# **Current Events**

### **MEETING REPORTS**

### American Association for Laboratory Animal Science - Annual Meeting

The 33rd Annual Session of AALAS, convened in Washington, DC, was principally concerned with keeping its members up to date on how to run an animal lab, with scant consideration given to the enormous ethical questions related to whether anyone ought to be running a lab at all. Typical sessions in this vein were "Diseases of Rodents and Rabbits"

and "Techniques for Pest Control." But there were several seminars that indicated, by both title and content, that the biomedical establishment is beginning to become aware of animal welfare concerns. Several of these relevant symposia are summarized here.

### "Care and Use of Domestic Farm Animals in Research"

With the exception of Bernard Rollin (Colorado State University, Fort Collins) who stressed the innate moral relevance of animal interests and their individual and distinctive natures, one might have concluded from this session that the speakers had met beforehand and agreed to several assumptions about farm animals. First, no one questioned the notion that factory farms are a necessary element in a modern economy. R.L. Preston (Texas Technical University, Lubbock) noted that, since only 3-4 percent of the U.S. population feed the other 97 percent, confinement units are the only way that farmers can meet mass-consumer demands. Second, it was assumed that despite the problems that confinement introduces, it does convey considerable benefits. P.O. Gray (Animal Diseases Research Institute, Ontario, Canada) extolled the advantages of a totally controlled environment and implied that any stressrelated problems that may show up in farm animals can be solved simply by a little more thought by any competent engineer. D.L. Brooks (College of Veteri- nary Medicine, University of California, Davis) offered the oft-repeated senti- ment that "the pasture can cause more problems than the feedlot," since pas- turing introduces complex problems like mud and weeds.

So when the speakers averred.(most notably, Dr. Preston) that the standards used in domestic-animal research ought to be those of a "well-run farm," it could be concluded that they meant a well-run confinement operation. R.L. Preston began his talk with a list of eight assumptions, among them: man does have dominion over animals; farm animals are very flexible and adaptable; the animals found in a confinement unit today are derived

from strains that have already adapted.

Yet evidence of concern about animal welfare did show up in some presentations. In this regard, two discussions demonstrated just how divergent the possible approaches to assessing animal welfare can be. P.J. Matthews (National Animal Disease Center, Ames, IA) outlin-ed an arithmetical scale for determining wellbeing. In his technique, a list of ele-ments presumed to be easily observable indicators of well-being is drawn up for each species (such as appetite, coat con- dition, cleanliness), and a score is given for each characteristic, for each animal (3, 2, 1, 0 for good, fair, poor, or negative indications, respectively). The total score provides an overall index of the animal's welfare.

Conversely, R.L. Brooks advocated that empathy be the main ingredient in judging an animal's well-being: "Just look the animal in the eye," he said.

### "Current Federal Animal Welfare Policies and Regulations"

The first speaker, Connie Kagan (Cannon House Office Building, Washington, DC) summarized the provisions of H.R. 6928, currently pending legislation for regulating the care of lab ani- mals. The bill's principal provisions in- clude (1) promoting the development of alternative methods to animal tests, (2) mandatory accreditation for all labs, with- in 10 years, by a recognized agency like AALAC, and (3) a requirement that re- search proposals make some estimate of the animal stress *involved* in the study, and justify the necessity for such stress in terms of potential benefit.

She then ticked off the standard arguments advanced against the bill by the scientific community, and *gave* logical formulations to counter each argument. For example, researchers often claim that legislation isn't necessary, since their own standards are sufficiently high as to make self-regulation at least as effective as regulation by government. Dr. Kagan responded that, if this is true, why should laboratories resist requirements which only ask them to do what they are already doing anyway? In answer to pro-

testations that development of alternatives is expensive, and being done by industry and government already, Dr. Kagan stated that this is true to some extent, but it is also clear that specific legislation andfunding would speed the rate of innovation of alternatives immensely and foster broader acceptance of them.

Recent changes in the administration of the Animal Plant and Health Inspec-tion Service were detailed by Arnold Matchett of USDA. In terms of organiza-tion, there wil I now be two Directors under the Deputy Administrator for Animal Health Programs. One of these represents a new position: Director of Animal Care. Animal care staff (except for those in Compliance) will betransfer- red to the line operation of Veterinary Services, which supervises field enforce- ment. Compliance will become part of a new overall Compliance section, within the program services staff of Veterinary Services, to be headed up by the Direc- tor of Animal Care. In each area veterinary officer office. will be а designated to coordinate animal care activities. Under this new organizational structure, staff will be afforded direct control and com- munication with field personnel. The staff is also looking at ways to derive maximum benefit from attending veteri- narians at registered research facilities, and at ways to ensure that inspections are carried out only by qualified and concerned personnel. Toward this end, a new field manual to assist in making pro- per inspections is being drafted, and a National Animal Welfare Advisory Board, comprised of representatives from in- dustry, humane groups, dealers, and ex-

hibitors, will be established.

Next, Paul Lepore of the FDA spoke on laboratory practices. His goal, the assu ranee that all toxicology data re- lated to drugs be valid and reproducible, did mean that some minimal standards for lab animal care would have to be guaranteed, such as sufficient space for each animal, well-managed storage facili- ties, and adequate cleaning of all areas involved in housing and experiments. He stated that: "I see no conflict between adequate care and welfare, and good toxi- cology tests, since animals that are

handled properly are the best study subjects."

Charles McCarthy of NIH stressed the role of individual responsibility which each laboratory must assume in using animals. Like many speakers at the conference, he referred to the Taub case, and declared that its verdict was "sad but necessary." He viewed the ter- mination of Taub's studies as "a tragic waste." In general, however, he assured the audience that the whole sordid Taub affair represented an extreme rarity in animal care. Yet he did go on at some length about the increasing unease in society, reflected in research institu- tions, caused by a lack of confidence that current regulations can ensure even an adequate level of care for animals.

"Institutional Animal Care Committee"

Like many discussions that revolve around organizational and bureaucratic matters, the session on animal care committees entailed a good deal of highly abstract (and therefore vague) language. exhortations related to very little (if anything) of substance, and advocacy of a whole range of policies that could only be contradictory if actually put into practice. In short, it was dull. The only items of interest were a presentation on the successful efforts of the Canadian system of voluntary control, by H.C. Rowsell (Canadian Council on Animal Care), successful in part because of its tradition of involvement by the Canadian Federation of Humane Societies, and a discussion by David Phelan (Smith Kline and French Laboratories, Philadelphia), in which industry's distaste for any committees was expressed, and sole reliance on the attending veterinarian was proposed as a substitute for the ACC.-O.H. Murphy

# Symposium on Veterinary Medical Education - Ethical Dimensions

Exploring ethical and value issues in veterinary medicine was the theme of the 8th Symposium on Veterinary Medical Education held on June 28-30, 1982

in Knoxville, TN. Sponsored by the Association of American Veterinary Medical Colleges, American Veterinary Medical Association (AVMA), National Science Foundation, and the University of Tennessee, the meeting was attended by administrators, faculty members, and students from all across North America.

The objective of the symposium was to develop an awareness among veteri- nary educators of the need to establish formal coursework in the veterinary cur- riculum that deals with values. ethical considerations, and moral judgments. The breadth of this subject was covered by utilizing speakers from quite diverse backgrounds, in conjunction with a number of different forums to present their material. A journalist, philosophers, academicians, and clinicians from both human and veterinary medicine presented lectures, workshops, clinical grand rounds, panel discussions, and a video vignette.

The symposium addressed the importance of, and the methodology by which, value dimensions can be taught, as well as specific ethical issues that face the profess ion.

AVMA president Dr. Jacob E. Mosier opened the symposium by stating that "caring is the first concept of this symposium." He discussed the need to teach ethical values as well as develop successful models in the learning process in order to find "new avenues for action."

The forces that induce a reconsideration of the significance of ethics in veterinary medical education were discussed by Dr. Hyram Kitchan, dean of the University of Tennessee Veterinary College. The value of animals is emotionally. based, he noted, and also dependent on the nature of the companion animal/human bond. This bond may be the greatest force in changing the veterinary profession, he said. Just as the value placed upon animals in society is increasing, so is the sophistication of medicine and health care, and so the public expects veterinarians to be consumate experts in caring for animals. Referring to specific ethical issues facing the profession. Kitchen stated: "Economics shouldn't be used to maintain production methods, just as

anthropomorphical projection should not be used to abolish or change them."

Society's expectations of veterinary medicine were also discussed by Roger Caras, an ABC news correspondent. He expressed concern over the adversary relationship some veterinarians have tak- en vis-a-vis local humane shelters regard- ing spay/neuter clinics. He noted that his correspondence over the years indicates that the public expects the veterinarians to know everything about animals, includ- ing areas outside the realm of traditional medicine, such as behavior, wildlife, and show animals.

An effective teaching model used at Colorado State University to teach ethics to veterinary students was presented by Dr. Harry Gorman and Bernard Rollin, Ph.D. They developed an antagonist/ advocate role-playing session that is designed to contrapose students on the basic ethical issues relevant to veterinary medicine. These exercises cha llenge students to deal with the controversies they must face within the university, as well as those they will face when in practice, thereby giving them the opportunity to examine the process by which ethical decisions are made. Gorman and Rollin stressed that the simple regurgitation of facts does not facilitate building a code of ethics, and that students need exposure to social and moral issues problem solving, and consideration of nonempirical questions.

Looking to the future of veterinary medicine, Dr. William F. McCulloch of Texas A&M urged that the profession keep up with the public's perceptions of medicine and health care and advocated a more holistic approach. This involves the knowledge and use of ecological principles and the practice of preventive medicine. "Otherwise," he said, "outside forces will continue to have a greater effect on the profession than what we do within it."

Other highlights of the symposium included a survey on student concerns and value issues; clinical grand round case studies involving ethical issues in animal behavior, small- and large-animal medicine, public health and regulatory medicine; and a slide show on art in vet-

erinary medicine by Mariana R. Burt of the Massachusetts SPCA.

School of Veterinary Medicine University of Minnesota

# Colloquium on "The Place of Animals in Religion"

This discussion, held at the University of Denver, September 30-October 1, 1982, was a lively, timely, and informative colloguium. Fresh moral and ethical dimensions, cultural perceptions, and metaphysical constructs were drawn from such diverse sources as Taoism, Judaism, Greco-Roman history, and American Indian anthropology. While no consensus was reached on any topic, minds were opened to new possibilities. The academic rigor and excellent scholarship that was demonstrated during this meet-ing of diverse minds can give us some hope that some more mature minds and dedicated souls are endeavoring to con- struct a conceptual and ethical framework to deal with their own existential angst, as well as the emotional, social, and eco-nomic and environmental ills that afflict civilized society today. But we will still have to be patient. For some minds are still lost in such conceptual games as the meaning and structure of reality; un- reconciled, dialectic paradoxes; and the superiority of one conceptual structure or school over another.

Emphasis was, disappointingly, placed more on the environment than on wild and domesticated animals, though recognition was given to the plight of endangered species, whales, and factory-farmed animals. More than one participant expressed concern over the lack of focus on humans, whose psyche inevitably determines how we perceive, treat, and relate to animals and nature, and how we cope with anxiety and our fear of both life and death (fears that even motivate people to hold colloquia such as this, or write materials justifying factory farm- ing, greater spending on military arms, and the stockpiling of nuclear weapons).

Professor Nero may have fiddled while contemporary Rome burned, but

some of the fiddling in this symposium should have been heard by all. Sophie Jakowska, of the International Union for the Conservation of Nature & Natural Resources, detailed the more positve environmental stance that the Roman Catholic Church is now taking in Latin America. The paper of Po-Keugn Ip (University of Western Ontario) on "Taoism and the Foundation of Environmental Ethics" ought to be wallpapered throughout the Environmental Protection Agency and Department of the Interior and, for good measure, affixed to the ceilings in Gorshak's and Watt's offices, along with the inspiring paper of Gerard Reed (Point Loma College), "Homily on Black Elk," in which he described the native American environmental ethic.

J. Donald Hughes (University of Denver) exposed the Greek roots of Christianity that led to the "death" of Pan and his subsequent transmutation into a Satanic archetype in his presentation, "Pan: Environmental Ethics in Greek Polytheism." He traced the link between the desacralization of nature and the present state of our relationship with nature and God. Martin LaBar (Central Wesleyan College) examined the text of the Bible in his paper, "A Biblical Perspective on Nonhuman Organisms: Values, Moral Considerability and Moral Agency," to show that the Bible does indicate that animals are morally considerable, and that we as the sole moral agents on earth must realize the spiritual value of considering nature and all creatures morally. Jay McDaniel, Hendrix College, offered "Christianity and the Need for New Vision," and Bernard H. Baumrin (City University of New York) presented "Whose World?-A Jewish View of Man's Place in Nature." It became clear that the Old Testament (before the demise of Pan) reflects a far greater awareness of the sacramental aspects and ecological, ethical responsibilities in the human relationship with the rest of creation than does the New Testament (which is more concerned with how people treat each other).

Professor J. Donald Hughes announced the inception of a new journal, *Environmental Review*, to be published by

the American Society for Environmental History. For more information, write to him at Editorial Offices, *Environmental Review*, University of Denver, Denver, CO 80208.

#### **AALAS- Pound Animal Meeting**

For the second year running, the 1982 Annual Conference of the American Association for Laboratory Animal Science (Washington, DC) considered the issue of pound animals. As was pointed out by a member of the audience, the 1982 session covered a lot of the same ground that was covered in 1981, but there were one or two interesting new points raised. Ronald Flatt from Iowa State University told the audience about an agreement worked out with a local humane society in which veterinary students, after some instruction, polish their surgical skills by performing free spay/neuter work for the humane society. He also encouraged other institutions to adopt an open-door policy and noted that Iowa State now has a representative of the local humane society on their animal care committee.

The most disappointing talk was the one that dealt with alternatives to random-source dogs. The analysis of the suitability of different animal models was only superficial, and the speaker descended to the depths of banality when he said "I like to use dogs because I like dogs."

# FORTHCOMING MEETINGS

Universities Federation for Animal Welfare and Laboratory Animal Science Association: Joint Symposium on Standards in Laboratory Animal Management, March 30-31, 1983, London, U.K. New U.K. legislation is expected to call for codes of practice on the housing and care of laboratory animals. This symposium will address several questions concerning the content of this legislation: (1) How can the comfort and well-being of laboratory animals be assessed? What are the physiological and behavioral needs of laboratory animals? Can the needs of the animal be compatible with the needs of the

animal technician and the animal user? To answer these questions, reports *of* LASA/UFAW working groups on rats and mice, rabbits and guinea pigs, dogs and cats, and new and old world primates will be presented, as well as presentations by distinguished speakers and related poster sessions. Contact LASA/UFAW Symposium, 8, Hamilton Close, Potters Bar, Herts, EN6 3QD, U.K.

**ASTM Committee E-47 on Biological Ef**fects and Environmental Fate: .7th Symposium of Aquatic Toxicology, April 17-19,1983, Milwaukee, WI. Papers are now being solicited for this meeting in the following subject areas: new methods and concepts for testing and assessing the aquatic hazard of materials (e.g., chemicals, efflents); sublethal effects; bioavailabil ity and recent advances in environmental chemistry; biological and ecological implications of responses of organisms to materials; and lab vs. field - how good is predictive capability and what confounds extrapolation and assessment in situ. Contact Program Chairman, Dr. Rick D. Cardwell, Envirosphere Company, 400 112th Avenue N.E., Bellevue, WA 98004.

Association of Institutes for Tropical Veterinary Medicine: International Conference on Impact of Diseases on Livestock Production, May 9-13, 1983, Kissimmee, FL. Contact Dr. M.J. Burridge, Director, Center for Tropical Animal Health, College of Veterinary Medicine, Box J-136, University of Florida, Gainesville, FL 32610.

Latham Foundation, AVMA, and CVMA: Conference on the People/Animal Bond, June 17-18, 1983, Irvine, CA. Interdisciplinary perspectives on people-animal relationships and environments will comprise the focus of this event. Contact William J. Winchester, DVM, Department of Animal Resources, University of California, Irvine, CA 92717.

**Latham Foundation, AVMA, and CVMA:** Conference on the People/Animal Bond, University of Minnesota, June 21-22, 1983,

St. Paul, MN. This meeting will also provide a forum for an interdisciplinary discussion of "the bond"; many of the disciplines represented have not previously addressed the topic of human/animal bonding. Contact William J. Winchester, DVM, Department of Animal Resources, University of California, Irvine, CA 92717.

International Council for Laboratory Animal Science: "The Contribution of Laboratory Animals to the Welfare of Man and Animals: Past, Present, and Future," July 31-August 5, 1983, Vancouver, BC, Canada. Topics covered will include: a geographic overview of laboratory animal science; the animal model in gerontological studies; the development, status, and future of international quality in laboratory animals (standardization); and new and future trends in biotechnol- ogy. Contact Mr. D. Joi, !CLAS/ CALAS 1983, Box 286,810 West Broadway, Van- couver, BC, Canada VSZ 1J8.

Australian Society for the Study of Animal Behavior and the Australian Academy of Sciences: 18th International Ethologi- cal Conference, August 29-September 6, 1983, Brisbane, Australia. Potential participants are being given early notifica-tion for this conference, since this is the first time an International Ethological Conference has been open to all behavioral scientists, and therefore no chan-nels of communication have been estab-lished to reach all those who might be interested in attending. The content of the plenary sessions has not yet been de- termined, and the committee sponsoring conference would welcome any suggestions on possible session topics. Plenary sessions will be strongly didactic, but will also provide a general overview of recent developments and highlight any problems or controversies. Contact Conference Secretary, Animal Behavior Unit, University of Queensland, St. Lucia, Australia 4067.

**IEMT:** International Symposium on Pets and Society on the 80th Birthday of Professor Konrad Lorenz, October 17-19, 1983,

Vienna, Austria. Contract Secretary, IEMT, Johann-Blobner Gasse 2, A 1120, Vienna, Austria.

### **ANNOUNCEMENTS**

# "Psychology Experiments on Animals" from NEAVS

The New England Anti-Vivisection Society has published a concise and lucid summary of the arguments on one side of the debate about whether animals can (or should) serve as suitable models for human psychopathologies. fn *Psychology* Experiments on Animals, author Brandon Kuker-Reines traces the development of the idea that animals can substitute for humans from the early days of psychological research. In their efforts to elevate psychology to the status of a true natural science, investigators locked onto the microbiological dictum of Koch's postulates, which state that proof of causation for infectious disease must be obtained in animal models. A second contributing factor to the premise that animal minds can be considered merely as simple analogs of human minds was the later work of Pavlov. Observing that certain sets of experimental conditions made dogs react in frustration by squealing and thrashing about, Pavlov assumed that he had found an animal parallel to human neurosis. In other hypnotized dogs, he thought he recognized the symptoms of schizophrenia.

The author argues that it is the very fact that using animals as models means guessing about which outside manifestations (symptoms) are clues to what's within, so that these symptoms can be duplicated in test animals, that has made psychological studies in animals, at best, simply a waste of time, when "psychologists are not even sure of what behaviors comprise the 'core symptoms' of each type of illness in people" (p. 17).

A set of four criteria, developed by W.E. Bunney, former head of the National Institute of Mental Health, is used as a benchmark for assessing the various animal models of human mental illness. According to the criteria, the animal model and the human illness must have similar causes, symptoms, responses to treatment, and underlying neurobiological mechanisms. The author then examines the current models for several types of illness (schizophrenia, depression, phobia and obsession, etc.) and demonstrates the woeful inadequacy of the animal models for each disease. At the end of the book. Kuker-Reines concludes that the differences between humans and other animals are sufficiently profound as to make any attempts at constructing cross-species analogies about mental pathologies a pointless task.

The book is available from NEAVS, 1 Bulfinch Place, Boston, MA 02114.

#### Farm Facts

The Farm Animal Care Trust has begun publication of a single-page newsletter, *FACT SHEET* (three-hole punched for inclusion in a binder), on farm animal problems and new husbandry systems to help alleviate the problems. Sample topics covered in recent issues:

- The Globovolg Egg System, a new non-intensive housing design for laying hens that features a central row of nest boxes along the length of the building, with wire floors placed over a manure. pit on either side of the nest area. The nest areas are provided with perches, and above the nest boxes is a 5-m-wide platform that also runs the length of the building.
- The dubious nutrional quality of white veal, and some alternatives to special-feed veal operations.
- Antibiotics in animal feed; some statistics on the quantities used annually are given, with a discussion of the wideranging adverse effects of overuse of antibiotics, especially the creation of new antibiotic-resistant microbial strains.

To have your name placed on the *FACT SHEET* mailing list, write FACT, Inc., P.O. Box 14599, Chicago, IL 60614.

### Anti-Cruelty Statutes, State by State

A useful guide for animal rights advocates, the "Analysis of Anti-Cruelty Statutes in Reference to Exemptions for Experimentation," is a distillation of a research project undertaken by the Society for Animal Rights on how the various state laws deal with animal cruelty in U.S. laboratories. Of the 50 states, 32 have no specific exemptions for research and testing activities, 6 have exemptions for certain research facilities, and the other 12 states grant a total exemption to all research and testing activities. The guide can be obtained from SAR, Inc., 421 South State Street, Clarks Summit, PA18411.

### Pharmaceutical Manufacturers Association Now Favors Modification of the Standard ID50

The PMA represents 149 research-based drug companies that, together, account for most of the new prescription drugs that are developed in the U.S. In October 1982, the PMA issued an official report in which the role of the median lethal dose (LOSO) test was reassessed, in light of the real needs of toxicologists and clinical pharmacologists, as well as the actual context of the test: it is but one of a battery of tests used to determine the safety of a new drug.

The report notes that since

Scientific needs rarely require an exact value, practices and regulations should be changed to provide the option of obtaining adequate information on the acute toxicity of a drug, with fewer animals than the precise LOSO test demands Just as meaningful information can be obtained with fewer animals.

The LOSO, the PMA states, also has inherent disadvantages: results are highly susceptible to the vagaries of the many experimental variables involved, and the LOSO value obtained has only limited utility in estimating dose levels for further subacute and chronic studies.

Therefore, the PMA recommends an alternative test procedure, which has been found acceptable to most U.S. regulatory agencies in non-rodents. The PMA group advises that this alternative technique be considered acceptable for tests in rod- ent species, too. In this technique, test substances are administered to the same small group of animals in increasing doses that are spaced over intervals of 1 to 4 days. The maximal tolerated dose and minimal lethal dose can be determin- ed from the results, and an estimate of the LOSO made as well. At the same time, data can be collected on clinical signs of overdose and organ toxicity.

For a copy of the report, contact Pharmaceutical Manufacturers Association, 1100 15th Street, N.W., Washington, DC 20005.

# **Book News**

The Canadian Seal Hunt: A Moral Issue (proceedings of a symposium sponsored by the Canadian Federation of Humane Societies, Toronto, Canada, 1982). In February of 1982, the CFHS held a conference that attempted to analyze the ethical aspects of sealing in a nonemotional fashion and, as part of this effort, to assess the costs and benefits of the seal hunt to both humans and animals. The published proceedings contains talks on "Moral Concern and the Ecosphere" by John Livingston, "Moral Concern and Animals" by Bernard Rollin, and "Moral Concern and the Harp Seal Hunt" by Wayne Sumner (a revised version of Dr. Sumner's paper appears in this issue of the Journal). A verbatim transcript of the panel session that followed the formal papers is also included.

Animals, Nature & Albert Schweitzer, edited with commentary by Ann Cottrell Free (available from and published in part by The Humane Society of the United States, Washington, DC, 1982). The life of Albert Schweitzer- his work, his ideals, and his sentiments on nature and human life - are set forth in this book, which is comprised principally of quotations by Schweitzer himself, with comments by editor Lee interspersed. The book is also a collection of photographs, of Schweitzer and the African people for whom he felt such a strong vocation, as well as the animals and plants with whom he felt so close a bond. Schweitzer's "reverence for life" philosophy emerges as a central theme, as his thoughts on lab animals, meat eating, hunting, falconry, animal rights, and euthanasia are explored.

Trends in Bioassay Methodology: In Vivo, In Vitro, and Mathematical Approaches (proceedings of a symposium sponsor- ed by the National Institutes of Health, U.S. Department of Health and Human Services, NIH Publication No. 82-2382, Bethesda, MD, 1981). In an earlier issue of the Journal (2(3):151-156), we reported on an NIH-sponsored conference that was intended to establish the state-of-the-art in alternatives to the use of laboratory animals. The findings of the conference were to be used by Congress as part of the requisite data for an informed hear- ing on H.R. 4805, the Research Moderni- zation Act, which was first introduced in mid-1979. At about the same time, NIH had begun to study its own procedures and funding mechanisms, to see what sorts of support it was giving to the develop- ment of alternatives; the Government Accounting Office, too, had expressed an interest in NIH policy on alternatives. Yet, with all this impetus, the meeting did not take place until February 1981, because of reluctance at NIH to hold any public forum at all on the topic of alternatives.

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As detailed in the Journal, the symposium that did take place was limited in scope beforehand to the topic of bioassay techniques, on the premise that this area offered some more easily defin- able parameters on which to base a discussion, such as costs and legal requirements for testing. Now, the published proceedings provides copies of the papers presented and transcripts of the panel discussion sessions. Ironically, many of the papers focus on animal models. Some samples: "Animal Method- ology for Toxicity Testing," "In Vitro and In Vivo Systems for Detection and Development of Anticancer Drugs," and "The Use of Chimpanzees in Biomedical Research."

Reckoning with the Beast: Animals, Pain, and Humanity in the Victorian Mind, James Turner (The Johns Hopkins University Press, Baltimore, 1980). "The History of the Victorian Age will never be written: we know too much about it." Or so lamented Lytton Strachey in his preface to Eminent Victorians. To explore this "singular epoch," Strachey counseled, the historian must "row out over that great ocean of material, and lower down into it, here and there, a little bucket, which will bring up to the light of day some characteristic specimen, from those far depths, to be examined with a careful curiosity."

In Reckoning with the Beast, James Turner dips his bucket into a sea alive with the reform of nineteenth-century. manners and mores and brings it up dripping to exercise his particular curiosity upon the origins of the animal welfare movement in England and America. The result is a slender (140 pages of well-written text) but thoroughly documented (38 pages of very interesting notes) examination of the struggles of proper Victorians, both eminent and anonymous, to reconcile the ancient fear of the "animal" in manwith the new understanding of man as animal; to accommodate the old spiritualism to the new materialism; to render the new urban - and largely industrial -

life as tame as the old rural - and largely agrarian - one; and, ultimately, to proclaim a victor in the pitched battle between Science and Sensibility for control of public policy.

Turner chronicles the simultaneous burgeoning of empathy for the suffering of animals and their use in scientific experimentation. Abetting the inevitable and violent convergence of these two phenomena is the newfound abhorrence of pain: Science begins to learn to alleviate pain; people begin to hate pain as it is no longer an uncontrollable part of life on earth; the new sensitivity to pain in general leads to a revulsion at the pain inflicted by *Homo sapiens* (now, thanks to Science, acknowledged to be a member of the animal kingdom) upon his fellow animals; Science begins to inflict pain upon animals deliberately, in order to learn to alleviate it more effectively. Victorians cling tenaciously to the belief they inherit from the Enlightenment of the perfectibility of man; Science becomes the new vehicle of amelioration; Science's seemingly deliberate cruelty appears to be anything but a sign of an improved human spirit. As if that were not a bucketful already, this ironic drama is played out against the backdrop of the class-conscious doubts and fears of the Industrial Revolution.

Mr. Turner's principal hypothesis is that animal welfare got an early lead in the race for reforms and stayed out in front for much of the century because animal protection, unlike many of the movements to aid various segments of suffering humanity, posed no substantial threat to the established social order. He finds "compassion damned up behind a wall of convention, ideology, and inter- est." Sailing between the Scylla and Charbydis of "sympathy and social caution," compassionate Victorians could exer-cise their urge to succor upon the "one wholly acceptable object of benevo- lence: the suffering beast."

The conflicts of philosophies and desires in *Reckoning* are described in their full complexity; the players are not. The ravenous reader of history, sated upon a particular historian's bill of fare,

wipes his chin and wonders what might have been omitted from the menu. In Turner's case, it would seem that he has omitted any flavoring that would render the early animal welfare advocates - the perfervid antivivisectionists in particular-palatable to modern tastes. Could *all* of the founding mothers and fathers of the Humane Movement have been so unremittingly smug, snobbish, self-righteous, and strident as Turner portrays them?

But if the biographical sketches seem lopsided, Turner does credit Victorian animal protectionists with having "mobilized the humane sensibilities of those among the English and American middle classes too timid to venture into the more controversial efforts to relieve suffering." He acknowledges that the abhorrence of suffering, once learned on animals, bore many fruits in the social reforms that ameliorated conditions for children, laborers, the elderly, and other exploitable segments of society caught in the machinery of changing times. But perhaps the most fruitful legacy bequeathed to the Space Age by Victorian animal lovers was to make of the natural world and human ethics a laminate: the corollary concepts of reverence for life and animal rights. It will devolve to another historian a few generations hence to depict the good, bad, and curious consequences of these notions in the twentieth century. It is to be hoped that this future historian will possess Mr. Turner's articulateness and fidelity to the message of the drama, while at the same time showing just a shade more charity to the actors.

Anna Fesmire

### Faith of Our Fathers Dept.

But still another inquiry remains; one often agitated by the more recondite Nantucketers. Whether owing to the almost omniscient look-outs at the mastheads of the whale-ships, now penetrating even through Behring's straits, and into the remotest secret drawers and lockers of the world; and the thou-sand harpoons and lances darted along all continental coasts; the moot point is, whether Leviathan can long endure so wide a chase, and so remorseless a havoc; whether he must not at last be exterminated from the waters, and the last whale, like the last man, smoke his last pipe, and then himself evaporate in the final puff.

Comparing the humped herds of whales with the humped herds of buffalo, which, not forty years ago, overspread by tens of thousands the prairies of Illinois and Missouri, and shook their iron manes and scowled with their thunder-clotted brows upon the sites of populous river-capitals, where now the polite broker sells you land at a dollar an inch; in such a comparison an irresistible argument would seem furnished, to show that the hunted whale cannot now escape speedy extinction.

But you must look at this matter in every light. Though so short a period ago-not a good life-time-the census of the buffalo in Illinois exceeded the census of men now in London, and though at the present day not one horn or hoof of them remains in all that region; and though the cause of this wondrous extermination was the spear of man; yet the far different nature of the whale-hunt peremptorily forbids so inglorious an end to the Leviathan. Forty men in one ship hunting the Sperm Whale for forty-eight months think they have done extremely well, and thank God, if at last they carry home the oil of forty fish. Whereas, in the days of the old Canadian and Indian hunters and trappers of the West, when the far west (in whose sunset suns still rise) was a wilderness and a virgin, the same number of moccasined men, for the same number of months, mounted on horse instead of sailing in ships, would have slain not forty, but forty thousand and more buffaloes; a fact that, if need were, could be statistically stated.

Furthermore: concerning these last mentioned Leviathans, they have two firm fortresses, which, in all human probability, will for ever remain impregnable. And as upon the invasion of their valleys, the frosty Swiss have retreated to their mountains; so, hunted from the savannas and glades of the middle seas, the whale-bone whales can at last resort to their Polar citadels, and diving under the ultimate glassy barriers and walls there, come up among icy fields and floes; and in a charmed circle of everlasting December, bid defiance to all pursuit from man.

Wherefore, for all these things, we account the whale immortal in his species, however perishable in his individuality. He swam the seas before the continents broke water; he once swam over the site of the Tuileries, and Windsor Castle, and the Kremlin. In Noah's flood he despised Noah's Ark; and if ever the world is to be again flooded, like the Netherlands, to kill off its rats, then the eternal whale will still survive, and rearing upon the topmost crest of the equatorial flood, spout his frothed defiance to the skies.

Herman Mellville, Moby Dick