The Principles of Humane Experimental Technique

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CHAPTER 8

THE FACTORS GOVERNING PROGRESS

This tendency in the large groups to go on increasing in size and diverging in character...

Special Organizations

The Laboratory Animals Bureau

We may end with brief reference to already existing organizations in the U.K. which are partly or mainly concerned with the progress of humane technique. Much has already been said of the Laboratory Animals Bureau, especially in Chapters 3 and 6, and we need not repeat it here. Though not specifically concerned with problems of experimental technique, the L.A.B. has already played a star part in contributing to the conditions of its progress. It is more encouraging to know that activities of this sort are spreading internationally. Every year the L.A.B. publishes a volume of Collected Papers, usually based on a Symposium held during the year. These volumes, which began to appear in 1953, are among the most valuable sources for the general methodology of experimentation.

The Animal Technicians' Association

Special mention should be made of another body, the Animal Technicians' Association. It must have been obvious throughout this book that a very large responsibility for the success of humane technique, especially in reduction and refinement, lies with the technician in charge of the experimental animals. The A.T.A. exists to raise the status, educational standards, and morale of the animal technician; its work is eminently to be encouraged. The organization was born in the present decade, but is already beginning to achieve signal success. Its members exchange ideas and discuss practical problems at the annual congresses of the L.A.B., where an impressive standard of papers and discussion is to be observed. The A.T.A. also publishes its own journal to which both scientists and technicians contribute. The

whole movement must be highly important, not only in improving the efficiency of animal technicians, but in encouraging communication in the field of technique (cf. Mundy, 1953, 1957).

While on the subject of the animal technician, we may glance at the potentialities of *automation* in the animal house. Much of the animal technician's time has always been consumed by the tedious labor of feeding, watering, and cleaning. This may not be necessary much longer. For instance, in the new animal breeding unit of the I.C.I. laboratories at Alderly Park, D. G. Davey is introducing a device adapted from poultry farming, by means of which the cleaning of cages is partly, and the watering of animals wholly autonomic (Davey, personal communication to W.M.S.R.). The autonomic apparatus must, of course, be *supervised* by the technicians, as in the forms of industrial automation. But this is a much lighter burden. Such automation can be seen to have two immediate advantages from the animals' point of view. Contingent inhumanity associated with a large animal usage will be greatly reduced, for inadvertent failure to water an occasional cage is virtually eliminated. Disturbance of the animals, of a kind known to affect their physiological variance, is obviated. But the more fundamental effect is one common to all forms of automation. Relieved of routine chores, the animal technician is free for more interesting and stimulating work. He or she is able to take a much greater and more informed interest in the health and behavior of the animals and the progress of the investigations. In particular, such a technician has time to take a personal interest in, and devote personal attention to, even individual animals. The whole human-animal relationship becomes less impersonal, a very important factor in a large animal house. Much may, therefore, be hoped from automation, both in raising the status of the animal technician and in improving the lot of his or her charges.

The Universities Federation for Animal Welfare

UFAW is the only organization to have concerned itself specially with the subject of this book. It is, therefore, natural to end with a sketch of its activities in this field.

UFAW was founded in 1926 by Major C.W. Hume, M.C. (its present Secretary-General), as U.L.A.W.S. (the University of London Animal Welfare Society), and extended its membership to branches in other universities in 1938, when it became UFAW. It has been concerned from the outset 'to show that study of the welfare of animals should be a branch of scientific sociology'. It is the only scientific animal welfare society, and enjoys the patronage of many distinguished biologists. It has sponsored investigations in many fields, such as pest control and animal euthanasia, but its work on laboratory animals began only after the World War II. This work is now rapidly expanding.

UFAW is a charitable organization, which cannot operate on a governmental or commercial scale, and for a long time it sought mainly to catalyze research. It has, however, engaged in a considerable amount of research activity itself, and currently employs five biologists.

The first major achievement was the *UFAW Handbook on the Care and Management of Laboratory Animals,* published in 1947. This book, edited by Professor A.N. Worden, was the work of a number of expert authors. It soon became an indispensable work on the laboratory bench. It was the first attempt to assemble practical instructions for the proper maintenance of all the main experimental species in use. As such it must have had incalculable results in terms of humane and efficient experimentation.

The subject of experimental method was already considered in a paper published by Hume in 1949. In the late forties and early fifties, Phyllis G. Croft performed under UFAW auspices the work we have mentioned earlier. The immediate purpose of this work was related to euthanasia outside the laboratory, but we have seen that it has many important bearings on humane technique.

In 1954, UFAW felt able to turn its serious attention to the problem of experimental technique, as opposed to husbandry, and in October of that year we ourselves began to engage in work for UFAW. A principal outcome of our own work is the present book.

In 1955, UFAW began to offer financial assistance to M.R.A. Chance, whose work we have also referred to at length (especially in Chapter 6), and at the same time reengaged the services of Dr. Croft, who is at present studying problems of pain, and in particular the problem of investigating pain mechanisms without inhumanity. In 1956, E.C. Grant was engaged by UFAW to assist Chance, and he is now actively studying the behavior of laboratory mammals for the purposes discussed in Chapters 6 and 7. At the end of 1957, J.H. Mackintosh was appointed to explore the potentialities of a humane toxicity test devised by Chance; he is to work in close cooperation with Grant.

In May 1957, UFAW organized a Symposium on Humane Technique in the Laboratory, held at Birkbeck College under the chairmanship of Professor P.B. Medawar, C.B.E., F.R.S., who is also the chairman of UFAW's Scientific Advisory Committee. This symposium was reviewed at length in several periodicals, including the *British Medical Journal,* the *Lancet* and the *Pharmaceutical Journal.* It has now been published under the editorship of W. Lane-Petter as the sixth volume of Collected Papers of the Laboratory Animals Bureau (1957). We have had occasion to refer to every one of the contributions.

Finally, a second and greatly expanded edition (951 pages) of the *UFAW Handbook* was published a few weeks before the time at which we write. Edited by Professor Worden and Lane-Petter, it is the work of more than seventy contributors.