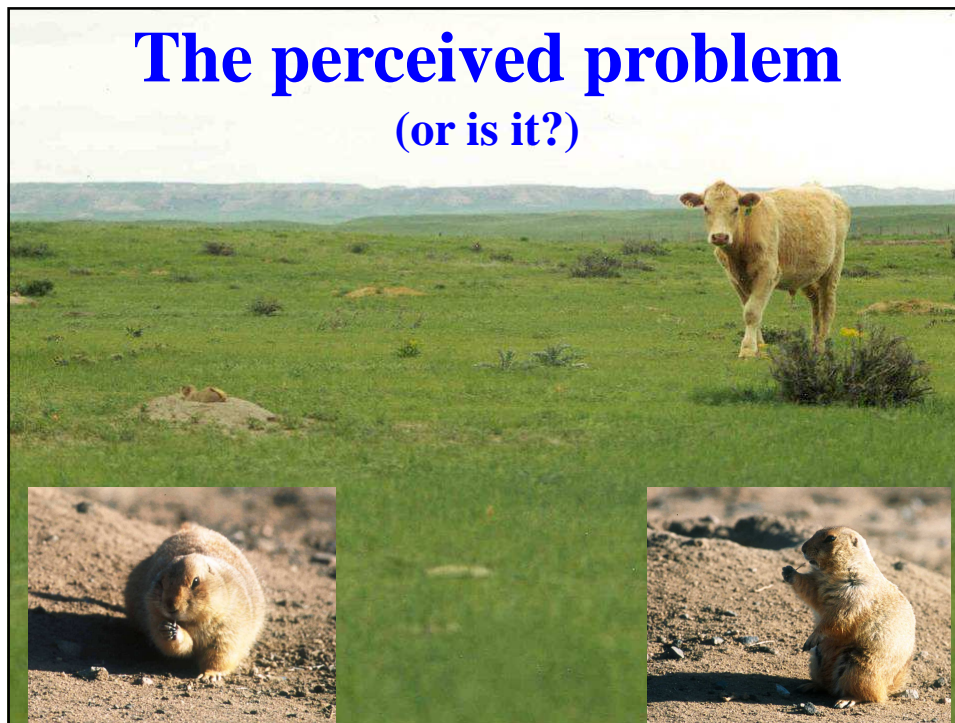


Prairie Dogs = Keystone Species

Ecosystem Engineers that influence Ecosystem Attributes & Processes:

- Serve as Prey (& home of prey) for several predators
- Provide Habitat: foraging, shelter, denning, & nesting
- Alter Soil Chemistry, Plant Species Composition, Vegetation Structure, Water & Nutrient Cycling





Conflict Among Stakeholders



Attitudinal Surveys of Key Stakeholders Toward Prairie Dogs

Key Findings:

1) Results that "Everyone Knew"

- Ranchers & rural residents believe that prairie dogs are pests that compete with their livestock for food
- Many urban residents believe that prairie dogs are pests that dig up yards, gardens, parks, and sports fields and get in the way of development
- Some urban residents like to watch prairie dogs and believe they are ecologically important

Attitudinal Surveys of Key Stakeholders Toward Prairie Dogs

2) More Subtle Findings:

Ranchers & others dislike prairie dogs because

- They symbolize poor land stewardship
- Of fears of loss of control over public and private grazing lands (has been a gradual erosion of historical control)
- Wildlife conservation, esp. for species on the ESA, might lead to ranching restrictions (has happened with other species)
- Conservation of prairie dogs represents one more a threat to rural western lifestyles
 - That lifestyle is under threat from multiple sources
 - The number of ranchers is decreasing
 - Hard to blame yourself for increasing range problems

Agencies' Response:

➤ Ignored the Social Science Data

- Federal Coordinator: "Prairie dog conservation is easy, we just have to pay the ranchers."

➤ Developed a Simplistic Conservation Efforts

- Education Program to teach ranchers that PDs and cattle compete much less than thought (3-6%)
- Financial Incentive Program to pay ranchers that allow PDs to live on their land

Ranchers' Response:

- Disbelief (we will revisit this)
- Counties threatened to pass regulations designed to discourage participation in the program

Continued Conflict

Because John Thune wants 'em gone

Daschle sides with Environmentalists

When Tom Daschle comes home at election time he likes to talk about all the "so-called" clout he has in Washington. Now he is even peddling some new get tough talk when it comes to controlling the prairie dogs that are overrunning our West River lands.

But the truth is Tom Daschle has not done one thing to solve this problem. In fact, Daschle's voting record is so friendly toward the left-wing environmentalists the Sierra Club gave him an 83% approval rating.

Tom Daschle has lost his way so badly that he voted with the left-wing League of Conservation Voters 2 out of every 3 votes they recorded.

No wonder the varmints are heading to the polls to vote for him.

John Thune sides with West River folks

John Thune sees these prairie dogs for what they are: a "West River menace" that must be hunted down and killed. These dogs are hurting the West River ranch economy.

... John Thune on Tuesday proposed a one-mile buffer zone on federal grasslands to keep prairie dogs from encroaching onto adjacent private rangeland. Thune said that, if elected, he would renew efforts begun during his tenure in the U.S. House to amend the federal Endangered Species Act and to oppose the listing of prairie dogs as a threatened species. But he said, western South Dakota ranchers can't wait for that.

"There's a sense of urgency out there with the economic impact that prairie dogs are having on our landowners' ability to make a living," Thune said. "Ranchers ought not to have to fight prairie dogs for grass for their livestock."

June 30, 2004

Their very existence threatens our way of life as they carry and spread disease.

As our Senator, John Thune will make eradicating the prairie dog problem a top priority.

The dogs are lining up to vote for Tom Daschle...

It's Time for a Change
John Thune for U.S. Senate

Issues in Stakeholder Relations Resurfaced in Other Programs



Attitudinal Surveys of Key Stakeholders Toward Wolves

Similar Key Findings:

- Ranchers don't like wolves b/c they eat livestock
- Hunters don't like wolves b/c they eat elk & deer
- Rural residents are afraid that wolves will eat pets and children
- Many people like to watch wolves and believe they are ecologically important

Attitudinal Surveys of Key Stakeholders Toward Wolves

More Subtle Findings:

Ranchers & others dislike wolves because

- Of fears of loss of control over public and private grazing lands (has been a gradual erosion of historical control)
- Wildlife conservation, esp. for species on the ESA, might lead to ranching restrictions (has happened with other species)
- Having wolves requires changes in management
- Conservation of wolves represents one more threat to rural western lifestyles
 - That lifestyle is under threat from multiple sources
 - The number of ranchers is decreasing
 - Hard to blame yourself for increasing range problems

Conservationists' Response:

- **Financial Compensation Program** (Defenders of Wildlife (NGO) and government agencies) to pay ranchers for livestock kills due to wolves
- **Education Program** using information and persuasive arguments for ranchers and others

Outcome:

- **Increased support among the general public**
- **No change in support among ranchers and hunters**
- **Ranchers and hunters had among the highest knowledge scores (after conservationists) prior to education program**

Effects of Persuasive Arguments

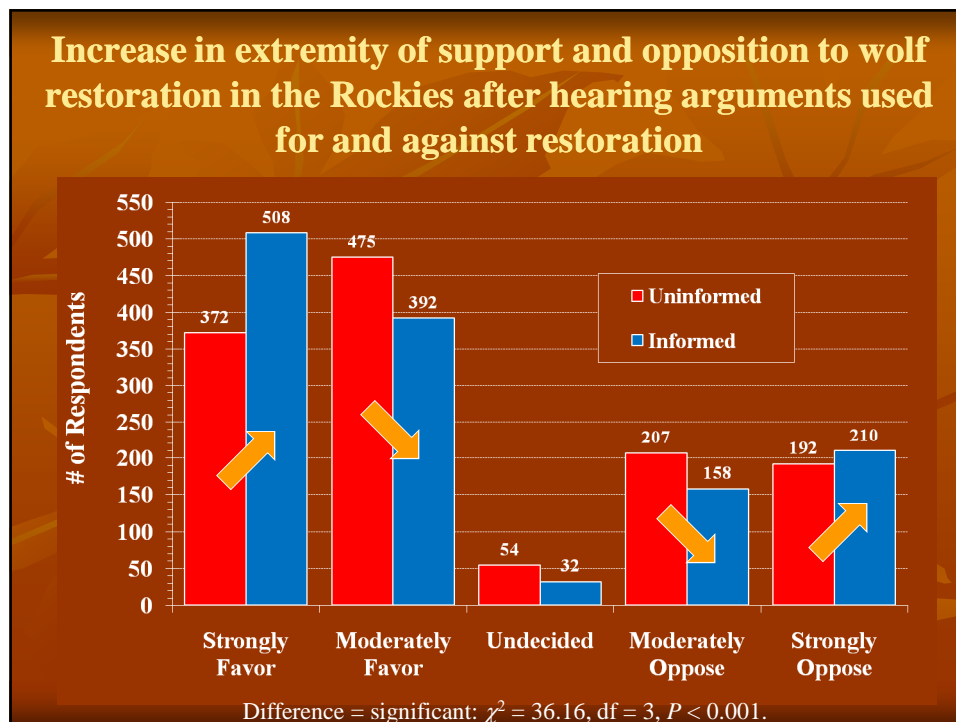
Attitudes Before & After hearing persuasive arguments

Examples of Pro Arguments

- Wolves are God's creatures that have as much right to occupy the wilderness as ranchers or hikers
- The presence of wolves helps keep the population of elk and deer healthy by thinning out the sick and weak and leaving the strong to reproduce
- We owe it to our children and grandchildren to maintain the environmental health of this region by keeping wildlife like wolves alive and well

Examples of Anti Arguments

- Wolves attack and can kill domestic livestock such as cattle and sheep and lead to financial losses for ranchers and farmers
- Reintroducing wolves into the region will hurt hunting by reducing available elk and deer populations
- We should not waste taxpayer dollars on a program to reintroduce wolves to the region



Importance of Information-based Knowledge to Attitudes is Often Over-Estimated


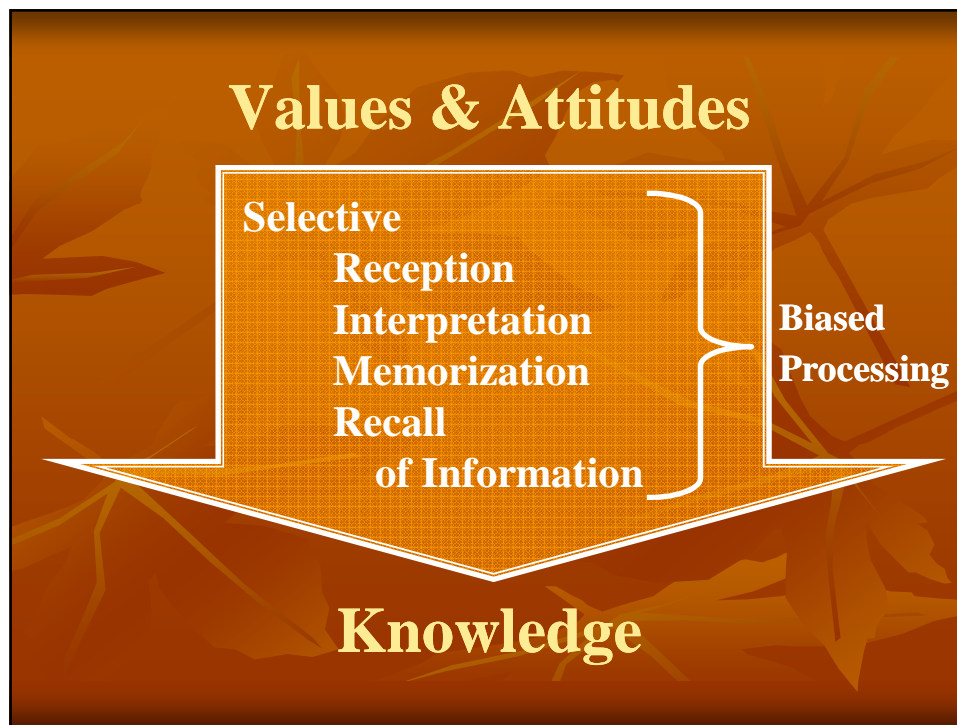


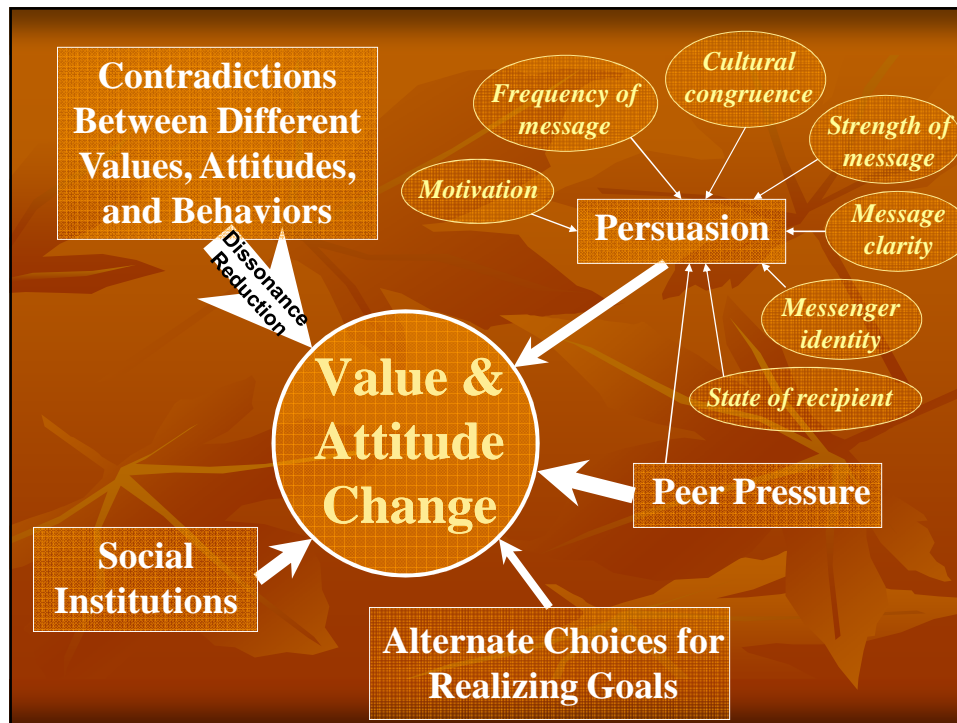
Photo: J. Proctor

- Especially true for people who value knowledge highly (educators, scientists, etc).
- Many kinds of knowledge exist
- Information receptivity depends on many factors, especially with poor, ambiguous, complex, or "extreme" information
- Values and attitudes influence knowledge; not just vice versa.



Influencing Perspectives

- **Often very difficult, especially for strongly held values and attitudes**
- **Best success at influencing people = people with poorly developed attitudes**
- **Value & attitude change is most successful when people become aware of internal inconsistencies between values, attitudes, and behaviors**
- **People usually change peripheral values & attitudes to better reflect core values**
- **Values influenced by several factors**



Is it Ethical to Induce Value & Attitude Change?

- Not working for change = accepting the status quo (in this case loss of Biodiversity)
- Opponents try to take the “moral high ground” but really simply opposing change
- We should respect the right of people to hold different values and attitudes . . . But
- Everyone constantly tries to influence others
- Everyone believes their value system is best (or they would change it!)

Recommendations

on Considerations of Values and Attitudes

- ⇒ Turn to Social Scientists & the Pedagogical Literature for assistance
- ⇒ Use Multiple Studies & Multiple Methods:
 - ✦ Interdisciplinary approaches, NOT multi-disciplinary
 - ✦ Different methods to cross-validate results,
 - ✦ Short-term & Long-term studies (to track how long impacts last)
- ⇒ Recognize the difficulty in inducing value, attitude, & behavioral change, so . . .

Recommendations

- ⇒ Focus on areas that offer the most hope of affecting *behavioral* change (changes in values, especially core values are very difficult):
 - ✦ Children
 - ✦ People (stakeholder groups) with poorly developed values & attitudes toward animals and nature conservation
- ⇒ Developing strong education and outreach programs that do more than provide information and persuasive messages
 - ✦ i.e., work on positive *experiences*

Conclusions

- ⇒ Conservation problems are primarily social, economic, and political in nature
- ⇒ Therefore, Biology/Ecology is not sufficient
 - ★ Importance of truly interdisciplinary (not multi-disciplinary) approaches (i.e. include social sciences)
 - ★ Involve experts trained in the social sciences
 - ★ Great value to Policy Sciences approach
- ⇒ Hopefully, I illustrated the importance of considering values and attitudes
- ⇒ I could give similar talks on considerations of organizations, politics, economics, and more

Thank You!

for your attention

**& to the Organizers
for inviting me**



Photos: John Hoogland, Lauren McCain, Jonathan Proctor, Rich Reading, Anne Rohrer, Nicole Rosmarino, & David Stern