

An Analysis of Children's Attitudes Toward Animals

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ABSTRACT: An analysis was undertaken of the attitudes toward animals held by 145 children, ages 12 to 14. The four most prevalent attitudes were humanistic, moralistic, naturalistic, and ecologicistic, in that order. No attitude differences were found between boys and girls. Close to 90% of the children reported that they had spent time in class discussing wildlife.

Wildlife management is dependent upon the interaction of people, wildlife, and the environment on which they both depend. The wildlife management policies a society implements are largely dependent on the demands that people make upon the wildlife resource and the societal attitudes that underlie a political response. Many scholars have pointed out that attitude development in children is critical to their later action as adults. Therefore, a study of children's attitudes may reveal emerging attitudes of the generation that will accede to political power.

What attitudes about animals do children hold who are ages 12 to 14 and live in a typical urban community in Ontario?

A basic premise of this research is that the attitudes learned as children will be carried on to adulthood. If this assumption is accepted (a longitudinal study would have to be undertaken to verify its accuracy), then re-

search of this type may give an indication of the attitudes of future adults.

The Waterloo County Board of Education has a long-standing policy encouraging environmental education in the curriculum. As part of this policy, three outdoor education centers operate throughout the school year. These centers are typical outdoor education facilities, with classrooms, laboratories, nature trails, and a wide variety of natural environments close by. These centers are staffed by teachers who provide a wide variety of programs to the classes that come from the schools. Most children in the county participate in this center-based program at some time during their school career. The program is designed to supplement regular classroom instruction.

Filion et al. (1983) have found that wildlife is important to Canadians. Most Canadians over 15 years of age are involved in some form of wildlife-related activity, usually as a leisure pursuit. For example, 8.1 million Canadians reported observing wildlife during travel; 92.5% of these people reported that such encounters increased significantly their enjoyment of the trip. Activities such as hunting, fishing, wildlife viewing, wildlife-related travel, buying films and books about wildlife, and photographing wildlife were reported as being widespread and important to Canadians.

Attitudes underlie behaviors. Table 1 lists the attitude categories toward animals that were used in this study.

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People who pursue different outdoor activities also express different attitudes toward nature. Hunting can be associated with attitudes such as utilitarian, for those who desire a product such as meat; dominionistic, for those who desire symbols of power such as trophies; or naturalistic, for those who desire contact with nature (Kellert 1978). Birdwatchers score highly in the naturalistic and ecologicistic attitude scales (Kellert 1977). Pet owners who regard their pets as companions reveal strong affection for animals, as indicated by high humanistic and low negativistic scores (Kellert 1977). Backpackers were found to have naturalistic and ecologicistic scores. They also showed low levels of utilitarian attitudes and a bias against commercialism not found in birdwatchers and nature hunters (Kellert 1977).

Wildlife management has traditionally been centered around hunting and fishing, recreational behaviors that are based largely on the utilitarian and dominionistic points of view. Future wildlife management policies will be shaped according to the attitudes of future adults.

Currently, there is a paucity of information on the attitudes and activities of Canadian children with regard to animals. The views these children now hold, how-

ever, if they remain unchanged into adult life, will be brought to bear on wildlife management agencies.

With this in mind, the following research questions were posed: (1) What are the attitudes toward wildlife held by children of ages 12 to 14? (2) What are the attitude differences between girls and boys? (3) What attitudes are found in children who report participating in wildlife-related activities such as camping, reading about wildlife, watching television or films about wildlife, classroom activities about wildlife, and pet ownership?

Methods

A questionnaire was administered to 145 students who were attending either Grades 6 to 8 in public schools in the Waterloo County Board of Education. All students in two classes of Grade 8 and three classes of Grade 6 were required to participate in the survey. The classes to be surveyed were chosen by the school board. A teacher of the students administered the questionnaire.

The attitude categories and scales were adapted from Kellert (1980). The questions used were based on the questionnaire of attitudes toward animals developed by Kellert (1977). Minor modifications were made in order to make the questions more understandable to students of this age. Each of the eight basic attitudes was tested with eight questions. The students were asked to respond to each attitude question with a 5-point scale response of strongly agree, agree, don't know, disagree, and strongly disagree. Answers to each of the five categories were given scores of 5 through 1, respectively. Therefore, the highest score possible for a given attitude would be 40; the lowest, 8. The individual scores were then totaled to provide various group scores.

Each student was also asked for a yes or no answer to each of the following questions: Do you have a pet at home? Do you go camping at least once a year? Do you read books or magazines about wildlife? Do you watch films or television programs on wildlife? Have you spent time in class talking about wildlife?

All data were analyzed using the SAS system. We used *t* tests to measure significant differences between populations. An alpha level of .05 was used to indicate significance in all analyses.

Results

Test Results

The survey showed that all eight attitudes were found in this student population. In order of occurrence from most frequent to least frequent, the attitudes were humanistic ($M = 32$), naturalistic ($M = 31$), moralistic ($M = 27.5$), ecologicistic ($M = 26.5$), scientific ($M = 25$), utilitarian ($M = 23.5$), negativistic ($M = 23$), and dominionistic ($M = 19$).

TABLE 1.—Attitudes toward Animals

Attitude	Definition
Naturalistic	Primary interest and affection for wildlife and the outdoors.
Ecologicistic	Primary concern for the environment as a system, for interrelationships between wildlife species and natural habitats.
Humanistic	Primary interest and strong affection for individual animals, principally pets.
Moralistic	Primary concern for the right and wrong treatment of animals, with strong opposition to exploitation or cruelty toward animals.
Scientific	Primary interest in the physical attributes and biological functioning of animals.
Aesthetic	Primary interest in the artistic and symbolic characteristics of animals.
Utilitarian	Primary concern for the practical and material value of animals or animal habitat.
Dominionistic	Primary interest in the mastery and control of animals, typically in sporting situations.
Negativistic	Primary orientation an active avoidance of animals due to indifference, dislike, or fear.

Gender Comparisons

There were no significant differences between the boys and the girls in any of the attitude scores. This finding contrasts with that of Kellert and Berry (1984), who found that adult American men scored significantly higher than American women in ecologicistic, utilitarian, and dominionistic attitude scales. These authors suggest that men have a greater orientation to the practical utilization of animals and to the domination of animals for personal satisfaction. Adult women were found to score higher on humanistic and moralistic scales, indicating a greater emotional attachment to animals, typically pets, and a great concern for the ethical treatment of animals.

Kellert and Berry (1984) found that similar attitude orientations occurred with children but with less divergence between the sexes. Their findings suggest that the distinct differences in attitudes begin after the early adolescent years.

Our study suggests that Canadian children of both genders have similar attitudes at the ages of 12 through 14. If these attitudes are going to diverge, as data suggest, this will occur in the years following.

Activity Comparison: Pet Ownership

We found that 75.2% of the students had a pet in their home. An analysis was undertaken of the attitude differences between those children who had pets in the home and those that did not. The students who reported having a pet in the home had significantly higher levels of attitude scores in the humanistic ($p = .0005$) and naturalistic ($p = .02$) scores. They also had lower scores for the dominionistic ($p = .01$) and utilitarian ($p = .01$) scores.

The humanistic attitude is characterized by the belief that animals have human-like qualities. It is therefore reasonable to suggest that children who regard their pets as friends would transfer that attitude to wild animals.

The naturalistic attitude is characterized by a primary interest in, and affection for, wildlife. It is also reasonable to assume that an interest in, and affection for, pets can be transferred to wildlife.

The dominionistic attitude is associated with a desire to dominate wildlife. It is usually correlated with activities, such as ranching, that involve a high level of domination over animals for a particular purpose. It is possible that pet ownership reduces the desire to dominate animals.

The utilitarian attitude supports the use of animals for profit. The primary purpose of most pet ownership is not for profit but for other values, such as companionship.

The high rate of pet ownership among the children studied indicates that most urban children of this age primarily relate to animals as pets. Thus, they are relating to animals with feelings of affection and interest.

Activity Comparison: Camping

We found that 69.7% of these urban children went camping at least once a year, but no attitude differences were found between those who went camping and those who did not. This is surprising, because environmental educators have long maintained that direct contact with nature is important to developing positive attitudes. Kellert (1977) revealed a distinct grouping of attitudes for backpackers and frequent campers. Our survey did not differentiate between various amounts or types of camping. It is possible that the experience of those who camped infrequently might be similar to the non-campers. This could explain the lack of differences between the two groups of students.

Activity Comparison: Reading about Wildlife

It is reasonable to assume that those who read about wildlife have higher levels of interest in the subject. In this study, 60.7% of the students reported that they read books or magazines about wildlife.

There was a highly significant difference between those who reported reading about wildlife and those who did not. The readers had a higher naturalist score ($p = .0001$) and a higher scientific score ($p = .0002$). The non-readers had a higher utilitarian score.

The high naturalistic and scientific scores for the readers suggested that the desire to learn about wildlife was highly developed in over 60% of the children studied. This is an encouraging finding for those who wish to see a future populace that is interested in the scientific management of wildlife. Unfortunately, the high utilitarian score of nonreaders suggests that those who will lean toward the activities of hunting and fishing in the future will have lower levels of knowledge about wildlife and less willingness to learn about wildlife through reading. For agencies that cater to the latter group, this finding would imply that they should use media other than the written word to communicate with these people.

Activity Comparison: Film and Television Viewing about Wildlife

In recent years, many films about wildlife have been made. A review of the television schedule in any Canadian city reveals a large amount of nature programming. But do Canadian children watch these shows? The majority of students (75.3%) reported that they did.

Those children who watched television wildlife programs had significantly higher attitude scores in the humanistic ($p = .01$), naturalistic ($p = .0001$), ecologicistic ($p = .01$), and scientific ($p = .0008$) categories. These children can be described as valuing wildlife in its natural environment, with high levels of interest in viewing wildlife.

Activity Comparison: Classroom Discussion of Wildlife

Most children (89.7%) reported that they had discussed wildlife in the classroom. No significant differences in attitudes were found between those who reported having participated in discussing wildlife in class and those who reported not having such discussions. Given the very high percentage of students who reported such discussions, it is probable that all students in the study have heard such issues being discussed in class. This could explain the lack of differences between the two groups.

Summary and Conclusions

Our study of a small sample of urban Canadian children revealed that the most frequently measured attitudes toward animals were humanistic, naturalistic, moralistic, and ecologicistic. This finding contrasted markedly with that of Kellert (1980), who found that the most common attitudes of adults toward animals in contemporary society in the United States were humanistic, moralistic, utilitarian, and negativistic.

The Canadian children in this study clearly had attitudes different from those of the American adults. Are the differences the result of the respondents' ages or nationalities?

Westervelt and Llewellyn (1985) reported that the most common attitude found in a U.S. survey of Grades 5 and 6 was humanistic. Our results showed a predominance for the humanistic attitude among the Canadian children in our sample. This similarity in attitudes suggests that nationality may not be a determining factor in our sample.

Assuming that our premise that attitudes learned as children tend to carry through to adult years is valid, the attitude profile seen in Canadian children today may be the emerging profile of adult attitudes in the future in North America.

Strongly held humanistic attitudes present a problem for wildlife managers because holders of such attitudes frequently oppose activities such as hunting. Our study results suggest that if children maintain their humanistic attitude as they grow older, they may demand alteration of many of the wildlife management activities that are so commonly practiced.

The most prevalent attitudes in our sample of students were those that demonstrated affection and attraction for, and interest in, wildlife. This suggests that,

from an environmental education point of view, these students have developed a set of wildlife attitudes that support some forms of conservation and management activities.

The very high levels of classroom-based learning about wildlife, reading about wildlife, and viewing programs about wildlife suggest that these students are strongly interested in this topic. This interest, if maintained, should bode well for their future involvement in wildlife-related adult activities. This interest also suggests that the findings of Fillion et al. (1983) with regard to high levels of wildlife-based recreational activity in adults will continue to occur in Canada as these children mature.

The lack of attitudinal differences between the sexes is quite encouraging and suggests that the cultural biases of the past in which boys showed higher levels of interest in wildlife are now past.

The strong influence of pets on children is well known. With the decline of access to animals as beasts of burden and sources of food in farm environments, there has been a corresponding decline in negativistic and dominionistic attitudes. Children's primary encounters with animals now are pet ownership and the viewing of wildlife in backyards, parks, and countryside. It is possible that we are seeing a fundamental societal shift away from the dominionistic/utilitarian attitude of the farmer who uses nature for survival and profit to the naturalistic/humanistic attitude of the urban child who owns a pet and participates in outdoor education programs.

REFERENCES

- Fillion, F. L., S. W. James, J. Ducharme, W. Pepper, R. Reid, P. Boxall, and D. Teillet. 1983. *The importance of wildlife to Canadians*. Ottawa, Ontario: Canadian Wildlife Service.
- Kellert, S. R. 1977. Attitudes towards animals and characteristics of various animal activity groups other than hunters. Working paper. Washington, DC: U.S. Fish and Wildlife Service.
- . 1978. Attitudes and characteristics of hunters and anti-hunters and related policy suggestions. Paper presented at Hunter Safety Education Conference, Charleston, South Carolina.
- . 1980. Contemporary values of wildlife in American society. In *Wildlife values*, Tucson, Ariz.: Center for Assessment of Noncommodity Natural Resource Values, University of Arizona.
- Kellert, S. R., and J. K. Berry. 1984. Gender variations in relationships to animals. *Human Dimensions in Wildlife Newsletter* 3(3): 2,525.
- Westervelt, M. O., and L. G. Llewellyn. 1985. *Youth and wildlife*. Washington, DC: Fish and Wildlife Service, U.S. Department of the Interior.