

# PSYCHOLOGICAL & BEHAVIOURAL ANIMAL EXPERIMENTS AND RESEARCH TESTING

## Introduction

Psychology has been defined as the study of the mind - of perception, thought emotion. learning and behaviour and as such, human volunteers would seem the natural choice for research and observation. Nevertheless one of the strangest and most disturbing use of animals is in psychological and behavioural research.

Countless animals have been surgically dismembered, drugged, starved, fatigued, frozen, electrically shocked . . . maddened and killed in the belief that their behaviour, closely observed, would cast light on the nature of human kind!

Yet for psychologists the researcher's central dilemma exists in an especially acute form. . . either the animal is not like us, in which case there is no reason for performing the experiment; or else the animal is like us in which case we ought not to perform an experiment on the animal which would be considered outrageous if performed on one of us.

A wide variety of species are subjected to behavioural experiments, including monkeys, dogs, cats, rabbits, rats, mice, pigeons, chicks, fish and guinea pigs. Surgery, drugs, electric shock and food or water deprivation, are all commonly used during behavioural research.

Psychologists have investigated the effects of deliberately induced stress, such as that arising from social isolation, either by solitary confinement or by separation of infant animals from their mother. Animals are also subjected to deliberate brain damage, in order to observe the effects on behaviour. Electric shocks or other painful stimuli are often used to study the process of learning whilst many psychologists investigate the effects of already known drugs on the "normal" or stress-induced behaviour of laboratory animals.

It is obvious that psychological and behavioural experiments cause suffering in a number of ways. Each of these areas will be explained in more detail.

## PICTURES OF MONKEY PSYCHOLOGICAL ANIMAL TESTING

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### 1. Deliberately Induced Stress - Animal Experiments

#### (a) Social Isolation - Psychological Laboratory Animal Testing

Despite the distressing and well known effects of early separation of mother and infant, experimental psychologists have felt it necessary to reproduce the same situation in laboratory animals. Apart from observing the general effects of early separation, some researchers have been interested in the effects on play behaviour, whilst others have used social isolation to assess the importance of play.

Other experiments have been carried out to discover whether the distress caused by social isolation could be reduced by allowing the animals to see their reflection in a mirror.

Social isolation is also used as an integral part of other behavioural experiments for research into aggression, and the effects of brain damage.

(b) **Physiological and Biochemical Effects of Fear and Stress - Animal Research Vivisection**

Research to find the physiological and biochemical changes which occur in stressed and frightened animals has used several techniques including electric shocks and immobilisation, during which animals are tied to a grid.

(c) **Aggression - Psychological and Behavioural Animal Testing**

Electric shocks and other painful stimuli have been widely used to induce fighting behaviour, in the study of aggression. In electric shock-induced fighting experiments, animals have been exposed to 60 electric shocks of 2 mA intensity over a 10 minute period. Yet it is known that 0.1 mA can force rats to alter their behaviour so this must be somewhat painful.

In the use of laboratory animals to study aggression researchers have investigated how mice, tightly restrained in a perspex tube, attack a metal object in front of them. Apparently this model of aggression bears little resemblance to other models such as electric shock induced fighting. Vivisectionists have also investigated the effects of food deprivation on fighting between rodents.

## 2. **Food Deprivation - Animal Behavioural and Psychological Experiments**

Animals are routinely starved to around 80% of their normal body weight as an integral part of many behavioural experiments. However, experiments to discover the specific effects of food deprivation on sexual and aggressive behaviour and on the behaviour of infant animals, has also featured prominently in experimental psychology.

Particularly disturbing is the research to investigate the effect of food deprivation on the behaviour of infant animals.

- The field of research on the behavioural effects of early life undernutrition is strewn with equivocal and contradictory findings. It has been suggested that some of this confusion may have arisen from the use of different strains of animals in different laboratories.

Researchers justify such experiments by stating that:

- malnourished children are known to be lethargic and lack curiosity in exploring their surroundings,
- and there is controversy whether this is a direct consequence of the malnutrition rather than being caused by other factors like emotional disturbance.

But whatever the results of the animal experiments the solution is the same from the child point of view - improve social and environmental conditions and eliminate malnutrition.

### **3. Electric Shocks Animal - Testing Psychological Experiments**

Electric shocks feature prominently in the experimental psychologists' armoury.

Their use in the study of aggression and in the physiological and biochemical effects of fear and stress, has already been described at (1b + 1c). As a form of punishment or conditioning electric shocks are often used to change behaviour and are frequently employed to study the process of learning. One approach involves giving electric shocks to the eyes of rabbits to make them blink. Shocks are even used to study the process of punishment itself.

### **4. Brain Damage - Animal Experiments Psychological Laboratory Animal Testing**

There is a vast literature covering the effects of brain damage on the behaviour of laboratory animals. In some cases, the effects caused by damaging a specific part of the brain will be observed, but apart from scientific curiosity, it is difficult to understand why such experiments are performed. Brain lesions in human beings occur either accidentally or during therapeutic surgery, but the resulting effects can still be observed clinically. For instance it was found that bilateral removal of the mesial temporal lobes in man resulted in profound amnesia, indicating that the hypothalamus plays an important role in human memory.

Consequently, there is no medical justification for producing brain lesions in healthy animals who in any case may respond quite differently.

Many experiments have been performed to investigate the effect of an enriched environment on recovery from brain damage. It is hardly surprising that brain damaged animals, living in a social and enriched environments fared better than those kept socially isolated, or in boring conditions.

### **5. Drugs - Animal Research Psychological and Behavioural Testing**

Psychologists also study the effect of drugs on animal behaviour and this includes drug addiction and withdrawal. Much of this research is designed to investigate the effects of already known mood changing drugs such as antidepressants, sleeping pills, sedatives, stimulants and tranquillisers despite the fact that more reliable information could surely be obtained by observation of the large number of people actually taking the drugs. For instance this approach has shown that millions of people given minor tranquilisers regularly become drug dependent.

Sadly there are all too many human addicts without subjecting animals to further cruelties. Clinical observation and community care are surely the best approaches to treatment and care, since animal models are unlikely to shed light on the complex psychological facets of human drug addiction and withdrawal. Animal experiments have little to offer the human patient.

### **Farm Animal Behaviour - Experiments and Research**

Behavioural research is also carried out to refine intensive farming practices.

Part of the experiments are concerned with the motivational systems determining the needs of livestock for food, water, warmth, light, sex, etc.

For instance, experiments with sheep and calves have been carried out to understand their illumination preferences using a selection of lighting levels for animals kept in intensive husbandry units. Lambs have also been subjected to maternal deprivation and other distressing procedures in experiments designed to study the mother-infant relationship.

Drinking behaviour has been studied in pigs deprived of water and it has been shown that thermal effects also influence drinking. For instance, warming the scrotum increased drinking. On the other hand, removal of the olfactory bulbs in young pigs had no effect on feeding. In other experiments concerned with "motivation", the control of food and water intake has been studied using electrical stimulation of the brain.

As is well known, intensive production methods cause great stress and so-called "vices" can result. Experimenters have felt it necessary to reproduce some of these behavioural problems in pigs by giving various drugs, such as Metoclopramide - an anti-emetic drug - and some neuroleptic drugs. Attempts have also been made to reproduce such "vices" in sheep and guinea pigs. However such experiments may be defended to the farmer producing animals under traditional free range conditions, they would seem to have little value.

### **Alternatives to Psychological and Behavioural Animal Experiments**

The big questions are: have we learned much that is new or beneficial from these millions of experiments? And - whatever may have been learned - is the infliction of so much pain and terror warrantable? And finally, is there any possible justification for duplicating and reduplicating this sort of experiment or variants of it, when the results are known and are readily ascertainable by means of films, books and articles in Journals?

Yet the usual justification for such experiments is that they are of help in understanding mental disorders. The experiments described make such a claim difficult to accept, but let us be generous and explore the idea a little further. It might be thought that the introduction of behavioural therapy, to treat phobias and other neurotic disorders was dependent on research using animals, to develop the underlying theories of learning.

It would be curious to argue that it would have been impossible to carry out the relevant research on human subjects; for how could a therapeutic method for use with human beings be based on principles of learning which could be demonstrated and investigated in dogs and rats, but which could not be demonstrated and investigated in human volunteers? Indeed, one could argue that the development of behavioural therapy might have been more rapid if more of the relevant research had been carried out on human volunteers rather than on animals for instance, the importance of imagery would probably have been defined earlier.

Much psychological and behavioural research using animals seems both trivial and obvious and is increasingly criticised by psychologists themselves. The results of social isolation; the need for an enriched environment in the recovery from brain damage; the effects of under-nourishment early in life, are all examples where the outcome is surely obvious. If the justification for such research is the investigation of various aspects of our own behaviour, then surely this could be achieved far more reliably and without the infliction of pain and misery, by careful analysis of human behaviour. The real alternative then is to observe ourselves.

## **Conclusions**

1. It is obvious that psychological and behavioural experiments cause suffering to animals in a number of ways. Animals are subjected to stress, starved, given electric shocks, drugged and brain damaged during the course of such research.
2. Many of the experiments are trivial and the outcome obvious, yet funding all over the world with taxpayers money is still forthcoming.
3. The claim that such experiments are of help in understanding mental disorders cannot be taken seriously. If the justification for such research is the investigation of our own behaviour, then surely this could be achieved far more reliably by careful observation of human behaviour. The International Association Against Painful Experiments on Animals calls for a complete prohibition on the use of animals in psychological and behavioural research.

## **PICTURES OF PRIMATE PSYCHOLOGICAL ANIMAL EXPERIMENTS**

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