



10.00 – 10.45 hrs.

## **Animal Welfare: The question is ‘Do they suffer?’**

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### **Summary**

All animals have certain primary needs that have to be fulfilled in order that they can survive, grow, maintain health and reproduce. If these needs are not met, then the animals will react adversely. Homeostasis will be disturbed, health will be threatened, and biological fitness will be reduced. All of these effects have negative consequences for animal production, and, in order to improve production efficiency, it is important that the mechanisms are understood. This will generally be achieved through a study of stress. Many of the papers being presented at this meeting describe such studies.

The thesis being made in this paper, is that these studies do not necessarily contribute to our understanding of animal welfare. The reason is that the vertebrates and higher invertebrates have evolved subjective feelings to protect their biological needs in a more flexible way than is possible by means of simple stimulus-response behaviour. The argument is made that animal welfare is all to do with these subjective feelings, with the negative feelings commonly called ‘suffering’ and with the positive feelings known as ‘pleasure’. It is sentience, or the capacity to experience feelings, that means the vertebrates and higher invertebrates can experience a quality of life or, in other words, have welfare.

Usually there will be a close correspondence between an animal’s primary need and its secondary feeling, because feelings have evolved to protect needs. However, this is not always the case with domesticated animals. Thousands of years of artificial selection has resulted in some strains of animal in which the biological need and the corresponding feeling have become divorced. For example many strains of meat-type chickens and fast growing pigs have huge appetites that do not correspond with their nutritional needs. Therefore, in spite of the fact that feelings have evolved secondarily to animals’ primary needs, and in spite of the fact that feelings cannot be investigated directly and are difficult to measure indirectly, nevertheless it is feelings that govern welfare and, in any research on welfare, it is feelings that should be investigated.

It is possible to gain information on feelings by studying animals’ behaviour. Methods have been developed whereby animals can be ‘asked’ what they feel about aspects of the environments in which they are kept and procedures to which they are subjected. Good progress is being made in investigating the major states of suffering in our farm animals, the states of fear, frustration, pain and discomfort, and methodologies are being improved and refined all the time. A watch needs to be kept for the possibility that animals can experience other states of suffering, perhaps states not experienced by human beings and therefore difficult to recognise. Also, the time is now ripe for a systematic investigation of pleasure in animals.



## CV

### Ian James Heatly Duncan



Ian Duncan was born and educated in Edinburgh, Scotland. He graduated with an Honours Degree in Agriculture from Edinburgh University in 1965 and went on to study for his PhD at the Poultry Research Centre under the guidance of David Wood-Gush. His doctoral research was on the behaviour of domestic fowl in frustrating and conflict situations in an attempt to answer emerging criticisms of battery cages for laying hens. He was thus the first person to bring a scientific perspective to an animal welfare problem.

He continued to investigate poultry behaviour and welfare at the Poultry Research Centre (now the Roslin Institute) for more than 20 years, rising to Principal Scientific Officer and Head of the Ethology Department. In 1989, Dr. Duncan emigrated to Canada and is currently Professor of Applied Ethology at the University of Guelph in Ontario. He also holds the University Chair in Animal Welfare.

Dr. Duncan's research has ranged from the practical, such as investigating the least stressful methods of catching broilers, to the theoretical, such as developing models of motivation. He has been particularly interested in analysing states of suffering that may be experienced by poultry, such as fear, frustration and pain. More recently he has suggested that some poultry behaviour may be motivated by pleasure. His main contribution to animal welfare science has been in developing the theory that welfare is all to do with the subjective feelings of animals. He continues to develop methods of "asking" animals what they feel about the conditions under which they are kept and the procedures to which they are subjected.

Dr. Duncan is in big demand as a speaker on animal welfare topics. He has been invited to give talks on animal behaviour and welfare all over the world. He has published more than 150 papers on animal behaviour and animal welfare topics

In 1991, Dr. Duncan was given the RSPCA and British Society of Animal Production Award for "innovative developments in animal welfare science". He also very much enjoys teaching, and in 1999 his course "Principles of Farm Animal Care and Welfare" won the inaugural award from the Humane Society of the United States for being the best course in North America dealing with animals and society. In 2001 he was given the Robert Fraser Gordon Memorial Medal for services to poultry science.