BOOKS & ARTS



Vivisectionists strike back

The complex issue of animal experimentation should not be dumbed down in the face of violent opposition, argues **Andrew Read**, reviewing a new polemic on the US experience.

The Animal Research War

by P. Michael Conn and James V. Parker Palgrave Macmillan: 2008. 224 pp. \$34.95, £22.99

Animal researchers in the United States are the targets of terrorists. If you need persuading that this is happening and that this is bad, read this book. It is a primer on the extremists and organizations involved and their tactics lobbying in schools, novel legal manoeuvres, threatening families, posting razor blades, vandalism, arson and bombing. If you experiment with animals, this book should persuade you to open your post with a letter-opener instead of your finger. There are people out there who really hate you. Authors Michael Conn, associate director of the Oregon National Primate Research Center, and James Parker, the centre's former press officer, argue that extremists are waging a war on animal research.

Talk of war can motivate a nation, but it does not always generate good policy. Conn and Parker say they must use military rhetoric to attract the attention of the public to these attacks and their effect on human and animal well-being. To deliver their wake-up call, the authors mirror the strident language of animal-rights organizations, such as People for the Ethical Treatment of Animals (PETA). I have some sympathy for the authors' approach. The enormous membership of such organizations suggests that the best way to get a message across in this dumbed-down world is to skip the subtleties, assert that grey is black, and hurl sound bites, anecdotes and context-free quotes at the public. *The Animal Research War* does this important job well enough.

But tossing certainties over the barricades will go only so far. To agree rules we must discuss the details, and the ethics are difficult. Animal experimentation undoubtedly contributes to relieving human and animal suffering, so we are morally obliged to do it. But we are also morally obliged to do it humanely. Achieving both these ambitions with public support requires a grown-up debate.

No one knows what level of governmental oversight best reconciles our moral obligations to the sick with our moral obligations to animals. The US system is less demanding than that in the United Kingdom, for example, so which is right, if either? At least one approach must be morally deficient and should be abandoned.

Another difficult issue is how we should deal with phylogeny. In the United States, rats, mice and birds are not given the same legal cover as primates, cats and dogs. Under the UK system, one species of octopus is covered, but you can do what you like to the others. Is there a sound basis for replacing mice with zebrafish in toxicology testing? Should there be welfare protection for crustaceans? Or no protection for chickens?

In most countries, permission to experiment

on animals involves an ethics committee that performs cost-benefit analyses. Yet the connection between a particular experiment and human well-being is usually tenuous. Science is one of mankind's most wasteful enterprises, and it has to be: as Conn and Parker put it, scientists are explorers, not clairvoyants. Research that seems to be useless, and even research that actually was useless is a crucial part of the long-term success of biomedicine. Many animals are used to explore what turn out to be blind alleys. That is how we learn.

Is it even possible to determine the cost of not experimenting on animals? One of the reasons that malaria continues to be such a humanitarian crisis is because, compared with primates, mice can mount much better protective immune responses against malaria. Ideally, high-throughput screening of candidate vaccines should therefore be done in primates. How much human suffering is a consequence of the systematic failure to use more primates in malaria vaccine development?

These issues are at the heart of animal experimentation, and the scientific community is silent about them. Do we avoid open discussion about national regulations because these rules shield us from society? One of the worst consequences of animal-rights extremism is the suffocation of rational discussion. If complex arguments are not aired, then the difficult decisions are left to politicians who must juggle vested interests.

The scientific community, one group with such vested interests, is now being forced by the political activism of the antivivisectionists to clamber out of its bunker and engage, at least with the easy questions, such as why animal experimentation cannot be banned outright. The Animal Research War is an important US step in the hitherto largely European process of making that simple case. But in the online era, the role of books is to provide accessible analysis of the details behind the sound bites, and this book should have gone further. For instance, Conn and Parker's research centre was infiltrated by an undercover animal-rights activist, and pictures of its apparently miserable primates are posted on PETA's website. Conn and Parker counter that the pictures were either doctored or taken deliberately just before cages were cleaned, or show behaviour seen naturally in the wild. So why not give visual proof? Why aren't we letting the cameras in?

Animal experimentation is a complex issue. Pretending otherwise, as Conn and Parker do, smacks of a cover-up. It is farcical to maintain that biomedical scientists are always angels, particularly if our best argument is that the US government has given us the all-clear to experiment. Let's be honest about past abuses and new cases that come to light, and move forward with case studies that show how animal research is run better these days. There may be mileage in animal-centred historical accounts being hurled at us by animal-rights campaigners, which Conn and Parker simply throw back with the rhetoric reversed. Is the correct lesson of thalidomide that animal testing is useless, or that insufficient animal testing is dangerous? Would the germ theory of disease still be conjecture without animal experimentation? Where would the polio vaccine be if Sabin and Salk had modern in vitro and in silico tools and twenty-first-century animal regulations? The undoubted cases of excessive and insufficient animal use, the dead ends and blind alleys, and the basic biology from whence it all came may be rich in honest detail, but such narratives and conjectures would make fascinating and persuasive reading.

The full story would also address the fundamental misunderstanding at the heart of the debate. Antivivisectionists maintain that researchers actively choose to experiment on animals, despite personal risk and bureaucratic hassles, to pursue science that is irrelevant to human or animal well-being. They also believe that our community conspires to keep the pointlessness of our profession from the public. Actually, our biggest problem is that we are poor at projecting the complex and messy process of science, and the humanity of scientists. Andrew Read is professor of biology and entomology in the Center for Infectious Disease Dynamics, Pennsylvania State University, Pennsylvania 16802, USA.

Moralist, meet scientist

Experiments in Ethics

BOTTERELL/ZEFA/CORBIS

by Kwame Anthony Appiah Harvard University Press: 2008. 288 pp. \$22.95, £14.95

Picture a crowded room. In one corner, people are arguing about abortion; in another, about euthanasia. Around the coffee table, sitters dispute the obligations of the rich to the poor. By the sofa, folks are debating the criteria for a just war and the proper relations between men and women, and another group queries the use of primates in medical experiments. Nearby, a huddle of ethicists disputes politely which moral theory to accept - utilitarianism, kantianism, virtue ethics, contractarianism or something else. At the back, people are shouting something about whether suicide bombers are heroes or villains, and plates are flying. The individuals seem to have only one thing in common: each is convinced he is right.

In the past few decades, scientific interest in moral behaviour has surged. Psychologists, neuroscientists, evolutionary theorists and behavioural economists have begun to turn their experimental methods to understanding the ways we arrive at moral judgements. Scientists of human nature have called into question commonplaces about character and offered subversive explanations for various moral intuitions.

Philosopher Kwame Anthony Appiah explores the relation between empirical research into moral behaviour and moral philosophy, a discipline that questions what we ought to do and what there is reason to value. In *Experiments in Ethics*, he reviews a sample of the most intriguing experiments through which scientists have sought the mechanics of our moral minds.

Questionnaires have revealed that people's responses to moral dilemmas sometimes



A passer-by is more likely to offer help if they have recently experienced good fortune.

depend on how a problem is framed. This calls into question how much weight we can put on moral intuitions in cases in which superficial rewording makes us reverse our verdicts. Hypothetical problems in decision-making have demonstrated that general biases in human thinking arise when cognitive heuristics are applied outside their proper domains. Daniel Kahneman received the 2002 Nobel Prize in Economics for developing prospect theory, describing how people's behaviours deviate from the prescriptions of classical decision theory. Similar biases might occur in our moral thinking. In a famous study on moral judgement that used functional magnetic resonance imaging, Joshua Greene reported that utilitarian and non-utilitarian responses were associated with different neural signatures in moral 'up-close-and-personal' dilemmas.

In one philosophical thought experiment, a runaway trolley threatens to run over and kill five people. You can flick a switch that will deflect the trolley down a different track where it will kill one person. Most people say they would flick the switch — a response that is in accordance with utilitarianism, an ethical theory according to which the right action is the one that has the best net consequences.

Now consider a variation: again a trolley rolls along a track where it will kill five people. This time you are standing on a footbridge overlooking the track, and the only way you can save the five is by pushing a fat man standing beside you down on the track; if you do, the fat man will die, but his body mass will stop the trolley and five people will be saved. In this more personal version, most people say they would not push the fat man even though