

© 2022 Universities Federation for Animal Welfare
The Old School, Brewhouse Hill, Wheathampstead,
Hertfordshire AL4 8AN, UK
www.ufaw.org.uk

Animal Welfare 2022, 31: 495-503
ISSN 0962-7286
doi: 10.7120/09627286.31.4.002

The 3Rs principles and genetic pain disenchantment

S Camenzind^{*†} and M Egge[‡]

[†] Messerli Research Institute, Unit of Ethics and Human-Animal-Studies, University of Veterinary Medicine, Veterinärplatz 1, A-1210 Vienna, Austria; ORCID iD: <https://orcid.org/0000-0002-2227-2061>

[‡] Philosophisches Seminar, Universität Basel, Switzerland; ORCID-iD: <https://orcid.org/0000-0001-8019-309X>

* Contact for correspondence: samuel.camenzind@vetmeduni.ac.at

Abstract

William Russell and Rex Burch's 3Rs principles were developed 1959 before animal ethics emerged as a scientific discipline in the 1970s and before many ground-breaking developments in modern biotechnology, such as genetic engineering. From this starting point we sought to analyse the normative foundations of the 3Rs principles in contemporary terms and concepts of animal ethics. After establishing the normative groundwork of the 3Rs, we will look at their practical implications within the context of present-day biotechnology. To this end, we shall investigate whether the genetic disenchantment of research animals to limit their ability to feel pain (GPD) complies with the original 3Rs principles. We use GPD as a practical example, since it is being discussed today as a promising way of solving one of the key moral issues raised by animal research, notably animal pain and suffering. By discussing GPD in the context of the 3Rs we aim also not only to gain insights into whether GPD is compatible with one or more of the 3Rs, but also to develop a better understanding of the specific normative foundation of the 3Rs principles and the conceptual limitations and practical implications of that foundation. We argue that reducing moral concerns about animal research to those that are intelligible within a sentientist framework (eg harm and suffering), as the 3Rs do, represents an oversimplification of the moral issues involved. We suggest that interference with abilities, instrumentalisation, flourishing, and death are all important aspects of animal ethics requiring consideration.

Keywords: animal ethics, animal research ethics, animal welfare, genetic engineering, genetic pain disenchantment, 3Rs principles