



UNIVERSITAT DE  
BARCELONA

Observatori de  
Bioètica i Dret  
Universitat de Barcelona



# Revista de Bioética y Derecho & Perspectivas Bioéticas

www.bioeticayderecho.ub.edu - ISSN 1886-5887

## ANIMAL BIOETHICS

### Proposal for bioethics education in Animal Ethics

### Propuesta para una educación bioética en ética animal

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## OBSERVATORI DE BIOÈTICA I DRET DE LA UNIVERSITAT DE BARCELONA

*Revista de Bioética y Derecho* was established in 2004 by the Bioethics and Law Observatory (OBD, Spanish Acronym) and with the support of the Master in Bioethics and Law of the University of Barcelona: [www.bioethicsandlaw.es/master](http://www.bioethicsandlaw.es/master). In 2016, the journal of the Bioethics' Program of the Latin American Faculty of Social Sciences (FLACSO, initials in Spanish) called "Perspectivas Bioéticas" decided to merge with *Revista de Bioética y Derecho*.

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## Abstract

This study proposes the continuous bioethics education in university health and biology courses. A field study was conducted with matriculating students at a university in southern Brazil about the ethics and legal questions regarding the use of animals in research and teaching. It was found that almost half of the students were unaware of important animal ethics issues, showing that these themes are merely incipient in the education provided within this particular university. Considering this reality, the inclusion of bioethics only as a discipline and isolated from the formal curriculum has not been effective and that bioethics education, incorporating polemic subjects such as animal ethics, should be included in an all-encompassing and constant approach throughout the training of students in biomedical fields.

**Keywords:** education; bioethics; animal ethics; brazilian legislation.

## Resumen

Este artículo propone la educación en bioética continuada en los cursos universitarios de salud y biología. Se condujo un estudio de campo acerca de las cuestiones éticas y legales relacionadas al uso de animales en investigación y docencia, a estudiantes matriculados en una universidad del sur de Brasil. Se detectó que casi la mitad de dichos estudiantes no tenían nociones de cuestiones importantes de ética animal, mostrando que estas asignaturas se encuentran en un estado incipiente en la educación provista por esta universidad en particular. Considerando esta realidad, la sola inclusión de la bioética como una disciplina aislada del currículum normal no ha sido efectiva, y que la educación en bioética que incorpore aspectos problemáticos como la ética animal, debería ser incluida como parte de un enfoque global y constante a lo largo de la formación de los estudiantes en el campo de la biomedicina.

**Palabras clave:** educación; bioética; ética animal; legislación brasileña.

## 1. Introduction

When a new law becomes official in a country, the norm generally represents a substantial part of the society's desire that the specific topic, which is standardized in a document, be officially controlled. Society comprises different segments that do not assimilate the law in a homogeneous fashion, especially when the law addresses polemic themes, such as the controlled use of non-human animals in education and research.

In 2008, law 11.754/08<sup>1</sup> became official in Brazil. This law guides the use of animals in scientific research and education throughout the national territory. The philosophical debate regarding non-human animals substantially enhanced the reach of this topic in the juridical scope in Brazil, which was reflected, in a modest way, in the creation of this new legislation.

This norm unified some processes in the country, such as the creation of an institutional Ethics in the Use of Animals Commission (CEUA). The CEUA is responsible for overseeing non-human animal handling in the scope of each institution, which is similar to establishments in countries such as Australia, Canada, the United States and some countries of the European Union.<sup>2</sup> It also created the National Council of Animal Control and Experimentation<sup>3</sup> (CONCEA), the normative, controller and appellate body.

This law also advocate the substitution of animals by alternative methods whenever possible. It is important to highlight that, since 1998, Brazil has implemented law 9.605,<sup>4</sup> which criminalizes not only the abuse or cruel mistreatment of animals but also their utilization in science when alternative methods are available. The country also has a center to validate these alternative methods (BraCVAM - Brazilian Center for the Validation of Alternative Methods), which is groundbreaking in Latin America. However, since its formation three years ago, BraCVAM has yet to officially recognized alternatives methods.

This is the Brazilian reality: the judiciary interprets the mistreatment of non-human animals as a crime, recent laws seek to limit the use of animals in the scientific arena, and society has individuals who are supportive of this theme. Nevertheless, this theme has been increasingly presented not as a dialog but as a confrontation between representatives of the sciences and animal rights.

The contemporary debate involving the use of non-human animals, with echoes in the Brazilian landscape, currently assumes that a common ethical principle exists in regard to animals: the idea that it is of insufficient reason to cause suffering (at least unnecessarily) to other live beings with the exclusive objective of satisfying the needs of human beings. The principle of "Speciesism" emphasized by Peter Singer<sup>5</sup>, in which humans tend to defend other humans just by

virtue of being the same species, demands a definition regarding whether the non-human animal has a *moral status* that forces a foundation for the establishment of a divisor line between human beings and other animals.

The Speciesism stance demands substantial reflection, and discussion must occur in a safe and secure way. Where should this space for reflection happen? Where should this type of debate be encouraged? These reflections and debates should occur at educational institutions, particularly universities. These organizations will generate future researchers and lecturers who will act according to the principles they learned throughout their professional training. As a result, the stance of university professors who are training students is of critical importance.

## 2. Field research

The biomedical field is one in which animals are commonly used as a didactic model both by researchers and lecturers in practical classes. Balcombe<sup>6</sup> has questioned the educational activities performed with the students (such as animal vivisection and the demonstration of drug toxicity through intoxication, which cause suffering and death of a healthy animal) and analyzed the real need as well as the irreplaceable consequences of the acquisition of this knowledge. The ethical cost of these types of activities is also emphasized by Orlans<sup>7</sup>. Initially providing the students with options regarding the use of animals or alternative methods can prepare students for deciding the value of life. In doing so, the students would be invited to reflect on the ethical aspects of the utilization of animals and the application of the 3Rs theory from Russel and Burch<sup>8</sup>, resulting from their practical study activities.

Importantly, the theory of the 3R's includes the replacement, reduction and refinement of animal use for education and scientific research. Replacement is defined as "any scientific method employing non-sentient material which may ... replace methods which used conscious living vertebrates;" reduction is defined as the process that includes the selection of the most appropriate strategy when planning and performing all research, and the smallest possible number of animals is used; and refinement is defined as "any decrease in the incidence or severity of inhumane procedures applied to those animals which (...) have to be used."<sup>9</sup>

Howard's position on the 3Rs theory from Russell and Burch is as follows:

*The treatise by Russell and Burch was timely insofar as it was published just before the numbers of animals used for scientific procedures increased dramatically with developments in the pharmaceutical and agrochemical industries and expansion of academic research into the life sciences. By acting as a 'blueprint' for ensuring that*

*ethical issues can be recognized and debated, the 3Rs offer us a valuable 'reality check' and should form the bedrock on which animal experiments are designed and carried out.*<sup>9</sup>

Learning about the real need of scientific research and the concerns with animal well-being should be simulated at educational institutions. The refusal to do so otherwise by unnecessary, futile or counterproductive research should be the mandatory attitude of students' supervisors in scientific research. It is education's charter to guide students to position themselves in an area that trains new researchers and lecturers to consciously discuss and propose a respect for the morally accepted limits of animal utilization in scientific fields.

Would our formal education system support the students and these moments of reflection? How would the topic "utilization of animals in research and lecturing" be treated in the training of students? Would the academics from the health and biology fields incorporate new moral values of respect toward the non-human animal as established by the current law in Brazil?

With the purpose of answering these questions, a brief study was conducted with matriculating students in these specific areas at a private university in the south of Brazil. The findings will be made available to the university to enhance the existing bioethics teachings in the curriculum of health and biology. It is important to highlight that this university's curriculum already offered a formal module on bioethics and was already differentiated in the country due to its commitment to answering ethical questions, specifically with the approach to animal ethics, even before its legislative establishment. This is supported by the more than seven-year presence of an ethical commission on the use of animals, in addition to the availability of periodic courses in bioethics, which are informal and open to the general public.

Because of this institutional action and from the formal approach in the curriculum, it was expected that the current students would have incorporated the knowledge of national laws and themes related to animal ethics during their training.

Students of Medicine, Odontology, Pharmacy, Nursing, Nutrition, Physical Education, Physiotherapy and Biology were invited to participate in this study. The students who accepted were given a questionnaire to identify the knowledge regarding the ethical and legal aspects of animals that they would carry with them into their professional life.

For the application of this data collection, the research protocol was previously submitted to and approved by an institutional ethical committee (nº 18294213.4.0000.5336). This study was carried out in the classrooms, respecting the autonomy of the student taking part in the study. In total, 275 students participated in the study; however, not all students wanted to answer all the questions.

Variable	Opinion	
	Yes N(%)	No N(%)
<b>Animal Ethics in teaching and research</b>		
Do you have any knowledge regarding the legal demands implied in the use of animals in practical classes and research? (Arouca's law [Law nº 11.794/2008])? (N= 275)	91 (33.1)	184 (66.9)
Are you aware that, according to Arouca's Law (Law nº 11.794/2008), whenever possible, practical classes should be filmed, photographed or recorded for future practices to avoid the unnecessary repetition of the didactic process with animals? (N= 274)	143 (52.2)	131 (47.8)
Do you know that it is a crime, assured by the Environmental Crimes' Law (Law 9.605/1998) and with detention ranging from 3 months to 1 year plus a fine, to perform a painful or cruel experiment with live animals, even for didactic purposes, when alternative methods are available? (N= 275)	127 (46.2)	148 (53.8)
Do you know what the Ethics in the Use of Animals Commission (CEUA) is? (N= 271)	139 (51.3)	132 (48.7)
Are you aware that it is legally mandatory to acquire previous authorization from a CEUA for ALL activities inside a university that involve animals? (N= 274)	157 (57.3)	117 (42.7)
Are you aware of the existence of the National Council for Animal Experimentation's Control (CONCEA)? (N= 266)	114 (42.9)	152 (57.1)
Have these questions been addressed in modules during your undergraduate degree? (N= 274)	127 (46.4)	147 (53.6)

Table 1: Acquired knowledge about animal ethics of matriculating students from Biological and Health Sciences.

### 3. Conclusion

According to the answers given by the students of this university in south Brazil, it can be observed that almost half of the matriculating undergraduate students will face the job market with an incipient education in animal ethics, despite the existence of a current law in the country. As mentioned earlier, these students will graduate from an institution that always has been concerned with a bioethics education, which includes animal ethics.

This study, which took place in an institution that generally values bioethics education (particularly in animal ethics), indicates that the inclusion of bioethics only as a discipline that is isolated from the formal curriculum has not been effective.

Considering this reality, it is clear that bioethics education, inclusive of polemic subjects, should be included in an all-encompassing and constant manner in the training of students in

biomedical fields, encouraging reflection and discussion of new values that will be incorporated into the education of future professionals.

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Received for publication: 23 February 2015

Accepted for publication: 3 November 2015