

A painting of a cougar running across a red dirt path in a mountainous landscape. The cougar is in the foreground, running towards the right. The background shows a valley with a river and mountains under a blue sky.

Humans, Carnivores, and Nature:

A Study of Public Perceptions of
Large Carnivores and Nature in
the United States and Canada

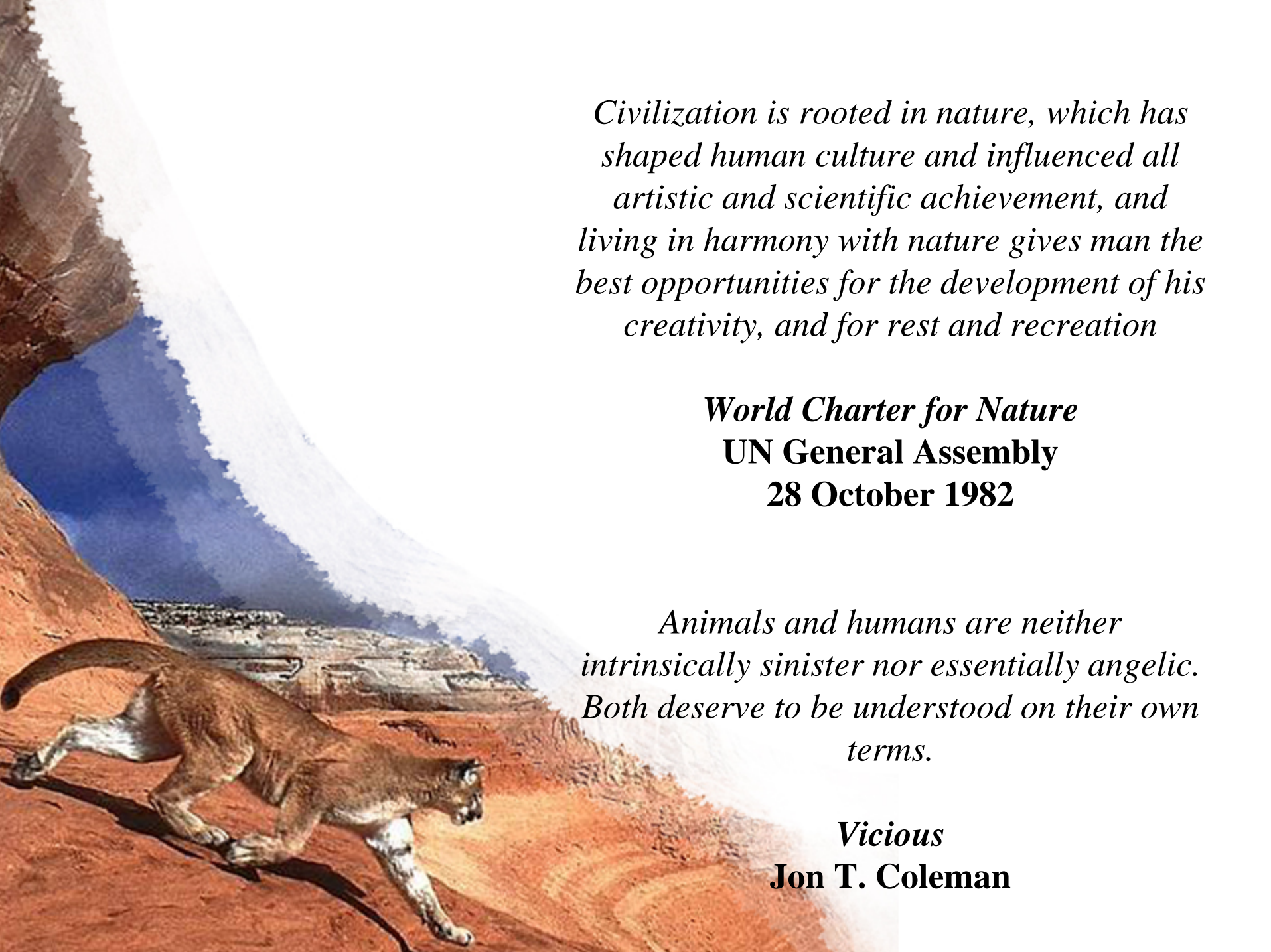
Christopher W. Peterson

Presented on May 27, 2005

In Partial Completion of the MA in Environmental Studies

Center for Environmental Studies

Brown University

A painting of a cougar running across a red dirt path in a mountainous landscape. The cougar is in the foreground, running towards the right. The background shows a valley with a river and mountains under a blue sky.

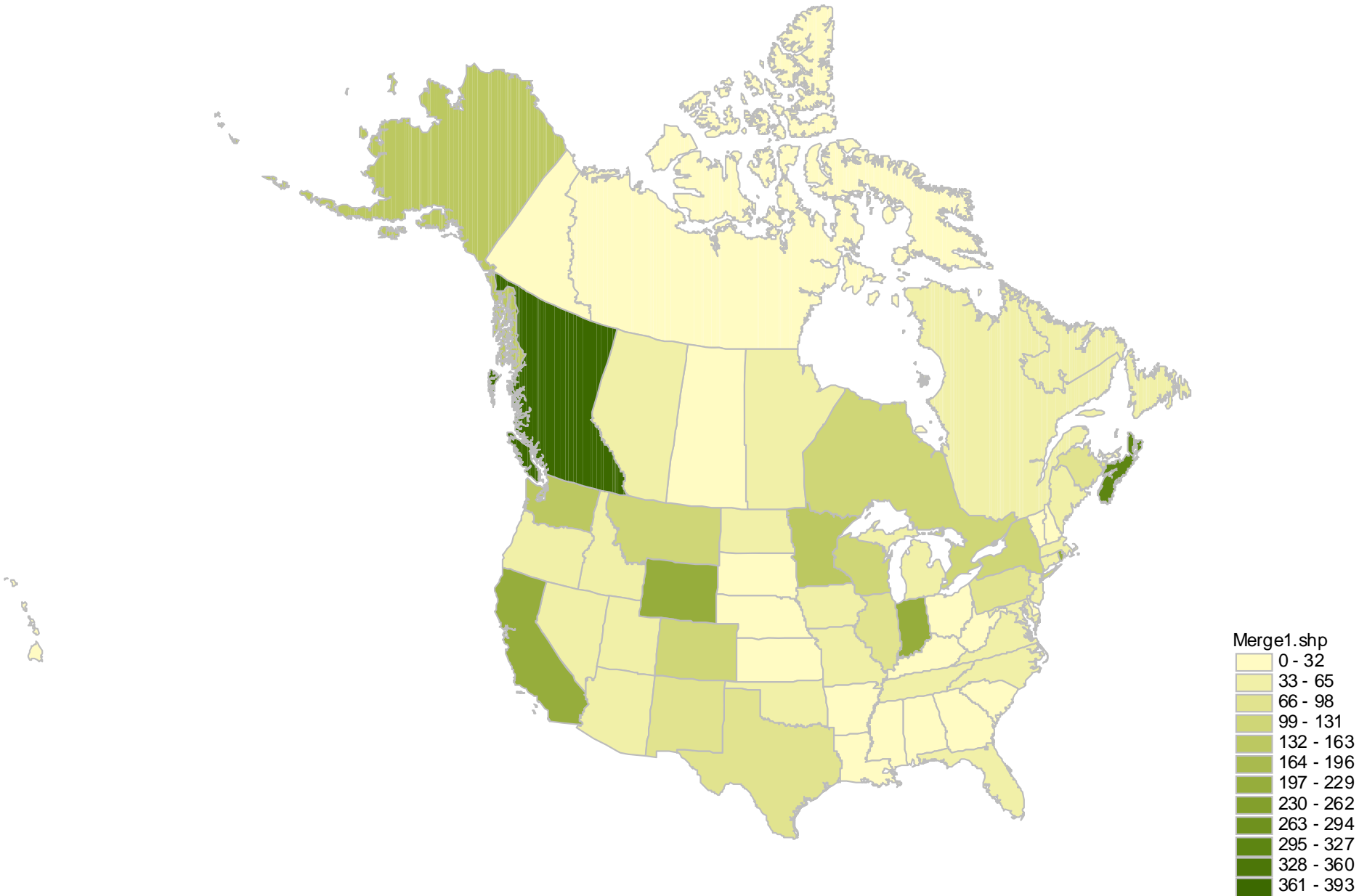
Civilization is rooted in nature, which has shaped human culture and influenced all artistic and scientific achievement, and living in harmony with nature gives man the best opportunities for the development of his creativity, and for rest and recreation

World Charter for Nature
UN General Assembly
28 October 1982

Animals and humans are neither intrinsically sinister nor essentially angelic. Both deserve to be understood on their own terms.

Vicious
Jon T. Coleman

What province/state do you currently live in? (number of responses)



Scapegoating

**We're
Moving to the
Cities**



**Moral
Revolution**

**Changing
Concepts of
Wilderness
and Nature**

Grizzly Sow w/Cub



Bear Eating a Fish



Wolf Lying in the Snow



Man Feeding a Bear



Dead Cougar Lying in the Bed of a Truck



Small Pack of Wolves Feeding on a Deer



Cougar Standing in Snow



Dead Wolf Lying on Examination Table



Female Cougar w/Offspring



Bear Raiding a Dumpster



Wolf Snarling



Dead Bear Posed w/Hunter





Blood





**What Actually
Happened?**





Knowledge

1. Carnivores are a valuable part of the world we live in.
2. It is important for people to protect carnivores for future generations.
3. It is not important to have carnivores in my state/province because they have them in other parts of North America.
4. It is important to protect carnivores even if I will never see one in the wild.
5. I am afraid of carnivores.
6. People are afraid of carnivores.
7. People should be afraid of carnivores.
8. Carnivores are dangerous to people.
9. Carnivores and humans can coexist.
10. If a carnivore kills a person it should be killed.
11. If a carnivore kills a pet it should be killed
12. If a carnivore destroys livestock it should be killed.
13. People should be reimbursed for damages caused by carnivores.
14. Other wild animals should be protected from carnivores.
15. It is wrong to put the needs of humans above the needs of other animals.
16. It is wrong to put the needs of animals above the needs of humans.

Control

Fear

Respect

Providence Skyline



Researcher w/Dead Elk



Harvest



Sidewalk w/Flowers



Brush Fire



Mesa Verde



Old Saloon



Iowa



Buffalo



Abandoned Prison



Badlands



Abandoned Bus



Car Engine



Prairie



Lighthouse



Cemetery



Irene the Cat



Hikers



| Label | Statement Pairs | |
|-------------------|--|---|
| Purposeful | Nature is purposeful in its actions. | Nature is made up of things that happen randomly. |
| Important | Nature is important. | Nature is unimportant. |
| Fact | Nature is a single fact like gravity. | Nature can be more than one idea. |
| Exhausted | Nature should be used until exhausted. | Nature should be preserved. |
| Morality | Morality is part of Nature. | Morality is not part of Nature |
| People | Nature is separate from people. | Nature includes people. |
| Pure | Nature is pure. | Nature is corrupted. |
| Spiritual | Nature is part of the spiritual world. | Nature is just part of the physical world. |
| Beautiful | Nature is beautiful. | There is nothing attractive about Nature. |
| Fragile | Nature is fragile. | Nature is strong |
| Always | Nature is something, which is always there. | Nature is something, which may not last. |
| Value | Nature is valuable simply because it is there. | Nature is valuable because of the things we can use it for. |
| Control | Nature is controlable. | Nature is uncontrolable. |
| Danger | Nature is dangerous. | Nature is harmless. |

Does Nature Include People?

Percent

50%

40%

30%

20%

10%

n=45

n=181

n=162

n=156

n=430

n=468

n=564

n=2430

n=59

0.00

1.00

2.00

3.00

4.00

5.00

6.00

7.00

8.00

Skip | Excludes People.....Includes People | N/A

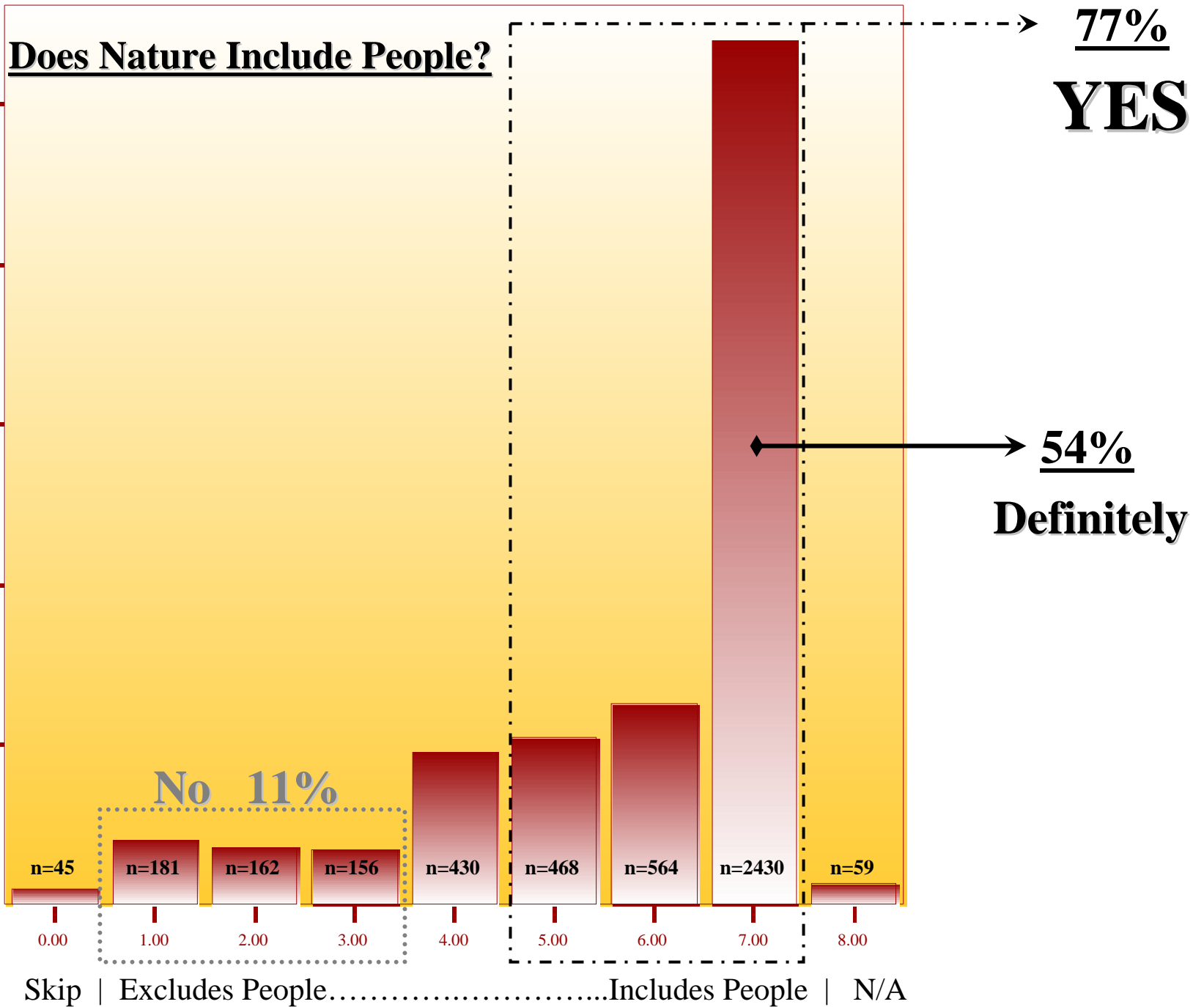
No 11%

77%

YES

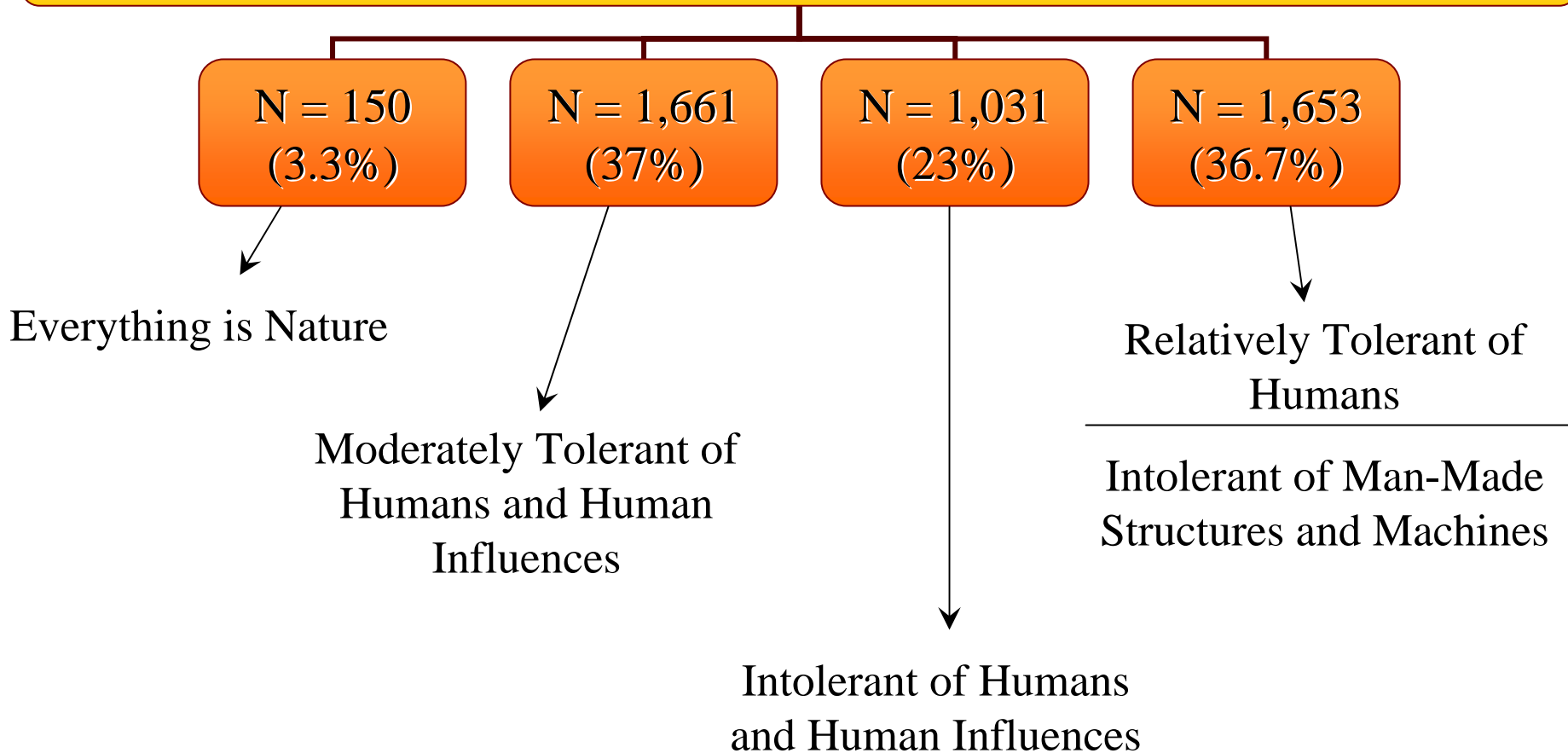
54%

Definitely



Identifying Nature in Photographs

Sample Population Responses to Nature Photographs (N = 4,495)





Nature

Hunters who are members of hunting organizations and who currently reside in Alaska or British Columbia. (N = 218) (NWHunters)

Members of property rights organizations who self-identify as 'wise use' advocates. (N = 57) (PRWU)

Self-identified environmentalists who are members of environmental organizations, and who have never hunted. (N = 763) (Envis)

Mothers who have never engaged in hunting, trapping or fishing.
(N = 140) (Moms)

Table 5.9 "People should be allowed to hunt." (%)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------|------|------------|----------|----------|-------------|-------------|-------------|-------------|
| Entire Sample Population | | 4.6 | 7 | 8 | 15.4 | 15.4 | 13.4 | 35.4 |
| NWHunters | 0.5 | 0.5 | 0 | 0 | 0.5 | 0.5 | 2.8 | 95.4 |
| PRWU | 10.6 | 5.3 | 1.8 | 3.5 | 3.5 | 1.8 | 8.8 | 71.9 |
| Envis | 27.5 | 6.8 | 9.8 | 10.9 | 21.6 | 18 | 15.7 | 17 |
| Moms | 42.8 | 19.3 | 12.1 | 11.4 | 27.1 | 14.3 | 4.3 | 10.7 |
| CSC1 | 20.6 | 4.7 | 7.5 | 8.4 | 16.4 | 16.7 | 14.7 | 31.3 |
| CSC2 | 14.9 | 4.4 | 4.4 | 6.1 | 10.3 | 8.9 | 6.8 | 57.2 |
| NPC1 | 15.3 | 3.3 | 2.7 | 9.3 | 10 | 9.3 | 10.7 | 53.3 |
| NPC2 | 20.4 | 4.7 | 7.6 | 8.1 | 14.8 | 15.2 | 13.5 | 35.5 |
| NPC3 | 24.3 | 6.9 | 8.5 | 8.9 | 16.8 | 15.5 | 11.3 | 30.7 |
| NPC4 | 16.3 | 3.3 | 5.7 | 7.3 | 15.7 | 16.2 | 14.9 | 36.5 |
| NSC1 | 20.2 | 4.7 | 7.3 | 8.2 | 15.7 | 15.8 | 13.6 | 34 |
| NSC2 | 14.6 | 4.3 | 4 | 6.3 | 12.1 | 12.1 | 11.3 | 49.4 |

Disagree at some level

Table 5.10 Gender and Groups (%)

| | Male | Female |
|---------------------------------|-------------|-------------|
| Entire Sample Population | 44.1 | 55.9 |
| NWHunters | 94.5 | 5.5 |
| PRWU | 86 | 14 |
| Envis | 24 | 76 |
| Moms | 0 | 100 |
| CSC1 | 40.5 | 59.1 |
| CSC2 | 62.3 | 36.9 |
| NPC1 | 62.4 | 37.6 |
| NPC2 | 37.6 | 61.8 |
| NPC3 | 45.4 | 54.6 |
| NPC4 | 48 | 52 |
| NSC1 | 43 | 57 |
| NSC2 | 56.2 | 42.6 |

Table 5.11 Urban, Suburban, Rural and Groups (%)

| | Raised | | | Reside | | |
|---------------------------------|-------------|-------------|-----------|-----------|-------------|-------------|
| | Urban | Suburban | Rural | Urban | Suburban | Rural |
| Entire Sample Population | 18.5 | 46.5 | 35 | 38 | 38.5 | 23.5 |
| NWHunters | 13.8 | 31.7 | 53.7 | 23.9 | 34.9 | 41.3 |
| PRWU | 12.3 | 33.3 | 52.6 | 19.3 | 31.6 | 49.1 |
| Envis | 22 | 54.4 | 22.4 | 44.8 | 36.4 | 18 |
| Moms | 34.3 | 46.4 | 17.9 | 27.9 | 47.1 | 25 |
| CSC1 | 18.9 | 47.6 | 32.4 | 39.5 | 38.1 | 21.7 |
| CSC2 | 14.4 | 37 | 45.6 | 27.5 | 38.9 | 31.8 |
| NPC1 | 18.7 | 40 | 41.3 | 46 | 27.3 | 25.3 |
| NPC2 | 16.4 | 47.9 | 34.3 | 34.9 | 42.3 | 22.3 |
| NPC3 | 21.6 | 43 | 33.6 | 39.5 | 35.7 | 23.3 |
| NPC4 | 17.9 | 46.5 | 34.8 | 38.3 | 36.7 | 24.1 |
| NSC1 | 18.2 | 46.4 | 34.2 | 37.8 | 38.5 | 22.7 |
| NSC2 | 18.9 | 41.1 | 37.5 | 34.8 | 35.3 | 29.2 |

Table 5.12 Who Self-Identifies as an Environmentalist or a Conservationist? (%)

| | Yes | No | Yes | No |
|---------------------------------|-------------|-------------|-------------|-------------|
| Entire Sample Population | 46.5 | 53.5 | 46.9 | 53.1 |
| NWHunters | 29.8 | 70.2 | 63.8 | 36.2 |
| PRWU | 35.1 | 64.9 | 61.4 | 38.6 |
| Envis | 100 | 0 | 67 | 33 |
| Moms | 60 | 40 | 37.9 | 62.1 |
| CSC1 | 50.9 | 49.1 | 48.6 | 51.4 |
| CSC2 | 23 | 77 | 37.6 | 62.4 |
| NPC1 | 50 | 50 | 44.7 | 55.3 |
| NPC2 | 39.9 | 60.1 | 40.2 | 59.8 |
| NPC3 | 47.7 | 52.3 | 45.9 | 54.1 |
| NPC4 | 51.9 | 48.1 | 54.4 | 45.6 |
| NSC1 | 47.2 | 52.8 | 46.9 | 53.1 |
| NSC2 | 38.8 | 61.2 | 45.8 | 54.2 |

105065





Nature: Use the Idea

**Full
Disclosure**

Image Control

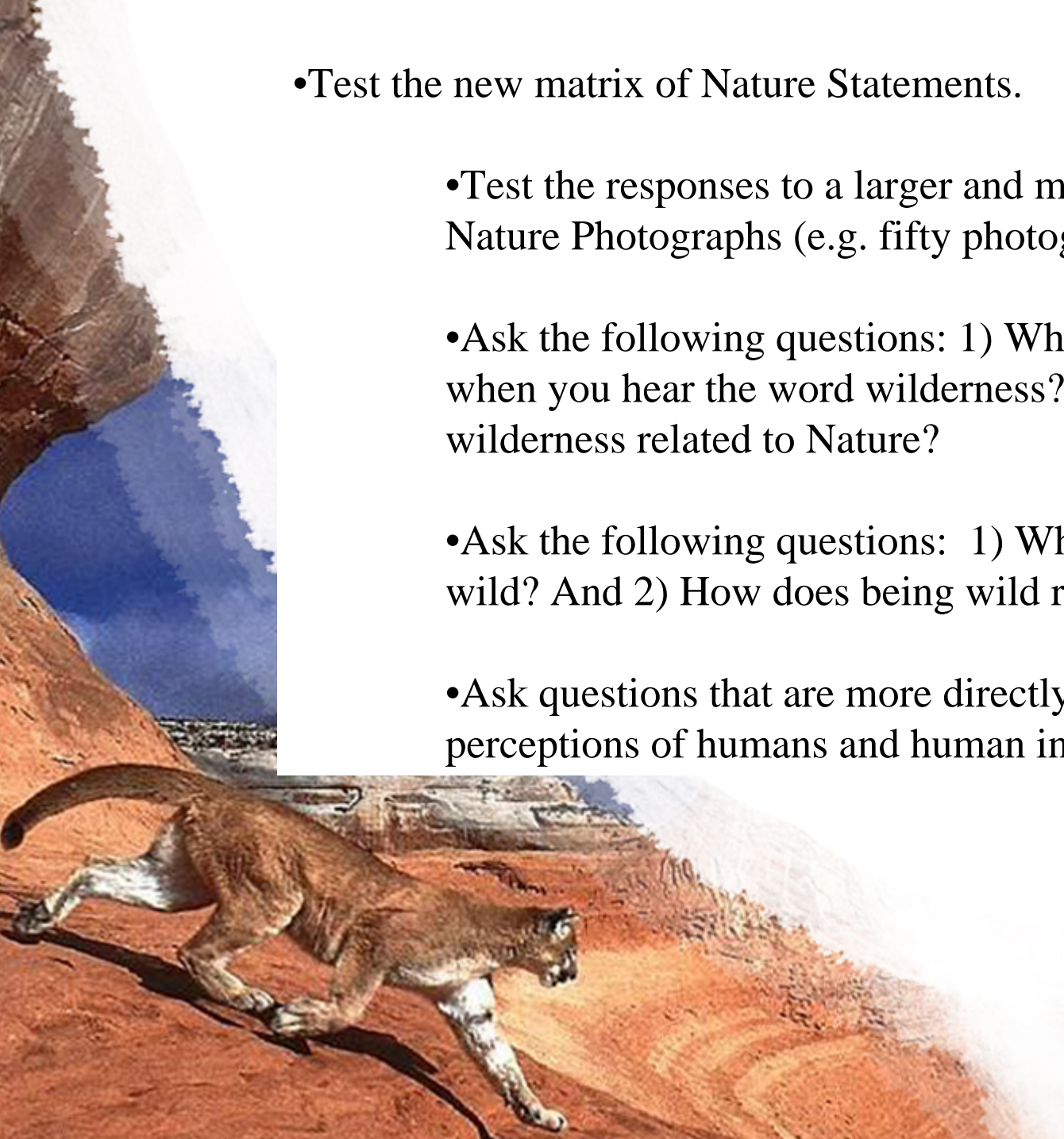
Respect

Knowledge

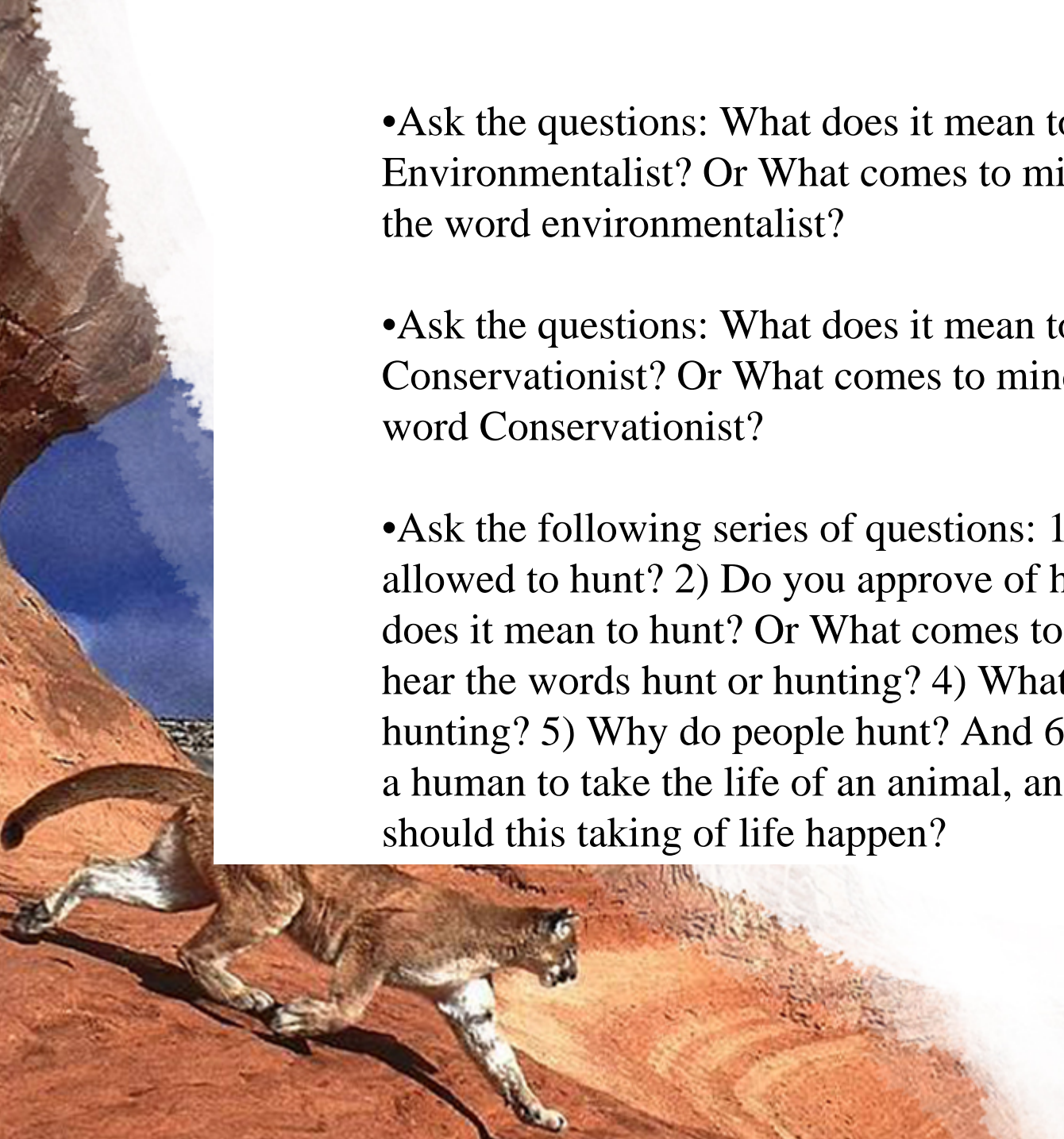
**Do Not Make
Group
Assumptions**



- Test the new matrix of Nature Statements.
 - Test the responses to a larger and more varied sample of Nature Photographs (e.g. fifty photographs).
 - Ask the following questions: 1) What comes to mind when you hear the word wilderness? And 2) How is wilderness related to Nature?
 - Ask the following questions: 1) What does it mean to be wild? And 2) How does being wild relate to Nature?
 - Ask questions that are more directly inquiring into perceptions of humans and human influences in Nature.



- Ask the questions: What does it mean to be an Environmentalist? Or What comes to mind when you hear the word environmentalist?
- Ask the questions: What does it mean to be a Conservationist? Or What comes to mind when you hear the word Conservationist?
- Ask the following series of questions: 1) Should people be allowed to hunt? 2) Do you approve of hunting? 3) What does it mean to hunt? Or What comes to mind when you hear the words hunt or hunting? 4) What is involved in hunting? 5) Why do people hunt? And 6) When is it okay for a human to take the life of an animal, and by what means should this taking of life happen?

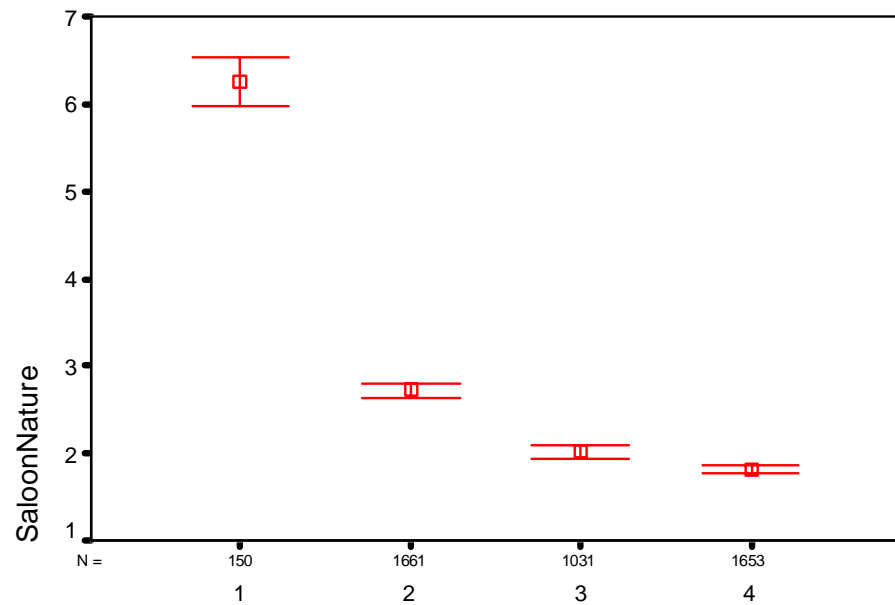
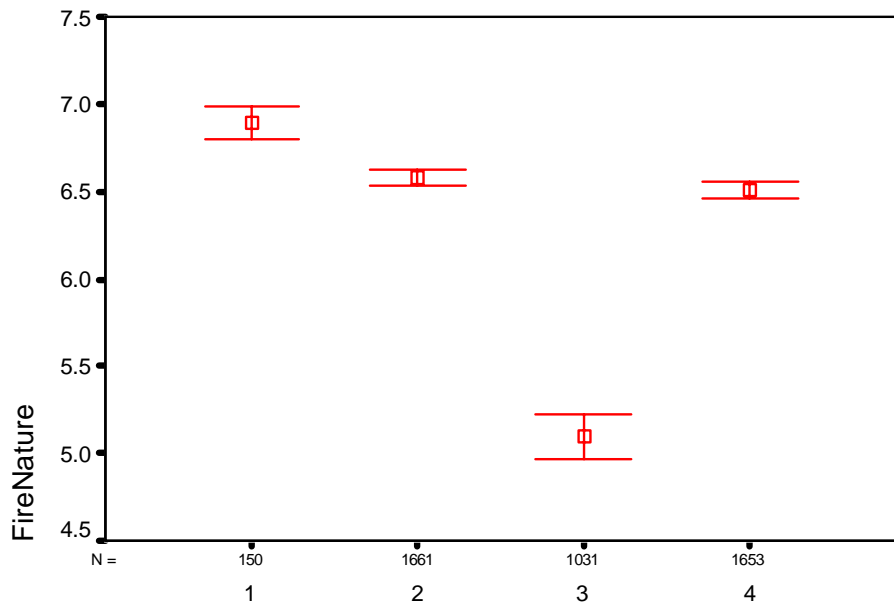
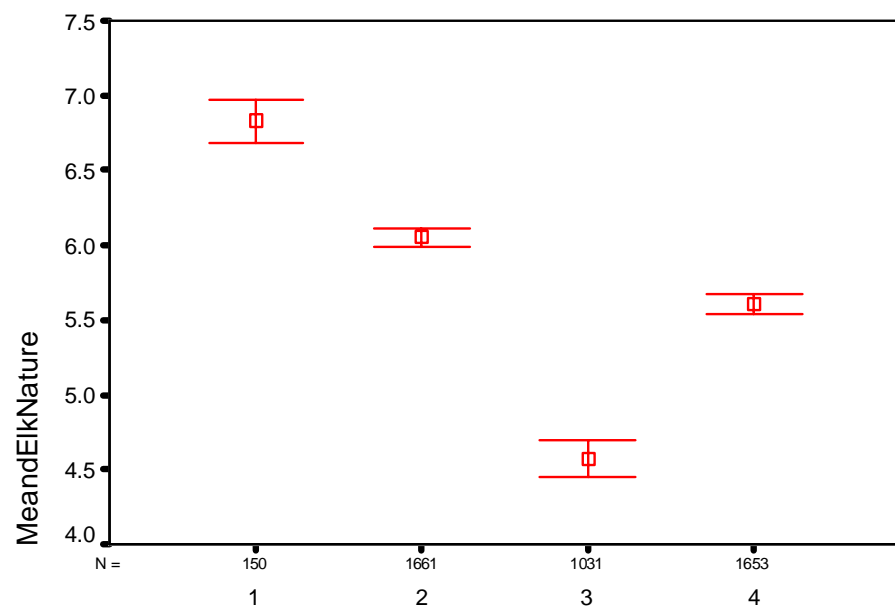
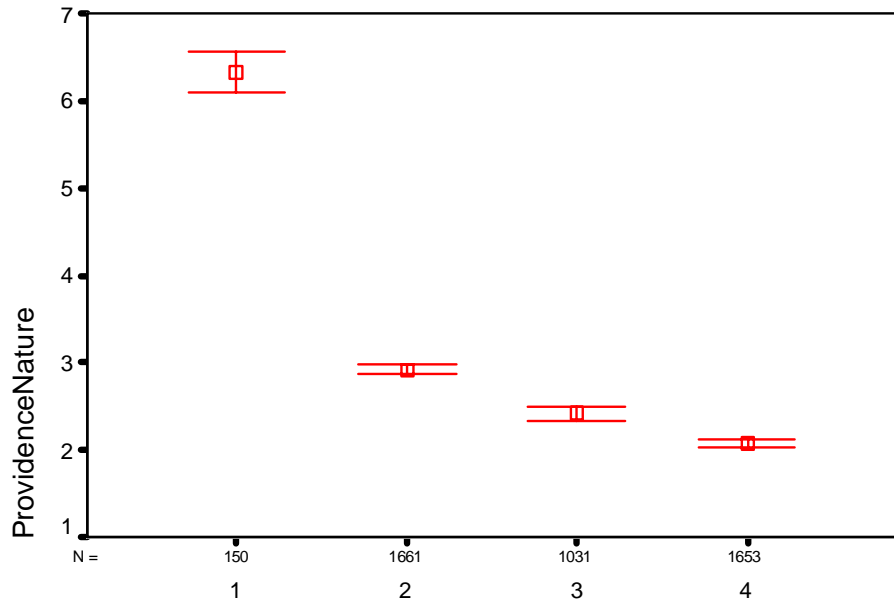


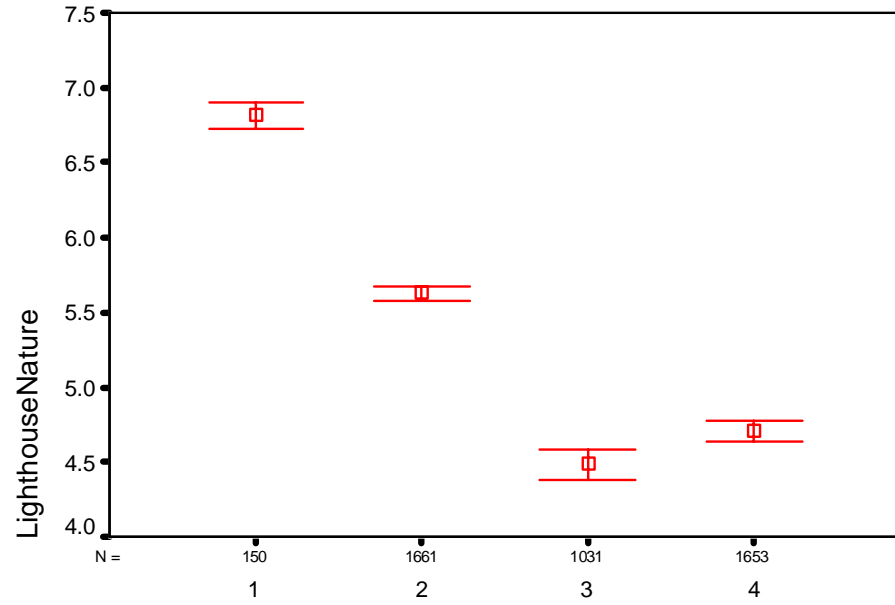
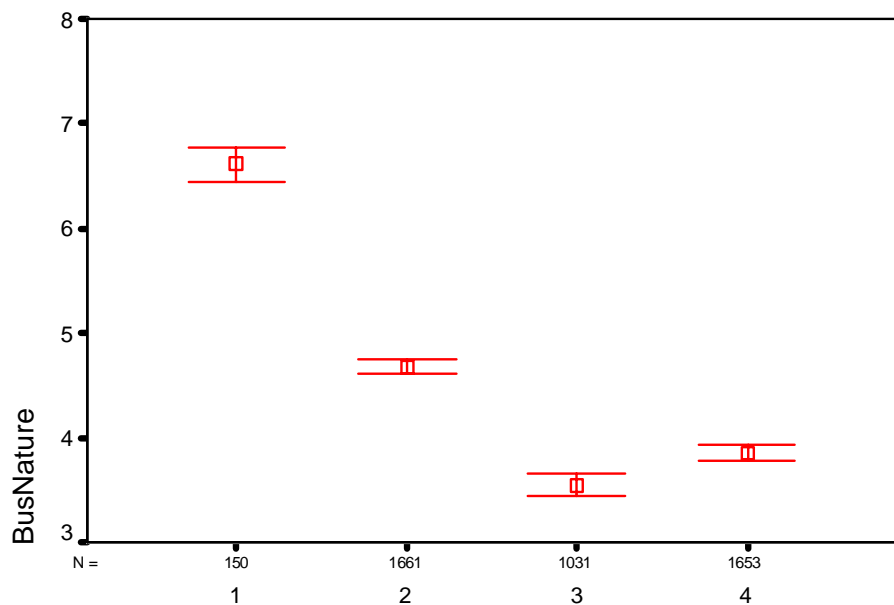
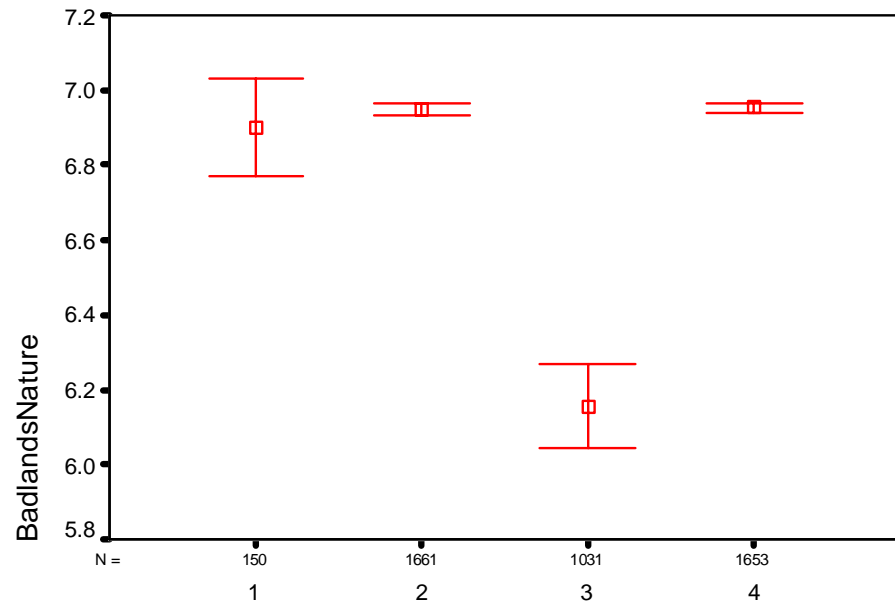
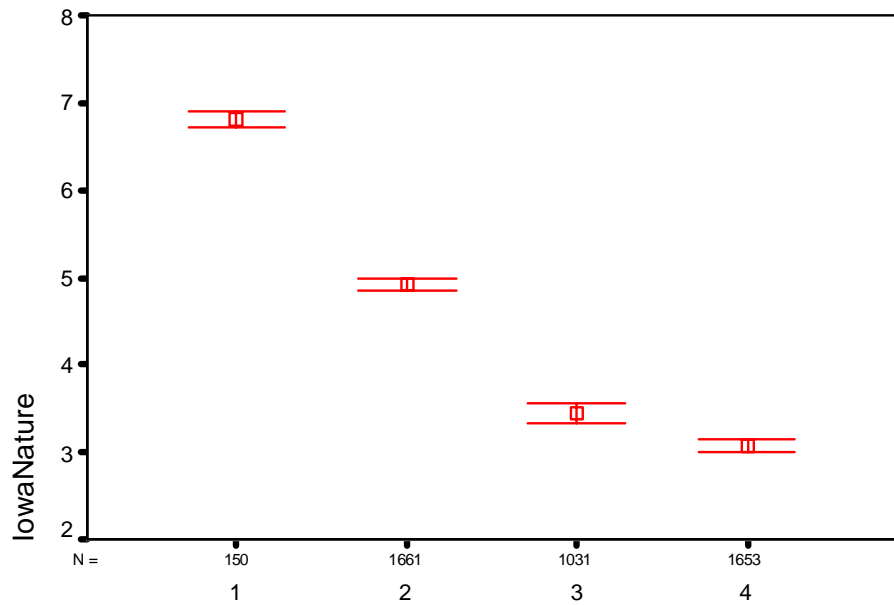
**I would like to extend my deepest
thanks to the 4,500 people who were
so kind as to participate in this
research.**

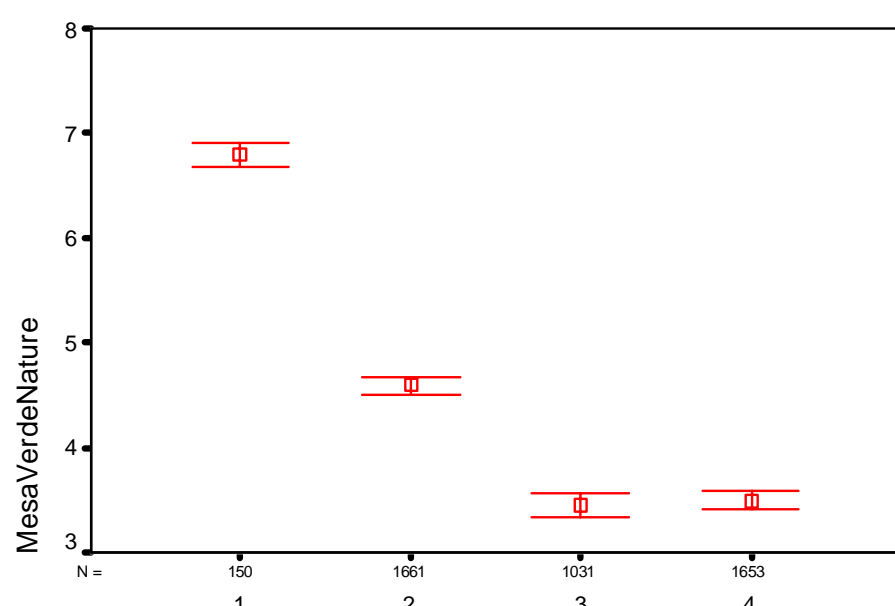
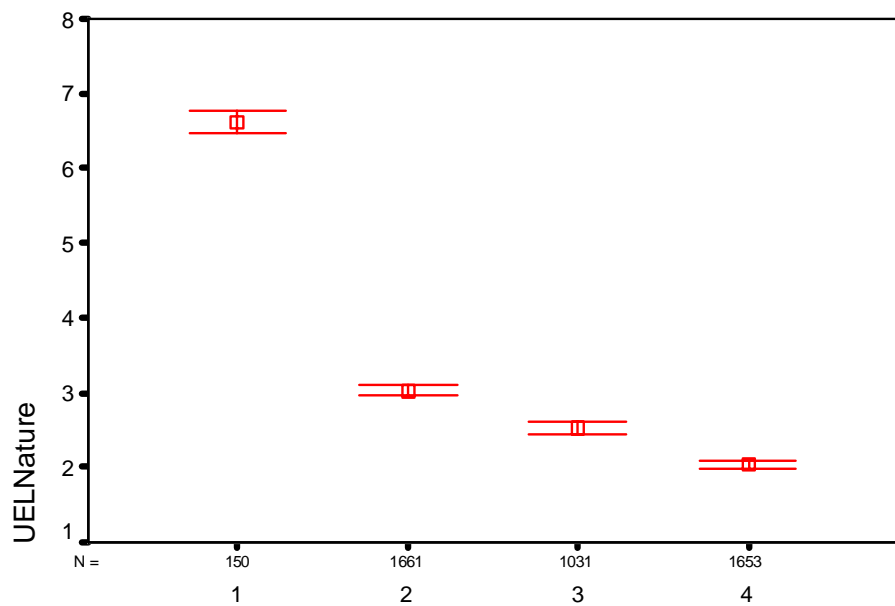
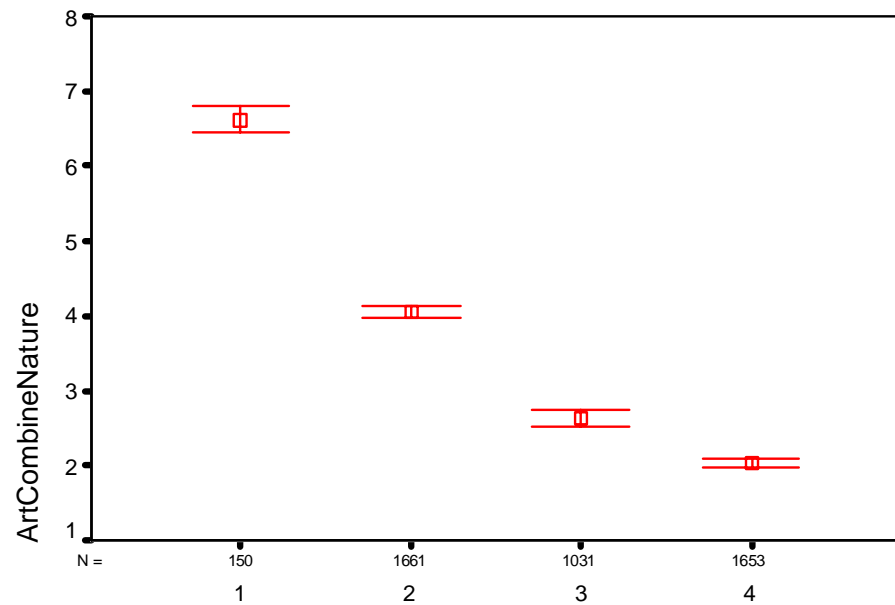
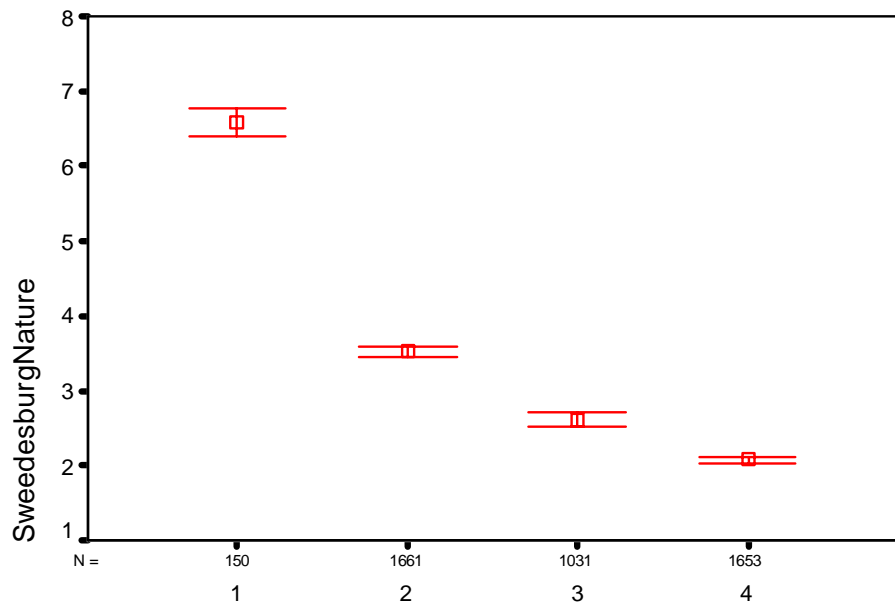
**The British Columbia Wildlife Federation
The International Wolf Center
Audubon Arizona
Audubon Society of Rhode Island
Selkirk Conservation Alliance
Arkansas Canoe Club
Kamloops Fish and Game Association
Unknown Individuals in Indiana and Nova Scotia**

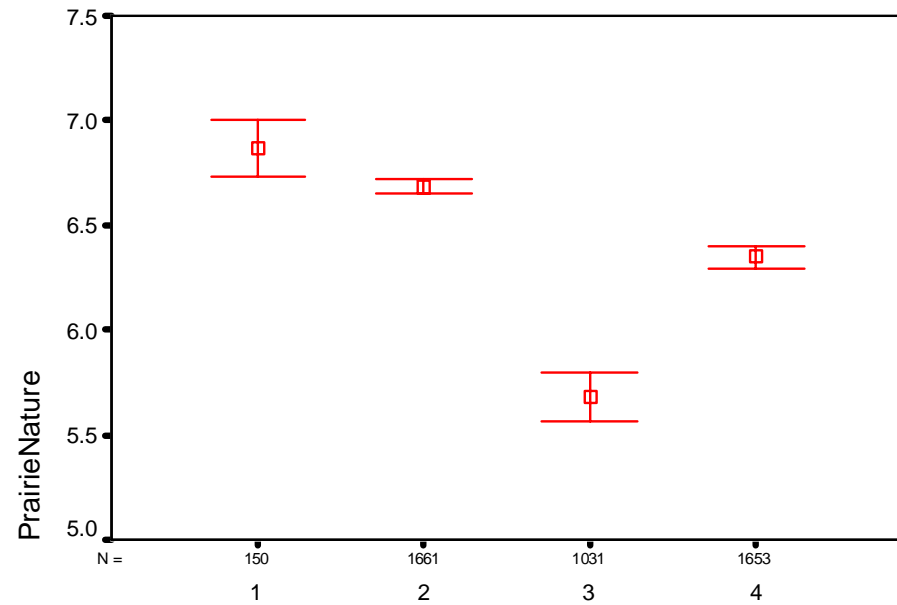
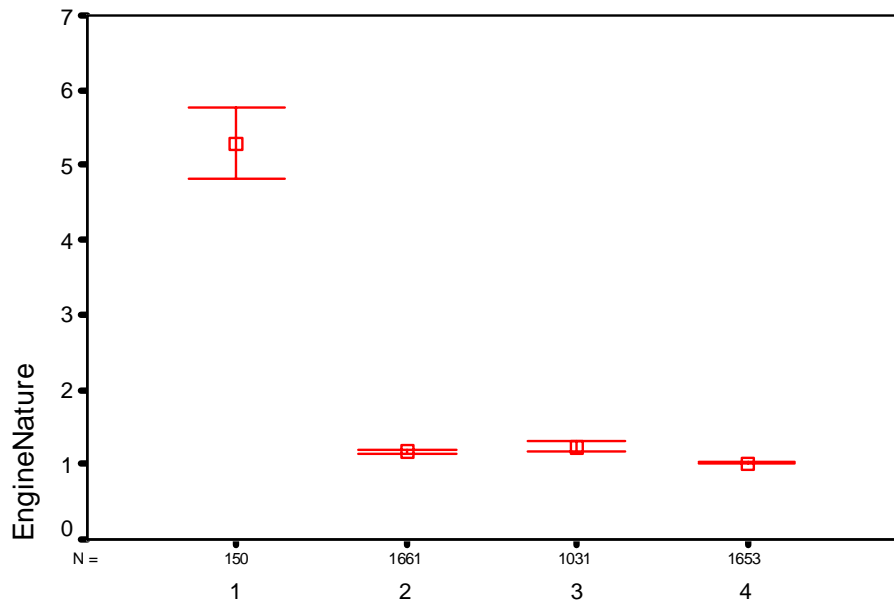
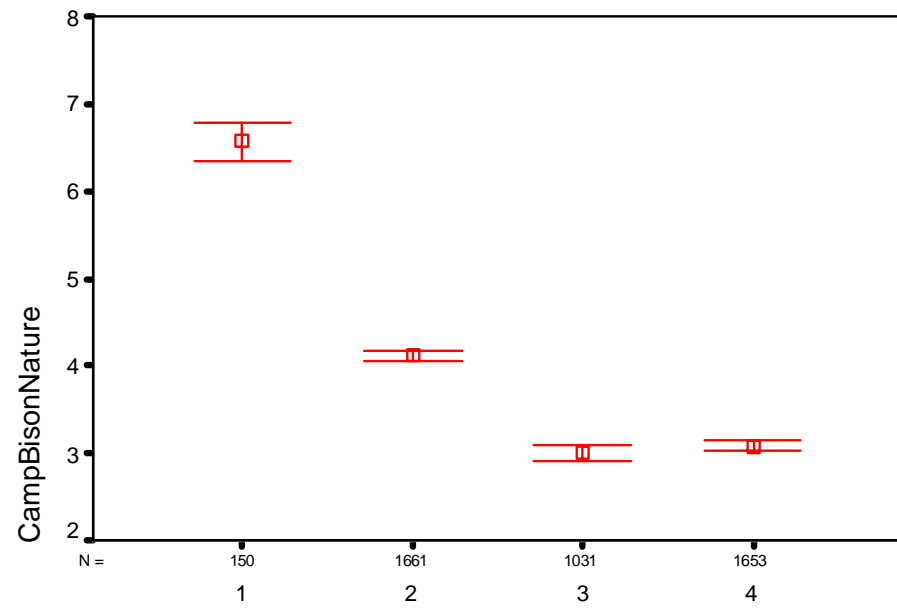
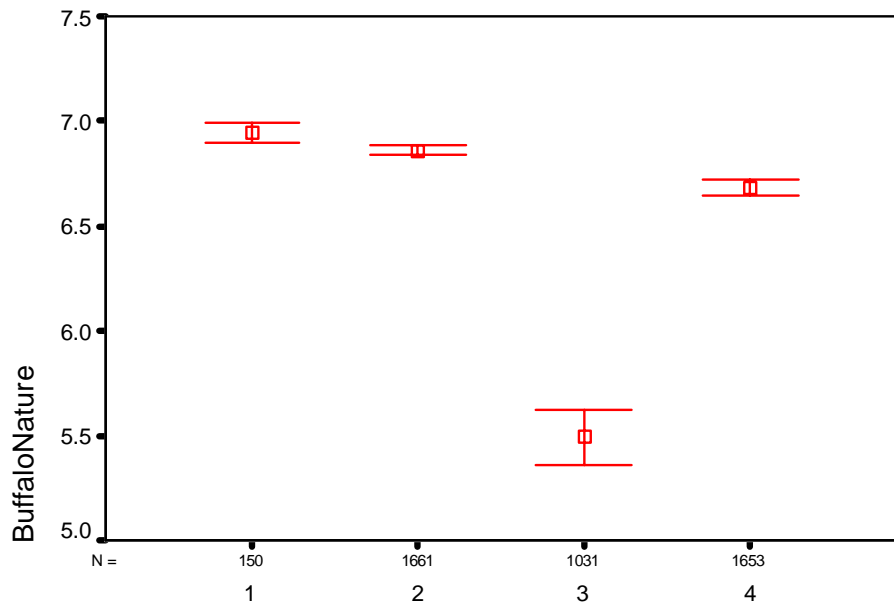
**Thank you all for
your time.**

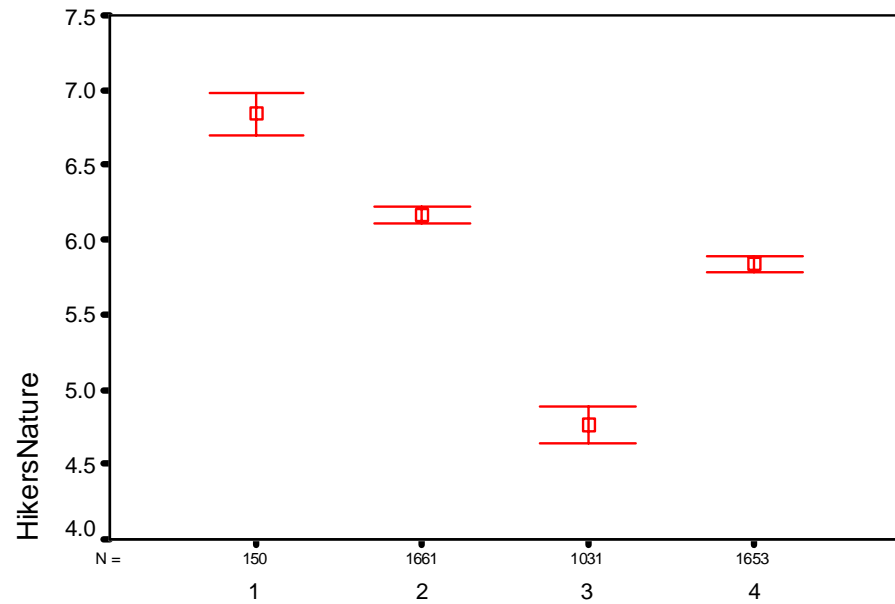
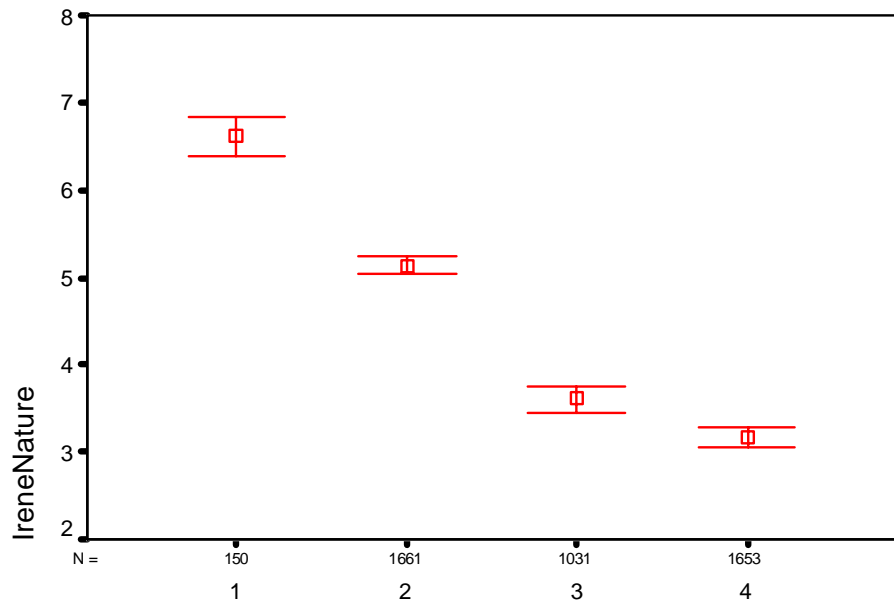












Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.012 | 33.399 | 33.399 | 6.012 | 33.399 | 33.399 |
| 2 | 1.974 | 10.964 | 44.363 | 1.974 | 10.964 | 44.363 |
| 3 | 1.328 | 7.376 | 51.739 | 1.328 | 7.376 | 51.739 |
| 4 | .948 | 5.266 | 57.005 | | | |
| 5 | .847 | 4.703 | 61.708 | | | |
| 6 | .790 | 4.387 | 66.095 | | | |
| 7 | .739 | 4.106 | 70.201 | | | |
| 8 | .693 | 3.848 | 74.049 | | | |
| 9 | .637 | 3.538 | 77.586 | | | |
| 10 | .602 | 3.345 | 80.932 | | | |
| 11 | .564 | 3.136 | 84.067 | | | |
| 12 | .509 | 2.826 | 86.893 | | | |
| 13 | .483 | 2.686 | 89.579 | | | |
| 14 | .432 | 2.402 | 91.981 | | | |
| 15 | .421 | 2.336 | 94.317 | | | |
| 16 | .390 | 2.168 | 96.486 | | | |
| 17 | .347 | 1.925 | 98.411 | | | |
| 18 | .286 | 1.589 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

Wilderness
Purity
Wildness

Component Matrix^a

| | Component | | |
|------------------|-----------|-------|-------|
| | 1 | 2 | 3 |
| ProvidenceNature | .713 | -.333 | |
| MeandElkNature | .412 | .396 | .475 |
| FireNature | | .490 | .472 |
| SaloonNature | .686 | | |
| IowaNature | .706 | | |
| BadlandsNature | | .522 | |
| BusNature | .593 | | .362 |
| LighthouseNature | .613 | | |
| SweedeburgNature | .784 | | |
| ArtCombineNature | .746 | | |
| UELNature | .712 | -.327 | |
| MesaVerdeNature | .582 | | |
| BuffaloNature | | .539 | -.324 |
| CampBisonNature | .727 | | |
| EngineNature | .600 | -.368 | |
| PrairieNature | .340 | .478 | -.362 |
| IreneNature | .503 | | -.458 |
| HikersNature | .393 | .492 | |

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.593 | 18.519 | 18.519 | 2.593 | 18.519 | 18.519 |
| 2 | 1.583 | 11.305 | 29.824 | 1.583 | 11.30 | |
| 3 | 1.219 | 8.707 | 38.531 | 1.219 | 8.70 | |
| 4 | 1.117 | 7.980 | 46.511 | 1.117 | 7.98 | |
| 5 | 1.011 | 7.218 | 53.729 | 1.011 | 7.218 | 53.729 |
| 6 | .899 | 6.423 | 60.152 | | | |
| 7 | .858 | 6.128 | 66.280 | | | |
| 8 | .793 | 5.662 | | | | |
| 9 | .782 | 5.585 | | | | |
| 10 | .740 | 5.288 | | | | |
| 11 | .677 | 4.835 | | | | |
| 12 | .629 | 4.496 | | | | |
| 13 | .604 | 4.311 | | | | |
| 14 | .496 | 3.542 | | | | |

Extraction Method: Principal Component Analy

Utilitarian 1

Being

Utilitarian 2

Component Matrix^a

| | Component | | | | |
|------------------|-----------|------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| NaturePurposeful | .463 | | | -.423 | -.343 |
| NatureImportant | .597 | | | .376 | |
| NatureFact | | .430 | | | -.562 |
| NatureExhausted | | .743 | | | |
| NatureMorality | .498 | | | -.427 | |
| NaturePeople | | | .659 | .330 | |
| NaturePure | .599 | | | | |
| NatureSpirit | .546 | | | | |
| NatureBeautiful | .665 | | | | |
| NatureFragile | .475 | | .457 | | |
| NatureAlways | | .586 | -.521 | | |
| NatureValue | .404 | | | .450 | |
| NatureControl | | .432 | | | .557 |
| NatureDanger | .342 | .350 | | | .307 |

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Human Influence

Dominance

Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared L | | |
|-----------|---------------------|---------------|--------------|------------------------------|---------------|----|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cu |
| 1 | 3.683 | 23.020 | 23.020 | 3.683 | | |
| 2 | 2.303 | 14.391 | 37.411 | 2.303 | | |
| 3 | 1.839 | 11.493 | 48.904 | 1.839 | | |
| 4 | .975 | 6.095 | 54.999 | | | |
| 5 | .968 | 6.049 | 61.048 | | | |
| 6 | .923 | 5.766 | 66.814 | | | |
| 7 | .842 | 5.260 | 72.074 | | | |
| 8 | .816 | 5.097 | 77.171 | | | |
| 9 | .740 | 4.623 | 81.794 | | | |
| 10 | .706 | 4.412 | 86.206 | | | |
| 11 | .507 | 3.170 | 89.376 | | | |
| 12 | .478 | 2.986 | 92.363 | | | |
| 13 | .379 | 2.369 | 94.732 | | | |
| 14 | .342 | 2.137 | 96.868 | | | |
| 15 | .262 | 1.634 | 98.503 | | | |
| 16 | .240 | 1.497 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

Control

Fear

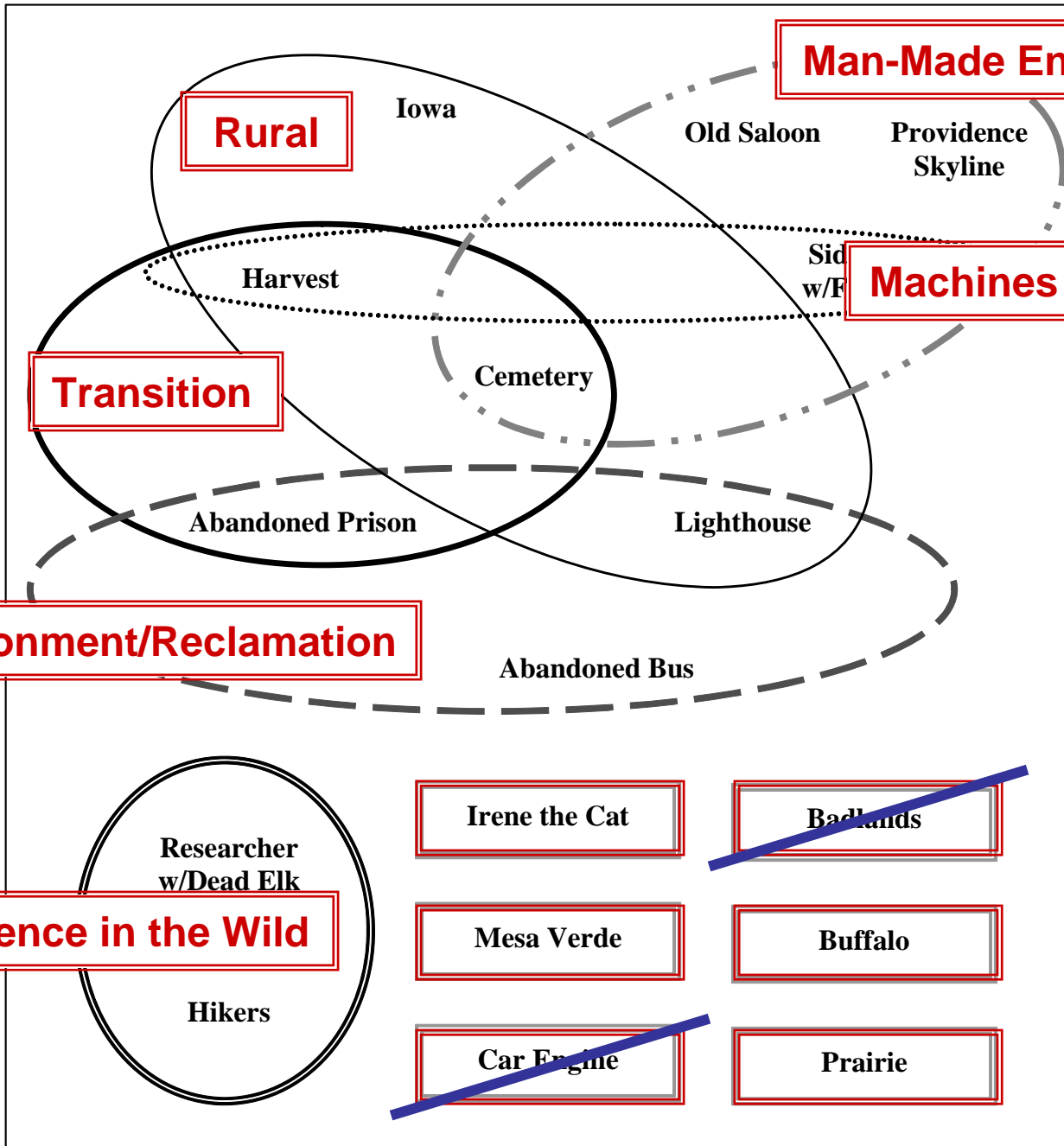
Respect

Component Matrix^a

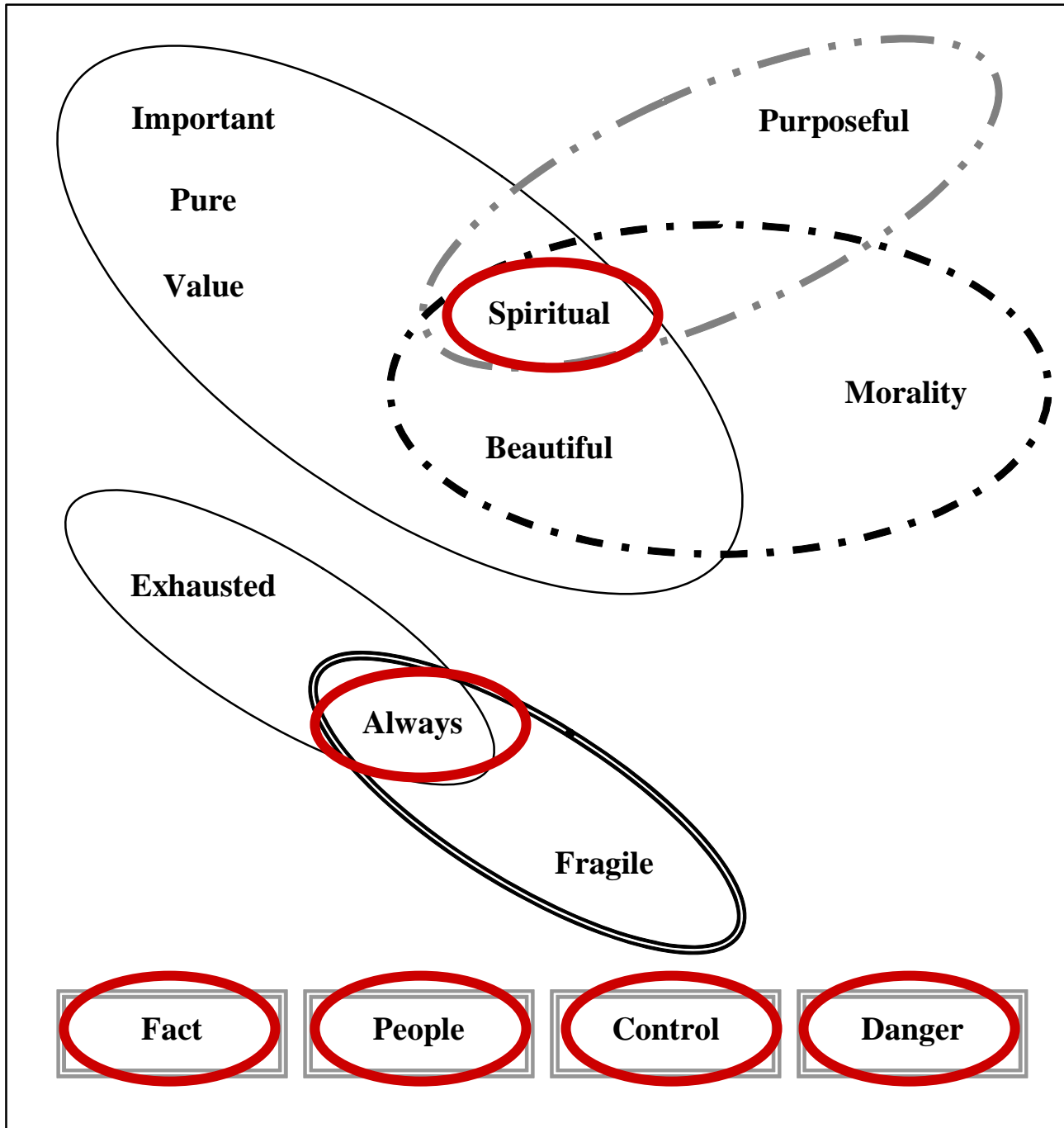
| | Component | | |
|--|-----------|------|-------|
| | 1 | 2 | 3 |
| Carnis are valuable | -.572 | .319 | .567 |
| Important for future | -.641 | .346 | .482 |
| Not Important - other places | .346 | | |
| Protect even if never see | -.573 | .311 | .378 |
| I afraid carnis | | .734 | -.363 |
| People afraid carnis | | .560 | |
| Should be afraid carnis | | .777 | |
| Carnis dagerous to people | .352 | .669 | |
| Cs/Hs can coexist | -.384 | | |
| Carni kills person? | .641 | | .533 |
| Carni kills pet? | .714 | | .421 |
| Carni destroys livestock? Reimburse? | .737 | | .475 |
| Wild animals should be protected from carnis | .413 | | .338 |
| Wrong - Humans above Animals | -.538 | | |
| Wrong - Animals above Humans | .341 | | |

Extraction Method: Principal Component Analysis.

a. 3 components extracted.



* |0.4| used as critical value



* |0.2| used as critical value

Table 5.7 Crosstabulation of Nature Statement Clusters vs. Carnivore Statement Clusters

| | | | CSC | | Total |
|-------|-----------------------------|-----------------------------|--------|--------|--------|
| | | | 1 | 2 | |
| NSC | 1 | Count | 3,515 | 583 | 4,098 |
| | | % within NatStateClusters | 85.8% | 14.2% | 100.0% |
| | | % within CarniStateClusters | 92.9% | 82.1% | 91.2% |
| | 2 | Count | 270 | 127 | 397 |
| | | % within NatStateClusters | 68.0% | 32.0% | 100.0% |
| | | % within CarniStateClusters | 7.1% | 17.9% | 8.8% |
| Total | Count | 3,785 | 710 | 4,495 | |
| | % within NatStateClusters | 84.2% | 15.8% | 100.0% | |
| | % within CarniStateClusters | 100.0% | 100.0% | 100.0% | |