

Book Review

John Parascandola (2024). *A history of the development of alternatives to animals in research and testing*. West Lafayette: Purdue University Press, 176 pp. USD \$39.99, ISBN 978-1-61249-962-8 (hardback), ISBN 978-1-61249-963-5 (paperback), ISBN 978-1-61249-964-2 (epub), ISBN 978-1-61249-965-9 (epdf).

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The idea that animal experiments should be *replaced* or *improved*, rather than merely *regulated* or totally *banned*, rose to popularity only relatively recently, in the latter half of the 20th century. Historian John Parascandola provides a concise, careful, and compelling account of this remarkable development. It is highly instructive reading for anyone interested in the politics of animal experimentation.

Parascandola proceeds in roughly chronological order and focuses on the UK and the USA. He begins in early 19th century Britain, where special legislation for animal experimentation was first proposed and later introduced as part of the *Cruelty to Animals Act 1876*. Some fifteen years later, the first organisations devoted to “painless research” (p. 6) emerged. This, however, initially did not mean directly replacing animal experiments with other methods, but asking different questions in the first place. The main ‘alternative’ was studying nature by observation instead of experimentation, though it could also mean studying it experimentally *in vitro* (p. 8).

It was not until the explosion of animal experimentation during the surge of biomedical research after World War II that the idea of alternative methods gained significant ground. Parascandola recounts the story of British military man Charles Westley Hume, who founded the University of London Animal Welfare Society (ULAWS), later renamed Universities Federation for Animal Welfare (UFAW), which in 1947 published its first ‘Handbook’ on laboratory animal welfare (p. 28). Hume initiated the project of writing another book on “the ways in which experimental methods could be rendered increasingly humane” (p. 30).

A noteworthy fact that is not emphasised by Parascandola is that UFAW also pursued the idea of *refinement* alternatives in areas other than animal experimentation — including in rabbit trapping, animal slaughtering, and even in whaling, where for a while it promoted the use of electric rather than explosive harpoons.¹ The strategy was essentially to offer animal users less harmful means without ever questioning their ends, in the hope of soliciting their voluntary cooperation.² The limitation of this strategy of voluntary cooperation is that, while one can *offer* humane solutions, one cannot *force* anyone to use them. The electric harpoon never took off because whalers resisted and ignored it,¹ presumably because it was inconvenient to change the existing systems.

Parascandola gives a detailed account of how the two authors of the eventual book, William M.S. Russell and Rex L. Burch, were recruited and how their work was structured. Russell was the principal writer and Burch the principal interviewer — the book was to rely heavily on the insights and opinions of animal researchers across the UK. A particularly intriguing aspect of this chapter is Parascandola’s discussion of hand-corrected letters from the Russell Archive at the University of Nottingham. Evidently, Russell fine-tuned Burch’s wordings and gave him detailed instructions on how to behave during the interviews, taking utmost care not to lose the favour of animal researchers (p. 34). Russell’s own contribution was to conduct a literature review and to present his and

Burch's findings in book form. His main innovation was grouping the various existing alternatives under the framing of the 'Three Rs' of *replacement*, *reduction*, and *refinement*. His writing style, however, was heavily criticised, both by Hume and the prospective publisher, Methuen, as being "carelessly and obscurely written", "high-falutin'" and "really off-putting" (p. 41). Extensive revisions were requested before publication.

Two chapters recount how little uptake the Three Rs framework had in the 1960s and 1970s. Even after all the revisions, reviewers still found the book to be excessively obscure and abstract (pp. 54–55). Some claimed that the book's insights were already well-known among leading researchers, which Parascandola considers "clearly an overstatement" (p. 55). In any case, the book was rarely mentioned by researchers or politicians in the first two decades after its publication. Even those focusing on the development of *replacement* alternatives, most importantly the Fund for the Replacement of Animals in Medical Experiments (FRAME), made little reference to Russell and Burch's book (p. 77).

In a section titled '*Why Did the Three Rs Meet with So Little Initial Success?*', Parascandola argues that the reason was not just Russell's flamboyant writing style, but more importantly the entrenched nature of the animal research debate at the time and the lack of available alternatives (pp. 69–71). But this explanation, which puts all the blame on animal researchers and none on Russell and Burch, seems awfully convenient. If it were true, one would expect reactions to the book to have been heated, not lukewarm. Indeed, as Parascandola notes, some of the friendliest reactions came from staunch defenders of animal experimentation (pp. 56, 91). Perhaps the book was largely ignored, not because it was too uncomfortable for animal researchers, but because it was too comfortable. It merely presented a buffet of options to make their research more humane without compromising their scientific goals. But if switching to another method is inconvenient for any reason, a mere voluntary offer exerts no pressure to make the change. Thus, ultimately, the Three Rs may have failed to garner much interest for similar reasons to those proposed above for the electric harpoon.

In the late 1970s and early 1980s, animal experimentation came under increased scrutiny due to pressure from a rising animal rights movement, embodied by activists like Henry Spira (pp. 96–101). This pressure was increasingly funneled into the formation of institutions to develop and promote alternatives, such as the Center for Alternatives to Animal Testing (CAAT) at Johns Hopkins University (pp. 101–108) and the FRAME Toxicity Committee (pp. 109–114). Parascandola describes how these institutions were created under pressure from animal rights groups and in the face of fierce resistance from the scientific community. This is a general dialectical pattern which he emphasises early on: "[...] the movement for alternatives was consistently advanced by pressure from animal protectionists on scientists" (p. 3).

In an epilogue, Parascandola surveys developments since 1990, including efforts by American government agencies to reduce their reliance on animal testing (p. 131). However, some of these efforts have however already been scrapped in the meantime.³ Parascandola also highlights the formation of the European Center for the Validation of Alternative Methods (ECVAM) and similar institutions. He also engages briefly with prominent literature on the Three Rs, including calls to discard, amend, or expand the framework (pp. 133–135). While there is little new in this last chapter, it helpfully rounds off the book's discussions. An unfortunate omission are the recent calls for the creation of transition strategies — away from animal experimentation and toward alternatives — by the European Parliament, two European Citizens' Initiatives, and petitions to the British and Swiss governments.⁴ This could have been an interesting example of how the promotion of alternatives can go beyond the Three Rs, for example, by redirecting science funding — a step that Russell and Burch never seem to have considered.

Overall, Parascandola succeeds in presenting the history of alternatives in the latter half of the 20th century in an accessible and thought-provoking way, expertly balancing fine details and broad strokes. The book's main limitation is that it does not seriously question the helpfulness of the Three Rs framework and the guiding idea of an 'alternative'. It does not ponder whether it might be better to go back to the 19th century roots of the alternatives movement and try to encourage researchers to ask different questions in the first place, not just to employ different methods. But the book puts its readers in an excellent position to start asking these questions themselves.

References

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Competing interests

The author declares none.