

Unit: HPS111: Introduction to Psychology A

Topic: Animal research in psychology

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**Abstract**

The ethics of animal research in psychology can be considered in terms of balancing the costs and benefits, in service of the 'greater good'. Behavioural animal research has brought great benefits, although sometimes the benefits aren't readily apparent or easily understood. The costs to animal subjects vary greatly depending on the study and are mitigated by a number of factors. I argue that based on a cost benefit analysis, psychological research on animals can be justified, and that the current regulatory system does this effectively.

### **Justifying Animal Research in Psychology**

Animal research in psychology is highly controversial because at its heart is an ethical dilemma. Historically, animals were viewed as qualitatively different from humans, allowing for clear moral distinctions (Baldwin, 1993). But beginning in the 19<sup>th</sup> century, a growing concern for animal rights and animal welfare has led to campaigns against scientific research using animals (Baldwin, 1993). Some campaigners have argued that animals have rights equal to humans, making research on animals immoral (Baldwin, 1993). Meanwhile, the benefits and relevancy of psychological animal research have come under attack (Weiten, 2005), and some researchers have been accused of needless cruelty (Bowd & Shapiro, 1993). There are reasons to place importance on the wellbeing of animals, and, certainly, some research can be highly invasive. But on the other hand, behavioural research on animals can provide great benefits, including improved quality of life and reduced suffering for humans; From this perspective, not conducting research could be seen as allowing suffering to continue. The dilemma, therefore, is one of choosing between two potentially harmful options. What factors should be considered, and how should this decision be made? In this essay, I'll discuss the benefits of research, the costs to animals, and the suitability of the current regulatory processes. I'll argue that from a utilitarian perspective, animal research in psychology can be justified, and should therefore be allowed to continue subject to the current checks and balances.

In her overview of the debate, Baldwin (1993) identifies the work of Peter Singer as a key philosophical foundation for the animal rights movement. Singer argues from a utilitarian perspective. He believes that in evaluating the 'greater good', animal wellbeing should be included as a factor (Baldwin, 1993). If a non-human organism can experience pain and suffering, then it's reasonable to count its experience in our

judgement of what's ethical. However, it doesn't follow that invasive research and the sacrifice of animals is never justified. In certain circumstances animal pain and suffering will be off set by even greater benefits. Furthermore, if the impact of an experiment can be minimized, a particular animal research project may still serve the 'greater good'. From another angle, preventing research could be seen as maintaining the suffering of those who might have benefited from it; Framed in this way, some research may be justified as the lesser 'evil'. What's important is weighing both costs and benefits carefully in light of their complexities.

In psychology, there are numerous examples of animal research resulting in significant benefits. While citing the benefits of one particular study doesn't prove the case for animal research more generally, specific instances are useful for countering broad claims of irrelevancy, as well as demonstrating the possibilities. For example, research on monkeys in the 1960s led to a new rehabilitation technique for patients with some forms of neurological damage (Miller, 1985). Previous research had established that if afferent nerve fibres in an animal's limb are severed, depriving it of sensation, the animal will no longer use that limb. However, psychologist Edward Taub discovered that by tying back the good arm, a monkey could re-learn, to some extent, to use it's de-afferented limb. Taub was accused of abuse (Bowd & Shapiro, 1993), however, his discovery led to Constraint Induced Movement Therapy, a successful treatment for stroke, incomplete spinal cord injury, and other brain injuries (Taub & Uswatte, 1999, 2000). Stroke, in particular, affects hundreds of thousands of people each year (Taub & Uswatte, 1999). As such, the benefits of this research are wide spread, and ongoing. This is only one example. Despite the fact that only 7 – 8% of all psychological research involves animals (Weiten, 2005), the list of outcomes are extensive, including treatments for alcoholism, substance abuse, and Alzheimer's disease (Baldwin, 1993). Against this evidence, criticism on the grounds of irrelevancy isn't convincing.

However, often the benefits of research on animals may not be readily apparent; This may be the source of much of the criticism against animal research in the field of psychology (Baldwin, 1993). Compared to the immediate, direct impact on the animal, the knowledge and applications of research may seem intangible. However, it is important that the nature of scientific research be taken into account. It is inevitable that some studies will not yield helpful results, as a number of hypotheses may need to be tested before the useful one is proven. Therefore, the inconclusive can still be thought of as contributing to the eventual benefit. Other behavioural research may not produce immediate applications, but can still be justified by the benefits it enables down the line. Classic studies by Skinner and Pavlov are good examples. Their research into conditioning and operant conditioning revealed fundamental psychological principals (Weiten, 2005). These theories are the foundation of behavioural therapies used to treat many conditions including anorexia (Miller, 1985). If the advantages of research are to be given fair consideration, then they need to be weighed in light of these tendencies.

On the other side of the equation, the costs of animal research need a sophisticated examination. A variety of techniques, with varying degrees of invasiveness, may be used in psychological research. Examples range from observations of animal behaviour (for example, the observation of a rat's lever pressing frequency in a Skinner box (Weiten, 2005)), to sensory deprivation (brain plasticity research in kittens (Weiten, 2005)). How invasive these procedures are will be mitigated by a number of factors: species, number of animals used, anaesthetics, husbandry issues, and euthanasia procedures, may be some of the relevant factors ('Australian code of practice for the care and use of animals for scientific purposes', 2004). Various scales of invasiveness have been developed to help quantify harm experienced by research

animals ('Using animals in science', n.d.). Low level invasiveness might involve slight discomfort and mild anxiety, while on the more severe end of the scale, animals may be subjected to prolonged pain and severe distress ('Using animals in science', n.d.). An evaluation of the impact of research on animals needs to account for these varying levels of severity.

The current ethical processes are well suited to weighing these costs and balancing them against the benefits. In Australia, the use of animals in psychological research is covered by the 'Australian code of practice for the care and use of animals for scientific purposes' (2004). The code of practice provides extensive guidelines, as well as a system of Animal Ethics Committees (AECs). Any research using animals must receive authorisation from an AEC, and each committee must include veterinary, research, and animal welfare experts. This ensures that judgements can be made in the light of sophisticated scientific understanding, based on the latest evidence. Furthermore, one member of the committee must be independent of the research institution and not involved in science; This ensures a measure of independence.

The code of practice pressures researchers to raise animal welfare standards and adjust their methods to minimize harm. It emphasises the principles of the three Rs – "The replacement of animals with other methods, the reduction in the number of animals used, and the refinement of techniques used to reduce the adverse impact on animals" (Australian code of practice for the care and use of animals for scientific purposes', 2004). Researchers must justify their methods in the light of these principals. For example, in line with the 'replacement' principal, research proposals submitted to AECs must include a list of alternative methods and a justification for why these can not be used. If researchers want to be sure of receiving approval, it's in

their interest to 'replace, reduce, and refine'. As methods improve, AECs can gradually tighten their standards, and in this way, improve animal welfare long term.

AECs have discretion in how they apply guidelines to each individual case. This is an important feature, however, animal rights activists may feel uncomfortable with the flexibility of this system. The code of practice (2004) makes frequent use of indefinite phrases like "only when necessary" and "if essential" – terms difficult to operationally define. In the minds of activists and the general public, this may seem dangerously unclear. Yet, while absolute rules are easier, they can not take into account every circumstance; they can't account for the latest scientific knowledge, or anticipate the latest research methodologies. An active and flexible regulatory system has the best chance of being ethical, because it's able to deal with the subtleties of each individual case.

In the end, the question of animals used in psychological research will always be, to some degree, a dilemma. As the success stories show, the benefits of research can be considerable, but so too can the costs, and both are difficult to quantify. For any particular research proposal, there may be no objective way of calculating what's in the 'greater good'. How many rehabilitated stroke patients equal one de-afferented monkey? As the APA acknowledges (1990, cited in Baldwin, 1993), it is essentially a matter of conscience. However, the current regulatory system has characteristics that facilitate an ethical balance: Animal Ethics Committees are expert, concerned about animal welfare, and independent. They make case by case judgements based on a variety of detailed information. Meanwhile, the code of practice encourages researchers to minimize harm and replace animal research with other methods.

A culture of concern for animal welfare should be fostered within the psychological community, and researchers should make every effort to minimize

harm. Decisions regarding animal research should be made individually, based on sophisticated analyses of both the costs and benefits. Accordingly, I recommend that, subject to the current regulatory processes, research on animals in psychology should be allowed to continue.

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