

Anti-French Discourse in the Nineteenth-century British Antivivisection Movement

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Antivivisection literature has for some time now been the corpus of research of scholars of cultural studies, particularly since Richard Ryder's revealing publications in the mid-1970s and 1980s. Although it is well-known and accepted that it was the rise of experimental physiology as a discipline in continental Europe (particularly France and Germany) that launched the establishment of vivisection as the absolute means for medical research, further explorations as to the type of discursive constructs used by British antivivisectionists to construe French medical culture aids us in the comprehension of how animal protection groups explored and tested their strategies. In this paper, I focus exclusively on the image of France in the nineteenth-century activist writing of British animal protectionists to analyse how their discourse emerged and evolved in response to legal regulations on vivisection.

Keywords: (anti)vivisection writing; Britain; France; Frances Power Cobbe; experimental physiology; nineteenth century

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El discurso antifrancés en el movimiento británico decimonónico de la anti-vivisección

Desde que Richard Ryder publicase sobre la historia de la vivisección a mediados de los setenta y en los ochenta, la literatura de anti-vivisección ha crecido como objeto de análisis en los estudios culturales. Es bien conocido que fue el desarrollo de la fisiología experimental en la Europa continental (especialmente Francia y Alemania) lo que condujo a la proclamación de la vivisección como método absoluto de investigación médica. Sin embargo, es necesaria una mayor profundización en el tipo de discurso empleado en Gran Bretaña por los activistas en contra de la práctica para caracterizar la comunidad médica francesa. Dicha profundización permite comprender cómo los grupos de protección animal y sus miembros más destacados exploraron y pusieron a prueba sus estrategias. En este artículo se analiza exclusivamente la imagen de Francia en los escritos de los activistas de la Gran Bretaña del siglo XIX con el fin de examinar la génesis de su discurso y la evolución del mismo al quedar la práctica regulada legalmente.

Palabras clave: escritos sobre (anti)vivisección; Gran Bretaña; Francia; Frances Power Cobbe; fisiología experimental; siglo XIX

Vivisection is a practice that has existed since ancient times, but it was during the nineteenth century that it became institutionalized as an experimental method, altering the traditional approach to, and object of, medicine itself. Although other nations of continental Europe were also advancing towards standardizing animal experimentation, it was France that, because of its post-revolutionary cultural and ideological innovations and its proximity, particularly provoked the British antivivisection movement, unleashing a wave of unprecedented social activism in relation to animal protection in the name of mercy. In this paper, I examine the discursive tendencies employed by British antivivisectionists during the greater part of the nineteenth century to bring French experimental physiology into disrepute. Through a compendium of addresses, essays, journalistic pieces and pamphlets, I aim to raise awareness of how their arguments and tactics shifted as vivisection became increasingly incorporated and regulated in the British medical community, and to show some of the formulae involved in the transnational characterization of the French physiologist.

1. THE EMERGENCE OF EXPERIMENTAL PHYSIOLOGY IN FRANCE

The Revolution and its aftermath marked a turning point in French medicine, opening a new era of physiological, clinical, pharmaceutical and biological sciences. The intellectual climate, which led to the establishment of a network of relationships between scientific, academic and reformist circles, certainly contributed to establishing Paris as the most progressive city in continental Europe, and its ambitious advances in medical research would soon acquire an (in)famous reputation abroad. As Weiner and Sauter (2003) point out, it was indeed at the turn of the nineteenth century that new developments in the field of clinical medicine overturned the methods of the old regime, bringing not only new administrative regulations regarding the centralization of medical institutions, but also adopting an entirely new approach through which to diagnose and treat patients. Among other innovations, Napoleon and Jean Antoine Chaptal, minister of internal affairs, facilitated the modernization of clinical medicine through “the creation of the Hospital Council to oversee all aspects of Paris hospital life,” the centralization of city admissions, and the “regulation of dissection with the establishment of central amphitheatres” (Weiner and Sauter 2003, 31).

This rearrangement was indispensable for the success of what was slowly becoming a new method of instruction, one which broke with the traditional mode of learning through the reading and revision of texts in the lecture hall and instead sought the bedside as the empirical space in which to deepen knowledge, and the amphitheatre as the arena in which to acquire surgical skills. The new medical schools that emerged in the 1790s became the training ground for a new generation of doctors who would gain their experience in the clinic and autopsy rooms of Parisian hospitals. Pierre Desault (1738-1795), who trained Xavier Bichat (1771-1802), ensured that the course he taught at the Hôtel-Dieu would, in the words of Lesch, immerse students “in the routine of clinical observation and

treatment Instruction and examination were oral and practical, rather than written and theoretical.” He also allowed his students access to “an amphitheater doubling as a classroom and as operating room separate from the wards, and the ready availability of rooms for dissection” (1984, 53).

By focusing on the mastery of surgical and clinical competences, Desault’s approach, in a way, encouraged students’ aspirations towards individuality as physicians. Driven by his research on tissues, Bichat would steer medicine farther away from observation and theory in order to stress the need to not necessarily acquire surgical skills, but to have a strong practical grounding in physiological knowledge itself. His *Discourse on the Study of Physiology* (1798) was to be instrumental in securing vivisection and autopsy as the appropriate paths through which to truly comprehend the inner functioning of the body. A live organism contained the hidden truths of physiology as much as it could unleash a chain reaction of further questions that the researcher could explore through careful experimentation. Bichat’s experiments had brought him to the conclusion that beyond the organs were the “simpler” and more fundamental tissues, which were to be regarded as the analytical units of the principle of life. To achieve optimal results, Bichat delineated a series of guidelines to best obtain empirical evidence, which included comparative analyses, the avoidance of environmental changes during the experiment that may interfere with the natural function of the body, the need for the repetition of procedures, and the thorough observation of the subject before and during the procedure (Guerrini 2003, 72). Bichat’s studies on anatomy and histology and his doctrine of vital properties set the referential departure point for future research. As John Cross wrote in 1820, Bichat’s contribution to science was coupled with an emphasis on vivisection as the means of research: “The taste of Bichat for experiments has produced the mania of vivisection, and an unlimited confidence in this manner of studying physiology” (qtd. in Lesch 1984, 80).

This infatuation with vivisection had a ripple effect across generations. Some well-known nineteenth-century practitioners active in France include Julien Legallois (1770-1814), Pierre-Hubert Nysten (1771-1818), Guillaume Dupuytren (1777-1835), Nicola Blondlot (1808-1877), Achille Longet (1811-1871), François Magendie (1783-1855), Jean Pierre Flourens (1794-1867), Claude Bernard (1813-1878), Louis Pasteur (1822-1895), Paul Bert (1833-1886) and the Russian-French Elias von Cyon (1843-1912). Though some of these names reached more international fame than others on account of their research and / or discoveries, all of them appeared, at one point or another, immersed within the transnational vivisection controversy. Whether complying with Bichat’s doctrine of vital properties or supporting an antithetical position, the overall direction of medical, biological and veterinary sciences was towards the full consolidation of vivisection as the chief method of research. Magendie, who began his formal medical training in 1801 at the École de Médecine in Paris, and would go on to become full professor at the Collège de France, as well as a distinguished member of the Académie des Sciences, was the first to gain a reputation in Britain as a ruthless vivisectionist. He criticized Bichat in the journal of the Société Médicale d’Émulation, but nonetheless adopted his routine of deliberately

injuring the experimental subject for his research on the nervous and digestive systems. He distanced himself from the methods of autopsy and dissection as much as from the principle of vital properties: the basic distinction was to be made between the living and the dead, and it was in the former state that the function of the vital elements could be exposed. Ryder contends that, unfortunately, Magendie was “an experimenter in the hit-and-miss sense of the word and entirely lacked the modern concern for precision and the control of variables” (1983, 122). In 1821 he founded the *Journal de Physiologie Expérimentale*, not long before his procedures were first presented in London, causing, as we will shortly see, unprecedented public outrage.

Magendie’s pupil, Claude Bernard, who succeeded him in the chair at the Collège de France, would be no less a provoker of anti-French sentiment on the part of the antivivisectionists. Heir to the legacy of Magendie, Bernard subjected animals (he was particularly fond of frogology and of using the more accessible domestic species) to operations on the pancreas, the liver and other digestive organs, among other experiments. His declarations in *Introduction à l’Étude de la Médecine Expérimentale* (1865) stood as a clear defense of the physiologist and his laboratory, and were to be repeatedly used by both French and English antivivisectionists to give shape to the profile of the men who prioritized cruel science over morals:

A physiologist is not a man of fashion, he is a man of science, absorbed by the scientific idea which he pursues: he no longer hears the cry of animals, he no longer sees the blood that flows, he sees only his idea and perceives only organisms concealing problems which he intends to solve. Similarly, no surgeon is stopped by the most moving cries and sobs, because he sees only his idea and the purpose of his operation. (Bernard 1957, 103)

To build a case for vivisection, Bernard echoed earlier defenders of the practice when he pointed to the incongruity of eating and using animals for sport but not for scientific purpose, which after all was the only medium through which to make further advancements in the physical wellbeing and health of society. Since experimentation was imperative (as man could only benefit from its results after due empirical trials), one was left to weigh the moral implications attached to using human or animal subjects. Immersed within the logic that experimentation on humans was essentially immoral, he opted for an equation based on ontological opposites, as opposed to an extension of rights: “If it is immoral, then, to make an experiment on man when it is dangerous to him, even though the result may be useful to others, it is essentially moral to make experiments on an animal, even though painful and dangerous to him, if they may be useful to man” (Bernard 1957, 102).

2. EARLY RESPONSES TO FRENCH PHYSIOLOGY: RICHARD MARTIN AND MAGENDIE
The strong aversion to French experimental physiology which developed in neighbouring Britain was in great measure the result of a clash between medical traditions. During

the first half of the nineteenth century, natural theology was still prevalent over other disciplines, and although it encouraged research, it also “tended to subordinate scientific to moral or theological ends” (Lesch 1984, 10). Meanwhile, by the 1820s, France was well under way in institutionalizing physiology as a respected field, and by the 1870s “only in France did physiologists both train in and practice new forms of hospital medicine within firmly institutionalized research traditions” (Miller 2009, 341). In contrast, British (and American) clinical medicine “tended to draw ideas from continental physiology [as opposed to developing their own experimental traditions], being less successful in producing new research in this period” (341). In addition, in Britain, teaching continued to prevail over research, and physiology was providing few immediate solutions to the health hazards brought on by the Industrial Revolution. It was not uncommon, therefore, for many of those medical students who rejected their country’s general disdain for the new scientific discipline to opt for training in Paris. Those who did acquire their medical skills within Britain, such as Charles Bell (1774-1842) or Marshall Hall (1790-1857), who studied at the University of Edinburgh, were quick to express their admiration of the French.

Insights into the vivisection developments in France reached Britain not only through eye-witness reports of the atrocities that were being produced and condoned within Parisian faculties and private laboratories, but also through demonstrations by Frenchmen before the English public. It was on account of the scandal resulting from Magendie’s public demonstrations in London in 1824 that the Irish Member of Parliament, Richard Martin, raised his voice in the House of Commons on February 24 and March 11, 1825. Martin, who had only three years previously succeeded in passing a bill (eventually to be known as “Martin’s Act”) to condemn the ill treatment and abuse of horses and cattle, now shifted his attention to the brutality concomitant to this new field of science that threatened to spread from the continent to Britain. Martin reportedly referred in these outbursts to a scientist whom he labeled as “a fellow, a disgrace to man, a Frenchman of the name of Magendie, who had come over [to London] to perform experiments in the most atrocious and cruel manner” (qtd. in *John Bull*, 6 February 1825, 66). Martin reportedly went on to describe the Frenchman’s public demonstration before the appalled English audience as follows:

He took a greyhound which had belonged to a lady, and for which he paid ten guineas; he nailed the animal down to a table by the feet and ears, using long iron spikes; he then proceeded to cut out the nerves, for the purpose of showing the effect of the nervous system; he cut out the nerves of the eyes; then the nerves of the taste and the hearing. He gave the animal some bitter drink, which he rejected. After these cruel experiments had been made, he said to the persons present, “Gentlemen, as the animal cost me so much I must make it the subject of another operation. If my servants take care of the animal to-night, and keep it alive, I shall be able to perform further operations on the other side of the jaw to-morrow. If it should not die I should be able to cut it up alive.” (qtd. in *John Bull*, 6 February 1825, 66)

Martin's description and his strategically persuasive remarks taking a stand against vivisection foreshadowed the pamphlets, essays and addresses that flourished in Britain in the second half of the nineteenth century, at the peak of the international controversy. His tactic was apparently simple: the detailed description of the cruelty involved was informative as much as an instrument through which to arouse the sensibilities of the other Members of Parliament. At a time when an ethos of domesticity was seeping into a gendered division of private and public spheres, Martin was conjuring up the image of a dog, the quintessential symbol of faithfulness and loyalty whose only knowledge of the world had been that available to him through his companionship with a woman. That same creature had become a victim of the despicable ruthlessness of male-dominated French physiology. Suffering and pain came in the form of cold, hard man-made objects whose function was reversed: rather than "construct" or "conjoin," the nails and iron spikes are used to assist in the dismemberment, amputation and crippling of another being. The step-by-step sequence of the process is used in a significant way: one by one, the dog's senses are destroyed; little by little, the helpless creature is detached from the world. Death is imminent, but its invasive conquest of the body is unmercifully dilatory. There is a sense of patience and procrastination elicited by Magendie, a patience associated with the cold, calculating nature of a physician blinded by an excess of ambition, purposely inflicting pain, as opposed to alleviating it.

Furthermore, the very format of a public demonstration threatened to blur the boundaries between science and entertainment. As Martin would reportedly also declare in the March sessions of parliament, Magendie's experiments "were only exhibited here [in London] to produce a dramatic effect" (qtd. in *Morning Chronicle*, 12 March 1825, n.p.). The indignant and banal attempt to "theatricalize" the torture of animals was further evidence of the degeneracy of the vivisector, for insensitiveness to suffering could not take a more disquieting shape than an arrogant exhibitionist desire to entertain and induce awe in audiences. In the view of Martin, the Frenchman's self-gratifying remarks during the operations were evidence that Magendie was looking to pepper his experiments with comments that would add entertainment value to the demonstrations. Martin reportedly alleged that Magendie had "placed his ear close to the mouth of the suffering animal, and said, patting it with his hand, *restez tranquille*; then turning to the spectators, he added, *Il serait plus tranquille s'il entendait Francais*" (qtd. in *Morning Chronicle*, 12 March 1825, n.p.). The anecdote was what Martin used to close his comments on Magendie, for it best illustrated what could potentially perturb other members enough to publicly condemn the act: that not only were science and entertainment not being held as monolithic categories, but that there was no design to the experiments other than to show and display. In other words, French physiology represented a form of research that did not strive for utility, thus perverting the pivotal responsibility of the physician. Martin was not opposed to animal experimentation if such procedures were to be aimed at "the discovery of any latent point of science that would materially benefit man by being discovered" (qtd. in *Morning Chronicle*, 12 March 1825, n.p.); but the Frenchman's apparent zeal in carrying

out a demonstration for mere exhibitionist purposes and with no epistemological agenda was unreasonable and disturbingly immoral. This was a key issue in the 1820s. As Bonner writes, “unlike the British and the Americans, the continental researchers were not held back by the ‘yoke of utility’ . . . and did not worry so much about the lack of useful applications of the new physiology” (2000, 153).¹ Unsurprisingly, and probably as a reaction to Magendie’s London demonstrations, “twenty-nine doctors at Newcastle and another thirty-eight at Bath signed protests against vivisection” (Turner 1980, 84).

3. THE ALFORT VETERINARY SCHOOL CONTROVERSY

By the second half of the nineteenth century, vivisection was a highly publicized controversy in Britain, and criticism against vivisectionists within national borders continued, enmeshed within the discursive aversion towards French practitioners. In the 1840s, the Royal Society for the Prevention of Cruelty to Animals (the Society for the Prevention of Cruelty to Animals, SPCA, founded in 1824, having been granted the Queen’s patronage in 1840, thus becoming the RSPCA) had received reports of the experiments practiced at the Alfort Veterinary School near Paris, causing a stream of protests in the French and British press. In the mid-1840s, the reverend David Davis unsuccessfully petitioned King Louis Philippe I to stop vivisection at the School. These reports were poignantly revived in the late 1850s, along with new testimonies, to strengthen the humane advocates’ abhorrence of French physiology. In 1860, the English physician Alfred Perry, who had visited the School, recalled for *The Lancet* the daily tortures to which horses and mules were subjected and his complaints against the professor, who argued that the vivisection practices “accustomed the students to the shrinking of the animal when touched by the instruments; and made them cool at operating” (qtd. in Orleans 1993, 17). The Alfort Veterinary School had been founded in 1764, and although veterinary sciences operated independently from the medical schools, vivisection was also regularly practiced there. Elliot contends that “the professors of veterinary medicine had free access to almost limitless supplies of animals and horses in particular” (1987, 52). Indeed, there seemed to have been an ulterior motive for this preference for equines: “In the nineteenth century the horse was still an essential weapon of war and so governments were always willing to allow scientists to carry out research that was intended to improve their effectiveness” (1987, 52). The controversy, clearly magnified by the affronted responses and criticism coming from England, particularly from the Society for the Protection of Animals, an organization based in London, resulted in the French Academy’s creation of a committee to evaluate the issue in the early 1860s. As Orleans suggests, the Academy’s contempt both for the English and the pathologist M. Dubois, the only member to propose a reform by which dissection would almost completely substitute vivisection, was vividly illustrated in the final resolution, which declared that the complaints made by the Society for the

¹ Bonner borrows the phrase from Gerald L. Geison (1972, 41).

Protection of Animals were “without foundation,” and that the performance of vivisection “should be left to the discretion (*sagesse*) of men and science” (qtd. in Orlans 1993, 18).

The resolution and the French Academy’s scornful reproach of English antivivisection, however, far from succeeded in silencing international criticism against French experimental physiology. The most memorable affronted response to Alfort was still to come in the form of the Irish (and London-based) activist and suffragette Frances Power Cobbe (1822-1904). In her article “The Rights of Man and the Claims of Brutes” (first published in the November 1863 issue of *Fraser’s Magazine*), Cobbe denounced that “the French system has terribly transgressed the limits of morality” (2004, 237). In Cobbe’s view, there were three fundamental and irrevocable reasons underlying this accusation. Firstly, like Martin, she emphasized the irrelevance of such procedures at a practical level, which violated the object of medical science in itself:

Of those [experiments] actually performed daily at Allfort [*sic*] (64 on each horse) the great majority were (like the removal of the hoof) wholly useless, and present no kind of compensating benefit for the acute torture they inflict, inasmuch as the operations cannot be copied in the human subject, nor would they ever be used by any owner in the case of a horse. As to the primary motives justifying such taking of life for purposes of science, they cannot be alleged in the case at all; for there is no attempt at discovering any new fact, or ascertaining any doubtful one, ever propounded. (Cobbe 2004, 237)

Secondly, Cobbe attacked the French for their general reluctance to employ anesthetics, the use of which meant that the physiologist “can test at will any scientific truth at the cost, perhaps, of life, but never of torture” (2004, 234). She claimed that in France, dogs and horses had for years “been dissected alive and submitted to every conceivable operation for the instruction of pupils in anatomy and veterinary surgery, and that no chloroform [had] been in use on these occasions.” The stark contrast was marked by England, where vivisection was “comparatively rare” and “performed only by scientific men for the ascertainment of physiologic facts, and usually with the exhibition of chloroform” (2004, 236-37).

Thirdly, Cobbe argued that the French were perpetuating a moral infraction against the natural maturation of civilization towards mercy and kindness. “The Rights of Man and the Claims of Brutes” opens with a parable about two antithetical but strangely related worlds, fleshed out by Eastern and Western culture. In the ancient Moslem story, the king’s city is destroyed because of the people’s wanton wickedness, cruelty and greed. Only one man is pardoned by Allah, a man who once showed mercy to a camel, and who survives for a thousand years in solitude and prayer, until a servant of God relieves him from the world with a blessing. In the Western story, an allegory of French culture, there rises a city of opulence, sophistication and cultivation, as reflected in the wondrous architecture and gardens. Yet moral corruption spreads amongst the learned people of the city, beclouded by their unfettered pride in their knowledge, an excess that blindly leads

them to believe themselves unique and distinct from the lesser cultures and to a hoarding of vaporous epistemological merits. The self-venerating wise men and their pupils employed themselves in public buildings (the Videlicet School of Medicine, the College of France, the Faculty of Sciences and the Veterinary School at Alfort), where they took “tame and inoffensive animals” and “having bound them carefully for their own safety, proceeded to cut, hew, saw, gouge, bore, and lacerate the flesh, bones, marrow, heart, and brains of the creatures groaning helpless at their feet.” It was in this manner “that these wise men, and learned men, and honourable men discovered that a horse could be made to suffer for ten hours, and to undergo sixty-four different modes of torture before he died” (Cobbe 2004, 218, 219). The moral abomination of deliberate cruelty, Cobbe suggests, is even greater when the culture perpetuating such atrocities has already reached a stage of intellectual refinement. Outweighed by reason, the practitioners are not the only ones to blame: it is the stagnancy of the entire community, indifferent to the infliction of pain and suffering, which “continue[s] to uphold the torturers in esteem, and in high public functions” (2004, 220). The ancient Eastern story is one of primal peoples; their behavior is to some extent justifiable, as they had not yet evolved into a state of refinement. And yet they are the ones who, paradoxically, are castigated with the ultimate divine punishment. Cobbe transposes these allegories into class-based categories. “As a rule,” she states, “the most cultivated are the most merciful” (2004, 244). France, however, perverts and inverts this logic. Mirroring the Moslem legend, Cobbe regards England as a land where

it is the half-brutalized and scottish [*sic*] carter, or the degraded and filthy dealer in ‘marine stores,’ who is brought up before the magistrate for furiously flogging his stubborn horse, or skinning alive some miserable cat.² In France, alas! it is the men of science—men belonging to the learned professions—who disembowel living horses and open the brains of dogs. (2004, 245)

Much to the dismay of French medical circles, the surgical practices at Alfort would continue to figure as emblematic instances of French deviancy in British antivivisection literature for years to come. In 1876, a Paris correspondent for the *Daily News* wrote that “the French still have a few lessons to learn as to the treatment of human and dumb creatures,” and criticized the Alfort veterinary surgeons for wrongfully believing that since animals possessed no imagination, it was impossible for their suffering to extend beyond the first impact. The correspondent finished by drawing on English literary excellence as a counterpoint to what he suggested was a moral abnormality characteristic of the French: “I prefer Shakespeare’s notion, that the poor beetle that we tread upon, in corporal sufferance feels a pang as great as when a giant dies” (*Birmingham Daily Post*, “Vivisection in Paris,” 21 January, 1876, 7). In his 1892 address “Vivisection: Is It Justifiable?,” Dr Charles Bell

² The 1822 Cruel Treatment of Cattle Act (“Martin’s Act”) was amended by the 1835 Cruelty to Animals Act to include the protection of other domestic animals and prohibit baiting.

Taylor would again resurrect the horror of the Alfort procedures through the testimonies of a certain Dr Crisp, who had visited the Veterinary School years earlier.

4. ONGOING CRITICISM AND THE 1876 CRUELTY TO ANIMALS ACT

Throughout the ensuing decades, vivisection increasingly became the RSPCA's central target, including a failed attempt to prosecute Eugene Magnan, one of Magendie's pupils, after his polemical demonstrations at the Congress of the British Medical Association held in Norwich in 1874. To discredit experimental physiology, antivivisectionists continued to rely on eyewitness testimonies of those who had been to Alfort or studied under a French vivisector. An 1863 issue of the *British Medical Journal* featured an anecdote by Dr Latour, who recollected a demonstration by Magendie: "I remember once, amongst other instances, the case of a poor dog, the roots of whose spinal nerves he was about to expose. Twice did the dog, all bloody and mutilated, escape from his implacable knife; and twice did I see him put his forepaws around Magendie's neck and lick his face. I confess—laugh vivisectors if you please—that I could not bear this sight" (qtd. in Ryder 2000, 101).

James Maculay, one of Magendie's students, also recalled his repudiation of the experiments, and felt "thankful such scenes would not be tolerated in England by public opinion" (qtd. in Bertomeu-Sánchez 2012, 13). Dr George Hoggan, although omitting the name of Claude Bernard, with whom he had studied in Paris, wrote in 1875 for the *Morning Post* that he was "of opinion that not one of those experiments on animals was justified or necessary," and that it was not advancements for "the good of humanity" which were sought, but rather "to keep up with, or get ahead of, one's contemporaries in science, even at the price of an incalculable amount of torture needlessly and iniquitously inflicted on the poor animals" (qtd. in Cobbe 2012, 637). English students who had once enjoyed French tutelage and had incorporated vivisection into their own research were targeted, as were other vivisectors beyond the English borders. Such was the case of the German professor Moritz Schiff, who had also studied under Bernard and who was publicly disparaged in Florence by Cobbe in the early 1860s during her visit to the city. Cobbe's petition to Schiff, published in *La Nazione*, to cease his experiments on animals was signed by 783 people, most of whom were aristocrats or eminent members of English or Florentine society.

The 1870s turned out to be the crucial decade in the legislative regulation of vivisection in Britain. In 1873, the two-volume work *Handbook for the Physiologist*, edited by John Scott Burdon Sanderson, was published. The book very clearly absorbed and paid homage to the methods and state of the art practices and techniques that had launched experimental physiology in France and Germany, and represented a quixotic gesture "to transform the status of British physiology within a generation" (Richards 1987, 127). Sanderson himself had received part of his training from acknowledged European scientists, including Bernard. It was the first book of its kind to be published in the English language, and featured the collaboration of established members of the medical profession with an academic

post, including the physiologist Michael Foster, the histologist Emanuel Klein, and the pharmacologist Lauder Brunton. With elementary students in physiological science as the target readers, the purpose of the *Handbook* was overall educational, and included numerous illustrations and plates to strengthen the didactic input. However, its failure to comply with the British Association for the Advancement of Science's insistence on the avoidance of pain and suffering automatically made it a target of the antivivisectionists, for the text lacked any adequate discussion as to the need for anesthesia.

In 1875, Cobbe and Hoggan joined forces for the founding of the Society for the Protection of Animals Liable to Vivisection, soon to become known as the Victoria Street Society (and later renamed the National Anti-Vivisection Society [NAVS]). A few months earlier, their attempts to pass a bill in the House of Lords regulating vivisection had clashed with the interests of another bill presented in the House of Commons, one that more clearly protected the endeavors of Burdon Sanderson, Charles Darwin, T.H. Huxley and the English pro-vivisection scientific community. The contradictory nature of the two proposed bills as well as escalating press coverage of the matter were reason enough for the appointment of a Royal Commission to investigate the issue. After subsequent months of recommendations from the Commission and ensuing lobbying, the result was the Cruelty to Animals Act, which received Royal Assent on August 15, 1876. The Act referred only to vertebrate animals and stipulated that all experimenters had to be licensed by the Home Secretary under positive recommendations from specified medical overseers. It additionally authorized the inspection of the places where the procedures were conducted. In order to carry out experiments without anesthesia or procedures for the illustration of lectures and demonstrations, researchers had to request a special certificate.

The 1876 Cruelty to Animals Act satisfied neither pro- nor antivivisectionists. As Rupke contends, it epitomized "a traumatic development in the still informal and largely untried relationship between scientists, the government and the lay public" (1987, 188). Unsurprisingly, the Act was not received favorably by the Victoria Street Society. Rather than protecting animals, the new legislation secured the invulnerability of the vivisectionist. Not only could the special certificates annul the restrictions collected at the beginning of the Act but henceforth, once the special certificate had been acquired, the vivisectionist was fully protected by the law. Nor were the supporters of vivisection content. Although many restrictions had been avoided, the experimenters nonetheless felt their individual enterprises were curtailed by the Home Secretary's responsibility to grant or deny licenses. "True, relatively few applications were rejected," Turner explains. "But even those few hurt, especially when the decision flew in the face of the medical recommendations to the Home Secretary" (1980, 92).

5. NEW TACTICS AND THE PERSISTENCE OF ANTI-FRENCH LOBBYING

All in all, despite the Act's attempts to ameliorate public tensions, the dispute continued rather intensely in many circles throughout the end of the nineteenth and beginning of

the twentieth century. The same year that the Act was passed, the constant onslaught from the humane advocates compelled scientists to create what Marshall Hall had striven for so ardently,³ the Physiological Society of Great Britain. Five years later, London became host to the International Medical Congress, which united the scientific elite for the defense of their research and the most practical and appropriate methods to carry it out. Their message was clear: vivisection was necessary for the advancement of medicine, and the British surgeons and scientists who attended the Congress (among them James Paget, T.H. Huxley and the anatomist Richard Owen) were in dire need of making the nation understand this. Lobbying continued in 1882 with the establishment of the Association for the Advancement of Medicine by Research (AAMR), which ultimately aimed to repeal the Cruelty to Animals Act. By influencing public opinion through leaflets and Owen's *Experimental Physiology: Its Benefits to Mankind*, the AAMR attempted to reach out to the administrative authorities (by the 1910s and under the accusations of Stephen Coleridge, the Home Office would eventually admit to its connections and consultations with the AAMR for the granting of licenses). As Rupke notes, at the epicenter of the controversy were still the matters of utility and cruelty. The former proved an easier point to defend: in his Folkeston address in 1881 Owen himself listed several well-known discoveries resulting from vivisection, including experiments by Harvey, John Hunter, Bernard, Pasteur, or Bell, and "even if certain experiments did not have demonstrably direct bearing on the maintaining of health and the curing of disease," Rupke writes, "it could be argued that scientific and medical knowledge are one and indivisible" (1987, 195). As to the matter of cruelty, scientists continued in the tradition of relying on equations of animal exploitation: if animals suffered and were tortured for other purposes, namely for food and sports, was not scientific progress a more justifiable motive? Causing pain for entertainment, comfort and fashion, in the view of many, concealed a deeper violation than science, whose prime object was to benefit the wellbeing of man, could ever fathom.

Turner argues that the organized protection of animals somewhat subsided in Britain and in America during the last two decades of the nineteenth century and the beginning of the twentieth century. He rightfully bases part of his contention on the facts that: (1) the SPCAs shifted their focus more clearly onto the ethos of domesticity, inculcating in children kindness towards animals;⁴ (2) the SPCAs lost a notable amount of members who, on account of the organizations' growing conservatism, either joined the more radical antivivisection societies or abandoned the animal protection cause altogether;

³ Hall's experiments on the circulation of blood and on reflex had attracted criticism of such magnitude in Britain that at least twice in his lifetime (first in the early 1830s and later in the late 1840s) he found himself in the position of having to propose a physiological society that would regulate such procedures.

⁴ These SPCAs include the RSPCA and its American counterparts, which developed during the second half of the nineteenth century and which modeled themselves upon their British forerunners. The American Society for the Prevention of Cruelty to Animals (ASPCA), founded in 1866, led the way, and was soon enough followed by organizations in Pennsylvania (PSPCA), founded in 1867, and Massachusetts (MSPCA), New Jersey and San Francisco, which were created in 1868.

(3) the vertiginous effects of Darwinism (and the notion of kinship with animals) and industrialization had faded, and such fears had dissipated within the routine of everyday life; and (4) new legislative measures protecting the lower classes, women and children and the emergence of social services made the matter of animal cruelty less urgent for the channeling of compassion (Turner 1980, 123).

Despite these cultural shifts and the British scientific community's empowerment through the AAMR and its support from continental Europe, I would argue that revulsion to French experimental physiology was still to be a central part of the antivivisection crusade during this period, and the image of the French vivisector as a bloodthirsty sadist was to remain prevalent in humane advocacy. There was, however, a noticeable change in the tactic of assailing experimental physiology and its particularly French character. The 1876 Act, which after all was but a means of hindering, not suppressing, vivisection may not have met either of the parties' expectations, but it certainly demanded a rearrangement of strategic moves. Cobbe's 1880s antivivisection pamphlets adopted a more aggressive tone, and French physiologists such as Bernard or the Russian-French Cyon were targeted more severely than ever. Her best known pieces, "Bernard's Martyrs" (1879) and "Light in Dark Places" (1883), were particularly vocal about the heinousness of French physiology. Anesthesia, which she had once viewed (although rather skeptically) as the lesser of two evils to use in the performance of surgical procedures, no longer afforded a humane solution. Too many times chloroform and ether had been used ineffectively, applied incorrectly or insufficiently. The use of curare, a potent plant extract, raised the most nightmarish image of all: as far back as the 1860s, Bernard had attested to its paralyzing properties while leaving the subject not only fully conscious, but also fully sensitive to pain. Curare was anything but an anesthetic, and it rendered possible the best conditions for the vivisector: the animal was immobilized and there was no other effect that would interfere with the natural function of the body.

Bernard's comments on curare hauntingly reappeared in Cobbe's pamphlets and addresses, for they fittingly reflected the rapacious, fiendish nature of the vivisector, suggesting a sadistic pleasure on the part of the scientist emanating from his power over a creature fully aware of its own helplessness. Death under curare, claimed Bernard, was "accompanied by the most atrocious suffering that the imagination of man had conceived" (qtd. in Cobbe 1889, 185). In "Light in Dark Places," Cobbe also anticipated contemporary animal rights maneuvers by 'illuminating' what was usually concealed from the general public. She reproduced drawings from Bernard's *Physiologie Opératoire* and Livon's *Manuel de Vivisection*, as well as plates by Cyon and Bert. These illustrations graphically catalogued the horrors of the tortures; from the instruments used to the manner animals were held down, and reproduced key moments of the surgical interventions. Cobbe's retaliation in using the Frenchmen's own engravings alongside descriptions of their procedures written by them to appeal for an amendment of the 1876 Act represented an alternative strategy more in the line of straightforward "shock tactics" than her habitually compact and eloquent essays.

Cobbe continued writing incessantly, revealing a growing radicalism that demanded nothing short of abolition. She helped found the antivivisection journal *The Zoophilist* in 1881, and two years later launched a French version of the periodical, *Le Zoophile*, to reach out to the Parisian readership in the hopes of stirring civil unrest from within the nation that had started it all. The initiative, however, was short-lived. After roughly six months, Cobbe gave up *Le Zoophile* on account of the negative response of readers, who, in her words, “obviously found the paper too dry for their taste” and remonstrated “against the occasional references in it to religious considerations” (2012, 671). In 1898, Cobbe left the NAVS and formed the even more exigent British Union for the Abolition of Vivisection (BUAV), which received the enthusiastic support of George Bernard Shaw.

Like Cobbe, Charles Bell Taylor often relied on the vivisector’s own description of his experiments, which generally sufficed for discursively inducing an explicit image of the French experimenter’s depravity and viciousness. Taylor “de-contextualized” the data collected by Dr Brachet, Professor of Physiology at the École de Médecine, on what he ironically referred to as a “moral experiment.” Much like Martin had accomplished in his retelling of Magendie’s demonstrations, Taylor paraphrased Brachet to denounce the cruelty involved in the animals’ slow and painful deliverance from the world. Taylor quoted Brachet as follows:

I inspired . . . a dog with the greatest aversion for me, by plaguing or inflicting some pain or other upon it as often as I saw it. When this feeling was carried to its height, so that the animal became furious as soon as it saw or heard me, I put out its eyes. I could then appear before it without manifesting any aversion. I spoke out, and immediately its barkings and furious movements proved the passion which animated it. I therefore destroyed the drum of its ears and disorganized the internal ear as much as I could, and when an intense inflammation which was excited had rendered it deaf, I filled up its ears with molten wax. It could no longer hear at all. Then I went to its side, spoke aloud, and even caressed it, without its falling into rage: it seemed even sensible to my caresses. (1892, 4)

Aside from Cobbe and Taylor, other advocates continued to combine previous discursive methods with new alternatives to contravene French physiology and its transnational contagion. Henry Salt founded in 1891 the Humanitarian League, promoting respect for all sentient beings through a Thoreauvian-inspired doctrine, and in 1894 he published *Animals’ Rights Considered in Relation to Social Progress*. Salt insisted on the argument that the justification of vivisection on the grounds of utility was worthless, its most threatening effect being that of compromising society’s striving for moral balance. France, just as much as Germany, was often invoked as an example of historical moral error (Salt and Leffingwell 2010, 136-37). Anna Kingsford, the first Englishwoman to graduate from the Paris Faculty of Medicine, campaigned internationally to pressurize the French government into regulating vivisection and even published a paper vilifying Louis Pasteur called “La Rage de Monsieur Pasteur.” Like Cobbe, she attacked medical materialism,

was adamant in her demands, and invoked historical analogies to persuade readers, as for example comparing vivisectors and the medical community to the Inquisition (Finn 2012, 194), thus also anticipating contemporary animal liberation discourse which allegorizes laboratories as concentration camps. Yet unlike Cobbe, not only was she a vegetarian and a spiritualist-esoterist, but she had actual experience in working with physiologists, a fact that became of increasing importance for building a case for antivivisection. Among her innovations, Kingsford linked vegetarianism to antivivisection and augmented shock-tactics through what today perhaps would be considered publicity stunts:⁵ she offered her body as a replacement for experimental animal subjects and claimed to have cursed Bernard and Bert, thereby causing their deaths (Elston 1987, 276). More poignantly, Kingsford, alongside other feminists such as Isabella Ford and Ouida, explicitly likened animal experimentation to surgical practice on women, children, and the poor. The use of female subjects in French medical and experimental practice certainly inspired an entire body of literature by feminists, whereupon ovariectomies were compared with the cutting of live animals, and research on hysteria with the experiments related to hydrophobia. The feminist implications of vivisection have been extensively documented by scholars.⁶

Although Kingsford advocated regulation in compliance with the English model (Finn 2012, 193), it became evident at the turn of the century that experimental physiology had rather successfully seeped into medical courses in London when two members of the Swedish Anti-Vivisection League, Lizzy Lind-af-Hageby and Leisa Katherina Schartau, published the critically-acclaimed *The Shambles of Science* (1903). The two students had come into contact with French vivisection in their 1900 visit to the Pasteur Institute in Paris. Shocked by what they witnessed, they enrolled in physiology classes at the London

⁵ Shock tactics and publicity stunts have today become the norm to draw attention to animal rights and liberation issues: from People for the Ethical Treatment of Animal's controversial campaigns and advertisements to street performances and demonstrations, the movement has continuously explored ways through which to flesh out an anti-speciesist discourse since the mid-1970s and early 1980s. Since animality has been historically defined according to its counterpointing to what is categorically human, post-Darwinian experimenters have found themselves cornered as to what to ontologically and ethically make of their animal subjects: if their physiological, biological, psychological and emotional resemblances to humans are what makes them useful for research, do not these similitudes also signify upon our obligation to respect them precisely because they are so much like us? Current pro- and antivivisectionist arguments and campaigns are motored by the rhetorical possibilities afforded by the likeness / difference dilemma, obviating the matter that, as Huggan and Tiffin contend, it is not so much the animals themselves that pose a problem for postcolonial civilizations, but rather our representation of them. These representations are "indicative of our attempts to reconcile, and thereby come to terms with, the contradictory attitudes to animals that most human societies harbor" (Huggan and Tiffin 2010, 138). Nonetheless, as Cary Wolfe (2003) has fairly recently argued, the concept of animal rights and its associated representations are flawed insofar as we have yet to overcome the humanist discourse that places human subjectivity at the center of our social, philosophical, bioethical and biopolitical structures. This humanist subjectivity, fueled precisely by the likeness / difference paradigm, fails to acknowledge the uniqueness of animal species and individuals, for it only assimilates the 'other' on account of kinship to humans, hence redistributing different species within our ethical consideration, but ultimately refraining from imploding the speciesist structure itself, whereby there will always be some species at the bottom and more privileged ones at the top.

⁶ For a more thorough analysis of these aspects see Elston (1987), Kean (1995), Lansbury (1985), Miller (2009) and Pollock (2005).

School of Medicine for Women. Their book, which ran to five editions before World War I, stressed the importance of having first-hand experience in physiological research the better to combat it, and again placed the French at the center of institutionalized cruelty to animals. The contemporary vivisectionist represented a “philosophical retrogression” (Lindaf-Hageby and Schartau 2012, 6): he had in a way degenerated back to Cartesian doctrine through his regard of animals as mere machinery deprived of feeling and consciousness. London professors reproduced the experiments performed by Bernard (and also other international scientists such as Heidenhain and Pawlow), and seemed to always fail either in the justification of the experiments or in the efficient administering of anesthesia, if it was used at all. The triumph of experimental physiology was not just proven by the institutionalization of vivisection as part of the educational lecture (despite the restrictive measures in the 1876 Act), but also by the fact that the dominating male scientific approach had alienated women from their natural predisposition to kindness and nurturing: “The woman vivisectionist has arrived. She ‘works’ with perfect tranquility, and is above all anxious to blot out sentiment. . . . Will women who have been trained at the vivisection-table become gentle, loving mothers?” (Lindaf-Hageby and Schartau 2012, 186-87). Not only, as Kingsford, Ford or Ouida had attempted to convey, were women being subdued by French male-centered powers through gynecological research, but the incorporation of women within the medical sphere as vivisectionists represented an interesting twist, in fact, to what Cobbe had so ardently (and quite successfully) been avouching in England: that the participation of more conservative women in the public sphere through their joining forces with antivivisection organizations was an activity which safeguarded women’s feminine virtue. The emerging professionalization of women as vivisectionists in England, in other words, represented the ultimate triumph of the medical field that had been initiated in France: not only had experimental physiology fared well in influencing British legislation and medical schools, but it had also stretched as far as corrupting women in Britain who were seeking a space in the public sphere.

CONCLUSION

The birth of experimental physiology as a discipline and the institutionalization of vivisection as the chief method of research in France generated throughout the nineteenth century a heated and somewhat xenophobic response from animal protection groups in Britain. As experimental physiology spread from continental Europe to Britain, antivivisection advocates developed a discourse that progressively established a formulaic rhetoric intent on discrediting French physiologists, physicians, veterinary surgeons and their pupils. Arguments such as the lack of utility, the entertainment value, the sadistic, fiendish, cold temperament of the vivisectionist and the descriptive accounts of slow, torturous deaths contravened to some extent a smooth and apathetic adoption of French scientific approaches, but proved insufficient to halt the passing of an Act that antivivisectionists regarded for the most part as a *carte blanche* legitimizing the physiologist’s authority. As

a result, antivivisectionists incorporated new discursive and publicizing strategies that would go on to define the anti-experimentation animal protection movement in the Edwardian period.

Although, as Turner (1980) and other prominent scholars argue, the notable medical breakthroughs of the late nineteenth and early twentieth century caused an inner fracture within the ranks of the antivivisection movement (since the argument as to the utility of the experiments no longer seemed so convincing), handfuls of antivivisectionists continued their struggle for abolitionism or further restriction for years to come. True, the antivivisection discourse would in time lose its original discursive potency (along with its solid, loyal audience), and supporters in Britain as much as in America would increasingly find themselves cornered by accusations targeting their lack of scientific knowledge. The American surgeon William Williams Keen (2009), for instance, repeatedly expressed his bitterness towards the antivivisectionists' penchant to revive examples of experiments carried out decades earlier in France, hence ignoring the extent to which medical knowledge had advanced and offensively distorting the character of the medical practitioner.

Still, although the arguments purported by Cobbe, Hoggan, Salt, Kingsford, Ouida, Lind-af-Hageby and Schartau, among scores of others, would, for the most part, fade for several decades, their message would become powerfully resuscitated within the animal liberation movement invigorated from the mid-1970s onwards. In spite of the fact that many of these arguments—primarily those based on utility and on anti-French reactions—were, needless to say, outdated by then, the spirit of their crusade succeeded in reaching a new generation of animal protectionists and activists in Europe and in the United States.

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