

Topics Awaiting Study: Investigable Questions on Animal Issues

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At one time or another we have all made use of animals. Plous (1993) observes that in modern American society, "it is virtually impossible to live without relying on animals. Animal by-products of the meat industry are found not only in the foods we eat and the clothes we wear, but in the walls of our homes, in kitchen and bathroom floors, in toiletries, in the streets of our cities, and the cars we drive" (p. 2). Historically, animals have participated in the development of practically every aspect of human civilization - in war and peace, in work and at play, in love (companion animals) and hate (varmints), in life (biological experiments) and in death (pet cemeteries). Appendix 1 identifies the multitude of ways that animals continue to be used by human beings across the world.

Statement of the Research Problem

Unfortunately, social scientists' study of the role of animals in human society has not yet kept pace with society's consumptive use of animals. We know a lot about our attitudes toward animals (e.g., Driscoll, 1992; Hills, 1993; Kellert, 1993; Kellert & Berry, 1980, 1985), but not much about the sociological variables behind our behavior and experiences of animals or how we learn to apply different standards in different situations. The psychosocial factors that support the use of animals in human society are not well understood and remain in need of study (Arluke, 1993; Bryant, 1993; Noske, 1989; Plous, 1993; Serpell, 1986; Sperlinger, 1981).

On the other hand, the research situation is rapidly improving. Over the past decade several leading social science journals have devoted entire issues to the discussion of the role of animals in human society (e.g., *Marriage and Family Review*, 1985; *Journal of Social Issues*, 1993, 49, 1; *Qualitative Sociology*, 1994, 17, 2). In 1986 Congress established the Animal Welfare Information Center (AWIC) of the National Agricultural Library (NAL) to act as a national, computerized clearinghouse for the dissemination of information on animal issues. There also exist two peer-reviewed scientific journals specializing in animal issues - *Anthrozoos* (published by the Delta Society) and *Society and Animals*) featuring empirical research on animal-related human behavior from a wide variety of disciplines including ethology, psychology, sociology, anthropology, and linguistics.

Despite these advances there is no conceptually integrated theory to help investigators synthesize the diversity of existing literature. There is also a relative absence of control groups, of random selection and random assignment sampling techniques, and of manipulated independent variables in research designs analyzing the nature of human behavior toward animals. Many questions regarding the human use of non-human animals are begging for cross-cultural investigation.

Investigable Questions on Animal Issues

What are the most timely yet unanswered questions in animal issues? Bryant (1993) proposes an extensive research agenda for the study of the role of animals in human society. Building upon Bryant's framework, Appendix lists eleven research topics on animal issues that social scientists can investigate with practical application and that are manageable by current social science research methods. Each animal issue is followed by a list of research questions and reference articles to help the investigator get started.

The most popular research topic in animal issues has been the study of pet ownership. Many hypotheses have been proposed to explain the observed positive effects of pets on children and the elderly. Animals may provide (a) a relaxing buffer from stressful life events, (b) companionship, (c) protection, (d) unconditional love, or (e) a sense of responsibility in a way that promotes physical and psychological wellness (Soares, 1985). Sociologist Arnold Arluke (1993) writes "it is not clear how prolonged these influences are when they do occur, exactly what triggers a positive outcome, and what influence humans have on animals either positively or negatively" (p. 6). There are innumerable research opportunities to be explored here.

Another area set of animal issues is animal-related crime and deviant behavior. Numerous laws and regulations govern animal-related offenses, ranging from hunting without a license to failure to properly anesthetize animals in laboratory experiments. We know relatively little about the reasons for the abuse of animals (Godlovich, Godlovich & Harris, 1971). Research into the socialization of violence toward animals can reveal how such learning may both be a cause and side-effect of the violence and abuse of humans (Moulton, Kaufmann & Filip, 1991; Niebert, 1994; Shapiro, 1994). According to Bryant (1993), "perhaps no area of human-animal behavior is in more need of understanding than animal-related crime and deviance" (p. 27).

Another set of animal issues deals with the role of animals in contemporary culture (Tester, 1991). Animals act as symbols not only in our private psyche but also in our public civilization. Animals play a role in our literature, art and music, religion and folklore, verbal symbolism and vocabulary, fashion design and advertising, our holidays and toys, and in children's stories. Popular culture is saturated with animal symbolism. Factors that support this continued use of animals are psychological and social in nature and remain in need of study.

Another set of animal issues involves the role of animals in sport, recreation, and leisure activities. Bryant (1993) notes that "given the enormous human investment of time, energy, and money in animal-related leisure and recreation, this would seem to be an ideal area for future research (p. 21)." Philosopher Mary Midgley (1993, p. 10) observes that "When a president of the United States . . . can defend his shooting habits by saying 'These aren't animals, these are wild quail . . . I don't think I could shoot a deer . . . quail - that's something else,' then there surely exist public confusions worth investigating."

Animals have historically been involved in our work systems and continue to play a major role in many national and

international economies. Livestock production is a \$36 billion industry in the United States, accounting for 5% of all farm cash receipts, utilizing about 40% of all land, consuming about one-third of all raw materials, and employing about 200 million people worldwide (U.S. Department of Commerce and U.S. Department of Interior, 1980; World Resources Institute and International Institute for Environment and Development, 1988). The sheer scale of such consumptive practices warrants further investigation into how people think about their use of animals (Plous, 1993).

Another set of animal issues deals with public policy, law, and political movements. Understanding the psychology of human relationships with animals will be critical to resolving many political issues in the animal rights debate (Herzog, 1993). The animal rights movement is now one of the largest social movements in the United States, yet Herzog (1993) observes that, "only recently have basic demographic data about activists become available. There remains a (scarcity) of information about what draws individuals to the cause and how involvement affects participants" (p. 104).

Studying the processes that influence moral judgments about the worth of an animal may provide insight into the nature of human moral development itself (Dunlop, 1989; Galvin & Herzog, 1992; Haidt, Koller & Dias, 1993). Since so many of our perceptions about the worth of animals rest upon presumptions about animal psychology, we will need more factual information about the nature of animal minds (e.g., Barber, 1993; Griffin, 1992).

Animals and our use of them are also a source of significant social problems. A recent issue of *Society and Animals* (1994, 2, 1) dealt entirely with how certain animals come to be seen and treated as deviant. Phillips (1994, Summer) recently examined the case of laboratory animals. Ecologically some animal-related occupations have had a negative impact on the environment (e.g., cattle ranching in Central America is responsible for the clearing of 25% of all forests between 1960 and 1980) (Rifkin, 1992).

Animals also play a problematic role in the American diet, as the consumption of meat and dairy products are associated with a wide range of human health problems including heart disease, cancer, diabetes, osteoporosis, salmonella poisoning, and increased mortality rates (Barnard, 1990; Robbins, 1987). The use of animals in biomedical and behavioral research becomes problematic when animal experimentation (a) fails to reveal many hazards of medicinal drugs (false positives), (b) leads to premature rejection of potentially valuable drug therapies (false negatives), (c) delays important scientific advances because of misleading information, and (d) diverts funds away from research on people (Cunningham, 1993; Kaufman, 1993; Sharpe, 1988).

What psychological and social factors promote the continued use of animals as a food source and as heuristic research tools in the face of these problematic issues?

What are the most timely unanswered questions? Needs assessment interviews with key leaders in diverse sectors of the animal protection movement - attorneys, shelter administrators, lobbyists, activists, and organizers - would provide a good starting point (Takooshian, 1994). Using this wish-list to design studies that address these questions, investigators could collaborate with selected leaders to identify the funding and personnel needed to conduct the study.

Appendix 1: Human Uses of Animals

Animals as a Variable in Human Socialization

- pets in the family
- pet-facilitated therapy (PFT)
- zoophobia (fear of animals)

Animal-Related Crime and Deviant Behavior

- killing or stealing (animals as personal property)
- violating fish and game laws (animals as public property)
- maintaining a prohibited reptile (animal as hazard or nuisance)
- causing animals excessive pain (cruelty to animals laws)
- destruction of animal habitat (crimes against ecology)
- cockfighting, dog fighting
- animal-related religious sanctions (pork taboos, sacred cows)

Animals in Culture

- animals in literature (Black Beauty, Moby Dick, Aesop's Fables)
- animals in art and theater
- animals in music and song titles
- animals in religion (totem pole, ritual animal sacrifices)
- animals and Holidays (Easter Bunny)
- animal-related language (metaphors) and symbolism (dreams)
- animals in jewelry design, on clothing (bunny slippers)

- animals in advertising (Charley Tuna, Joe Camel, Smokey Bear)
- animal toys
- children's drawings of their pets and of wildlife

Animals in Sport, Recreation, and Leisure

- sport hunting, trapping, fishing, frog-catching, bullfighting
- racing (thoroughbred, greyhound, reindeer, dog sled)
- county fair contests (sheep-shearing, bullfrog jumping)
- training show animals (horses, elephants), and hay rides
- zoo visiting (public & private), circuses, rodeos
- bird watching and feeding, whale watching
- animal calling (rattling for whitetails, calling elk)
- animal (wild & tame) photography
- animals on television (wildlife films and series - Lassie, Flipper)

Animal-Related Occupations and Human-Animal Work Systems

- beekeepers, breeders, biologists, biological
- supply company workers, butchers, damage
- control officers, dog catchers, ethologists,
- farmers, fast food restaurant workers,
- fisherpersons, game wardens, hunting guides,
- jockeys, lab experimenters, pet therapists,
- pet shop owners, pound workers, taxidermists,
- trainers, trappers, veterinarians, wildlife
- officials (federal and state), wildlife
- rehabilitators, zoologists, zoo workers.
- handicapped people (seeing-eye dogs, monkey aides to paraplegics)
- transportation (camels, elephants, burros, dog sleds)
- trade distribution (animal-drawn conveyances)
- dyadic workteams (farmer & ox, hunter & hound, horse & rider)
- participation in 4-H and other clubs

Animals in Politics (Public Policy, Law, and Sociopolitical Movements)

- animal rights movement
- endangered species controversy
- animal welfare controversy
- intensive animal farming
- ecofeminism

Animals as a Social Problem

- house cats as a threat to wildlife.
- mongrel dogs, stray cats causing nuisance and disease
- coyotes killing livestock, pet dogs attacking children
- raccoons contaminated with the rabies virus
- termites damaging housing
- beaver dams causing property damage by flooding
- fire ants destroying farmlands
- deer, mice eating ornamental shrubs
- animal collisions with autos and bikes.

- "killer" bees threatening humans
- wild and domesticated animals causing human deaths

Animals as Food, Products, and Artifacts

- food (meat, tuna, cheese, ice cream, gelatin)
- animal products (import-export trade)
- clothes and textiles (coats, boots, belts, gloves, furs)
- walls (sheetrock, wallpaper adhesive) and paints (crayons)
- kitchen and bathroom floors (linoleum, ceramic tiles, floor wax)
- toiletries (soaps, perfumes, deodorants, cosmetics)
- city streets (asphalt binders) and machinery oils
- automobiles (brake fluid, upholstery, car wax)
- plastics (photograph records, photographic film)
- animals as marketable, patentable commodities (animal genetics)

Animal as Tools of Research and Teaching

- animals as tools of research (biomedical and behavioral science)
- animals as teaching instruments (classroom dissection)
- consumer product testing, drug testing
- genetic manipulation of species (oncomouse)

Animals as a Variable in Social Stratification

- breeding exotic animals
- owning pedigree dogs and cats
- owning exotic or endangered animals (ferrets, pot-bellied pigs, pythons)
- Animals in the Military
- horses, dogs, porpoises, bats used to attack or detect enemies
- dogs, pigeons as message carriers
- dogs as guard animals, as drug enforcement agents (K-9 Corps)
- combat-type injuries done to animals (bullets, radiation, burns)
- animals as test subjects in outer space

Appendix 2: Investigable Questions

Animals as a Variable in Human Socialization

- Do people's attitudes toward the role of animals in human society depend on their experience of animals (B. Levinson, 1972)?
- How does having a pet influence children's personality development (Herzog, Betchart & Pittman, 1991)?
- How does living with a pet affect the child's perception of body, self, time, and others (B. M. Levinson, 1978)?
- Do children who have companion animals learn more quickly than those who do not (Bryant, 1993, p. 20)?
- At what age do children develop an attitude toward animals (B. Levinson, 1972)?
- Why do some individuals within the same family identify so intensely with animals, and others not at all (Kidd & Kidd, 1987)?
- How do people-owners' attitudes differ from nonpet-owners' (e.g., are the 60% of U.S. homes with a pet more sympathetic to animals than the 40% with none) (Takooshian, 1993, p. 104)?
- Is pet ownership valued consistently or is it helpful primarily in times of stress (Perelle & Granville, 1993; Siegel, 1993, p. 160)?
- Are there particular stressors, such as being ill, that make caring for a pet more burdensome than pleasurable (Siegel, 1993)?
- How does the death of a pet affect its owner and how can therapists assist these people (Quakenbush, 1985)?

- What are the long-term effects of depriving a child or elderly person of the companionship and emotional support afforded by companion animals (Bryant, 1993, p. 30)?

Animal-Related Crime and Deviant Behavior

- Are animal abuse and child abuse related? How frequently do people who commit violent crimes also have a history of animal abuse in their background (Carson, 1972; Moulton, Kaufmann & Filip, 1991; Nibert, 1994)?
- Does the presence of companion animals in childhood impact on the likelihood or non-likelihood of crime or deviance later in life (Bryant, 1993, p. 20)?
- Are those who love animals more or less concerned about children or about people in general (Arluke & Sax, 1992)?
- Under what circumstances do people feel justified in eradicating whole populations or species of animals (as in the conflict between spotted owl preservation and the American logging industry) (Plous, 1993, p. 44)?
- Animals in Culture
- What is the social meaning of this animal preoccupation? Do we turn to animals, even if imaginary or illusionary, because people are not satisfactory or not sufficient in terms of providing companionship and support (Bryant, 1993, p. 23)?
- What is the meaning of animals in television and print advertising, as well as in cartoons and comic strips, and how have these images changed in recent years (Arluke, 1993, p. 7)?
- In western society, are our preconceptions of animals such that we have to create idealized, fictional creatures because real animals do not measure up to our expectations? Are animals simply idealized versions of humans (Bryant, 1993, p. 28)?
- Under what conditions do people anthropomorphize animals rather than depersonalize them (Eddy, Gallup & Povinelli, 1993)?
- Do the personified animals in cartoons (Bugs Bunny, Daffy Duck, Mickey Mouse) have any impact on children's cognition and adults' identification with other species (Takooshian, 1993, p. 104)?
- What is, and what will be, the long-term impact of these anthropomorphized conceptualizations of animals on the social enterprise (Kowalski, 1991)?
- Why do some animals elicit our sympathy and why are we repulsed by others (Burghardt & Herzog, 1980; Plous, 1993)?
- How might the experience of empathy differ across individuals and across types of animals (e.g., pets, wild animals) (Hills, 1993, p. 112)?
- How are labels and categories important in people's reactions to the treatment of animals (Midgley, 1989; Rajecki, Rasmussen & Craft, 1993)?

Animals in Sport, Recreation, and Leisure

- What are some of the psychological and social determinants of attitudes toward hunting (Baker, 1985; Dahles, 1993; Shaw, 1975)?
- How does a wild life manager decide how many animals of which species will be killed, which will be protected, and which will be ignored (New Hampshire Fish and Game Department, 1994a; New Hampshire Fish and Game Department, 1994b, Summer)?
- Do rodeo fans tend to view 'animal rights' as un-American or even un-Godly (Takooshian, 1993, p. 102)?
- What are the categories that people use to sort animals on the basis of worth? (Midgley, 1993; Regan, 1983)?

Animal-Related Occupations and Human-Animal Work Systems

- How do psychological factors interact with economic factors in the use of animals (Plous, 1993)?
- How are animal protectors different from animal killers? The research problem would be to find out how two groups (e.g., volunteers with People for the Ethical Treatment of
- Animals and slaughterhouse workers) differ in the "big five" personality factors (i.e., emotional stability, extroversion, openness, agreeableness, and conscientiousness).

Animals in Politics (Public Policy, Law, and Sociopolitical Movements)

- What is the public's attitude toward critical wildlife and endangered habitat issues (Kellert, 1980)?
- Are conservation efforts tied to human preference for cute animals (Sunquist, 1992, November/December)?

- How do people reconcile human interests when they conflict with the disappearance of endangered species (e.g., ivory sales outlawed to save elephants, the spotted owl's habitat in conflict with loggers' rights to a livelihood, development in the Amazon vs. biodiversity (Plous, 1993, p. 44)?
- When should the interests of the animals be taken into account? How should these interests be weighed against human interests (Galvin & Herzog, 1992; Regan, 1983)?
- What causes people to join the animal welfare or animal rights movements (Herzog, 1993; Shapiro, 1994)?
- Are animal rights activists more rigid morally (because they are part of a moral "crusade" or more flexible (because they are tolerant of all species) (Sutherland & Nash, 1994, Summer)?
- Is there an "I'm alone" phenomenon? Are animal-lovers typically outnumbered in social situations? How do they behave when people in a social situation express harsh attitudes toward animals (Takooshian, 1994)?
- How do some, more radical, animal rights activists justify aggressive actions (Newkirk, 1992)?
- How do animal rights activists differ from other political activists (Broida, Tingley, Kimball & Miele, 1993)?
- Is a politician's liberal/conservative voting record related to interest in animal protection bills (Kimball, 1989)?
- What role should the American Psychological Association (APA) take in the animal experimentation controversy (Barnard, Selby, Robinson, Schreckenberg & Van Petten, 1990)?
- Is there a relationship between involvement in the animal rights movement and involvement in religious movements (Herzog, 1993; Lindzey & Regan, 1990; Pinches & McDaniel, 1993)?
- Are pro-animal attitudes among United States churchgoers associated with liberal theological positions (A. D. Bowd & A. C. Bowd, 1989)?
- Are 'New Age' activists in contemporary liberal causes - ecology, civil rights, feminism, anti-nuclear, peace - more likely to be sympathetic to a concept of animal rights (Gaard, 1993)?
- Animals as a Social Problem
- On what basis is deviance attributed to animals (Sanders, 1994, Winter)?
- Is there a hidden political agenda in conceptualizing animals as a social problem or are they genuine social problems? (Bryant, 1993, p. 26)?
- What types of people view which animals as social problems (i.e., varmints) (Rood, 1971)?
- What functions are served if animals are stigmatized? What kinds of social control mechanisms emerge to manage such animals (Arluke, 1994)?
- Approximately 35-50% of companion animals are brought to veterinarians to be euthanized because of their aggressive or destructive behavior. How do the people involved tend to behave in such a situation (A.R. Marder & L. R. Marder, 1985; Sanders, 1994, Summer; Schwabe, 1984)?
- In defending against "destructive" animals such as beavers or fire ants, do people operate according to a "just defense" doctrine taking into account proportionality and other "just war" arguments (Plous, 1993, p. 44)? Automobile collisions with deer in some areas of the United States are common (1,000 per year) and cause many fatalities to both deer and humans. Why are the animals running into the road to be killed? Statistics could be gathered from State authorities and various hypotheses could be tested. Are they seeking road salt? What accounts for the high proportion of 1-2 year old deer and moose killed?

Animals as Food, Product, and Artifact

- What are the central criteria people use in determining whether a given use of animals is justified, and how do people arrive at these criteria (Plous, 1993, p. 44)?
- Is it moral to kill animals for use in commercial products when alternatives exist (Plous, 1993, p. 3)?
- How have animal species changed as a result of human intervention (e.g., the trend toward leaner beef, bigger chickens, cows producing more milk, transgenic animals such as mice born without thymus glands) (Arluke, 1994, Summer; Wheale & McNally, 1990)?
- Why are myths perpetuated - particularly in the socialization of children - concerning the need to rely on an animal-based diet (Robbins, 1987)?
- What causes people to become vegetarians (Akers, 1983)?
- What are the differences in health, knowledge, and attitude toward animal issues between vegetarians and meat eaters (Shickle, Lewis, Charny & Farrow, 1989)?
- Animals as Tools of Research and Teaching
- Do views of science correlate with attitudes toward animals (Galvin & Herzog, 1992; Herzog, Vore & New, 1989)?
- What effect does laboratory experimentation have on the personality of the researcher (Arluke, 1993; Barnes, 1991, p. 115)?
- How do people maintain ethical boundaries distinguishing their treatment of companion animals from their treatment of other animals (e.g., how are lab experimenters who do pain research on dogs able to dissociate their work from their beloved pet dog at home (Phillips, 1994, Summer; Rowan, 1989)?

- Do animal experimenters' perceptions of animals vary as a function of their view of the necessity of animal use? Does perceived necessity vary as a function of how much pain is caused (Baldwin, 1993; Gallistell, 1989; Paton, 1993; Roberts, 1980)?
- Are judgments of an animal's ability to feel physical pain influenced by the proximity of the animal? By the amount of prior contact with the animal (Mroczek, 1991; Phillips, 1993)?
- Are there differences in attitude, personality, or behavior between those veterinarians who perform non-therapeutic operations on animals (i.e., work in animal labs, declaw cats or clip doberman's ears, euthanize healthy animals) and those veterinarians who refuse to perform such activities on ethical grounds (Tannenbaum, 1993)?
- Do animals have a right to be spared unnecessary suffering (Pratt, 1980; Rollins, 1989)?
- How many animals are actually used in behavioral science research experiments (Bowd & Shapiro, 1993, p. 134; Rowan, 1984)?
- What factors affect students' attitudes toward the use of living animals in learning biology, psychology or veterinary medicine (Bowd, 1993; Silberstein & Tamir, 1981; Tamir & Sever, 1980)?
- Does dissection create negative emotional reactions in students, distance them affectively from animals, and teach them to regard animals as expendable" (Bowd, 1993; Lock, 1994)?
- How does providing student with information on their right to a noninvasive curriculum in the biology classroom (Francione & Charlton, 1992)?
- What impact do alternative, non-animal teaching methods have on attitudes toward science (Physicians Committee for Responsible Medicine, 1993)?
- How does the pedagogical effectiveness of computer simulation (e.g., Rat Lab) compare with live animal instruction (Goolkasian & Lee, 1988)?
- How does the videotape "Unnecessary Fuss" (PETA) affect viewers' attitudes? If given the same survey before and after viewing this powerful 30-minute film, will students show greater sympathy for animals, for science (compared to a control group), or remain unaffected (Takooshian, 1994)?

Animals as a Variable in Social Stratification

- Are differences between people who own pets related to social class (Bryant, 1993, p. 32)?
- Does the meaning attached to animals and the classification system used to categorize animals differ according to social class and changes in social structure (Lofgren, 1985)?
- Are urbanites more pro-animal than the ruralites (Takooshian, 1993, p. 104)?
- Are animals viewed as an outgroup in much the same way that members of another race, religion, or nationality are regarded as an outgroup (Plous, 1993, p. 29)?
- Sociologically, what are the similarities between the enslavement of people and the enslavement of animals (Spiegel, 1988)?
- Is the ideology that authorizes oppression on grounds of race, class, gender, sexuality, physical abilities, and nature the same ideology that sanctions the oppression of species (Feminists for Animal Rights, 1994, Spring-Summer; Gaard, 1993)?

Animals in the Military

- Do animals moderate or exacerbate the anxiety or stress of humans in the military, and do animals alter the motivation or effectiveness of military personnel (Bryant, 1993, p. 25)?
- With the military now downsizing, will animals increasingly be used as augmentation mechanisms (Lawrence, 1991; Morrison, 1988)?

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