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Lobbying Against Compassion: Speciesist Discourse in the Vivisection Industrial Complex

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Abstract

The entire span of animal research from captivity to death causes immense suffering for hundreds of millions of nonhuman animals every year. Their suffering also disturbs the public, which is increasingly aware—due to animal advocacy, scientists' testaments, and growing direct evidence—that animals' use in biomedical research is more a matter of tradition than any proven superiority of vivisection over other modes of experimentation. Yet in response, the vivisection industrial complex lobbies against animal welfare regulation and animal rights activism. This article discusses how the political economy of the vivisection industry supports the speciesist business of animal testing by mimicking the language of animal welfare to increasingly obstruct the public's compassion.

Keywords

animal research, animal testing, animal experimentation, vivisection, speciesism, lobbying, political economy, compassion, ethics

During a 2011 experiment conducted by international researchers, seven healthy cats were anesthetized for tracheal intubation, ligation of the carotid arteries, and decerebration. After the decerebration, that is, the surgical removal of a portion of the cat's brain (in this case the mammillary bodies, a section of the hypothalamus), the cats were considered to have complete lack of sentience and anesthesia was discontinued. Two hours later, experiments were initiated. A middorsal incision exposed the cats' spinal cord, where electrodes were inserted into their paravertebral muscles. Since postmammillary decerebrated cats are unable to stand or step by themselves, their head and upper trunk were secured with an apparatus fixed on their back while a motorized treadmill was located under their hind limbs. Electrical shocks were applied through the electrodes, and the cats' forced locomotor reaction was compared with the locomotor behavior of four noninjured cats also forced to step on a motorized treadmill. The results showed that decerebrated cats are able to step on a moving treadmill belt when their spinal cord is electrically stimulated and backs secured. Because of the deep brain lesion produced on the cats, researchers concluded that spinal circuits might play a relevant role in postural control during stepping (Musienko et al., 2012).

This was not news. Previous studies had already reported that electrical shocks cause decerebrated cats to generate step-like movements. Regardless, the researchers justified conducting this experiment by claiming that here the cats' hindquarters were not immobilized, whereas they were in previous experiments. The researchers also advised further decerebration experiments since the brain can still play a role in balance regulation in decerebrated cats. Therefore, they acknowledged that their findings were not conclusive for understanding the multiple components that contribute to posture and locomotion control (Musienko et al., 2012).

This experiment occurred in the European Union under the world's strictest regulations in animal testing, which demand the application of the 3Rs principle for diminishing animal suffering.[1] For many people, vivisection—meaning live cutting or any other harmful or invasive use of animals with or without anesthetic, including psychological and trauma testing, whether in a laboratory, military, educational, or other environment—is deeply disturbing and invokes compassion that generates increasing opposition to animal testing. In the United Kingdom, for instance, more than one in three people oppose the use of nonhuman animals (nonhumans) in biomedical research because of concern for their welfare, in what is a growing trend (Campbell, 2012), while 21% believe that the government should ban experiments on nonhumans in any type of research and 76% think that more work should be done to find alternatives to using animals in research (Leaman, Latter, & Clemence, 2014).[2] The 1.17 million signatures collected in 2012 by the European Citizens Initiative "Stop Vivisection" to abolish animal research also illustrate this growing opposition. According to a 2013 survey of public opinion, 75% of Americans support "minimiz[ing] and eventually eliminat[ing] all forms of animal cruelty and suffering."[3]

Compassion is not an irrational emotion, it is a prosocial behavior (Kemeny et al., 2012), a response to the suffering of others, and a willingness to alleviate it (Curtin, 2014). As a prosocial mind-set and proactive behavior against suffering, the public's increasing compassion should be seen as progress toward a more ethical society. Therefore, it is a matter of evolution in human ethics and consciousness when citizens oppose the practices of forcibly restraining, isolating, shocking, addicting to drugs, starving, infecting, burning, poisoning, brain damaging, blinding, and genetically manipulating other sentient beings, regardless of any noble goal claimed behind those practices.

This article shows how the vivisection industrial complex (VIC)—defined as businesses that directly or indirectly conduct or support vivisection—opposes this compassionate, and therefore ethical, public outcry by pursuing a two-pronged strategy: It intensifies lobbying against animal welfare regulation and against the abolitionist animal rights movement; and it increasingly adopts a welfare-friendly discourse (in websites, reports, public statements, press releases, etc.), claiming that researchers ethically and physically care about the animals on whom they experiment. Yet the latter strategy does not constitute a

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compassionate attitude toward nonhumans since, as we will see, the discursive shift reinforces the noncompassionate ideology of speciesism—the belief of the supremacy of the human species that allows us to exploit our environment and the planet's nonhuman inhabitants for our sole benefit. In the end, the welfarist discourse is only a façade to continue business as usual (Khazaal & Almiron, 2014).

Theoretical and Methodological Framework

A Nonspeciesist, Nonanthropocentric Approach

Our theoretical framework draws on the wealth of knowledge generated since Darwin by cognitive biologists, ethologists, neuroscientists, psychologists, sociologists, and philosophers on nonhumans' intelligence, emotions, and morality, including their capacity to suffer and the importance of their interests, rights, and moral consideration. From this understanding, the ideology of speciesism—a form of anthropocentrism that denies nonhumans' interests any moral consideration equal to those of humans (Horta, 2010)—is no longer defensible.

In this regard, our approach is nonspeciesist. It owes much to utilitarian and moral rights philosophical approaches (Regan, 1983; Singer, 1975/1990; Spiegel, 1997) that acknowledge that moral consideration is not the sole preserve of the human species, and that it is futile to look for attributes which can be considered morally relevant across species (empathy, intelligence, morality) because such attributes can never be applied as a valid basis for moral consideration without also excluding some humans like infants or disabled adults (the speciesist dilemma from marginal cases). Therefore, what must be deemed relevant when discussing nonhumans is their *ability* to suffer, their *interest* to avoid suffering, their *capacity* to have inner lives, and their *right* to enjoy life.

Additionally, we share with Gruen, Adams, and other researchers of ecofeminism and ecogender, the acknowledgment that the most just approach to the discussion and treatment of nonhuman animals must also include a nonanthropocentric ethics of care based on compassion and applied empathy (Adams & Gruen, 2014; Donovan & Adams, 2007). Further along the vein of ecofeminism, we consider nonhumans through a wide-angle lens, which includes examining how the larger political and social structures of power provide convenient pretext to minimize or suppress inconvenient experiences (as the suffering nonhumans endure when vivisected). As Gruen (2015) reminds us, "context shapes reasons, values, and choices" (p. 28). Consequently, our approach is also consistent with a critical animal studies perspective, which addresses the suffering we inflict on nonhumans by analyzing the context of historical and social structural forces, recognizing the role of patriarchal and financial capitalism in promoting global systems of oppression (Best, 2009; Nocella, Sorenson, Socha, & Matsuoka, 2014).

Object of Study, Objectives, Methodology

The above framework is particularly useful to address our object of study—VIC's arguments and lobbying strategies. Our broad goals are to unveil (a) what kinds of power structures, and through what mechanism, feed and perpetuate speciesism and anthropocentrism and (b) how that leads to ignoring nonhuman suffering, that is, how the systemic focus on human health and safety suppresses compassion for nonhumans used in research. To this end, industries and interest groups involved in the business of animal testing are analyzed from a less studied political economy perspective and a sample of their discursive output is qualitatively studied. As background and primary data are not equally available across the globe, we focus on examples from the European Union and the United States (with some data on Australia), and provide comparative data from the most reliable sources available (government statistics, industries' reports, corporate annual accounts, corporate websites).

First, we identified VIC's power structure: who is involved, that is, the network of main industries by revenue, their leading companies, major lobbies, and the think tanks connected to them; what type of activities each business or organization conducts; and what lobbying strategies it follows. Second, we analyzed a sample of texts created by the industry and its interest groups to identify the mental frames, that is, the ideology behind VIC.

To analyze the ideology within which vivisection interest groups operate, we used a critical discourse analysis (CDA) drawing on Meyer and Wodak (2001), Van Dijk (2008), Fairclough (2010), and Giró, Farrera, and Carrera (2014), adapted to examining the discursive output of interest groups. CDA stands unequivocally in favor of discriminated groups and investigates if and how speech legitimizes discrimination. To obtain the mental frames (*macropropositions*) that form what Giró et al. (2014) call the *ideological matrix* behind a text, we applied lexical and semantic analysis, and analysis of suppressions and presuppositions. These CDA tools helped us identify explicit and implicit values and opinions in the texts and, most important, their "common sense" assumptions. By identifying the texts' ideological matrix we answer our main research question: What are the mental frames disseminated by the vivisection industry?

A Glance at the Nature of Animal Testing

The disturbing account at the beginning of this article describes only one of many experiments conducted on felines in laboratories across the planet. A wide number of scientists do various neurological research on domestic cats, producing lesions in the cats' brains with or without anesthesia.[4] Decerebrated cats survive none of these experiments. More than 3,700 cats were used in similar and other types of experiments in 2011 in the EU alone. The same year, the U.S. experimented on 21,352 cats, 8,977 of whom were used in experiments involving pain, according to the researchers (USDA, 2015). Yet the EU cats are just a small portion of the 11.5 million nonhuman animals used in EU experiments that year (European Commission, 2013b). The total number of nonhumans used in research in the U.S. is unknown since 96% of animals used in research (rats, mice, birds, fishes) are excluded from the 2002 Animal Welfare Act, and therefore unreported (The Hastings Center, 2015). Provivisection sources estimated that the figure for animals used in research in the U.S. was at least 26 million in 2010 (The Hastings Center, 2015; Speaking of Research, 2015). Globally, more than 126 million nonhuman animals are used in research

worldwide according to estimations from experts (Knight, 2011). Mice, rats, and other rodents are used the most (77%, European Commission, 2013b), yet many other species besides cats—as dogs, horses, birds, pigs, fishes, sheeps, goats, reptiles, and primates—are also used in experiments devised by scientists and approved by public and private scientific committees under strict rules of confidentiality.[5]

Nonhumans are used in several types of research. Among the most common are basic research (genetics, developmental biology, behavioral studies), applied research (biomedical research, xenotransplantation),[6] drug and toxicology testing, education research (mainly at universities), breeding research (genetic selection), and defense research (by governments). Experiments on nonhumans can last from hours to months and it would be impossible here to provide a close picture of what all those practices mean for them. The list goes from animals forced to inhale smoke or ingest chemicals or drugs, to those bread to be prone to mental illness, infected with diseases (or genetically disease-induced), forced into unnatural sexual behavior, shot in military trauma training exercises, having their brains damaged, being raised in complete darkness, or terrorized to test anxiety and depression, among many other possibilities. Usually details of these practices are kept secret from the increasingly sensitive public opinion; yet occasionally information concerning research on animals of whom humans are fonder, like cats and dogs, reaches the media.

Public opinion is inconsistent in its willingness to accept different degrees of invasiveness or which species should be vivisected, so much that certain experiments and species generate more concern than others. For instance, there is most concern for primates due to the biological closeness we share. The public usually condones the most biomedical research because of its alleged benefits for human health; yet the same public is largely unfamiliar with the fact that only an insignificant portion of biomedical experiments on animals constitutes applied research with direct results for human diseases. According to the EU, a mere 19% of its animal testing in 2011 was devoted to applied research (which does not mean that all tests were successful and produced results), whereas the majority of experiments (46%) are conducted for fundamental biology studies, with indirect application or none at all (European Commission, 2013b).

No one knows where our science and health systems would be today had we invested the amount of resources devoted to animal testing in alternatives instead. The call for alternatives is by no means new and it currently constitutes a blossoming field, thanks to funders and scientists involved in new drug designs and experimental research methods that promote humane alternatives.[7] Yet the path ahead is slow. The current EU legislation requires national governments to contribute financially to the development and validation of nonanimal testing methods (EU Directive 2010/63/EU). However, a survey conducted by the European Coalition to End Animal Experiments found out that EU members had invested only €18.7 million in 2013 from their Research and Development (R&D) expenditure in alternatives to animal research. The largest national R&D science expenditure on alternatives to animal testing in 2011 took place in the UK: over €11 million, or 0.036% of the UK national R&D expenditure (Taylor, 2014).

For some, the measuring stick to assess the value of animal research is not ethics but productivity, which requires that its contribution to science be validated. Advocates of animal research have attempted to validate claims that every major medical advance is attributable to experiments on nonhumans, only to find little evidence to support it (Matthews, 2008; Pound, Ebrahim, Sandercock, Bracken, & Roberts, 2004), and even enough to refute it (Knight, 2011). After making probably the most consistent effort to validate it, Knight concluded that "evidence indicates that actual human benefit is rarely—if ever—sufficient to justify" the costs of animal research even when marginalizing nonhumans' interests makes such research cheaper: "Animal experimentation is unreliably—and frequently poorly—predictive of human outcomes, and consumes enormous financial resource and human expertise, which are then unavailable to other research fields" (Knight, 2011, p. 185). For instance, comparative testing of carcinogens in humans takes upward of 2 years to produce results of demonstrably poor specificity, costs hundreds of millions of dollars, and consumes millions of nonhuman lives while a traditional rodent bioassay needs only 2½ weeks and US$1 million with alternative methods (Knight, 2011). More recently, *BMJ* (formerly *British Medical Journal*) addressed the poor quality of most preclinical animal research concluding that this is the fundamental cause of the low validity levels of preclinical research (Godlee, 2014).

Findings that animal research is not the cause of scientific progress are consistent with theories linking improvements in human health to other causes. Several prominent historians of different areas of health argue that improved nutrition, sanitation, and other behavioral and environmental factors are responsible for the decline in human deaths and increased life expectancy rather than medicine (and thus, animal research); for instance, Economics Nobel Prize winner Richard W. Fogel (2004, 2012) made a very strong case for the role of nutrition.

The Vivisection Industry: Business and Interests

The term *vivisection industrial complex* designates different types of organizations and businesses whose source of funding depends on or is related to using nonhumans for research. These are mainly (a) public or private companies directly conducting or commissioning animal testing (mainly pharmaceutical, but also chemical, cosmetic, and tobacco companies, as well as the government); (b) academic institutions (universities, research labs, medical schools); and (c) suppliers of animals for research and of related services besides animal testing such as providing organs, instruments, and training.

Governments are major players in VIC. Besides their direct involvement in animal testing through research funding, public universities, defense, and so on, governments also impose regulations to test products and substances for human consumption like drugs, chemicals, and cosmetics on nonhumans before marketing. Regulations can be contradictory and vary among countries, and in the U.S. among agencies like the Environmental Protection Agency, the Food and Drug Administration, the Department of Agriculture, and the Department of Transportation. For instance, although EU regulations require promoting the 3Rs in animal research, including a ban on animal testing for cosmetics, they also mandate assessing the toxicity of thousands of chemicals produced in or imported to the EU in large quantities (Directive 2006/121/EC for Registration, Evaluation, Authorization, and Restriction of Chemicals [REACH]). The animal-testing requirements of REACH, as well as of similar U.S.

programs, are unprecedented in terms of economic cost and high numbers of nonhumans required. Although a lot of biomedical research conducted on animals is not mandated by law, governments remain major players in VIC.

A Profitable Business

The use of nonhuman animals in applied research on human health and safety, headed by pharmaceutical companies, is currently a major business as well as a key segment of several lucrative industries. In 2014, the top 25 companies in the growing pharmaceutical market accounted for US$554 billion in revenue (PMLiVE, 2015) as global spending on medication reached US$1 trillion in 2013 (Sifferlin, 2013). Novartis, Pfizer, and Roche rank highest by revenue but a number of other companies make well over US$10 million in annual sales (see Table 2).

By contrast, universities, medical schools, research labs, and some public repositories, which focus on theoretical research and education, are the main recipients of public R&D funds worldwide. In 2012, the U.S. public budget for R&D was US$139 billion (Congressional Research Service, 2013), while in Europe, the total budget of the Horizon 2020 program for research and innovation (2014-2020) was US$79 billion (€76.1 billion; European Commission, 2013a). Although data about the exact amount invested in research that uses nonhumans is unavailable, a large portion of these budgets usually goes to basic and applied hard sciences where animal testing is customary. In addition, little information is provided concerning how these vast amounts are used, their harmful effects, and actual success.

Public and private research institutions are the main customers of companies that provide researchers with animals and animal-related services. Such companies supply animals bred or genetically manipulated for research, or free-living primates, and other nonhumans captured from their natural environments; they also supply biological *products* such as blood, tissues, or organs obtained from animals. In addition, these companies provide research accessories and tools, in vivo tests on animals, training for animal laboratory science, and numerous other clinical research services. In June 2015, the Lab Animal Buyer's guide, maintained by the peer-reviewed journal *Lab Animal*, listed more than 80 different companies selling animals and related services worldwide. Ten of them exceeded US$10 million in revenue and over 22— US$1 million (Table 1).[8] Far ahead of the rest, Covance is the largest company in the field, with US$2.5 billion revenue from drug development and animal testing services in 2013 and a specific division, Covance Research Products (US$2.5 million), devoted to breeding dogs, rabbits, guinea pigs, and nonhuman primates, as well as importing captured free-living primates. Covance's main business as a contract research corporation is using nonhumans for toxicological testing of the environmental, food, and nutritional-supplement industries.

Table 1. Providers of Animals for Research and of Animal Testing Services in North America, Europe, and Australia (2015).

Company	Location	Estimated revenue, millions of US$	Year founded
Covance, Inc.[a]	USA	2595.0	1952
Taconic Biosciences, Inc.	USA	136.0	1952
The Jackson Laboratory	USA	134.4	1929
The Bionetics Corporation	USA	50.2	1996
SNBL USA Scientific Resource Center	USA	45.2	1990
Marshall Farms Group Ltd.	USA	33.0	1939
Huntingdon Life Sciences, Inc.[b]	USA	31.0	1951
JANVIER Labs	France	19.8	1960
Lampire Biological Laboratories	USA	16.0	1977
genOway	France	11.1	1999
ProSci, Inc.	USA	9.5	1995
Animal Resources Centre	Australia	6.4	1981
Primate Products, Inc.	USA	6.2	1982
Hilltop Lab Animals, Inc.	USA	4.7	1999
Alpha Genesis, Inc.	USA	4.0	2003
SAGE Labs	USA	3.3	2013
Ingenious Targeting Laboratory	USA	3.2	1998
Covance Research Products, Inc.[c]	USA	2.7	1993
Ridglan Farms, Inc.	USA	2.6	1966
Exemplar Genetics, LLC.	USA	2.0	2007
Isoquimen S.L.	Spain	1.8	1994
Charles River Laboratories International, Inc.	USA	1.3	1947

[a]Acquired by Labcorp in 2014. Labcorp's revenues for 2013 accounted for US$5.8 billion. [b]Acquired by Harlan Laboratories in 2014. [c]Covance's division.
Source. Two databases were consulted (Buzzfile.com and FindTheCompany.com) in June 2015. They provided the latest data available.

According to Knight (2011), the use of nonhumans in labs has increased in a number of countries due mainly to two factors: the increased production and use of genetically modified animals per their widespread availability, low costs, and short life span, and the initiation of large-scale chemical testing programs like REACH in the EU, expected to require unprecedented number of animals. Indeed, the number of experiments performed on nonhumans between 1885 and 1969 skyrocketed from 797 to more than 5.4 million in the UK alone (Ryder, 1971). The 15 member states of the 1995 enlarged EU increased their use of nonhumans in experiments by 22% between 1999 and 2011 (European Commission, 2015). After EU Directive 2010/63/EU was ratified in 2010, the number of invasive studies using macaques surged. As a result, in 2013, up to 4,000 macaques were exported to the top four European countries that conduct animal research (the UK, Germany, France, and Spain; Statistics Mauritius, 2014). According to the Mauritius government, the number of primates exported for research increases annually, so much that it jumped by 49% between 2013 and 2014 when 8,992 primates were exported to the EU. In comparison, the use of primates in the U.S. for 2014 was estimated by the USDA (2015) at a whopping 57,735.

Lobbying for the Vivisection Industry

Interest groups employ three main strategies to influence policy makers, media, and public opinion: contributions to political campaigns, lobbying, and disseminating information via think tanks or advocacy platforms.

The pharmaceutical industry is consistently among the biggest political spenders in the U.S., traditionally in support of Republican candidates. According to OpenSecrets.org—the award-winning website of the Center for Responsive Politics tracking money in U.S. politics, the pharmaceutical industry donated US$32 million to political parties just in 2014.[9]

Three types of lobby groups represent VIC's interests: in-house lobbyists employed by companies, trade associations that represent their members, and third-party lobbyists for hire engaged by either companies or trade associations. Although this makes it difficult to assess how much money is spent influencing governments and how active the VIC lobby is, some figures are available. In the U.S., where lobbying has been in hyperdrive since the 1980s and lawmakers often become lobbyists when they are not reelected, the pharmaceutical industry is one of the biggest spenders that lobbies Congress. In 2014 alone, the industry spent US$231 million—a figure that reaches US$2.4 billion for the period from 2004 to 2014 (OpenSecrets.org, 2015). In the EU, where lobbying is less transparent, spending by the pharmaceutical industry was estimated at €91 million in 2011 (Corporate Europe Observatory, 2012). Typically, reported spending in the U.S. is more than twice that in Europe, what may be a sign of underreporting in the EU Transparency Register.[10] For instance, Pharmaceutical Research and Manufacturers of America, the largest trade group representing pharmaceutical research and biopharmaceutical companies in the U.S., reported US$16.6 million in lobby spending for 2014, while European Federation of Pharmaceutical Industries and Associations (EFPIA), its EU counterpart, reported only US$5.5 million. However, the aggregate of both figures provides an insight to the lobbying muscle of this industry in the world's two largest economic regions (Table 2).

Currently, we can take a closer look at who lobbies on animal issues only in the U.S., with OpenSecrets.org (2015) providing separate figures for reported spending on animal issues for each lobbying group. In 2014, for instance, the 132 U.S. organizations that lobbied on animal issues came mainly from the agricultural, biomedical, chemical, veterinary and pet, and entertainment industries. Only three of them did not lobby for animal research—Animal Defenders International, the Humane Society of the U.S., and Physicians Committee for Responsible Medicine. All other organizations lobbied for some use of nonhumans by humans. Lobbies devoted to animal research from 2004 to 2014 include the National Association for Biomedical Research (NABR; which spent US$830,000), Covance (US$660,000), and Charlie River Laboratories International (US$260,000, data only from 2006 onward).

Table 2. Top 12 Lobby Spenders in the Pharma/Health Industry (2014).

Company	Location	Revenue, billions of US$	Reported spending, EU Transparency Register[a], millions of US$	Reported spending, U.S. OpenSecrets.org, millions of US$
Amgen, Inc.	USA	20.1	1.4 to 1.6	8.6
Pfizer, Inc.	USA	49.6	1.1 to 1.4	9.5
Eli Lilly and Company	USA	19.6	0.8 to 0.9	8.2
Johnson & Johnson, Inc.	USA	74.3	0.5 to 0.7	7.7
Novartis AG	Switzerland	58.0	1.9 to 2.1	6.5
Bayer AG	Germany	43.8	2.7	6.2
Sanofi SA	France	36.8	0.6 to 0.8	6.0
Medtronic PLC	Ireland	17.0	0.3 to 0.4	5.3
Roche Holdings AG	Switzerland	49.6	1.1 to 1.4	5.0
AbbVie, Inc.	USA	20.0	0.3 to 0.4	4.9
Merck & Company	USA	42.2	0.3	4.8
GlaxoSmithKline	USA	35.8	1.9 to 2.2	4.4

[a]In € in the original source.
Source. Transparency Register and OpenSecrets.org for lobby spending, annual accounts for revenue.

VIC's lobbying strategies follow established patterns. One consists of building and maintaining a network of contacts. VIC nurtures traditional links between big business and political elites, visits the offices of new politicians, and invites old and new contacts to discuss soft issues. When a specific legislative opportunity or threat arises, lobbyists use their established networks to push their agenda (Corporate Europe Observatory, 2012). Two jarring instances of VIC's lobbying and networking power are passing the 2006 U.S. Animal Enterprise Terrorism Act (AETA; which replaced the 1992 Animal Enterprise Protection Act) and the EU Directive 2010/63 on the protection of animals used for scientific purposes. In the U.S., the NABR, a corporate front group representing around 300 institutions involved in animal research, was, among others, instrumental in securing AETA's adoption, a law that criminalizes in unprecedented ways nonviolent activism in defense of nonhumans and humans, while protecting the interests of the global animal industrial complex (Del Gandio & Nocella, 2014). NABR employed a number of strategies, ranging from providing talking points, smear campaigns, disinformation, and cherry-picking testimonies in Congress, to rushing the bill through the legislation .

In Europe, the tentative language of the EU Directive, introduced in a 2008 Commission's draft, was strongly criticized by the biomedical research industry because the draft placed tight restrictions on issues like invasive studies using primates ("European Scientists Who Support," 2008). Because of the industry's opposition, the European Parliament approved a 2010 version that diluted legitimate concerns for animals (Abbot, 2010). Members of Parliament criticized the interactions between lobbyists and legislators that took place between the introduction of the 2008 draft and the altered 2010 version as "excessive lobbying" by the drug industry (Harrison, 2009), while the industry downplayed it saying that researchers went "on the offensive" (Mansell, 2009).

Table 3. Top Animal Research Advocacy Platforms in the U.S..

Group	Year	Profile	Founders	Core mission	Sponsored platforms
The National Academy of Sciences (NAS)	1863	Lobby Think tank	Scientists	To further science in the U.S. with the explicit support of animal research.	NAS: nationalacademyofsciences.org ILAR: dels.nas.edu/ilar
American Physiological Society (APS)	1887	Lobby Think tank	Physiologists	To support research, education, and the circulation of information in the physiological sciences with the explicit support of animal research.	APS: the-aps.org/mm/SciencePolicy/AnimalResearch ARC: animalresearchcures.org (2008)
Federation of American Societies for Experimental Biology (FASEB)	1912	Lobby Think tank	Biological and medical research societies	To promote progress and education in biological and biomedical sciences with the explicit support of animal research.	FASEB: faseb.org/Policy-and-Government-Affairs/Science-Policy-Issues/Animals-in-Research-and-Education.aspx
American Association for Laboratory Animal Sciences (AALAS)	1950	Lobby	Animal laboratory industry	To support animal research and to serve as a forum for expertise on the use of laboratory animals.	AALAS: aalas.org Kids4Research: kids4research.org (2013) CARE: care.aalas.org (2013)
The National Association for Medical Research (NABR)	1979	Lobby	Animal laboratory industry	To protect the scientific community's use of animals in biomedical research.	NABR: nabr.org
Foundation for Biomedical Research (FBR)	1981	Lobby Think tank	Animal laboratory industry	To educate the public about the essential role of animal research in medical progress. NABR's think tank.	FBR: fbresearch.org
National Animal Interest Alliance (NAIA)	1991	Lobby	Animal industry complex	To protect the right to use animals in any industry, including medical research.	NAIA: naiaonline.org NAIA Trust: naiatrust.org

Americans for Medical Progress (AMP)	1991	Lobby Think tank	Animal laboratory industry	To educate on and support the use of animals in medicine in order to confront "animal rights extremists."	AMP: amprogress.org Pro-test: pro-test.org.uk (2006) SoR: speakingofresearch.com (2008) Thank-a-mouse: twitter.com/thankamouse (2015) SHARE: sharehappens.org (2011)
States United for Biomedical Research (SUBR)	2002	Lobby Think tank	Animal laboratory industry	To support and promote public understanding of biomedical research using animals.	SUBR: statesforbiomed.org

Table 4. Top Animal Research Advocacy Platforms in the EU.

Group	Year	Profile	Founders	Core mission	Sponsored platforms
Federation of Laboratory Animal Science Associations (FELASA)	1978	Lobby	Animal laboratory EU societies	To represent those interested in the furtherance of all aspects of laboratory animal science.	FELASA: felasa.eu
The European Animal Research Association (EARA)	2006	Lobby Think tank	Animal laboratory industry	To protect the interests of organizations using animals in research in Europe.	EARA: eara.eu
Understanding Animal Research (UAR)	2008	Lobby Think tank	Animal laboratory industry	To promote understanding and acceptance of the use of animals in biomedical research in order to confront "animal rights extremism."	UAR: understandinganimalresearch.org.uk AR: animalresearch.info ARE: animalrightsextremism.info
Animal testing perspectives (ATP)	2011	Lobby	European Federation of Pharmaceutical Industries and Associations (EFPIA)	To promote understanding and acceptance of the use of animals in research by the pharmaceutical industry in Europe.	ATP: animaltestingperspectives.org/

Another VIC strategy consists of promoting lobbyists as experts and creating information platforms or think tanks to generate often self-serving data, then feed it to policy makers and journalists (Tables 3 and 4). This includes indirect or grassroots lobbying that aims to educate public opinion (media and citizens) and subsequently move it closer to that of the industry. In the U.S., this strategy increasingly includes platforms that target students, youngsters, and even little children, promoting a conviction that animal research plays a positive and essential role in the progress of science and the improvement of human health care, as the American Association for Laboratory Animal Sciences or Americans for Medical Progress initiatives show (Table 3).

The comparative analysis of VIC's lobbying strategies in the U.S. and the EU is illuminating because it shows how until recently the U.S. VIC was more developed and aggressive than its less proactive EU counterpart. While AETA, like other U.S. laws that censor information on animal abuse, is legislation pushed by the industry as a reaction to animal rights activism, and thus a regulation explicitly protecting the industry, Directive 2010/63/EU was initially meant not so much to protect EU's industry as to restrict its use of animals out of a degree of compassion for them. Whereas AETA's adoption was celebrated by the U.S. industry, the Directive caused great concern in the European industry and a turning point in its lobbying strategy. As Table 4 shows, the 2008 discussion of the Directive sparked a number of unprecedented lobbying platforms (Understanding Animal Research, Animalresearch.info [ARI], Animalrightsextremism.info [ARE]). They are unprecedented in the sense that for the first time European lobbyists adopted the same criminalizing narrative strategy that the U.S. uses to equate *animal rights* with *terrorism* while suppressing compassion and the ethical dilemma posed by the use of nonhumans in research. Despite being more moderate than the U.S. hard-liner, the Directive nonetheless showed how arduously VIC counterlobbied an initially more concerned public, lawmakers, and a number of scientists. The powerful U.S. template was used to steamroll the more compassionate spirit in Europe and could potentially be used to steamroll animal advocacy worldwide.

How the Industry Frames Animal Research

This section introduces our findings from the CDA conducted on U.S. and EU animal research advocacy think tanks (Tables 3 and 4), and on a key voluntary regulation statement issued by the industry in the UK.

The Discourse of Advocacy Think Tanks

The analysis of the websites of the main U.S. lobbies and think tanks advocating for animal research shows a discourse coalition on the post-1992 criminalization of animal rights. Terms like "extremism," "terrorism," "radicals," and "violence" are consistently attached to "animal rights" in different sections of the websites of the Federation of American Societies for Experimental Biology, the Foundation for Biomedical Research, the NABR, Americans for Medical Progress, the Animal Welfare Council, the National Animal Interest Alliance, the Center for Consumer Freedom, the American Association for Laboratory Animal Sciences, and platforms

like Speaking of Research, among others. The sister organizations Foundation for Biomedical Research and NABR even maintain an "illegal incidents map" section, and refer to scientists and industries that animal rights activists oppose as "victims." In their characterization of "animal rights," anyone who supports abolishing nonhuman oppression is labeled "violent," "terrorist," and "radical," which assumes automatic justification of violence. These findings are consistent with what Del Gandio and Nocella (2014) label "the terrorization of dissent."

In the EU, the terrorization of dissent was absent until 2008, when the debate around Directive 2010/63/EU stirred the industry toward more aggressive lobbying. As this strategy move just started to take traction, there are still some major pharmaceutical advocacy groups that use more moderate language, like EFPIA in its website AnimaltestingPerspectives.org, and the self-regulatory agreement analyzed in the next section. Yet, beyond EFPIA, the newly launched Understanding Animal Research and its sister websites—ARI and ARE—replicate the *extremist* strategy of U.S. lobbyists.

Available in five world languages, ARI repeatedly affirms the industry's message that animal research is essential for all key medical discoveries. The website's articles associate "antivivisection" and "animal rights" with "extremism." A pinned link on all ARI's pages to ARE demonstrates in greater detail this association.

Ironically, ARE, the most aggressive animal research supporter in Europe, fails to focus on animal research and instead attacks animal research detractors, euphemistically describing itself as "a global information service about animal rights extremism." ARE paints people's reasons to support animal rights as irrational compulsion for terrorism and violence, never as rational willpower based on deliberate compassion and moral evolution. Such narrative conceals the fact that the overwhelming majority of animal rights activism is pacifist and morally grounded. Furthermore, what the website labels "criminal" acts—destruction of property or use of firearms—is anecdotal, while personal injuries are absent, which is again consistent with Del Gandio and Nocella (2014).

Both regions, although more so the U.S., share another aggressive strategy based in assertions of *care for animals*. Assertions are not proof. Yet almost any animal research organization, particularly in the EU, recognizes the obligation to adhere to the 3Rs and therefore alleges that care for animals used in experiments is a major objective and that nonhumans benefit from animal research that is always conducted on them against their consent.

The United Kingdom's Concordat on Openness on Animal Research

To identify VIC's mental framework, we have also conducted a CDA on the key U.K. text *Concordat on Openness on Animal Research* (COAR; Understanding Animal Research, 2014). This document was made public in 2014 and by fall of 2015 it was signed by 95 organizations, including the most important biomedical research funders, major pharmaceutical companies, largest research universities, and medical charities. Although the agreement was intended to affect the UK, it was circulated through the international website Understanding Animal Research, as most VIC stakeholders in the UK are international organizations or multinational corporations.

The COAR agreement is the industry's response to the public outcry against animal research. First, in this self-imposed, nonbinding regulation, the industry makes vague

commitments that signatories should follow for more openness and transparency. According to the text, the commitments meet a public demand for more information. This constitutes a fallacy, since the public's increasing demand is for less animal research, alternatives to it, or its abolition, as we discussed earlier.

Second, COAR's call for openness ironically suppresses the reality of animal research. The word "suffering" only appears once in the 2,609-word long text, and other terms with negative connotations appear in only 19 instances (conflict, 1; constraints, 1; distress, 1; opposed, 1; limitations, 1; pain, 1; poor, 1; suffering, 1; uncertain, 1; obligation/s, 4; harm/s, 6), altogether comprising 0.007% of the entire text. On the other hand, more than 300 positive terms describe the industry's actions, virtues, principles, and progress (more than 11% of the text, or 1,571 times more than the language on animal treatment and suffering). Therefore, we can draw the conclusion that the industry's understanding of "openness" is restricted to providing the public with the information the industry considers necessary to acknowledge the *value* of animal research. Hence, COAR conveniently misrepresents the outcry against animal research as a need for a debate "from a position of knowing the facts."

Third, according to the text, the information the public lacks allegedly pertains to a specific *context*: (a) the "progress of science" due to animal research, (b) the industrial leadership or "world-leading research" that animal research promotes, (c) the "care" with which the industry deals with animals used in research, and (d) the assertion that nonhumans benefit from vivisection. The problem this partisan perspective articulates is not animal research per se, but the deficient information the industry releases and its failure to demonstrate the "value" behind its practices.

A long list of exaggerations further supports this conclusion. First, COAR considers the role of animal research in the progress of scientific discovery "vital" and "essential," while dismissing the role of alternative methods without argument ("for the foreseeable future an important part of this research will continue to require the use of animals"). Second, it inflates the support animal research receives ("relatively high level of public acceptance," "many people trust us"), while downplaying its opposition ("some people are opposed"). Third, the statement exaggerates the degree of current openness ("several signatories . . . allow access to their facilities . . . such visits allow people . . . to see for themselves"), alongside assertions that confidentiality and business interests take priority to access to information or facilities. Fourth, it overstates the care nonhumans receive, which suppresses the fact that such care is only minimum (if at all), and that they receive it in Europe because EU law mandates it. Fifth, COAR exaggerates the benefits to nonhumans veterinary research provides—in the EU, animals used exclusively for veterinary medicine accounted only for 2.94% of all animals used in research in 2011 (European Commission, 2013a). Even this small percentage is misleading because beneficiaries from veterinary research are primarily agribusinesses who push for *producing* new *types* of animals that can resist better the conditions of factory farms and are easier to handle.

COAR's ideological matrix recognizes that the industry must be open about animal research's "impact on animal welfare and the ethical considerations involved," but does not address the ethical dilemma since "ethical considerations" are only entertained in balance with human interests, not as a moral dilemma per se: "the harm caused to animals must be justified by the expected outcome of the research." Therefore, the matrix illustrates the following general macroproposition: *when the*

public opinion receives the right information regarding how much animal research contributes to human interests, it will automatically embrace it. The macroproposition perpetuates the speciesist assumption that human health and economic interests take priority. It also perpetuates the assumption that whoever opposes animal research is manipulated by dishonest and ignorant forces ("the public must have accurate and up-to-date information," "people must be able to debate the issues from a position of knowing the facts," "for people to come to their own position they should be provided with clear and *honest* information"; italics added).

Finally, COAR rationalizes and justifies its speciesist ideology as socially imposed since animal research is allegedly conducted on behalf of the public ("the public deserves to know why and how animals are used *on its behalf*"; italics added).

In sum, what is seemingly presented as a commitment to improve practices, and therefore belies the need for change, is in fact a propaganda tool for perpetuating the core ideology that prevents change.

Discussion

With the belief that context shapes values and choices, we introduced here the results of our analysis of VIC's political economy and an overview of its ideological framework. The former shows that VIC is a lucrative network of businesses with powerful stakeholders from the public and private sectors and a vast and proven potential to wield influence over the regulatory and public spheres. The latter shows how the lobbies' narrative reinforces the notion of human supremacy and is instrumental in building a discursive network of support for this notion. We detected a contradictory narrative recognizing the problematic nature of the industry, which forces it to emphasize animal welfare concerns, while dismissing its ethical dilemma and justifying its practices.

To illustrate the link between context and ideology, we invite the reader here to compare the results of our analysis with current political discourse. In June 2015, despite 1.2 million collected signatures, the European Commission rejected the *Stop Vivisection European Citizens' Initiative*, which demanded the abrogation of Directive 2010/63/EU and the adoption of a new legislative framework that phases out animal experiments. The Commission's authorities asserted that phasing out animal testing was their future goal but denied the possibility of a ban at the moment. Their reasons mirror the industry's: Animal welfare is a limited goal that must be balanced against human interests; despite progress in the development of alternative approaches, replacing animal research is currently impossible; and animal research is central to the development of effective and safe medical treatments. To support the last reason, the Commission simply referenced the webpage of the largest VIC lobby and advocacy think tank in Europe, the European Animal Research Association.

Further research is needed; yet a few preliminary issues emerge from our analysis. Most relevant is the two-pronged strategy that VIC pursues, on one hand, stepping up lobbying efforts to protect its interests by blocking animal welfare regulation and vilifying animal rights advocates, while, on the other, adopting an animal welfare narrative to demonstrate that it cares for animals and heeds ethical concerns.

As a powerful economic player, VIC is sure to fiercely oppose any changes in running its business on economic grounds. Furthermore, its links to a sensitive field

such as human health provide a persuasive pretext for animal research, since many people believe that vivisection is morally justified if it benefits human health. To meet the global citizen's aspirations for ethical progress in society, this speciesist view should be transformed into a more compassionate and fair interspeciesist social justice approach, even though it might take a long time.

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Notes

1. The 3Rs principle was first introduced by Russell and Burch in 1959 and promotes methods that Replace (i.e., avoid or replace the use of animals), Reduce (i.e., minimize the number of animals per experiment), and Refine (i.e., minimize suffering and improve animal welfare) (National Center for Replacement Refinement & Reduction of Animals in Research, 2015).
2. We use the term "nonhumans" as shorthand because it showcases the power differential between humans and all other animals, not because we condone reifying the latter.
3. Humane Research Council (www.faunalytics.org)
4. Not using painkillers is very common in animal research, since anesthetic and analgesic use alters normal physiology and thus can distort results. In the British case, for instance, Knight reports that over the past 20 years, procedures not using any kind of anesthetic fluctuated between 59% and 69% of recorded totals (Knight, 2011).
5. We use the plural form "fishes" and "sheeps" to reflect that each sheep or fish is a distinct individual and to counter their speciesist reification as an indistinguishable mass when the singular carries a plural connotation.
6. According to the World Health Organization, xenotransplantation refers to the transplantation of cells, tissues, or organs among different species (http://www.who.int/transplantation/xeno/en/). This research is done as an alternative to procuring material of human origin that could bridge the shortfall in human material for transplantation.
7. Some of the proponents and sponsors of alternatives to animal research are rather old: For instance, the New England Anti-Vivisection Society was founded in 1895 (http://www.neavs.org); the Dr. Hadwen Trust in 1971 (http://www.drhadwentrust.org); the Alternative Research & Development Foundation in 1993 (http://www.ardf-online.org); the Lush Prizes in 2011 (http://www.lushprize.org).
8. Data were unavailable for companies in Mauritius, China, Taiwan, and a few firms in the U.S. (like Worldwide Primates, Inc., one of the largest primates importers in the U.S.), and Europe (like Scanbur AB).
9. No such aggregate figures are available for the EU.
10. In the U.S., information on lobbying is available due to mandatory lobby disclosure rules and databases, such as OpenSecrets.org. In the EU, there is a noncompulsory far less reliable register, the Transparency Register (Corporate Europe Observatory, 2012).

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