

CRUEL EXPERIMENTS FOUND AT SCIENCE FAIR

Dr. M. W. Fox, Director of the Institute for the Study of Animal Problems, a division of The Humane Society of the United States, attended the 27th International Science and Engineering Fair held in Denver on May 10-15, 1976.

Dr. Fox found, as have other HSUS investigators in previous years, the overall trend of animal experiments at this science fair was technique-oriented, repetitious, inhumane, and unimaginative. In the medicine and health category, for example, 29 animals of various species were used while there were

only 18 experiments in which biochemical, histochemical, or tissue culture were used. Most of the experiments involving the 29 animals were repetitive of an already well researched and documented area and/or merely an exercise for the student in some technique or experimental procedure. Some of them were merely designed to give the student a problem to which he can apply and learn various skills and techniques and, while this can be classified as a learning experience, it is cruel and inhumane since the animals suffer unduly and unnecessarily. Some specific examples are:

(a) Embryo Transplantation in Rabbits—A Feasibility Study

This project involved surgery purely technique oriented for the sole purpose of the exercise itself.

(b) Homotransplantation of Skin in Mice

In this project surgery was done at home, unsupervised, and was a needless repetition of some of a series of studies already recorded.

(c) Effects of Caffeine on Albino Rats

This study involved injecting caffeine in high doses which, of course, caused considerable distress in the rats. It, too, was needlessly repetitive and nothing more than an exercise in applied skills for the benefit of the student.

(d) Studies of the Heart in the Guinea Pig

In this case the project was supervised at home by the student's father who is a M.D. The student injected sodium telradecyl into the heart muscle of the guinea pigs to simulate a

coronary attack. This chemical causes severe and undoubtedly extremely painful damage. While the analyses made by this student were well conducted, it does not excuse this painful use of animals.

A major criticism of the projects in this science fair is that they are not evaluated and approved before being undertaken by the students. The HSUS Guiding Principles for Use of Animals in Elementary and Secondary Schools, for example, has a strong provision that animal observations must be supervised by a competent science teacher who shall approve the plan before the student starts work. It requires further that the supervisor shall oversee all experimental procedures and shall, personally, inspect experimental animals during the course of the study to ensure that their health and comfort is fully sustained. Yet in the study described in (c) above the protocol for the experiment was actually approved by a notary public of Montana.

Student supervision by many science teachers isn't adequate and often is non-existent where experiments entailing surgery or anesthesia are done in the home.

In citing other projects—the possible hearing loss in cats due to hair spray and the influence of phototoxic rays on the skin—Dr. Fox classified the former as "ridiculous in that hair spray is not used on cats and should be tested on people" and the latter as a study in which mice were exposed to ultraviolet and infrared rays after areas of their skin had been removed.

"The suffering of these radiated animals cannot be justified since their suffering was needlessly repetitive and neither demonstrated anything new nor contributed anything to the future mitigation of suffering in man or animal," Dr. Fox said.

One study, titled *Prevention of the Bends by Breathing Oxygenated Liquid*, was dismantled and not shown to the public. All animals used in it died. This was testimony to inadequacy of design, basic knowledge and, above all, humane concern. Yet this project, approved by a professor of psychology and a professor of surgery and anesthesiology, had reached the national finals.

Dr. Fox was impressed, however, with a number of studies in the zoology category, especially those using histochemical tissue culture and micro-organism experiments. One project he rated high on originality and

usefulness was a survey of calf mortalities due to various livestock practices on different farms. He also found more traditional studies on ecology, ecosystems, and animal behavior were generally well designed and presented. These, he said, were projects students can do well, often contribute to scientific knowledge, and are most desirable since the student interferes in a very limited way with the animals he studies and does not have to resort to surgery, drugs, or other such undesirable interventions.

Expectedly, this category, too, had its share of objectionable animal using projects. One, a study of *Behavioral Effects of Microwaves* in rabbits, was conducted during a six week period with a 10 minute exposure time each day. This made the rabbits hot and very uncomfortable and their memory was affected. Another was a bizarre experiment to determine if the rhythm of the female brine-shrimp's reproductive system can be interrupted. This was done by blocking the hind gut of shrimps. Unable to evacuate, the shrimp ate less and so their reproductive rhythm was disrupted. In the opinion of Dr. Fox there was little to be learned from this painful study.

An exhibit titled *A Study in Research in Trapping Activities* was entered by a student from Alaska. Because it had no prior approval of a biomedical scientist Dr. Fox requested it be withdrawn from competition. He was told the student was unable to find such supervision "out in the wilds" and was therefore allowed to enter the national fair. The purpose of the study was to obtain information on various aspects of trapping, to apply the knowledge, and to study animal behavior through observation in order to understand and predict some of their actions. For this project the student trapped 11 marten, 7 foxes, 3 wolverines, 1 beaver and 1 wolf. His study also included mounting some of the animals trapped as well as the cleaning of skulls. There is little doubt the trapping was done by means of the painful steeljaw leghold trap.

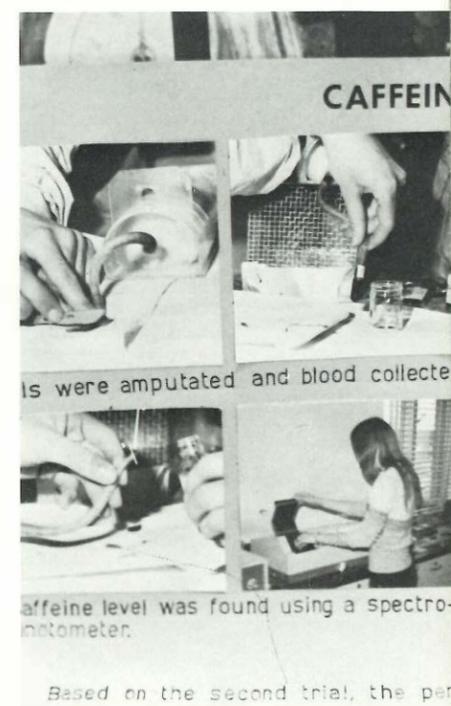
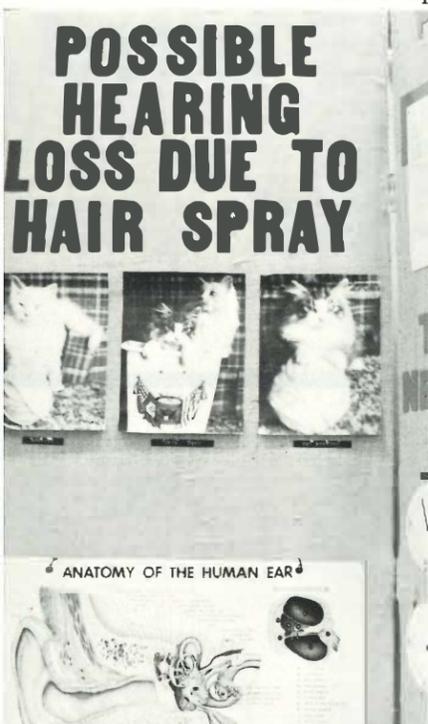
In the behavioral and social sciences category many experiments were well done, some involving observation of animals. Again, however, inhumane and objectionable experiments were found by Dr. Fox. One study titled *Nitrite: A Comparison of Nitrite Content in Cured Meat and Its Effects on Mice*, was a sickening experiment. The student (who used rats instead of mice) described findings already

well documented. Effects were not obtained until 100 times the FDA limitation level of nitrite was given. It took 20 days for one rat to die.

Dr. Fox and The Humane Society of the United States are gravely concerned with the results of the investigation into this International Science Fair. The projects examined and analyzed show there is a trend toward perpetuating the unthinking traditionalism of animal experimentation through continued use of convenient, familiar animals like rats, mice, rabbits, and guinea pigs. To prevent suffering of animals and the inculcation of inhumane attitudes in students it is of the utmost importance that a rational, objective, ethical, and humane appraisal be made every year for each exhibit and for each student before the proposed study is undertaken. Toward this end The HSUS is now considering preparing a handbook to provide alternative types of experiments which, while fostering sound objective research methods, would be tailored to humane values and ethical considerations. The Society is also considering an animal award to be given for the project judged the most humane and contributing significantly to the alleviation of suffering in animals.

The Society is committed to ending the abuse and suffering inflicted upon animals used in science education. In the words of Dr. Fox "to protect all life from unnecessary suffering and to protect nature from man is to begin to understand man in and through all life. Herein is our fulfillment through a life of service, purpose, dedication, and ultimate personal significance."

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