

## Book Reviews

### ***The Three Rs and the Humanity Criterion: An abridged version of The Principles of Humane Experimental Technique by WMS Russell and RL Burch (1959)***

M Balls (2009). Published by The Fund for the Replacement of Animals in Medical Experiments, Russell & Burch House, 96-98 North Sherwood Street, Nottingham NG1 4EE, UK. 131 pp Paperback (ISBN 978-0-9501700-2-2). Price £5.00.

For anyone concerned with the use of animals in scientific research to be ignorant of the Three Rs is to be scientifically as well as ethically illiterate. But how many people have ever actually read the groundbreaking book in which the concepts of Reduction, Refinement and Replacement were first systematically set out? *The Principles of Humane Experimental Technique* by William Russell and Rex Burch was originally published in 1959, but as Michael Balls tells us in his introduction to this abridged edition, even he, although deeply committed to replacement for a decade and a half, did not discover the book until the late 1980s, and even then he did not read his own copy until several years later. Part of the reason for this was that *The Principles of Humane Experimental Technique* is in some technical and stylistic respects not an easy read: Michael Balls remarks that when he did try, there were some “passages which I found very difficult to follow, and which still confound me, despite many attempts at working out what WMSR and RLB intended their message to be”. But no doubt much the same could be said of Newton, Einstein, Aristotle or Wittgenstein, and in the field of humane experimental technique, the innovative and systematic work of Russell and Burch is of the greatest conceptual and scientific significance. The importance of their emphasis, towards the end of the book, on “the necessity for research on research” is only now coming to be generally appreciated in relation to the use of animals in scientific research, and as the scientific study of alternatives grows, the status of Russell and Burch as founders of this new branch of science is likely to be increasingly appreciated.

It is particularly helpful therefore to now have available the present, abridged, annotated and updated version, edited by Michael Balls, who (as former first head of the European Centre of the Validation of Alternative Methods and as long-time editor of FRAME's journal, *Alternative to Laboratory Animals*) is especially well qualified for the task and has carried it through highly successfully. It is now possible to understand not only the clarity with which Russell and Burch defined and illustrated each of their three principles and their interrelations, but also the richness of the authors' philosophical as well as scientific exploration of a range of other relevant concepts, such as those of pain and distress, ‘direct and contingent inhumanity’ and ‘fidelity’ and ‘discrimination’ in relation to models; concepts which are repeatedly and rigorously

tested against biological and experimental actualities. Not even sociology escaped the attention of Russell and Burch: a concluding and perhaps prophetic chapter on ‘The factors governing progress’ explores authoritarian and revolutionary personality types among scientists and also the role of the three Rs in improving experimental efficiency and reducing financial cost. But, as the title of the abridged version makes clear, of equal importance to the authors was their ‘Humanity criterion’:

“If we are to use a criterion for choosing experiments, that of humanity is the best we could possibly invent.

The greatest scientific experiments have always been the most humane and attractive, conveying that sense of beauty and elegance which is the essence of science at its most successful”

Michael Balls is to be congratulated on making the seminal work of these two humane and learned scientists available to the wider readership it undoubtedly deserves. He has skilfully abridged some of the now less-relevant passages of the original and explained why and how others have been overtaken by later developments. He has also provided explanatory glosses to some of the literary or idiomatic phraseology deriving in some cases from Russell's classical as well as scientific education. This has been done, Michael Balls writes, in order to help make this version “more readily available to readers whose first language is not English”. For that thoroughly commendable reason, the present reviewer, who is a Scot, is even prepared to forgive the reduction of Lord Kelvin's splendid remark, “If ye canna mak' a model, ye dinna understand' it”. to the more prosaic “If you can't make a model of it, you don't understand it”.

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### ***The Ethology of Domestic Animals: an Introductory Text, Second Edition***

Edited by P Jensen (2009). Published by CABI, Wallingford, Oxfordshire OX10 8DE, UK. 246 pp Paperback (ISBN 978-1-84593-536-8). Price £29.95, US\$59.95, €49.95.

At a time when most of us were either in nappies or thinking that animal welfare and the environment were of rather fringe interest to serious animal scientists, Ingvar Ekesbo was driving forward enquiry, research and enthusiasm in these areas. He continues to do so. He is enthusiastic, generous with his time and was instrumental and active in reaching through the iron curtain to engage and encourage animal welfare and behaviour scientists in the, now former, Soviet Union. He is regarded with tremendous respect and affection, and indeed has been awarded an honorary Doctorate from my own institution. It is fitting and pleasing that this book, as was its first edition, has been dedicated to him, especially given the genesis of this book in northern Europe. His influence is, as the editor remarks, difficult to overstate.