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*Letter to the Editor***Animal Ethics Committees:
Reassurances Rejected**

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The ethical and legal framework governing animal experimentation in Australia has changed little since 1990 despite the publication of new editions of the Code of Practice. The latest Code was published in 2012, again with minimal change. The problems which I outline apply to all editions of the Code from 1990 to the present. Allen and Halligan pick up on the framework for the 2004 Code suggesting that my criticisms relate to the period before 2004. My acquaintance with the workings of Animal Ethics Committees (AECs) and the various codes spans a long period pre-dating 2004 and extending to the present. I chose to direct my article to the 2004 Code given that it was current at the time of writing. I note that Allen and Halligan do likewise. There are in fact no changes affecting our points of disagreement in the 2012 edition.

I argued in my article that there has been uneven compliance with the appointment of independent community members to the Animal Ethics Committees. It is heartening to see that the University of Sydney does comply. My own university only recently changed its practice. Until 2011 the category D position was filled by a philosopher employed by the University. I do not share the optimism expressed by Allen and Halligan that if one third of the committee is made of up of either animal welfare or community members not involved in animal research then this “ensures that community values have the opportunity to emerge.” These members may well feel intimidated to question

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the views of the two-thirds of the members on the committee who are committed to animal experimentation either through their scientific research or the handling of animals.

Referring to the principles of Reduction, Refinement and Replacement in my article, I note that “It is the latter that has proved most problematic.” Hence the focus of the rest of the article. Allen and Halligan claim that there is robust discussion of ethical issues in their committee and cite as examples: “the appropriate housing for particular animal species and the extent to which a given procedure will affect the welfare of an animal.” These are issues which fall under the principle of Refinement. There is however no indication that there is discussion about Replacement.

One of the key reasons why ethics committees don’t work is that the people on the committees whether they are scientists or not would generally fail to have a grasp of the possible alternatives to using animals in order to work out whether the proposal under consideration is justified. According to the Code the scientists on the Committee must be experienced in the use of animals for scientific purposes. Hence it is unlikely that their training would have taken them into “replacement” fields such as computer simulation or human epidemiology. The community members will then be relying on the scientists to tell them whether alternatives are available but the scientists are unlikely to be well enough informed i.e., have expertise across all viable alternatives, to be able to provide a basis for the discussion. So I criticized the Animal Ethics Committees for not adequately taking into account the Replacement principle when working out whether animal based research is justified. I did not intend to criticize individual members of the Committees as there are *structural* reasons for this weakness. It’s not the fault of the

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individual committee members that the committee has been set up in such a way that the crucial ethical question for an Animal Ethics Committee, viz., “Is this research justified?”, is unlikely be adequately addressed.

The AEC cannot rely on the researcher putting in the proposal to provide guidance into consideration of alternatives as if they are motivated to pursue animal-based research they are likely to have little or no acquaintance with alternatives such as human epidemiology or computer simulation which require in-depth study in different faculties. Again this is not meant as a personal criticism. I am simply trying to point out that what the researcher is required to do in terms of looking at alternatives and working out that none are available is too much to demand. The researchers may put on the forms that they have considered alternatives but given that they won't have an academic background in all viable ones then their consideration has to be superficial.

Allen and Halligan state that many different alternatives are used by the scientific community and “researchers are free to use the methodologies that they believe are best suited for solving the problem that interests them.” This is not always true. They may need to work in a team and there may be no team in their institution using methodologies that they believe to be best. This is particularly the case in small institutions. Also it may be difficult to get funding for non-animal based research in fields such as biology. The fact that the University of Sydney offers an annual prize for the best alternative to animal experimentation on the one hand tells us that this institution is valuing research in alternatives but on the other, that it is not by any means the norm. In any case, the issue is whether the researchers will have the background in different alternatives to know

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whether it is necessary to use animals or not and whether the AECs will have the expertise to assess that.

I wonder on what basis Allen and Halligan claim that “most scientists believe that for many of the most complex biological issues, particularly those concerned with diseases, animal models are required to make progress.” Which scientists have they consulted? Those doing conventional biology? Those working in *in vitro* studies? Those working in genomics at MIT? It’s a completely general claim and of a type that is used to close an argument. Andrew Knight’s book, *The Costs and Benefits of Animal Experimentation*, looks at the systematic reviews published in peer-reviewed scientific journals which he claims:

have demonstrated that animals are insufficiently predictive of human outcomes to provide substantial benefits during the development of human clinical interventions or the assessment of human toxicity. In only 2 of 20 such reviews located during a comprehensive survey did the authors conclude that animal models were either significantly useful in contributing to the development of clinical interventions or substantially consistent with clinical outcomes. Furthermore, one of these conclusions was contentious (Knight 2011, 183).

The scientists’ belief that Allen and Halligan refer to looks like it could be founded on inadequate investigation.

In a major study reported this year in the *Proceedings of the National Academy of Sciences* Soek et al. (2013) found that mice models for human sepsis, burns and trauma fail. The reason why they fail has been worked out by studies over ten years involving thirty nine researchers using human tissue and

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genomics. Dr Fink, a sepsis expert at the University of California said that “When I read the paper I was stunned at just how bad the mouse data are ...[yet] until now to get funding you had to propose experiments using the mouse model... This is a game changer” (Jaslow 2013). It is not just that the mouse has been shown to be a very poor model of the human but the reason why this is the case has been exposed. Billions of lives have been lost in useless research. Billions of dollars have been wasted. If alternatives to using animals had been explored earlier what a saving this would have been. The question, why is the mouse model failing could possibly have been triggered by taking up on the fact that mice can eat rotten food and not get sick but humans often do get sick by eating such food. Year after year research has been conducted in the hope of finding cures for sepsis, burns and trauma from animal studies when we now know that drugs that work for mice for these conditions will be ineffectual in humans and possibly deadly. The study of alternatives to using animals was needed to get to this point. It is interesting just how good an example of Thomas Kuhn’s ideas this illustration is. He argued that it is hard to see the weakness in a paradigm (understood as a way of doing science at a particular time) until alternatives are developed (Kuhn 1970, 111-117).

Allen and Halligan give examples of the role of AECs in over-seeing animal welfare when animal experiments take place. I am happy to believe that this is true. They claim that “AECs frequently modify applications with the aim of replacing, reducing or refining animal usage.” I can understand how modifying applications could lead to reducing and refining animal usage. I don’t understand how modifying applications can lead to replacing animal usage. It doesn’t make sense. If the AEC decides that animals should not be used then the applica-

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tion should be rejected, not modified. I think this illustrates the mind-set that ethical issues relate to animal welfare in experiments rather than the deeper, more important question, should animals be used at all?

Many, perhaps most, in the community might accept animal experimentation for scientific advance as Allen and Halligan claim. However are they right in doing so? If the systematic surveys of the results reported by Andrew Knight are correct then the assumption about the human utility of animal models is untested and unfounded (Knight 2011, 4). So the fact that these community attitudes exist, if they do, can't be used to justify using animals in research. Many people in western communities are aware that there is scrutiny of animal research. Some know about the existence of AECs. I would conjecture that there is a common belief that there is enough oversight of animal experimentation to ensure that only justified research is let through. That is a false belief.

In the face of the criticisms by Allen and Halligan I am not inclined to withdraw my claim that animal ethics committees don't work. I grant that they may help with refinement of conditions in experiments and reduction in the number of animals used and these are definite benefits for animals. However they don't and can't work to ensure that only justified research is allowed through. The Committees presence gives the wider community a reassurance that ethical questions have been adequately addressed. It's a false reassurance but different modes of scrutiny are blocked because of the perception of adequate over-sight.

References

- Jaslow, Ryan. 2013. "Mouse Studies May Lead Scientists Astray for Sepsis, Injury Studies." CBS News (February 12, 2013). Accessed July 15, 2013. http://www.cbsnews.com/8301-204_162-57569017/mouse-studies-may-lead-scientists-astray-for-sepsis-injury-studies.
- Knight, A. 2011. *The Costs and Benefits of Animal Experimentation*. London: Palgrave Macmillan.
- Kuhn, T. 1970. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Seok, J. et al. 2013. "Genomic Responses in Mouse Models Poorly Mimic Human Inflammatory Diseases." *Proceedings of the National Academy of Sciences*. 110(9):3507-3512.