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*The Humane Society of the United States*

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# Overview: The State of Animals in 2001

*Paul G. Irwin*

**T**he blizzard of commentary marking the turn of the millennium is slowly coming to an end. Assessments of the past century (and, more ambitiously, the past millennium) have ranged from the self-congratulatory to the condemnatory. Written from political, technological, cultural, environmental, and other perspectives, some of these commentaries have provided the public with thoughtful, uplifting analyses. At least one commentary has concluded that a major issue facing the United States and the world is the place and plight of animals in the twenty-first century, positing that the last few decades of the twentieth century saw unprecedented and unsustainable destruction of the natural world. This was taking place even as the concepts of animal rights and human obligations gained currency in modern life for the first time (Irwin 2000).

My own conclusions aside, it seems highly appropriate for scholars, researchers, and opinion makers in the animal protection and animal research fields to evaluate the position of animals in society at the dawn of the twenty-first century. Many contributors to this volume are members of the staff of The Humane Society of the United States (HSUS) and, as such, share an overarching commitment to creating a more humane society. Others are scholars from higher education. All of the contribu-

tors have taken part in a fascinating, sometimes frustrating, dialogue that seeks to balance the needs of the natural world with those of the world's most dominant species—and in the process create a truly humane society.

The strains created by unrestrained development and accelerating harm to the natural world make it imperative that the new century's understanding of the word "humane" incorporate the insight that our human fate is linked inextricably to that of all nonhuman animals and that we all have a duty to promote active, steady, thorough notions of justice and fair treatment to animals and nonhuman nature.

A humane society is compassionate, sustainable, and just. It counts on a hopeful worldview that calls on the better qualities of all people. It is driven by the moral imperative that every creature deserves (1) our concern, by which we mean a caring heart, (2) our respect, by which we mean a mindful attitude, and (3) our consideration, by which we mean intellectual engagement with the threats and diminutions to that animal's well-being. It is perhaps obvious why The HSUS believes it has as its mission the creation of a humane society. Indeed our vision statement envisions a world in which people meet the physical and emotional needs of domestic animals; protect wild animals and their

environments; and change their interactions with other animals, evolving from exploitation and harm to respect and compassion.

Based upon that mission, The HSUS almost fifty years after its founding in 1954, "has sought to respond creatively and realistically to new challenges and opportunities to protect animals" (HSUS 1991), primarily through legislative, investigative, and educational means.

It is only coincidentally that the choice has been made to view the animal condition through thoughtful analysis of the past half century—the life span of The HSUS—rather than of the past hundred years. It is in the last half-century that the role of animals in modern life has changed in unprecedented ways. Only in the last half century, for example, have domestic animals in the developed world been freed from lives as beasts of burden or have nonhuman primates been granted recognition, by some thinkers, as so cognitively similar to their human relatives that they merit inclusion in the human social framework of protection and justice (Cavalieri and Singer 1993).

From the animals' perspective, the past half-century has not been one of uninterrupted progress, however. Indeed, as some conditions have improved, others have remained frustratingly unchanged, and still others have undoubtedly deteriorated.

**Table 1  
Shelter Euthanasia of Owned Animals**

Year	Total Owned Dogs and Cats	Euthanized	Approximate % of Owned Animals Euthanized
1973	65 million	13.5 million	21.0
1982	92 million	8–10 million	10.0
1992	110 million	5–6 million	5.5
2000	120 million	4–6 million	4.5

How then to assess progress and failure? In the absence of a universally accepted, consistently applied set of standards for data collection and analysis, any attempt to answer the question, What is the state of animals in 2001?, must be based on a series of snapshots, an accumulation of statistics from which we can draw conclusions.

## How Has the State of the Animals Improved?

### Dogs and Cats: No Longer Expendable Property

In 1950 in the United States, by and large, dogs and cats were termed “pets” and typically roamed and reproduced at will. If they made nuisances of themselves, they were relegated to the “pound,” where they received an unmentioned, often inhumane, death. If they wandered off or were hit by cars, their human families—if they had one—might view the loss regretfully, but fatalistically. Leash laws, spay/neuter contracts, animal-care facilities, and companion animals were alien concepts. By 2000 most “pounds” had given way to “animal shelters” and “animal-care-and-control facilities” and spaying and neutering had become part of the concept of “responsible pet own-

ership.” The term “pet” itself had begun to be replaced by the more dignified and evocative “companion animal,” which was being applied to animals who carried with them more than minimal monetary value.

There are few good data on owned animal populations in the United States from 1950 to 1972. From 1970 onwards, however, we have relatively reliable trend information as a result of surveys by a variety of organizations. The surveys do not all agree in terms of the total number of owned dogs and cats, but the trend data are the same. In summary, the number of owned dogs and cats has increased from around 60 million in 1970 to around 115–120 million in 2000. While total numbers of owned dogs and cats have steadily increased (because the total number of households in the United States almost doubled, from around 60 to 100 million, over this time period), the actual rate of ownership of dogs (i.e., the number per household) began to decline in the mid- to late-1980s while the rate of ownership of cats stabilized in the mid- to late-1990s (Patronek and Rowan 1995; Rowan and Williams 1987). Currently, approximately 32 percent of households own at least one dog and 28 percent own at least one cat (Rowan 1992a; AVMA 1997). Over the same time frame, the number of stray or feral dogs appears to have declined substantially. The same cannot be said of stray and feral cats. There are no reliable estimates of the stray and feral cat population in the United States, but it could range from 25 to 50 million individuals.

From 1973 to the present, the demographics of dogs and cats in shelters has changed dramatically. Table 1 presents summary estimates of what has happened in the nation’s approximately 3,000 shelters (data from Rowan and Williams 1987; Rowan 1992b; HSUS 2000).

As one can see, shelters have made tremendous strides in reducing both the absolute and the relative number of animals euthanized because they are not wanted. Other evidence indicates that the rates of sterilization of owned animals are already high and continue to rise slowly and that there are parts of the country where it is difficult to find puppies available for adoption in shelters. Shelters are now addressing the challenges represented by the stray and feral cat populations by reaching out to cat colony feeders and are also looking at the challenges posed by harder-to-adopt groups of dogs (e.g., those with behavior problems and older animals).

A number of trends can be cited as proof of improving conditions for dogs and cats. The most enlightened shelters have invested in better facilities, better training of shelter personnel, and broad-based public education campaigns extolling the benefits of pet sterilization; they have developed more innovative adoption policies, better forms of euthanasia and sterilization, and a more sophisticated interaction with local governing bodies. Other shelters have struggled to improve their efforts in these areas as expectations in their communities rose. Dialogue on the validity of euthanasia as a means of pet population control and on the intrinsic value of companion animals above and beyond their “market” value has added a moral dimension to the previously unexplored relationship between “guardian” and “companion animal.” An expanding recognition of the link between cruelty to animals and other forms of human violence has legitimized concerns about pet abuse. Such concerns have goaded law enforcement officials into pursuing abusers more vigorously and judges into sentencing offenders to

more than a slap on the wrist. Knee-jerk, simplistic responses, such as dog-breed-specific bans, to community companion animal problems have prompted serious discussions of responsible pet ownership, discussions that would have been impossible to hold in 1950. The need for data on pet population demographics spawned the creation of the National Council on Pet Population Study and Policy in 1993.

The decline in pound seizures and the widening disapproval of puppy mills reflected the rejection of the concept of dogs and cats as commodities. That rejection was nowhere more evident than in the revulsion generated nationwide in 1998 by the revelation that foreign-made clothing and novelties using dog and cat fur were being sold in the United States (HSUS 1998). Federal legislation to ban the items (which are produced under inhumane conditions) was introduced in the U.S. Congress and by mid-2000 had thirteen cosponsors.

## The Decline in Sport Hunting

The number of hunters as a percentage of the population has been declining in the United States for nearly thirty years (see Table 2). A number of factors are thought to be contributing to the decline, including lack of discretionary recreational time; difficulty in gaining access to acreage on which hunting is permitted; decreasing acreage on which hunting is permitted (and the resultant crowded conditions experienced therein); and most important, changes in the social support system that once encouraged hunting as a recreational pastime, but that now discourages it.

State wildlife agencies, most of which rely heavily on sales of hunting and fishing licenses and disbursement of hunting-related federal dollars for their funding, are concerned by the decline (see Table 3). In recent years they have developed programs aimed at retaining current hunters and recruiting new ones, focusing on under-

**Table 2  
Hunters, by Census Division, 1955–1985**

Year	Number of Hunters (Millions)	Total U.S. Population (Millions)*	Percent
1955	11.8	118.4	10.0
1960	14.6	131.2	11.2
1965	13.6	142.0	9.6
1970	14.3	155.2	9.2
1975	17.1	171.9	9.9
1980	16.7	184.7	9.1
1985	16.3	195.7	8.4

\*U.S. population twelve years and older

Note: 1955 was the first year that the survey was conducted. The information is based on data from seven surveys conducted every five years, from 1955 to 1985.

Source: 1991 National Survey of Fishing, Hunting, and Wildlife-associated Recreation, U.S. Fish and Wildlife Service

**Table 3  
Paid Hunting License Holders, 1989–1999**

Year	Number of Paid License Holders (Millions)*	National Population Estimate (Millions)**	Percentage of Population that Hunts
1999	15.1	273.8	5.5
1998	14.9	270.3	5.5
1997	14.9	267.8	5.6
1996	15.2	265.2	5.7
1995	15.2	262.8	5.8
1994	15.3	260.3	5.9
1993	15.6	257.8	6.1
1992	15.8	255.0	6.2
1991	15.7	252.2	6.2
1990	15.8	249.5	6.3
1989	15.9	246.8	6.4

\*A paid license holder is one individual regardless of the number of licenses purchased.

Source: Fiscal Year Reports of U.S. Fish and Wildlife Service, Office of Federal Aid

\*\*Source: Historical National Population Estimates, Population Estimates Program, Population Division, U.S. Census Bureau

**Table 4  
Public Opinion on Wearing Fur**

Question	Year	% Accepting Fur	% Opposing Fur
Is it okay to wear (ranch) fur coats? (Sieber 1986)*	1986	45	47
Thinking about specific ways that humans assert their dominance over animals, please tell me if you think each of the following practices is wrong and should be prohibited by law, if you personally disapprove but don't feel it should be illegal, or if it is acceptable to you: Killing animals to use their skins for fur coats. (Roper Center 1989a)	1989	13	85
Do you think there are some circumstances where it's perfectly okay to kill an animal for its fur or do you think it's wrong to kill an animal for its fur? (Roper Center 1989b)	1989	50**	46***
Do you generally favor or oppose the wearing of clothes made of animal furs? (Balzar 1993)	1993	35	50
The use of animal fur in clothing should be banned in the United States. (Survey Research Center, University of Maryland, College Park 1999)	1999	43.8	51.4

\*Survey of 802 Toronto adults

\*\* Responding that under some circumstances it would be all right to kill an animal for its fur.

\*\*\* Responding that it would always be wrong to kill an animal for its fur.

represented constituencies such as women and children. How long one remains an active hunter is strongly associated with the age at which one first begins to hunt, so state agencies are recruiting very young hunters through special licenses and special children's days. Most state wildlife agencies sponsor "outdoors woman" workshops that focus on developing skills associated with sport hunting. Sport hunting continues an overall decline that began in 1975, both in overall numbers and in percent of the

population taking part in the activity.

The best news for animals may be that the decline in hunting has more to do with changes in society—a growing rejection of the idea of killing for fun—than with any logistical problems that make hunting more difficult. In the late 1970s, 64 percent of 2,500 Americans surveyed approved of recreational hunting provided that the hunter used the meat (Kellert 1979). A 1993 poll by the *Los Angeles Times* found that 54 percent of the polled sample opposed hunting

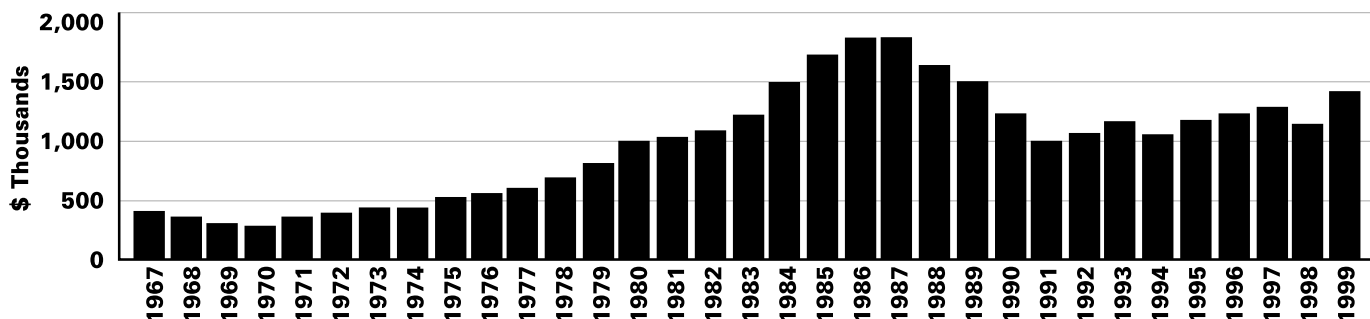
for sport—a reversal in attitudes in twenty years (Balzar 1993). A 1995 Associated Press poll revealed similar attitudes (Foster 1995).

The decline of hunting in the United States is likely to continue.

## The Decline in Trapping and Fur Sales

Since the 1980s, the fur fashion industry also has declined significantly. Once a widely desired symbol of

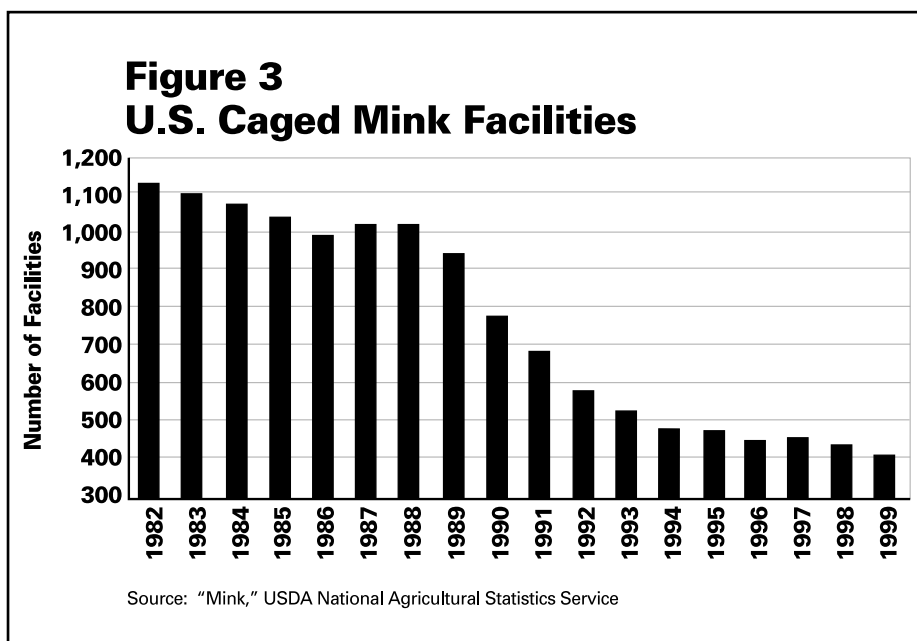
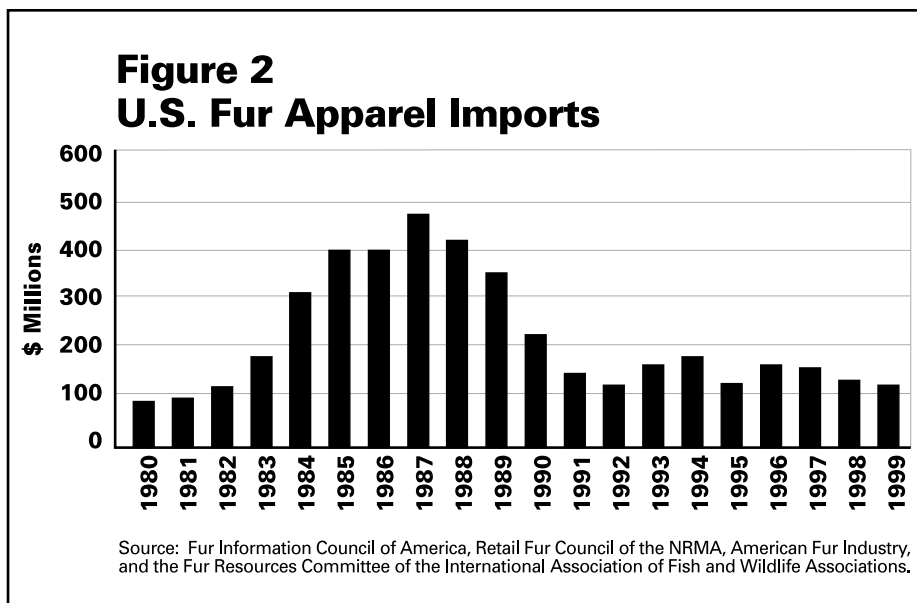
**Figure 1  
U.S. Retail Fur Sales**



Source: Fur Information Council of America, Retail Fur Council of the NRMA, American Fur Industry, and the Fur Resources Committee of the International Association of Fish and Wildlife Associations.

success and beauty, fur fashion has become controversial because of its link to questionable practices such as trapping and fur ranching, publicized by animal protection and animal rights groups. Surveys from 1986 to 1999 on public attitudes toward fur reported a range of attitudes. Acceptance of fur varied from a high of 50 percent (“under some circumstances”) to a low of 13 percent (see Table 4). Despite the “fur is back” hype spread by the fur industry at the end of the decade, U.S. retail fur sales—a statistic created by the fur industry itself—remain flat (see Figure 1). Even with zero inflation, low unemployment, a booming stock market, and increased spending by consumers, fur apparel is not selling. Imports of all types of fur apparel continue to decline as retailers fail to empty their showrooms by winter’s end. Fur-apparel imports, which make up at least 60 percent of the U.S. fur market, are considered to be a reliable indicator of the health of the U.S. fur industry (see Figure 2). The number of wild animals trapped for their fur in the United States has declined from 17 million in the mid-1980s to 3 million in 1999–2000. The United States is one of only three nations in the world that allows the use of devices such as the steel-jawed leghold trap, and the fashion industry has tried its best to distance itself from the cruelties of trapping. Fur from wild-caught animals has lost favor in the United States, and Russia, which traditionally has been a top consumer of wild-caught fur, has suffered an economic downturn that has hit the fur industry hard.

U.S. caged (or ranched) mink facilities have decreased by more than 50 percent since the mid-1980s (see Figure 3). The decline is attributed by the fur industry and anti-fur activists alike to low profits and an uncertain market future. Some fur farms have closed down completely; others have consolidated. Farmers face selling mink pelts at prices lower than the costs associated with breeding and raising the animals. As a result, the number of mink killed annually in the



United States has fallen from 4.6 million in 1989 to 2.8 million in 1999 (see Table 5). The number of cage-raised foxes has declined from 100,000 to 20,000 annually over the decade from 1990 to 2000. Items of clothing made primarily from fur comprise only 20 percent of the fur-apparel market; the rest is made up of fur-lined garments (50–60 percent) and fur-trimmed items (20 percent), a reflection of the trend to “hide” fur in linings or accents to avoid controversy.

In Europe and elsewhere, the story is the same. The number of cage-

raised mink killed worldwide declined from 41.8 million in 1988 to 26 million in 1999. Farmed foxes fell from 5.6 million killed in 1988 to approximately 3 million killed in 1999. The Netherlands and Sweden have outlawed fox farming, and Austria has effectively banned fur farming altogether.

However, the fur industry is now turning its attention to Asia as a primary market for fur apparel. New-found wealth has allowed many Asians to adopt traditional Western lifestyles, including luxury goods such as fur coats.

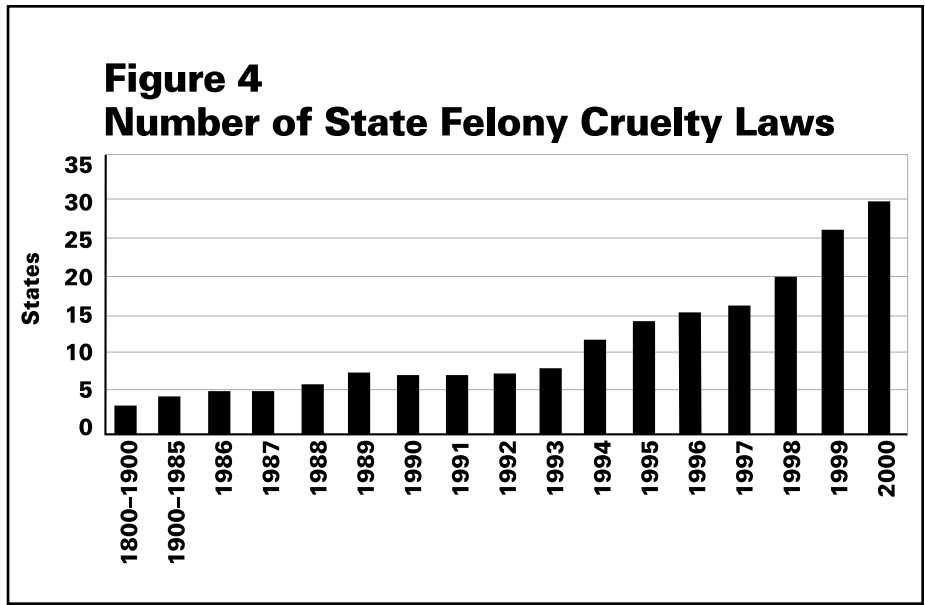
**Table 5  
U.S. Caged-Fur Statistics**

<b>Year</b>	<b>Pelts Produced (Millions)</b>	<b>Pelt Value (Millions)</b>	<b>Average \$/pelt</b>	<b>No. of Females Bred</b>	<b>No. of U.S. Mink Facilities</b>	<b>No. of Farms with Fox</b>
<b>1975</b>	3.07	\$74.0	\$24.10		1,084	
<b>1976</b>	3.03	\$87.8	\$29.00		1,015	
<b>1977</b>	3.08	\$87.1	\$28.30		1,040	
<b>1978</b>	3.36	\$132.0	\$39.30		1,095	
<b>1979</b>	3.39	\$139.5	\$41.10		1,105	
<b>1980</b>	3.5	\$123.6	\$35.30		1,122	
<b>1981</b>			\$32.20			
<b>1982</b>	4.09	\$118.1	\$28.90		1,116	
<b>1983</b>	4.14	\$123.7	\$29.90		1,098	
<b>1984</b>	4.22	\$130.0	\$30.80	1,115,000	1,084	
<b>1985</b>	4.17	\$116.8	\$28.00	1,115,000	1,042	
<b>1986</b>	4.1	\$170.0	\$41.30	1,073,000	989	
<b>1987</b>	4.12	\$177.2	\$43.00	1,077,000	1,027	
<b>1988</b>	4.45	\$143.8	\$32.30	1,198,000	1,027	
<b>1989</b>	4.60	\$93.9	\$20.40	1,202,000	940	
<b>1990</b>	3.37	\$85.8	\$25.50	922,200	771	
<b>1991</b>	3.27	\$71.6	\$21.90	874,000	683	
<b>1992</b>	2.89	\$71.8	\$24.80	782,000	571	
<b>1993</b>	2.53	\$86.2	\$34.10	712,800	523	58
<b>1994</b>	2.53	\$82.6	\$33.00	708,300	484	47
<b>1995</b>	2.69	\$142.8	\$53.10	678,200	478	49
<b>1996</b>	2.65	\$93.5	\$35.30	714,900	449	40
<b>1997</b>	2.99	\$99.1	\$33.10	705,200	452	31
<b>1998</b>	2.94	\$72.9	\$24.80	659,900	438	31
<b>1999</b>	2.81	\$94.8	\$33.70	660,400	404	27

Source: "Mink" USDA National Agricultural Statistics Service

## An Increased Presence in Federal and State Legislation

Many animal protection issues are handled exclusively at the state level. Mandatory spay/neuter legislation, animal control laws, and general anti-cruelty laws, for example, must be passed state by state. Although in 1950 every state had an anticruelty law, a multitude of new and important laws have been passed since then. The period between 1980 and 2000 was particularly active. Although Massachusetts made cruelty to animals a felony offense in 1804, only three other states (Oklahoma, Rhode Island, and Michigan) had joined it by 1950. By 2000 twenty-seven other states had made cruelty to animals a felony offense—all since 1986 (see Figure 4). Sixteen states have mandated psychological counseling as part of their anticruelty provisions. A requirement that a bond be posted to cover costs associated with holding animals prior to court disposition has been passed in six states. This brings to thirteen the number of states that ease the financial burden on animal shelters, which may have to house seized animals for months until a cruelty case comes to trial. Forty-five state laws making dogfighting a felony offense have been passed since 1975. Cockfighting is illegal in forty-seven states and a felony offense in twenty. Thirteen states now have vanity-license plate programs that support spay/neuter efforts and six states have pet overpopulation funds to help increase the number of spayed or neutered pets in the community. Twenty-seven states have laws mandating that animals adopted from shelters be spayed or neutered, and sixteen states now have consumer protection laws covering the purchase of animals from pet stores. Eight states prohibit tripping horses for the purposes of sport or entertainment. Nine states have passed laws prohibiting the sale of items made from the fur of dogs and cats. As of 2000 six states had enacted laws that give vet-



erinarians reporting suspected animal cruelty immunity from civil and/or criminal liability.

In 1950 there were three significant pieces of federal legislation protecting animals from suffering: the so-called Twenty-Eight Hour Law, which requires that animals be unloaded and provided with food, water, and rest for five hours when transported across state lines for more than twenty-eight hours; the Lacey Act (1900), which prohibits commerce in animals protected by law; and the Bald Eagle Protection Act (1940). (The Smoot-Hawley Tariff Act, passed in 1930, and the Migratory Bird Treaty Act, passed in 1918, might also be included as animal protection legislation.) By 2000 there were ten pieces of federal legislation, including the Humane Slaughter Act (1958); the Endangered Species Act (1966); the Laboratory Animal Welfare Act (1966) and its subsequent amendments, in 1970—when the name was changed to the Animal Welfare Act—1976, 1985, and 1990; the Wild Free-Roaming Horse and Burro Act (1971); the Horse Protection Act and Fur Seal Act (1976); the Marine Mammal Protection Act (1982); and the Humane Transport of Equines to Slaughter Act (1998).

One factor behind the increased success at the federal level was the tremendous expansion of national

animal protection, animal welfare, and animal rights organizations over last fifty years. In the United States prior to 1950, only the American Humane Association had an overtly national focus on *all* aspects of animal protection. Three anti-vivisection organizations had claimed national audiences for many decades. Several prestigious and influential state-oriented organizations, including the American Society for the Prevention of Cruelty to Animals (ASPCA), the Massachusetts Society for the Prevention of Cruelty to Animals, and the Women's SPCA of Pennsylvania, had set agendas within their jurisdictions that served as models and inspirations for groups across the country, but, by and large, had not lobbied Congress. The 1950s saw the creation of the Animal Welfare Institute, the Society for Animal Protective Legislation, Friends of Animals, the Catholic Society for Animal Welfare (later the International Society for Animal Rights), and The HSUS. The 1960s gave birth to the Fund for Animals, United Action for Animals, the Animal Protection Institute, and the International Fund for Animal Welfare. Greenpeace, the Animal Legal Defense Fund, People for the Ethical Treatment of Animals, and a number of single-issue national groups followed in the 1970s and 1980s. By the 1990s these groups had solidified



**Table 6**  
**Number of Horses and Participants**  
**by Industry, 1999**

Activity	No. of Horses	No. of Participants
Racing	725,000	941,400
Showing	1,974,000	3,607,900
Recreation	2,970,000	4,346,100
Other*	1,262,000	1,607,900
<b>Total</b>	<b>6,931,000</b>	<b>7,062,500**</b>

\*Includes farm and ranch work, police work, rodeo, and polo.

\*\*The sum of participants by activity does not equal the total number of participants because individuals could be counted in more than one activity.

Source: American Horse Council

their bases of support and had invested resources in lobbying members of Congress. They could point to several significant successes at formal coalition building among themselves, but the majority of their efforts were undertaken in informal alliances, particularly at the federal level. Alliances with environmental and conservation, social-justice, health advocacy, and consumer groups were less frequent but had occurred in pushing successfully for favorable action on shared agendas. Such cooperation reflected a level of political sophistication unheard of on the national scene prior to 1950.

## The Evolution of the Horse from Commodity to Companion

After centuries of exploitation as a means of transport in war and peace, the horse was fast becoming obsolete in the United States by 1950. The domestic horse and mule population had peaked in 1915, at approximately 26 million, in response to increased demands from farming, particularly in hauling large tilling equipment. After 1915 tractors and other mechanized vehicles quickly began replacing horses for farm work and for

conveying men and artillery into battle. Through the 1920s horses disappeared at the rate of 500,000 a year. Most were sold to meatpackers to be processed into dog food, bonemeal, leather, and glue. The price of horses reached an all-time low in 1950, and the horse population continued its steady decline until only about 3 million horses could be found in the United States in 1960, according to the U.S. Department of Commerce. Then, a generally expanding economy and an emerging middle class located in the new suburbs (surrounded by open land) led to an increase in participation in equestrian sports. A 1964 Cornell University study concluded that "The horse has become a status symbol for...entire families" (Howard 1965). Previously, only the Thoroughbred's role in racing, long acknowledged as the sport of kings, had given horses a patina of glamour.

For many newly minted equestrians, the horse evolved from a status symbol to a member of the family. Early television series like "My Friend Flicka," "Mr. Ed," "The Roy Rogers Show," and "Fury" featured horse heroes interacting with their human families much as did the canine stars of "Lassie" and "Rin Tin Tin." Nowhere was the evolving perception of horses in the American conscious-

ness more apparent than in the remarkable transformation of wild horse from vermin to symbol of American freedom. Since the 1920s, thousands of wild horses had been systematically slaughtered each year by Western ranchers, who viewed the horses as competition for their cattle-grazing public range land. By the early 1950s, hundreds of thousands of wild horses had been rounded up and sent to slaughter. Galvanized by Velma B. "Wild Horse Annie" Johnson of Nevada, an early opponent of such roundups, schoolchildren nationwide undertook a letter-writing campaign that resulted in passage of the federal Wild Free-Roaming Horse and Burro Act of 1971. This law prohibited the capture, branding, harassment, and slaughter of wild horses and delegated their oversight, removal, and adoption into private hands to the U.S. Department of Interior's Bureau of Land Management (BLM). Although the BLM has been strongly criticized for its management of wild horses, their protection was a major achievement and demonstrated the depth of the affection of the American public for the horse.

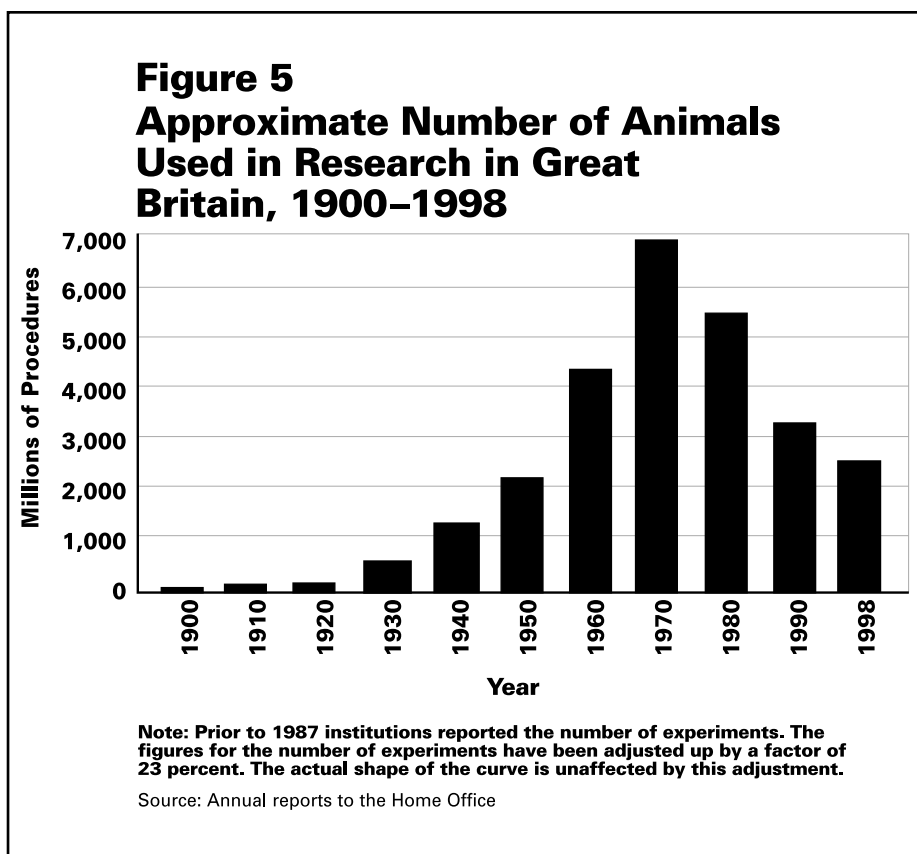
The horse-racing industry expanded under the influence of increased pari-mutuel wagering until the mid-1980s. The number of registered Thoroughbreds (the vast majority of which have always been bred for the racetrack) rose from 9,095 in 1950 to 24,361 in 1970 and peaked in 1986 at 51,296 before a change in tax laws made it less attractive to be involved in horse-related businesses. Competition from heavily televised sports led to an overall decline in racetrack attendance and betting handle, although annual Thoroughbred foal registrations rebounded somewhat in the 1990s to stabilize at approximately 36,000.

Racehorses did not all live the life of Secretariat, the 1973 Triple Crown winner who was named Athlete of the Year by *Sports Illustrated* (against human competition), as well as the Eclipse Award winner of Horse of the Year. Indeed, many thousands of former and failed racehorses went to

slaughter for human consumption in Europe, along with thousands of long-suffering veterans of riding academies, summer camps, and backyard horse-keeping experiments, particularly in the 1980s, when prices for horsemeat were higher than those for nondescript but serviceable riding animals. In response to inhumane conditions at horse auctions and slaughterhouses in the 1980s and 1990s, documented by animal protection advocates, federal legislation was passed in 1998 to address some of the most serious problems with horse transport and slaughter. As of mid-2000 more than seventy horse rescue organizations and/or equine sanctuaries were on the Internet ([www.equinerescueleague.org](http://www.equinerescueleague.org)). (That number did not include facilities associated with or operated by animal shelters.) These groups rescued slaughter-bound horses (sometimes through outright purchase at auctions) and rehabilitated horses seized from private parties.

There was also a public outcry over horses used in the production of the estrogen-replacement product Premarin®, commonly prescribed to ease the symptoms of menopausal women and to treat osteoporosis. Manufactured from the urine of pregnant mares who are tethered for six months at a time in narrow stalls to facilitate urine collection, Premarin was the most prescribed drug in the United States in 2000, with more than 47 million prescriptions dispensed (Noonan 2000). Animal protection groups have publicized their welfare concerns about the treatment of the 35,000-plus horses involved in Premarin production and have intensified their efforts to make information on plant-based alternatives to the drug more widely available.

As of 1999, according to a survey commissioned by the American Horse Council Foundation, 1.9 million people owned 6.9 million horses in the United States. Of that number, 725,000 were involved in racing and race horse breeding, 2 million were involved in horse showing, 3 million were involved in recreational activities, and 1.25 million were used in



other activities, such as farm and ranch work, rodeo, polo, and police work (American Horse Council 2000) (see Table 6). In each of these environments, individual horses were vulnerable to exploitation and abuse (the decades-long practice of “soring” Tennessee Walking Horses—altering their gait through painful means to gain advantage in the show ring—is a prime example). Nonetheless, it can be persuasively argued that the status of horses in the United States is higher than in 1950 and that their welfare has improved.

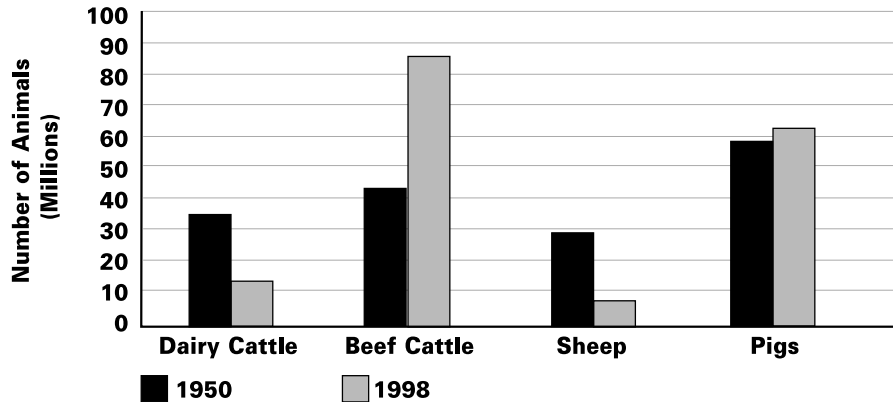
### **A Decline in the Use of Animals as Research Subjects**

After World War II, the U.S. government began to fund scientific research, including biomedical research, at levels previously unseen. The discoveries of a polio vaccine (in 1955) and of antibiotics such as penicillin fueled an intense interest in research as the clear and shining pathway to curing—literally—the ills of the world.

The demand for laboratory animals to support such research increased as well. One survey conducted in the late 1950s found that 17 million animals were being used in laboratories in the United States. Laboratory animal use reached its peak in the 1970s and then began a steady downward trend, as evidenced by figures from Great Britain (see Figure 5). It is probable that the same pattern of laboratory animal use occurred in the United States (Rowan, Loew, and Weer 1995), although the data from the United States are not as reliable. By the early 1990s, laboratory animal use was estimated to have declined by 50 percent from its peak in the early 1970s. Alternative scientific techniques, such as Russell and Burch’s (1959) Three Rs (reduction, replacement, and refinement of animal use in biomedical experimentation), had gained wide acceptance in all but the most conservative of scientific circles.

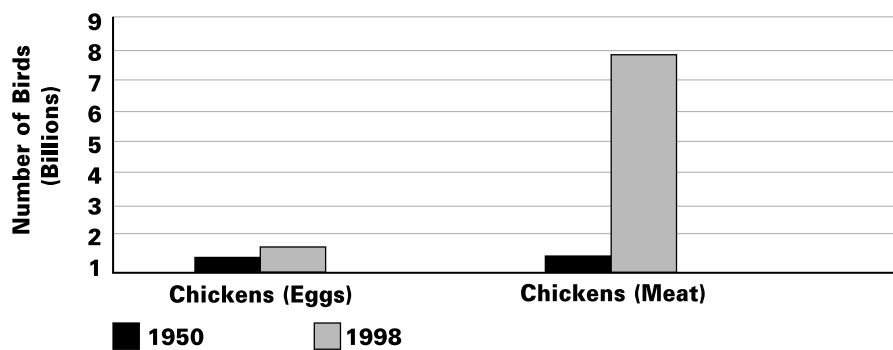
Public attitudes toward animal research have also changed over the last half century. A survey conducted in 1948 by the Gallup organization

**Figure 6a**  
**Changes in the U.S. Inventories**  
**of Livestock, 1950–1998**



Source: USDA National Agricultural Statistics Service 1960; 2000

**Figure 6b**  
**Changes in the U.S. Inventories**  
**of Chickens, 1950–1998**



Source: USDA National Agricultural Statistics Service 1960; 2000

for the American Medical Association found that 85 percent of those polled favored the use of live animals in medical teaching and research. By 1985 that number had dropped to 58.5 percent in a poll undertaken by the Baylor University Center for Community Research and Development (see “Social Attitudes and Animals” in this volume). Spurred by public pressure, the alternatives approach (as the Three Rs came to be called) was incorporated into national legislation

throughout the developed world and embraced by industry in Europe and the United States. In the meantime, procurement of disease-free animals became more expensive, as did virtually all aspects of research. These factors contributed to a reduction in the number of animals being used in experiments, although the declines in mouse use were reversed somewhat in the 1990s as researchers began to maintain breeding colonies of genetically engineered strains of mice not

available from commercial suppliers. Nevertheless, government centers devoted to the validation and regulatory acceptance of alternative methods established during the 1990s seemed to signal that alternatives “had arrived” and that animal research was poised to enter a new and promising era from an animal protection perspective.

## How Has the State of the Animals Worsened?

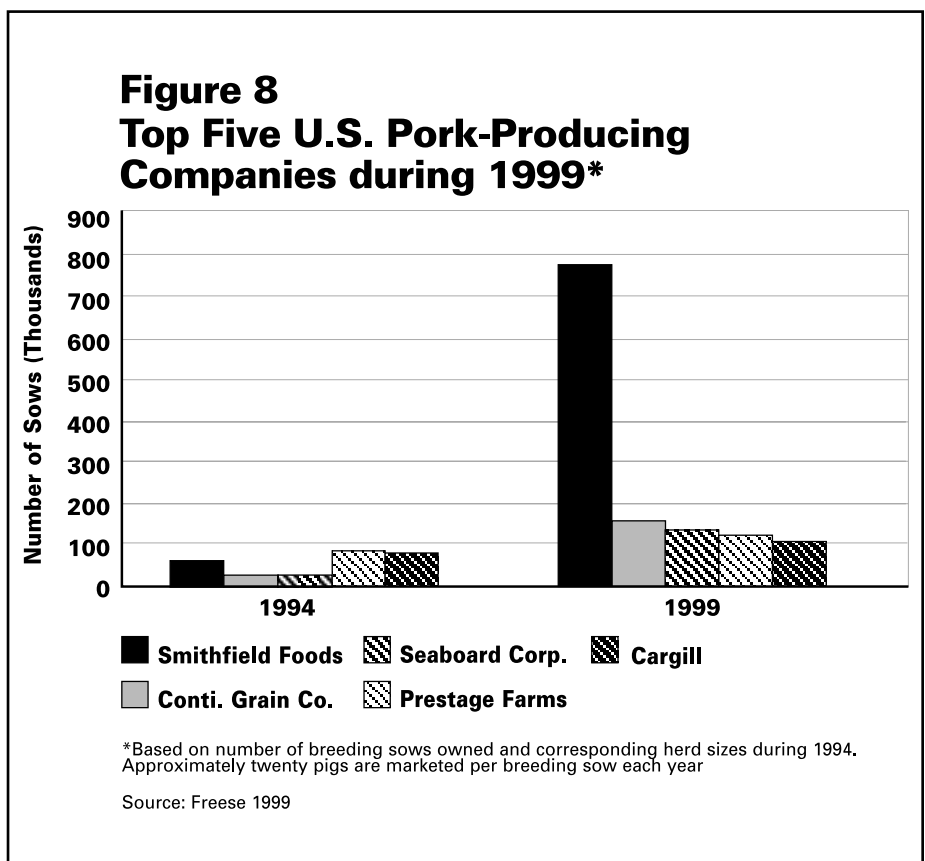
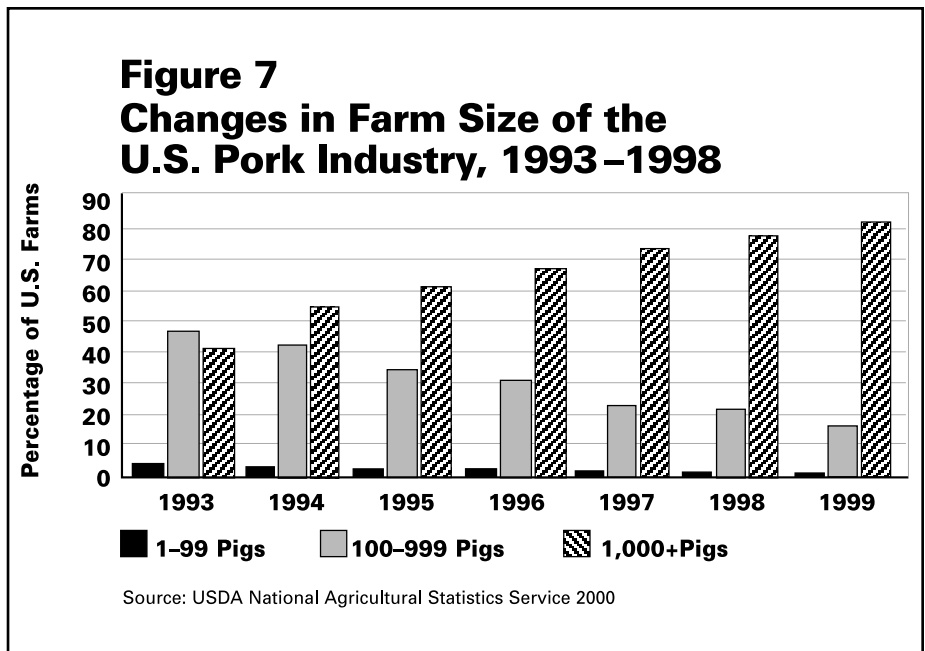
### More Animals Raised for Food More Intensively

Although conditions for some animals have improved significantly in the United States during the past fifty years, the story of farm animals is much more depressing. Humans are raising many more animals for food and fiber production (and the demand for food animals is far greater than for any other human use of animals). Increases in human population and meat consumption indicate that problems associated with animal agriculture are likely to intensify in the future. In the United States, the number of cattle raised for meat doubled during the past fifty years (see Figure 6a). More dramatic is the one-thousand-fold increase in chickens raised for meat (see Figure 6b); almost 8 billion chickens are now raised for meat each year in the United States alone.

The face of agriculture in the United States is changing at an alarming rate. Traditionally, animals formed an integral part of sustainable farming systems; they were fed from crops and forages grown on the farm, and their manure was returned to the land as fertilizer. With demands on animal agriculture increasing, however, family farms are being replaced by large “factory farms.” Factory farms have grown out of our ability to keep ani-

mals alive and growing in intensive confinement. Advances in feed formulation and dietary supplements have permitted farmers to raise animals almost entirely indoors, where the animals are mechanically supplied with carefully formulated feed that maximizes their growth rates. In such intensive environments, however, the animals have virtually no chance to express their normal behaviors. The waste from all these confined animals (farm animals in the United States produce more than one hundred times as much waste as humans) has to be managed. In sum, factory farms are associated with problems of environmental degradation, poor animal welfare, human illness and health risks, and damage to rural communities.

Changes in the U.S. pork industry illustrate the problems of factory farm systems. The 1980s and 1990s saw a dramatic decrease in the number of hog farms, with a corresponding increase in farm size. By 2000 more than 80 percent of pigs were raised on farms housing one thousand or more animals (see Figure 7). Furthermore, vertical integration in the pork industry has increased, and single companies now control all elements of the production system, from breeding and growing the pigs, to slaughtering the animals and processing their meat. Smithfields Foods, the largest hog producer and processor in the world (see Figure 8), swallowed its competitors through company mergers and acquisitions throughout the 1990s and, as of 2000, had substantial hog operations in the United States, Poland, Mexico, and Brazil (Miller 2000). The same multinational company names, such as ConAgra, Continental Grain, and Cargill, dominate production of beef, pork, and poultry meat, as well as grain production, and they export their farming systems throughout the world (Hefernan 1999). In China, where demand for pork has skyrocketed (see Figure 9), hog factories are replacing traditional backyard production systems. Without the supporting infrastructure of abundant water supply, well-maintained transportation systems,

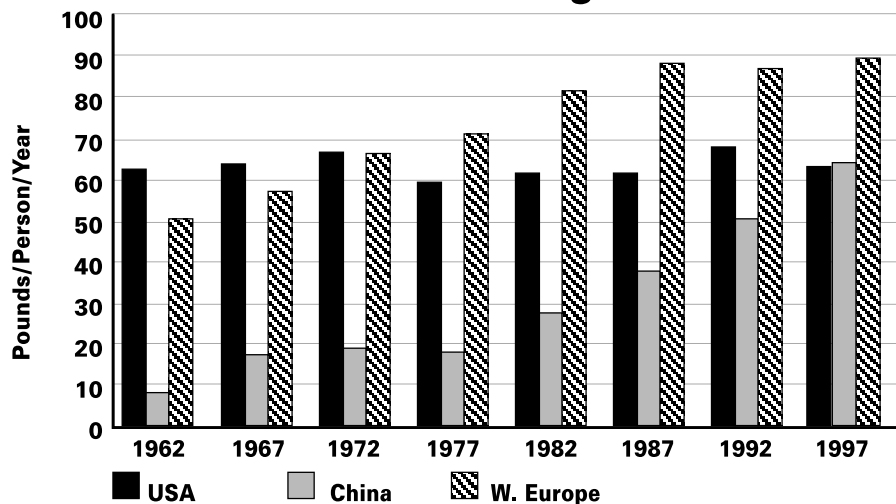


and reliable energy sources, adoption of factory farm systems is likely to cause a plethora of environmental, health, and socioeconomic problems. In the United States—and elsewhere—it is increasingly difficult for family farmers to compete with agribusiness due to their limited access to high-

volume markets to sell animals and higher input costs for feed, breeding stock, and veterinary care.

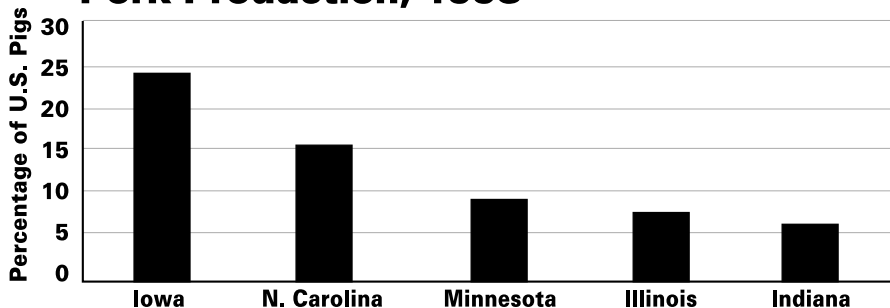
Animal production has also become concentrated in particular regions within the United States. Sixty-five percent of U.S. pigs are raised in just five states (see Figure 10), 15 million

**Figure 9**  
**Annual Per Capita Consumption**  
**of Pork for Selected Regions**



Source: UN Food and Agricultural Organization 2000

**Figure 10**  
**Top Five U.S. States for**  
**Pork Production, 1998**



Source: USDA National Agricultural Statistics Service 2000

in Iowa alone (USDA National Agricultural Statistics Service 2000). Similar trends exist in the raising and processing of beef, poultry meat, milk, and eggs. Regional concentration of animal production places an enormous strain on local ecosystems and results in environmental degradation. Poor handling, storage, and application of manure contaminates rural drinking water resources, destroys wetland areas, and kills fish and aquatic wildlife downstream (Clean Water

Network and the Izaak Walton League of America 1999). It is particularly distressing to observe the negative impact that changes in agriculture have had on the well-being of farm animals. In 2000 the welfare of farm animals in the United States was shameful, despite the much-publicized gains in farm animal productivity. Availability of antibiotics allowed management of subclinical levels of disease and thus facilitated the housing of large numbers of ani-

mals indoors. Research into mechanisms of growth facilitated the use of hormones and synthetic compounds to boost productivity. Building design focused on minimizing labor and maximizing numbers of animals housed rather than on improving the quality of the environment for workers and animals.

Consequently, animals on factory farms are raised in crowded, barren environments that do not correspond with the habitats in which their anatomy, physiology, and behavior evolved. Dairy and beef cattle often live in groups with ten thousand or more animals in outdoor yards, where there is no pasture for grazing or resting and no shelter from wind and sun. Pigs are raised in buildings with several thousand animals, where providing bedding material such as straw would interfere with the manure handling systems required on such large farms. Laying hens are housed in cages, without opportunity to perch, dust-bathe, or even flap their wings. The vast majority of breeding sows and veal calves in the United States are housed individually in crates, where there is insufficient space to walk or even to turn around, and where there is little opportunity to interact with social companions. This level of animal husbandry is unacceptable.

There is ample evidence to suggest that farm animals suffer in these factory farm systems. Painful procedures such as castration and tail-docking are standard management practices in the cattle, sheep, and pig industries, but unlike their companion animal counterparts, farm animals do not receive anesthesia or analgesia. Lameness, resulting from rapid growth and poor resting surfaces, is a painful and persistent problem in cattle, hog, and broiler chicken operations. Feeding high-grain diets results in rapid growth rates, but also causes ulcers in pigs and digestive problems such as bloat in cattle. Sores, injuries, and feather and hair-loss are common due to chronic irritation with pen and cage surfaces. Injuries and bruising often result when animals are handled, loaded, and transported. Where these

problems have economic impacts, companies are motivated to make improvements. However, there are few financial incentives for addressing problems that affect animals of low economic value, such as non-productive dairy cows or laying hens.

Currently, farm animals receive almost no protection from U.S. legislation (Wolfson 1999). The Animal Welfare Act, designed to protect animals used in research or exhibition, specifically exempts animals that are kept for food or fiber production. Farm animals are specifically exempt from anticruelty laws in most states. The two federal laws affecting the care of farm animals are limited in scope and poorly enforced. The Humane Slaughter Act requires that livestock be rendered unconscious prior to slaughter; however, poultry are excluded from this law. The Twenty-Eight Hour Law was discussed previously (see p. 7).

Until recently, farm animals have received surprisingly little sympathy from U.S. citizens, compared to the attention they have received in the European Union (EU), Canada, Australia, and New Zealand. Recent public opinion polls, however, indicate that concerns regarding agricultural practices are increasing. In telephone surveys, 93 percent of U.S. citizens polled agreed that animal pain and suffering should be reduced as much as possible, even though the animals were going to be slaughtered (Caravan Opinion Research Center 1995). Seventy-seven percent expressed concern for abuse and inhumane treatment of animals on factory farms (Lake Snell Perry and Associates 1999). More significantly, citizens have showed a willingness to take farm animal issues to the ballot box and are demanding more from their elected officials. Several states, including Colorado and North Carolina, have passed moratoriums blocking the development of factory hog farms. Consumers are becoming critical of their food purchases, with increased sales of organic products and increased involvement in community-supported agriculture projects. Some

animal scientists are also addressing farm animal welfare by designing equipment that addresses farm animal behavior and by using behavior to understand suffering and pleasure experienced by farm animals. Although the welfare of farm animals has diminished during the past fifty years, improvements are possible if citizens, government officials, and farmers address the issue.

## **The Environment: A Bumper Crop of Extinctions**

There is a growing consensus that the wild animal kingdom is under the greatest threat in 65 million years—when the reign of the dinosaurs was ended by an asteroid that collided with earth. Every day an estimated one hundred species of animals are being pushed into extinction.

Scientists are not certain about the exact rate of extinction because no global effort has ever been funded to find out how many species share the planet. This deficiency can be explained by human beings' lack of appreciation for the interdependence of all living things and for the importance of other life-forms to human survival. That said, estimates of the total number range from 10 million to 30 million species, the vast majority of them invertebrate.

There is a wide consensus that believes that the increasing human population is making escalating demands on the resources of the planet. Animal habitats are routinely modified, degraded, and eventually destroyed. Those attempts that are being made to preserve species typically concentrate on the biggest, the most beautiful, and the most charismatic species (using human criteria) such as Asian elephants, snow leopards, Bengal tigers, Javan rhinoceros, orangutans, marine mammals, giant pandas, cheetahs, gorillas, eagles, cranes, and sea turtles. These species all require large areas of relatively unspoiled habitat, and, as a result, existing small populations of such "keystone" species require human

decision makers to protect areas where large numbers of other species have a chance to survive.

In December 1999 government scientists reported that in the mid-1970s average global surface temperatures had begun increasing at a rate of 3.5 degrees Fahrenheit per century and would continue to rise by 2–6 degrees over the next one hundred years. While that rate might appear moderate, in reality it is very rapid, given that the earth has warmed only 5–9 degrees over the last 18,000–20,000 years (Irwin 2000). Global warming will affect the earth in ways currently unknown. The melting of the polar icecaps and resulting rise in ocean levels—so that entire islands and large areas along coastlines are submerged and populations are displaced—is one possible, if alarming, scenario (Irwin 2000). Since the mid-1970s scientists have known that the earth's ozone layer has been affected by industrial chemicals introduced into the earth's atmosphere, causing it to thin and thereby reducing its ability to protect nature from the sun's ultraviolet radiation. Such findings are slowly finding an audience beyond scientific circles.

The outlook for wild animals is rather bleak. While many organizations and individuals struggle to save wild species threatened with extinction, rising human populations and human consumption continue to erode our efforts. The animal protection community is concerned not only about the threats to animal populations, but also about the animal suffering that is caused by human encroachment on and depredations in wild habitat.

# Where Are Gains under Threat?

## Marine Mammals: Hanging On

For marine mammals, the significant gains of the last twenty-five years are now being threatened.

### Whales

In 1950 tens of thousands of whales were being killed every year by whaling nations (most notably the United States, Japan, Norway, Iceland, and the USSR). The International Whaling Commission (IWC), which had been established in 1946, set species quotas based mainly on assumptions grounded in human economic interests—not on whale biology. Unsustainable quotas set by the IWC were frequently exceeded. As a result, several species (such as grey whales and right whales) were pushed to the brink of extinction. Other species (such as blue whales, fin whales, and humpbacks) continued to be hunted in very large numbers until the 1960s, when some species received a degree of protection from whalers. Public sentiment in favor of whale protection continued to grow through the 1970s. In 1986 a worldwide moratorium on whaling was established. By 2000 this moratorium on all commercial whaling had allowed some species (eastern grey whales, northern right whales) to begin to recover. Other species, however, such as western gray whales and southern right whales, showed no signs of recovery. Japan (via a “scientific” whaling exemption) and Norway (which had continued to conduct domestic commercial whaling) were killing 1,200–1,400 minke whales annually despite the ban. In the 2000 whaling season Japan also began killing Brydes’ and sperm whales, and the IWC appeared to be poised to lift the moratorium.

### Dolphins

Beginning in 1959 and continuing through the 1960s, as many as 300,000 spinner and spotted dolphins were killed annually as a consequence of purse-seine operations in the tuna fishery of the eastern tropical Pacific Ocean (ETP). By the 1980s these stocks had been reduced to 15–20 percent of their original numbers and were declared depleted under the U.S. Marine Mammal Protection Act, passed in 1972. From 1990 to 2000 the mortality rate of dolphins in the ETP fishery had been reduced by 97 percent, due to the insistence by consumers that the “dolphin-safe” label, introduced in 1994 as a means of identifying product caught without harming dolphins, be applied to include the chasing and encircling of dolphins—not just to outright killing. So-called dolphin-deadly tuna was embargoed in the United States from 1994 until 2000. Due to pressure from Mexico (under the threat of a World Trade Organization challenge), however, the United States seemed to be on the verge of accepting fishing practices that would kill more dolphin as “dolphin-safe” for labeling purposes. This is doubly troubling since there is no evidence that dolphin stocks made an appreciable recovery in the decade 1990–2000. This is probably because the stress and trauma created by chasing and encircling the dolphins adversely affects reproductive success.

### Seals

In the 1950s hundreds of thousands of harp seals, including upwards of 300,000 white-coat pups, were killed in Canada each year for their fur. The population declined significantly as a result, and the seals were brutally slaughtered using inhumane methods such as clubs and *hakapiks*. This slaughter was documented on film in the 1960s and 1970s by animal protection organizations and broadcast across the United States. The intense hue and cry that followed influenced the Canadian government to outlaw the killing of white-coat pups in the

early 1980s and decrease the annual quota of harp seals that could be killed to 60,000. As few as 25,000 harp seals were actually killed in any one year as the public shunned products made of seal fur and the EU threatened a complete embargo on seal products.

By 1995 the quota had been increased to 200,000 harp seals, both to address fishermen’s concerns about depleted cod stocks (seals were suspected of taking cod as their populations increased) and to give jobs to unemployed Newfoundlanders. Seals were being killed for their meat as much as for their fur. Killing the white-coat pups remained illegal, but several thousand were being poached every year. In 2000 the quota for harp seals stood at 275,000. The future of the harp seal looks threatening.

### Captive Cetaceans

Captive cetaceans were almost unknown in the 1950s (although a few bottlenose dolphins were kept in aquariums) but, in the 1960s, a boom in marine parks, circuses, and dolphinariums was sparked by the successful television series “Flipper” and the saga of Namu, the killer whale who lived a year in captivity after being rescued from a fishing net. By the 1970s hundreds of dolphins and whales were being captured and maintained in marine parks and aquariums. By 2000 the situation worldwide was mixed. Captive populations and captures themselves were on the increase in Asia, particularly in China, Japan, and Indochina. Captive populations/captures were stable in eastern Europe and the Caribbean. In western Europe and Canada, captive populations were decreasing and there had been no known recent captures. Captive populations were stable or increasing in Africa, with captures proposed. Captive populations were stable or possibly increasing with no known recent captures in South America.

In the United States the captive population was stable or decreasing and there had been no known recent captures. The phenomenal success of

the “Free Willy” movies in the 1990s focused the attention of millions on the dark side of captivity for cetaceans. It would be ironic indeed if the publicity generated by “Free Willy” served as an impetus for the release of cetaceans kept in bondage as a result of enthusiasm generated by “Flipper” decades earlier.

### **Polar Bears**

In the mid-twentieth century, polar bears were hunted indiscriminately. This was a major cause of population declines throughout their ranges. By the time the decline was addressed—in the 1973 International Agreement on the Conservation of Polar Bears—several populations worldwide were severely depleted. All five signatories (USSR/Russia, the United States, Denmark/Greenland, Norway, and Canada) later disagreed on the interpretation of the agreement’s provisions on sport hunting. Gains made during twenty-five years of strong protection were undercut by the 1994 amendments to the Marine Mammal Protection Act, which lifted the prohibition against importing sport-hunted polar bear trophies into the United States. Since then, hundreds of trophies have been imported from Canada, including many that had been warehoused from earlier hunts. Environmental degradation of polar bear habitats was the biggest threat to polar bear populations in 2000 and the future is guarded at best.

## **Where Is the State of Animals Unknown?**

### **The Plight of Zoo Animals**

The state of the approximately 900,000 to 1 million zoo animals around the world is, unfortunately, largely unknown. Although great strides may have been made in the

standards of care—both physical and behavioral—in the last fifty years, only a minority of zoo animals living in a handful of progressive institutions (fewer than 20 percent of the whole) can be said to benefit from them. The vast majority languish unpublicized in barren, unsafe, and/or inhumane conditions, their only advocates the occasional shocked zoo visitor who attempts to interest local authorities or zoo management in mitigating the general misery of the animals. The larger zoos are now devoting more time and attention to in situ conservation and to conservation education. However, in the majority of institutions, public education is abysmal.

## **The Way Ahead**

Fifty years ago, problems with urban wildlife (with the exception of humankind’s centuries-long battle with rodents), the link between cruelty to animals and other forms of human violence, and the potential of immunocontraception for species population control were unheard of. Now these issues are at the forefront of some of the most promising work being done in animal protection.

### **Wild Neighbors: Moving Ever Closer**

Although cities occupy no more than 2 percent of the world’s habitable land mass, human urban populations now outnumber the rural population. Soon the majority of all humans on earth will live in urban environments. Those environments will be created through land development—clearing, grading, soil compression, wetlands draining, and infilling—all of which have a major impact on native species of mammals, amphibians, invertebrates, and reptiles. Those species that can withstand the drastic change in habitat—and those that can flourish within it—will ensure that the human tenants of these most human of environments will not be alone.

Although human beings have interacted with urban wildlife, particularly

rodents, since the beginning of recorded time, their relationships with many other species are relatively new. Urbanization is associated with a relatively small number of species in the environment, but in higher concentrations than are found in “wild” nature. These species interact with people in a variety of ways, and although many people enjoy their relationships with urban wildlife, particularly songbirds, it is the conflicts with wildlife that garner the attention of community leaders. These conflicts can involve individual animals, local groups, or regional populations.

Squirrels, white-tailed deer, raccoons, skunks, or Canada geese can, by their very existence, create tension and anger in communities that are intolerant of droppings on walkways or the consumption of ornamental plants. Species involved in actively changing the environment (such as beavers) or that are seen as threats to human well-being (such as bats) may be actively pursued by state and local officials either independently or in response to public pressure. Virtually all species interacting with human urban populations run the risk of being termed “nuisance” or “pest” species in specific situations and are dealt with via a variety of methods, ranging from the benign to the lethal. A consensus is needed among private nuisance wildlife control operators, wildlife rehabilitators, animal protection organizations, and state and local government agencies, in the absence of state regulatory and statutory oversight, to address growing public demand for solutions to wildlife problems that include nonlethal options before lethal options are considered. (In this context, problems are defined as human perceptions of the results of urban wildlife doing what it can to survive and compete for resources.) Tolerance must be accepted as a primary response, and solutions that are “environmentally sound, lasting, and humane” must continually be sought and developed.



## The Tangled Web of Animal Abuse

Although cruelty to animals has been acknowledged in the cultural and religious traditions of most societies, only in the past few decades has systematic attention focused on the link between cruelty to animals and other forms of human violence. Patterns of behavior of serial killers, spousal abusers, and juvenile murderers became the subject of active investigation in the 1980s and 1990s, but insightful observers had sounded warnings earlier. In 1963 anthropologist Margaret Mead wrote, "It would . . . seem wise to include a more carefully planned handling of behavior toward living creatures in our school curriculum . . . and alert all child therapists to watch for any record of killing or torturing a living thing. It may well be that this could prove a diagnostic sign and that such children, diagnosed early, could be helped instead of being allowed to embark on a long career of episodic violence and murder" (Lockwood and Ascione 1998).

Lockwood and Hodge brought the link between cruelty to animals and other forms of human abuse, particularly serial murder, to the attention of the animal protection community in 1986 through a review of work of Hellman and Blackman in 1966, Tapia in the early 1970s, and Felthous and Kellert in the early 1980s (Lockwood and Hodge 1986). Interest from the law-enforcement community came later, after FBI profiling of serial killers incorporated cruelty to animals as a predictor of violence (HSUS 1996). In the period 1995–2000, interest in the topic increased incrementally, as evidence of links between cruelty to animals and domestic abuse, youth violence, and other forms of criminal activity began to mount and was disseminated by the media. Ascione and Lockwood have identified five areas in need of attention in the coming decades: the "ecology" of violence against animals; the developmental dynamics of cruelty to animals and other forms of human violence; the relationship between

animal abuse and domestic violence; the social service response to cruelty to animals; and the dynamics of prevention and intervention/treatment. These assume greater urgency as American communities grapple with highly publicized incidents of seemingly random violence (such as the murders at Colorado's Columbine High School in 1999) that implicate perpetrators with a history of animal abuse. Such incidents strike at the heart of a community's feeling of safety and well-being and increase the urgency felt by society as a whole for diagnosis and intervention.

## Wildlife Contraception

The history of wildlife contraception is wholly contained in the period from 1950 to 2000. Technologically, nonhormonal chemicals, steroid hormones, nonsteroidal hormones, barrier methods, and immunocontraceptives have all been explored with varying degrees of success. This exploration has taken place against a backdrop of considerable resistance from traditional state wildlife agencies, grounded in the "hunt/shoot/trap" school of wildlife population control.

Immunocontraceptive vaccines show considerable promise, particularly in light of significant success with the porcine zona pellucida (PZP) vaccine. Kirkpatrick and Turner (1991) created a standard by which wildlife immunocontraception could be evaluated, which included contraceptive effectiveness of at least 90 percent; the capacity for remote delivery; the reversibility of effects; safety for use in pregnant animals; absence of significant health side effects; isolation of the contraceptive agent from the food chain; minimal effects on individual and social behaviors; and low cost. By these criteria the PZP vaccine has scored well and has shown exciting results in field use in wild horses, white-tailed and black-tailed deer, African elephants, water buffalo, Tule elk, and more than ninety species of zoo animals. Work continues on refining and developing

a one-shot vaccine (as opposed to the current two-shot regimen) and on expanding the vaccine's potential for use in domestic animals such as dogs and cats. The development of a permanent, one-shot, cost-effective vaccine would undoubtedly be a major weapon in the struggle against companion animal overpopulation. It could alleviate the effects of the painful and divisive debates over euthanasia, animal shelter spaying/neutering policies, and stray animal control and potentially unite many people of good will in their efforts to improve the lives of companion animals here and abroad.

## The Next Fifty Years

This chapter provides only a brief snapshot of the progress achieved and the setbacks that have occurred in animal protection from 1950 to 2000. Doubtless other people would select a different set of topics and view the situation slightly differently. Nonetheless, the animal protection movement can, I believe, be reasonably pleased with the progress made. Public opinion polls and academic treatises support the idea that concern for animals has increased and that this has led to gains in animal welfare in a range of areas.

On the other hand, there have also been significant setbacks. The threats to wild populations from habitat destruction, human encroachment, and human consumption are on the increase and the plight of farm animals in modern intensive systems (from birth to slaughter) can only be described as dreadful. The number of farm animals affected by such intensive systems has increased steadily through the last half of the twentieth century and looks as though it will continue to increase in the coming century.

Therefore, any plans and strategic suggestions for the next century must include some ideas to address the welfare of farm animals and the survival of wildlife. Such plans must come to

grips with a range of strategic challenges that will confront any nonprofit advocacy group. These challenges include human population growth, increased human consumption (leading humans to walk a little less “softly” on the earth with each passing decade), threats to the security of human societies and the natural areas that they occupy, technological changes and innovations (e.g., the Internet), and questions relating to different cultural, theological, and political views on a wide variety of issues around the world (e.g., differences among Islam, Christianity, Judaism, and Buddhism on a variety of topics). These strategic challenges can appear overwhelming and beyond the grasp of even a relatively large and influential sector of human society (such as a major religious denomination), let alone groups that enjoy less influence in the corridors of geopolitical power, such as the environmental movement or the animal protection movement. Nonetheless, any of these movements (a term used loosely since there are many shades of opinion—and even internecine conflicts—within such movements) must continue monitoring the larger strategic issues and develop its own strategies for progress that take into account larger geopolitical forces.

For example, the World Trade Organization (WTO) has the potential to have a major impact on animal protection. Its decisions or influence have already had an adverse impact on dolphin protection programs. The WTO is likely to continue to slow animal protection progress. Countries defer setting standards for animal welfare that may result in sanctions by the WTO, which could interpret such standards as unfair non-tariff trade barriers. Attempts to reverse or to ameliorate some of the worst practices in intensive animal husbandry are bound to run up against WTO problems (as Europe has already discovered with its attempts to limit the importation of hormone-free beef or fur from animals caught in leghold traps).

Despite the problems and the larg-

er threats to animal protection progress mentioned above, there are also grounds for optimism that we can move ahead to create a more humane society in the United States, the EU, and even worldwide.

Nonetheless, more needs to be done. Some cultural traditions, for example, are perceived to be less sympathetic to animal welfare than others. The Roman Catholic Church has generally been viewed as less supportive of animal welfare than have been some Protestant denominations. Such stereotyping, however, is based on the observation that animal welfare legislation and activity is more advanced in Northern European and American communities than in the Mediterranean countries and in Central and South America. Such differences may be more a matter of economic than theological disparities. In the end, we do not know how attitudes to animal protection are influenced by different cultural traditions as opposed to economic or political constraints.

Our ignorance of the influence of important cultural, religious, and political traditions on animal welfare thinking must be addressed. We need to understand whether Islamic societies are less supportive of animal welfare as a result of their theology or if their lack of attention to such issues is due to political and economic constraints. If the latter, we can devise strategies to address and to eliminate such constraints and develop programs that will advance animal welfare in traditional Islamic cultures. The HSUS plans to develop institutions and projects that will address some of the broader cultural issues and to devise plans to promote animal welfare more effectively in both the developed and the developing world. It may be possible to extend our First Strike initiative, which focuses on the close links between human violence to animals and human violence to humans, and argue that societies (and countries) that pay more attention to animal welfare are likely to be more civil and more secure for their human inhabitants than societies that ignore this issue.

In moving forward with plans to promote a more humane society, we perceive a number of elements and strategies to be critical components of such a goal. First, we need to be more inclusive in developing partners and alliances. Many nonprofit organizations view the corporate sector with suspicion and thus cut themselves off from opportunities to make a considerable impact on how society views animals. Arguably, the most powerful influence on the decline in hunting in the United States is the Walt Disney film “Bambi” (urbanization, another candidate, has not increased in the past thirty years). If one can work with a corporation like Disney to produce such a product (or products), the impact on animal protection is likely to be far greater than if we rely simply on our own channels of outreach. Thus, we need to look for partners in the corporate community and persuade them that they, too, have short- and long-term interests in promoting animal welfare.

Second, we need to work more closely and effectively with academe. From 1950 to 2000, the most common interaction between animal protection and academe involved a conflict over the use of animals in research. Thus, both communities have a tendency to view the other with suspicion. Nonetheless, an increasing number of academics are paying attention to the place of animals in society (the American Sociological Association recently gave permission for a group to try to establish an “animals and society” section) and their writings and studies influence the way society views animals and animal welfare. In the wake of the civil rights and women’s rights movements, centers for African-American and Women’s Studies sprang up at a variety of campuses across the United States. These centers have kept both movements vigorous and refreshed with new ideas and new findings. Several centers for animal welfare or the human-animal bond have been established in the last decade at a few North American universities. The animal protection movement needs to support and

work more closely with such centers and to help expand their number and influence.

Third, we need to develop a new approach to our interactions with wildlife. Immunocontraception, mentioned earlier, is a major new technology because it begins to give us an alternative to killing animals when conflicts between animals and humans occur. Thus, it allows us to change our mindset from lethal control to potentially gentler solutions. There are many ways in which we can arrange our human communities to lessen human-wildlife conflicts and increase our enjoyment at sharing our lives with wild creatures. Close interaction between a human and an animal can be (and has been in many cases) a transforming experience for the human involved. Such interactions need to be safe, enjoyable, and common for both animals and humans.

Fourth, for many people, a family is not a true family unless it includes at least one companion animal. Approximately 95 percent of Americans grow up experiencing such a relationship, but it is not always as satisfying for the humans and animals as it could be. We need to develop programs that increasingly celebrate the positive aspects of this human-animal interaction—including improved physical and mental health for the human partners (Wilson and Turner 1997)—and prevent the negative aspects. Shelters could become the focus of such a celebration in communities across the United States and thereby shed the image of being places that only handle failed human-animal bonds.

Fifth, there are three categories of verbal abuse in many languages: profanities, obscenities, and animal terms (Leach 1989). It is easy for us to understand why terms dealing with God and sex should have the power to shock us or to help us express vehemence and passion. It is less understandable why animal terms should have the same potency. We should understand that our relationships with animals (and with nature and wilderness) are not a simple matter of exaggerated sentiment or displaced

human empathy. They are fundamental to our being and to our long-term survival as a species and a self-sustaining society. We discount such relationships at our peril. As Gandhi is reputed to have said, “One can judge the civilization of a society by the way it treats its animals and its prisoners.” When we reach 2050, let us hope that we can say that societies across the globe are more civilized—and more humane—in the broadest sense.

## Literature Cited

- American Horse Council. 2000. *The economic impact of the horse industry in the United States*. Washington, D.C.: American Horse Council.
- American Veterinary Medical Association (AVMA). 1997. *U.S. pet ownership and demographics sourcebook*. Schaumburg, Ill.: Center for Information Management, AVMA.
- Balzar, J. 1993. Creatures great and—equal? *Los Angeles Times*. 23 December: A-1.
- Caravan Opinion Research Center. 1995. *Attitudes toward protecting farm animals from cruelty*. Princeton, N.J.: Opinion Research Corporation.
- Cavalieri, P., and P. Singer, eds. 1993. *The great ape project: Equality beyond humanity*. New York: St. Martin's Press/Griffin.
- Clean Water Network and the Izaak Walton League of America. 1999. *Spilling swill: A survey of factory farm water pollution in 1999*. Washington, D.C.: Clean Water Network.
- Food and Agricultural Organization of the United Nations. 2000. Statistical database. Available at [www.faostat.org/default.htm](http://www.faostat.org/default.htm).
- Foster, D. 1995. Animal rights pleas heard. Associated Press, 2 December.
- Freese, B. 1999. Pork powerhouses. Successful farming on-line. Available at <http://www.agriculture.com/sfonline/archives/sf/porkpower/pp.html>. Accessed December 1999.
- Heffernan, W. 1999. Consolidation in the food and agriculture system. Report to the National Farmers Union, 5 February.
- Howard, R.W. 1965. *The horse in America*. Chicago: Follett Publishing Company.
- Humane Society of the United States (HSUS). 1991. *Statements of policy*. Washington, D.C.: HSUS.
- . 1996. Deadly serious: An FBI perspective on animal cruelty. *HSUS News*. Fall.
- . 1998. What is that they're wearing? Washington, D.C.: HSUS.
- . 2000. *HSUS Pet Overpopulation Estimates*. Available at <http://hsus.org/programs/companion/overpopulation/opfaq.html>.
- Irwin, P. 2000. *Losing paradise*. Garden City Park, N.Y.: Square One Publishers.
- Kellert, S. 1979. *Public attitudes toward critical wildlife and natural habitat issues*. Phase I of U.S. Fish and Wildlife survey: American attitudes, knowledge, and behaviors toward wildlife and natural habitats. Washington, D.C.: U.S. Fish and Wildlife Service.
- Kirkpatrick, J., and J.W. Turner Jr. 1991. Reversible fertility control in nondomestic animals. *Journal of Zoo and Wildlife Medicine* 22: 392–408.
- Lake Snell Perry and Associates. 1999. *A nationwide survey of 1,000 registered voters about factory farms*. Washington, D.C.: Lake Snell Perry and Associates, Inc.
- Leach, E.R. 1989. Anthropological aspects of language: Animal categories and verbal abuse. *Anthrozoös* 2: 151–165. First published in *New directions in the study of language* Cambridge, Mass: MIT Press, 1964, 23–63. (See also the companion articles in *Anthrozoös* 2: 166–174 and 3: 214–233.)
- Lockwood, R., and F. Ascione, eds. 1998. *Cruelty to animals and interpersonal violence*. West Lafayette, Ind.: Purdue University Press.
- Lockwood, R., and G. Hodgé. 1986. The tangled web of animal abuse. *HSUS News*. Summer.

- Miller, D. 2000. Straight talk from Smithfield's Joe Luter. *National Hog Farmer*, 15 May, 12–16.
- Noonan, D. 2000. Why drugs cost so much. *Newsweek*, 25 September.
- Patronek, G., and A.N. Rowan. 1995. Determining dog and cat numbers and population dynamics. *Anthrozoös* 8: 199–205.
- Roper Center for Public Opinion. 1989a. Question USKANE. 89PM10. ROZ2. *Parents* magazine. September 22.
- . 1989b. Question USABC. 89. R10. ABC Newspoll.
- Rowan A.N. 1992a. Companion animal demographics and unwanted animals in the United States. *Anthrozoös* 5: 222–225.
- Rowan, A.N. 1992b. Shelters and pet overpopulation: A statistical black hole. *Anthrozoös* 5: 140–143.
- Rowan, A.N., F.M. Loew, and J.C. Weer. 1995. *The animal research controversy: Protest, process and public policy—An analysis of strategic issues*. Grafton, Mass.: Tufts University School of Veterinary Medicine.
- Rowan, A.N., and J. Williams. 1987. The success of companion animal management programs: A review. *Anthrozoös* 1: 110–122.
- Russell, W.M.S., and R.L. Burch. 1959. *The principles of humane experimental technique*. London: Methuen.
- Sieber, J. 1986. Students and scientists' attitudes on animal research. *The American Biology Teacher* 48, 2.
- Survey Research Center. 1999. National Omnibus 1999 Questionnaire Project #1367. College Park, Md.: University of Maryland.
- USDA National Agricultural Statistics Service. 1960. *Agricultural statistics 1960*. Washington, D.C.: USDA.
- . 2000. *Agricultural statistics 2000*. Washington, D.C.: USDA.
- Wilson, C.C., and D.C. Turner, eds. 1997. *Companion animals in human health*. Thousand Oaks, Cal.: Sage Publications.
- Wolfson, D.J. 1999. *Beyond the law: Agribusiness and the systematic abuse of animals raised for food or food production*. Watkins Glen, N.Y. and Orland, Cal.: Farm Sanctuary, Inc.