

## ORIGINAL ARTICLES

# Benign Uses of Wildlife

Victor B. Scheffer

14806 SE 54th St., Bellevue, WA 98006

### *Abstract*

*During the Age of Environmental Awareness, which dawned in the late 1960's, Americans turned to using wild animals more benignly (or in ways harmless both to individuals and populations) and less exploitatively. The evidence includes: new federal legislation reflecting a public shift toward benign uses, growth of interest in 'nongame' wildlife, growth of interest in wildlife watching (rate of increase in number of camera safaris estimated at 32% per annum in 7 recent years), growth in membership of animal-interest organizations (rate of increase estimated at 7.7% per annum in 15 recent years), and growth of interest in animal rights. Per capita participation in sports hunting, an activity which long represented the dominant use of wildlife, is decreasing. Popular sentiment, as distinct from zoological and economic considerations, increasingly influences wildlife use decisions.*

### *Introduction*

In this paper I shall examine community attitudes in the United States toward uses of wildlife — or birds and mammals exclusive of domestic animals and pets. I shall offer evidence that growing numbers of Americans are using wild animals benignly, *i.e.*, in ways noninjurious both to individuals and to populations.

The word benign is employed because benign is analogous to sympathetic and harmless, and thus has implications for both popular feelings and popular actions toward animals. Benign uses of wildlife include bird- and beast-watching, bird feeding, photographing at amateur and professional levels, sound recording (e.g., of birds, wolves, and whales), and similar activities. Benign uses have also been called nonexploitive and nonconsumptive uses (Fazio and Lawrence, 1977). They grade into low-consumptive uses, e.g., harassing for research, live capturing, and killing at low rates of exploitation. Properly designed and carried out, these operations have little impact on animal populations.

By long tradition, the wild animals of the United States belong (if that is the right word) to all its people. The fifty state governments have primary legal jurisdiction over them, while the federal government either shares or preempts jurisdiction for certain classes, including endangered species, migratory birds,

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marine mammals, and species living on federal lands. I emphasize, however, that public attitudes and preferences with respect to the uses of wildlife are first voiced, not at government levels but at citizen levels. Attitudes and preferences are given shape by zoologists, economists, and other specialists within wildlife agencies (commonly called game departments) and eventually become new statutes of law (Scheffer, 1976).

### *Federal Legislation For Benign Uses*

All wildlife legislation has one or more of the following goals: 1) to control damage by animal populations grown injurious to man or to his goods; 2) to preserve wildlife stocks; 3) to prevent cruelty to animals; and/or 4) to enforce popular sentiment with respect to particular uses (e.g., the benign use of deer in national parks). Historically, lawmakers have dealt with these goals in the order listed. Protection from wild beasts and agricultural pests received early attention; conservation as a means of ensuring sustained yields of animal products and of 'banking' genetic capital was subsequently recognized; humaneness was later seen as an emotional good — as an enlarging of the human spirit; enforcing public taste through plebiscite was last to be perceived and agreed upon as a proper exercise of the legislative process.

I do not propose to deal with the first goals except to note that the ideological distance between the 3rd and 4th goals — humaneness toward animals and benign use of them — is slight. Wildlife legislation is beginning to reflect community opinion that wild animals are earthly companions which ought not to be used destructively, even when that destruction is accomplished quickly and painlessly — or in other words, 'humanely.'

Some years ago, a South African entrepreneur proposed to raise pedigreed Dalmatian dogs for their attractive spotted pelts (Anonymous, 1972). He was halted by the government on the grounds that he would be acting, not cruelly, but contrary to public taste. The point here is that citizen influence on an animal use decision stemmed from intuitive, rather than rational, convictions. The law gave greater weight to emotional than to intellectual arguments.

The history of certain federal legislation illustrates the evolution of benign use in the United States. (Full legal citations to the following laws and treaties are given by Bean [1977]).

*The Bald Eagle Protection Act of 1940* was federal legislation for a wholly novel purpose — to preserve a wildlife species — a national emblem — for its symbolic value.

*The Lacey Act Amendments of 1949* prohibit the importation of wildlife under conditions known to be "inhumane or unhealthful" (Bean, 1977). This act may represent the first moral stand taken by Congress with respect to the treatment of wildlife.

*The Animal Welfare Act of 1966 as amended in 1970 and 1976* confirms the right of the federal government to protect animals from abuse. It stipulates that mammals transported or held in captivity for research, sale, or exhibition shall be treated humanely. (See also Visscher, 1971).

*The Endangered Species Act of 1966, as amended in 1969, 1973 and 1978.* It is curious that the 1966 and 1969 acts did not state why wildlife diversity should be

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preserved. The 1973 act did list six wildlife values: "esthetic, ecological, educational, historical, recreational, and scientific" [87 Stat. 884, Sec. 2 (3)].

*The Wild, Free-Roaming Horses and Burros Act of 1971* is rich in sentiment. It calls for humane treatment of these domestic animals gone feral and, more germane to the present argument, makes clear that most Americans do not want wild horses and burros used for meat, hides or glue, but rather, to be let run free as "living symbols of the historic and pioneer spirit of the West" (Humane Society of the United States, 1978).

*The Marine Mammal Protection Act of 1972*, although primarily a resource conservation measure, specifies that marine mammals shall not be harassed. Moreover, if they are taken dead or alive, the taking must involve "the least possible degree of pain and suffering practicable" [86 Stat. 1027-1046, Sec. 3 (4)]. The act bans the importation of any marine mammal or its products if the animal was nursing or was under eight months old, a novel provision designed to halt the importation of newborn harp seal skins. And the Act prohibits the importation of any marine mammal or its products if the animal was pregnant.

The portions of the Act dealing with suckling and pregnancy have no precedent in federal law and are based on pure sentiment. (It could be argued, perhaps, that if a female seal must be clubbed, the *economically* best time to kill her is not while she is pregnant but just after she has replaced herself as a unit in the population.)

In 1978, the Globe Fur Dyeing Corporation complained in a court action against the United States Government that the suckling provision of the Marine Mammal Protection Act "was a political response to public concern and emotionalism and bears no reasonable relationship to the goal of the Act and is therefore unconstitutional" (U.S. Department of Justice, 1978). The government disagreed; it denied the plaintiff's motion.

Earlier marine mammal laws, among them the Fur Seal Act of 1970 and the Whaling Convention Act of 1949, had dealt only with the conservation of stocks; they were blind to popular sentiment (Bean, 1977; U.S. House of Representatives, 1972). With respect to whaling, Scarff (1977) has written:

*Despite the strong, articulated convictions of many people that whaling is immoral, the IWC [International Whaling Commission] has continued to manage every stock of every species of whale based on the assumption that maximum sustainable harvesting is the socially optimal policy. The IWC has never recognized nor discussed the ethical justification for killing whales, and whales have never received protection from the IWC for ethical, moral, or aesthetic reasons.*

*The Fish and Wildlife Conservation Act of 1979* (H.R. 3292) was passed in the House of Representatives in July 1979 but as of October 1979 had not cleared the Senate. It is the latest version of three bills aimed at helping the states fund their nongame wildlife programs. ('Nongame' is discussed in the next section.) In 1977, Congress drafted H.R. 8606 which would have authorized annual appropriations to the states. Leading conservationists criticized it on the grounds that annual ap-

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propriations, rising and falling as they do with the changes of Congress, the President, and the Office of Management and Budget, are notoriously unreliable. The second bill, H.R. 10915, introduced in 1978, met that criticism by authorizing an 11% manufacturer's tax on bird seed, bird houses, bird baths, certain items of camping equipment, and certain binoculars and spotting telescopes. That bill, too, died in Congress and was replaced by H.R. 3292. The prime sponsors of H.R. 3292 mention the "90 million Americans who each year venture into the outdoors to enjoy our nongame wildlife heritage" (Breux and Forsythe, 1979).

The development of benign-use legislation can be seen as a widening of wildlife's constituency. Bean (1977) puts it this way:

*The expansion of the various wildlife values recognized by federal wildlife law, and of the meaning of the very term 'wildlife,' is...both a cause and result of yet another clearly discernible trend, the opening up of that body of law to the interested citizenry. If the concept of wildlife as a public trust resource has any meaning at all, it is that the views of the public must be fully taken into account in all decisions affecting the use of that resource.*

### *Growth of Interest in Nongame Wildlife*

One indication of a societal shift toward benign uses of wildlife is new interest in nongame wildlife. 'Nongame' is a curious, negative appellation, coined a decade ago by game department strategists who were groping to understand and to measure public sympathy for animals free and undisturbed, in contrast to hunted or trapped ones. Under new pressures to manage wildlife democratically, not solely for exploitive users, they responded by proposing nongame programs designed to protect chipmunks, herons, eagles, harbor seals, dolphins, and other species which rarely had been hunted or trapped.

Yet even recently, Russell Train (1978) wrote that "\$97 out of every \$100 spent by the federal and state governments on wildlife management goes to less than 3% of the species...used for hunting, trapping, or fishing."

### *Historical Perspective*

Certain events in the evolution of the nongame wildlife movement are historically significant:

**1969-1971** In 1969, the International Association of Game, Fish and Conservation Commissioners (1972) appointed a committee to consider the requirements and potentials of nongame wildlife. The committee, after digesting the returns from questionnaires it had sent to all the states, gave its report in 1971. It recommended that "nongame wildlife should be defined by exclusion." (That fauna would, in effect, be the residue left after the species commonly hunted and trapped had been provided for.) Further, "States not having authority to manage nongame wildlife should strive to gain and utilize such authority.... Federal assistance in funding...could encourage state participation. The money for such programs should be from the General Fund and be matched by state General

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Fund money in lieu of monies now contributed by hunters and anglers through state licensing systems and federal excise taxes."

**1972** Winchester-Western Division of Olin Corporation (a manufacturer of ammunition) published a booklet on model legislation for a state nongame wildlife program (Madson and Kozicky, 1972). It stipulated that the financial support for any such program should come in part from a prescribed "per centum of the amount of revenues raised in the preceding fiscal period from the sale of hunting, fishing and trapping licenses." (But why, one may ask, should the conservation of chipmunks and herons wax and wane with revenues from hunting licenses?)

**1972-1973** Durward L. Allen (1972), professor of wildlife ecology, addressing a national audience, called for a new North American wildlife policy: "I suggest," he said, "that we are at a time in our history when men must rise to a new level of sophistication in their attitudes toward the earth and the life it supports... Game management is only part of the culture and custody of living things." Allen was appointed chairman of a committee to write a new policy, which was duly written in 1973 (Allen, 1973). The policy noted that "a new trend is in progress. Game and fish agencies are getting broader responsibilities as wildlife agencies. Ways are being found to supplement their license-based funding through special taxes and appropriations representing contributions of the general public."

**1972-1974** In 1972, the Council on Environmental Quality and the U.S. Department of the Interior appointed Roland C. Clement, vice-president of the National Audubon Society, as chairman of a committee to "provide management policy guidelines for the nonconsumptive uses of wildlife" (Clement, 1974). In 1974, the committee offered the following recommendations: that a new federal law be enacted which would provide federal funds of at least \$30 million annually for nonconsumptive wildlife conservation, that these funds be matched by state funds, and that "the objective and result of this new funding shall be a more inclusive national wildlife conservation program, to include enhancement of wildlife values in urban areas wherever possible" (Clement, 1974).

**1975** Two workshops attended by 31 experts in research and management of terrestrial or aquatic wild animals were held in Arlington, Virginia under the auspices of the Council on Environmental Quality, the World Wildlife Fund, the Ecological Society of America, the Smithsonian Institution, and the International Union for Conservation of Nature and Natural Resources (Hill, 1976; Holt and Talbot, 1978). The participants concluded, in part, that

*The ecosystem should be maintained in a desirable state such that (a) consumptive and nonconsumptive values could be maximized on a continuing basis [emphasis added], (b) present and future options are ensured, and (c) risk of irreversible change or long-term adverse effects as a result of use is minimized (Holt and Talbot, 1978).*

**1976** The Council on Environmental Quality sponsored another national symposium for professional and lay persons involved with wildlife management. One result was a comprehensive, critical, well-balanced book authored by 43 leaders in that field (Brokaw, 1978). Among the conservation problems singled

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out by the authors were five main ones:

*...the narrow focus on game of many wildlife activities, the problem of predator control, the need for an ecosystem approach to wildlife management, the need for better ecological information as a basis for effective action, and the application of the public trust concept to wildlife on our public lands (Brokaw, 1978).*

It appears significant that the problem first listed is how we Americans are to broaden our vision to see wildlife as more than 'game.'

**1974-1979** The state game departments tried various schemes for funding nongame wildlife management. Among them were the sale of personal automobile license plates, private and corporate donations, taxes on cigarettes, and the sale of stamps and stickers (Jahn and Trefethen, 1978; Wildlife Management Institute, 1978). As of early 1979, New York was weighing the merits of a fish and wildlife lottery and the sale of wood from state lands (Faber, 1979). Also in 1979, the game department of Washington state asked the legislature for \$6 million from general tax revenues (O'Connor, 1979). What is significant here is that the game agency of an important hunting and trapping state had at last been obliged to seek financial support from the general public. Its action was an ideological retreat from the position that sportsmen have proprietary claims to wildlife which others do not.

Colorado, among other progressive states, now has a Nongame Advisory Council, a quasi-official arm of the State Division of Wildlife. "It has had a strong involvement in the philosophy that all wildlife species must be given fair emphasis in wildlife management programs" Ryan et al., 1978).

One of the lessons to be learned from the history of the nongame movement is that many Americans are alienated by state game administrators who persist in classifying wild animals as either target or nontarget species. What these Americans want is classification by use. They want administrators to provide for a broad spectrum of public uses, whatever the animal species, corresponding to public preferences for those uses.

### *Growth of Interest in Wildlife Observation*

There is evidence from both public opinion surveys and personal inquiry into the growth of the camera safari business that interest in wildlife watching is increasing.

In 1975, the federal government conducted a national survey of hunting, fishing, and wildlife-associated recreation (U.S. Fish and Wildlife Service, 1977). It had been preceded at 5-year intervals by similar, though less comprehensive, surveys (U.S. Bureau of Sport Fisheries and Wildlife, 1961, 1966, 1971). The surveys produced evidence that about 4.8 million Americans, 9 years of age or older, photographed wildlife in 1970 and about 14.9 million did so in 1975. (Although one may question that participation in wildlife photography increased *threefold* in only 5 years, it presumably did increase at some lively rate.)

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Moreover, the Fish and Wildlife Service has been making in recent years an internal survey estimating the reasons why people visit the national wildlife refuges which the Service administers. On an annual average basis, for the years 1973 through 1977, about 12.6 million (63%) of the refuge visitors were intent on "recreation, wildlife, nonconsumptive," while 7.6 million (38%) were intent on "recreation, wildlife, consumptive" (personal communication, 1979).

While interest in benign uses of wildlife has been growing, interest in sport hunting, a consumptive use deeply rooted in American culture, has been declining. Returns from the above-mentioned federal surveys indicate that in 1965 there were 13.6 million hunters 12 years of age or older, representing 9.6% of the comparable population (141.9 million). In 1975, there were 20.6 million hunters 9 years of age or older, representing 9.6% of the *all-age* population (214 million). Because the sampling bases were different in 1965 and 1975, the results cannot be compared. They strongly indicate, however, that the percentage of hunters decreased between 1965 and 1975. Reiger (1978) agrees that "although there are more hunters than ever before in the United States...they represent a declining percentage of the overall population."

Two main factors, I think, have been responsible for the fading importance of sport hunting: decrease in area of wildlife habitats and increase in anti-hunting sentiment.

Natural wildlife habitats are daily being lost to farmlands, suburbs, reservoirs, highways, marinas, and other engineered environments. The National Wildlife Federation (1974) once estimated the rate of loss at more than one million acres a year. McCormick places the destructive loss of wetlands alone (i.e., areas rich in waterfowl and aquatic furbearers) at 0.5 to 1% a year (in Good et al., 1978). As a consequence, hunting and trapping have become less rewarding and less attractive.

Anti-hunting sentiment is more difficult to measure. In 1975, the National Shooting Sports Foundation hired a major New York research agency to determine public attitudes toward hunting and hunters (Rohlfing, 1978). After interviewing people in five key cities, the agency concluded that anti-hunting sentiment is based on three main grievances:

*(1) Hunting results in animals being wounded and becoming crippled or dying a slow agonizing death. (2) The typical hunter is untrained and incompetent, possessing neither skills nor a knowledge of the basic rules of his sport, and therefore is dangerous to protected species, himself and others. (3) The hunter often behaves without regard for laws, rules, regulations or the rights of others. (Rohlfing, 1978).*

have dwelt on the decline of sport hunting because I believe that it is linked with the growth of interest in wildlife watching. One activity is displacing the other. Many Americans who find sport hunting unattractive for one reason or another are turning to benign uses of wild animals as an alternative.

### *Camera Safaris*

The past two decades have seen a sharp rise in the number of camera safaris,

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or programmed tours offering close-up views of wild animals. New leisure time and cheaper means of travel have opened opportunities for people to visit parks, wildlife refuges, seashores, and similar places where animals can be seen and enjoyed. Camera safaris grade imperceptibly from the serious or educational to the purely recreational. A few offer professional instruction in the special techniques of ornithology, entomology, wildlife photography, or drawing and painting from nature. Camera safaris sponsored by colleges usually offer credit.

To estimate the growth of the camera safari business in recent years, 26 travel agencies advertising in the United States were questioned for the kinds of information shown in Table 1. No agency was asked about the number of tourists it served nor the dollar importance of its business. Sixteen agencies replied. During 7 recent years, the number of safaris increased at a mean annual rate of 32%.

**TABLE 1.**

Increase in Number of Camera Safaris as Reported by 16 Travel Agencies<sup>(1)</sup>

	Range	Mean
Base year (BY) <sup>(2)</sup>	1957-1978	1970.7
Recent year (RY) <sup>(3)</sup>	1977-1978	1977.9
Study period (RY-BY), years	1-21	7.2
Number of safaris in base year	1-23	6.28
Number of safaris in recent year	3-316	44.37
Annual growth rate, percent		32

<sup>1</sup>Agencies advertising in the United States.

<sup>2</sup>Year when agency conducted its first safari.

<sup>3</sup>Year 1978 for 15 agencies, 1977 for one.

### *Impact of Tourism*

Rapid expansion of the camera safari business has brought with it the problem of getting people quietly and unobtrusively into the haunts of wild animals. Although the problem deserves fuller treatment than given here, I offer three case histories based on personal experience.

Along the Skagit River in Washington state, several hundred bald eagles gather each winter to feed on the spawned-out carcasses of salmon (Nature Conservancy, 1976). Eagle-watchers observe them from the riverbanks or from drift boats piloted by professional guides. In recent years, the number of eagle watchers has increased to the point where some wildlife managers now fear the birds may desert the river. Stalmaster and Newman (1978) recommend "reduced human interferences, creation of vegetation buffer zones, and establishment of

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activity restriction zones" for the wintering grounds.

On a camera safari in 1973 to Laguna Ojo de Liebre, Baja California, one of the shallow inland Mexican seas where gray whales breed in winter, biologist Karl W. Kenyon and I made a special point of estimating the effects of tourism on the wildlife of that region. (The Mexican government had already closed the upper reaches of the Laguna to whale-watching parties as of 13 February 1972; we were not allowed to enter the waters where most of the whales gather.) We later concluded that the tourists of all the camera safaris (about 30) into the Laguna that winter harassed at least 4,480 whales. Kenyon declared that an elephant seal population of Isla Guadalupe (offshore from the Laguna) which he had photographed eight years earlier had decreased to one-third its former size by 1973. By repeatedly frightening California sea lions off the beaches of Isla Benito del Centro over the eight-year period, tourists had cleared the island entirely of that species. The harbor seals of Isla San Martin were threatened. We watched pups, under a week old and barely able to float, trying to follow alarmed older animals into the open sea, and later counted 13 pups, 4 already dead.

In February 1979, I revisited Baja California — this time to Bahia Magdalena — on a whale-watching tour sponsored by the American Cetacean Society. The Mexican small boat operators who took us among the mating and nursing whales were keenly sensitive to the danger of disturbing them. They accepted the necessity of approaching the whales quietly and of viewing them from afar, despite the dampening effect of that technique upon thrill-seeking members of our party. The tour sponsor had provided a large anchored raft, complete with toilet and sleeping facilities, from which one could unobtrusively photograph passing whales or record their underwater voices.

Further references to the impact of tourism upon wildlife can be found in Crittendon (1975), Hudnall (1978), Jones (1966), Mountfort (1975), and Reiger (1978a).

### *Growth of Animal-Interest Organizations*

Since the late 1960's, in the modern period which has been called the Age of Environmental Awareness, Americans have been displaying heightened concern for the conservation of wild animals. In increasing numbers they are joining animal-interest organizations. Their motivations include interest in the preservation of vanishing wildlife habitats and endangered species, especially the popular forms such as whales, seals, wolves, eagles, and falcons, and growing moral concern for the welfare of animals. Moreover, an obvious factor in the growth of certain animal-interest organizations is their employment of modern big-business methods, including nationwide advertising, mail soliciting, and the publishing of quality newsletters, brochures and manuals.

In an attempt to measure, albeit crudely, the growth of animal-interest groups, 20 national organizations, each having at least 1,000 members or supporters and each professing an interest in wildlife conservation, were questioned. Fifteen responded with useful data (Table 2). The organizations represent a wide range of animal interests, from hunting and trapping to zoo management and humane treatment. During a study period which varied with the organization and averaged 15.3 years, membership increased at a mean annual rate of 7.7%.

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**TABLE 2.**

Increase in Membership as Reported by 15 Animal-Interest Organizations<sup>(1)</sup>

	Range	Mean
Base year (BY) <sup>(2)</sup>	1938-1971	1962.8
Recent year (RY) <sup>(3)</sup>	1978-1979	1978.1
Study period (RY-BY), years	8-40	15.3
Membership in base year, thousands	0.2-1,833	130.1
Membership in recent year, thousands	1.4-4,525	376.4
Annual growth rate, percent		7.7

<sup>1</sup>Nation-wide organizations in the United States having at least 1,000 members or supporters and professing an interest in wild animal conservation; data from personal inquiries, from Scheffer (1974:186; 1976:51), and from National Wildlife Foundation (1979).

<sup>2</sup>Founding year of the organization ranges from 1905 to 1970 (mean 1954). Each organization provided a "base year" membership figure for some year near 1960, except that organizations founded post-1960 provided a figure for some early year post-1960.

<sup>3</sup>Year 1978 for 13 organizations, 1979 for 2.

Although the data of Table 2 indicate a surge of interest in the preservation of wild animals, one may ask what they reveal about community attitudes toward uses of animals. To what extent do they reflect public taste? At first glance, very little. When, however, one compares them with the figures presented earlier on the decline of sport hunting, an activity which until lately represented the most important use of wildlife in America, one can reasonably conclude that the growth of animal-interest organizations is largely the result of new interest in benign uses of wildlife.

### *Growth of Interest in Animal Rights*

Interest in animal rights is expanding more rapidly than anyone could have imagined ten years ago. And, in conceding rights to animals, people tend to question the necessity — indeed the morality — of many traditional uses of wildlife species. Charles S. Elton of Oxford, pioneer ecologist, once wrote that "the first [reason for conservation], which is not usually put first is really religious. There are some millions of people in the world who think that animals have a right to exist and be left alone" (Elton, 1958). New books dealing with animal rights are appearing at a lively rate (e.g., Hutchings and Caver, 1970; Singer, 1975; Regan and Singer, 1976; Clark, 1977; Morris and Fox, 1978; Leavitt et al., 1978).

The startling notion that animals may have the legal right to sue for damages was proposed by Christopher D. Stone in 1972 (Stone, 1975 and 1976; Steinhart,

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1976). Justice William O. Douglas seized upon the notion, saw its logic and, in the same year, gave it national audience (Douglas, 1972).

In 1978, in Paris, the International League for Animal Rights (I.L.A.R.) offered its Universal Declaration of the Rights of Animals (or Animal Charter) to the United Nations Educational, Scientific and Cultural Organization (I.L.A.R., 1978). Because of UNESCO's rules, which specify that any document offered to it by an outside group must be presented by a member state of that group, UNESCO could not accept the declaration. Public backing for it, however, was obviously great; it was accompanied by more than two million signatures gathered from around the world.

The declaration reflects concern both for humane treatment and benign use of animals. It declares that "all animals are born with an equal claim on life and the same rights to existence. They deserve the right to liberty in their natural environment[and where] living traditionally in a human environment have the right to live and grow at the rhythm and under the conditions of life and freedom peculiar to their species." It concludes that "the rights of animals, like human rights, should enjoy the protection of law" (I.L.A.R., 1978).

Not everyone agrees. The *Washington Star* (1978) notes editorially that "anything so inconsistent as the Animal Charter, so sentimental in what it asserts, so false in what it ignores and so clearly out of proportion to the way things are in human society, becomes a mockery of benevolence, indeed of ethics."

According to philosophers Miller and Williams (1979), widespread belief in animal rights is the consequence of four factors working in our society: new knowledge that humans can communicate with nonhumans in what is close to language; the abortion controversy, which has forced us to ask what a 'person' is; the suspicion that nonhumans can reason (cf. Griffin, 1976); and "a group of discoveries and trends in the biological sciences, including sociobiology and ethology, which attempt to draw conclusions about human social patterns from the behavior of other species."

### *Conclusion*

Americans are turning to benign, or nonexploitive, uses of wild animals, less because exploitable species are becoming harder to find than because public sentiment is growing in the direction of greater respect for animals. Community opinion as to which uses of animals are 'right' and which are 'wrong' is being expressed in the language of national law. Community opinion is rooted not only in the soil of science, technology, and economics but in the soil of pure intuition. It grows, in the words of Russell W. Peterson (1978), "for reasons beyond logic or perceived self-interest."

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