



Rats in a Trap

By JULIA BASTIAN

CURRENTLY, biologists are saying that if wages continue to rise there may be a drive towards animal slave labour. For centuries elephants have been lifting trees, oxen have been dragging ploughs, and dogs and ferrets have been used for hunting, yet it seems that the exploitation of animals may have only just begun.

Apparently, extensive new knowledge of behavioural responses in animals has made it possible to train chimpanzees to become safe engine-drivers, while pigeons can learn to sort letters for the post or even pilot planes. In future, whole crops may be harvested by ape labour!

A new book on the study of animals and their responses to changing environments and stimuli is valuable not only because it presents fascinating material on such things as fish behaviour — including the sex life of the crab and a short life history of the dolphin (which, of course, is not a fish) — but because it throws light on the behaviour of mankind. The author, P. L. Broadhurst, freely admits that his book* is written by an animal, and will be read by animals — which helps a bit to explain what “an animal” really is.

As one would expect, the most useful animal for scientific study is still the docile, friendly, albino rat. These little creatures with white fur and pink eyes, and, it would seem, the most willing nature, are continually being subjected to some kind of conditioning treatment connected with learning or reasoning. For instance, the rats will readily learn to associate the sound of a buzzer or the flashing of a light with an electric shock—as first demonstrated by Pavlov. Stimulated by their natural desire for food, sex or the need to avoid pain, they will perform all manner of unusual activities, and when conditions are changed, as for instance when the reward, stimuli or environment is altered, the confused rats will adjust as best they can to the new situation.

The interesting thing about these experiments is that young rats’ behaviour begins to resemble what is regarded as neurotic behaviour in human beings. The danger and worry of the changing conditions bring about conflict, and the emotions become disordered. The rats “act potty.” Indeed, in the laboratory they showed all the evidence of anxiety due to emotional upset, in some cases developing stomach ulcers. This is not surprising when one considers the unpleasant experiences to which the

poor rats are subjected. Just as an animal can learn a trick, it can also learn to feel anxious in a given situation. Fear and anxiety are potent emotional motivators.

“Emotional responses are like habits,” explains Broadhurst, “and can be learned and unlearned.” So, a rat will learn the correct route through a maze if a meal awaits him at the other end. Without the food as reward for his endeavour, the route is soon forgotten.

The emotional responses of the human animal are learned in precisely the same way, and under just such circumstances of danger and worry do we suffer stress diseases like the rat. “It has been shown in the laboratory,” says Broadhurst, “that the way baby rats are treated in infancy affects the speed with which they learn when adult.” A rat nurtured by an anxious or disordered mother is more timid in exploring open space and much slower to learn the route through the maze than a “well-brought-up” rat.

All this suggests to a student of economics (though possibly not to a biologist) that an anxious society will produce slow and timid citizens. When the Government is constantly subjecting people to buzzers, flashing lights and electric shocks, in the sense that it tampers with the bank rate, debases the currency, regulates wages, freezes profits and dividends or introduces a pay pause, then the citizens must adjust as best they can to the new situation. It is not very surprising therefore that so many millions of human animals develop one or other of the many modern stress diseases, and millions more fail to explore the possibilities, or take opportunities, that might otherwise have been explored. We are caught like rats (most of us docile and friendly, if not albino) in a great experimental national trap.

Yet, fortunately, man is something more than a human animal and, unlike the rat, is in a position to order his environment if he will.

Broadhurst tells us that monkeys can be trained to accept payment for services in the form of “money” which they can then “spend.” “Instead of handing out peanuts for reward,” he says, “the monkeys are given tokens which can be placed in a slot machine in return for grapes.”

Reading this book one feels there is little doubt that monkeys would learn quite soon to work for plastic tokens, and possibly harvest a crop or two, but how much more so would the human animal work, and work well, for fair reward and economic stability, in a society free from the traumatic shocks of bells and buzzers.

**The Science of Animal Behaviour* (Pelican, 3s. 6d.)