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## The European politics of animal experimentation: From Victorian Britain to ‘Stop Vivisection’



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### ABSTRACT

This paper identifies a common political struggle behind debates on the validity and permissibility of animal experimentation, through an analysis of two recent European case studies: the Italian implementation of the European Directive 2010/63/EC regulating the use of animals in science, and the recent European Citizens' Initiative (ECI) 'Stop Vivisection'. Drawing from a historical parallel with Victorian antivivisectionism, we highlight important threads in our case studies that mark the often neglected specificities of debates on animal experimentation. From the representation of the sadistic scientist in the XIX century, to his/her claimed capture by vested interests and evasion of public scrutiny in the contemporary cases, we show that animals are not simply the *focus* of the debate, but also a privileged *locus* at which much broader issues are being raised about science, its authority, accountability and potential misalignment with public interest. By highlighting this common socio-political conflict underlying public controversies around animal experimentation, our work prompts the exploration of modes of authority and argumentation that, in establishing the usefulness of animals in science, avoid reenacting the traditional divide between epistemic and political fora.

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### 1. Introduction

The debate around the use of (non-human<sup>1</sup>) animals in science<sup>2</sup> is an old one, and despite important differences and developments since the 19th century, one can only be struck by the underlying continuity in its themes. Both camps have ready-made narratives to explain the history of such debate. Antivivisectionists generally

invoke a narrative of moral progress gradually elevating non-human animals from soulless machines (Descartes, 1637) or mere instruments (Kant, 1785) to beings that matter morally in virtue of their capacity to suffer (Bentham, 1789; Singer, 1975; Regan, 1983), and/or of the relationship we entertain with them (Donaldson & Kymlicka, 2013). In contrast, supporters of animal experimentation are quick to brand antivivisectionists as conservatives resisting

*Abbreviations:* AAMR, Association for the Advancement of Medicine by Research; ECI, European Citizens' Initiative; EU, European Union; FRAME, Fund for the Replacement of Animals in Medical Experiments; MEP, Member of the European Parliament.

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<sup>1</sup> Here we refer, by the term “animals”, to non-human animals (see Derrida, 2006 on the presuppositions implied in this habit).

<sup>2</sup> In different places and time, participants in the debate have instead used the expression vivisection. A number of commentators (e.g. Working Group of the Oxford Centre for Animal Ethics, 2015, p.13) have argued that it was preferable to use the expression “animal experimentation” because it is broader and arguably more exact (strictly speaking, vivisection means live dissection, which comprises only a subset of animal experimentation). Given that choices of words are seldom neutral – in fact scientific and medical interests have refrained from using “vivisection” because it sounded too gruesome (French, 1975, p. 267) – we have tried where possible to follow the actors' own terms.

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an arguably progressive science, and resort to the spectacular advances of science and its allegedly massive impact on human (and sometimes even animal) welfare to justify the necessity of animal experimentation. In this view, the regulated use of animals in research is an exemption, for the greater good, from our general concerns for animals, and a fair compromise (interestingly, the majority of scientists considers that regulations regarding animal experimentation is “about right”, independently of the specific country or legislation concerned – see [Cressey, 2011](#)). Such persistent juxtaposition of narratives prompts to ask why – if the story is one of two forces of progress which, in a dynamic balance, ineluctably push history towards its realization – the debate has been continuing with so little change through more than a century of social and scientific developments, and with no apparent closure in sight ([Gregory, 2000](#)). Apparently, we – setting aside, for a moment, the identity of this curious “we” – are still very much adjusting our ideas on the ideal compromise between imperatives of scientific and moral progress. To be sure, this lack of closure does not amount to a standstill, since advances, technical and discursive alike, are being made. Yet, they are unfolding in a manner that invigorates both camps in the pursuit of their rehearsed narratives. Take recent evidence on promising alternatives to animal experimentation such as tissue-engineering ([Vries et al., 2015](#)) and pitch it against transforming breakthroughs on the feasibility of dissecting biological function in vivo, including in non human primates ([Cyranoski, 2014](#); [Song and Knoepfel, 2016](#)). Or take some of the genuinely new ideas developed by moral philosophy on the issue of animal rights ([DeGrazia & Beauchamp, 2015](#)) and consider them in light of the fundamental problem of what it could or ought to mean to represent the interests of non-human animals in an ideal deliberative setting ([Kitcher, 2015](#)). It appears then that the persistent tension on this issue, and indeed one key enabling resource for both camps in marshalling ever new evidence in their support, rests on a fundamental disagreement about *who* judges competing scientific evidence and decides on a binding moral collective stance.

In this paper, we investigate these discourses and debates through a socio-political analysis of the role of animal experimentation in Europe, by drawing a connection between the origins of modern antivivisectionist movements in Victorian Britain and some of its most important European descendants today. We contend that a historical perspective on the onset of modern antivivisectionism highlights threads that have persisted through today’s debates, but could easily escape the commentator focusing on the contemporary events alone. In the view we propose, animals are at least as much the *focus* of human moral consideration as a privileged *locus* at which the place of science in society is articulated and scrutinized. We argue that behind widespread and historically situated rhetorics on the ‘evil of vivisection’ lies a common political struggle: the attempt to keep the scientific Golem ([Collins & Pinch, 1993](#)) under public control and prevent its capture by politically unaccountable powers. This is obviously not to say that care for animals in our societies did not play an important role in changing attitudes towards them – caring for pets did for instance play an immense role in shaping these attitudes ([Kean, 1998](#)). Yet, our paper shows that the antivivisection discourse arguably differs from other discourses on animal welfare in that it brings to the fore a contestation of the place of science in the public sphere. For this reason, antivivisectionism cannot be explained solely by means of the moral sentiments and values characterising the concern for animal welfare, but also demands looking at the social spaces, opposed interest groups and political leanings that give shape to the epistemic and moral value of animals, and thus contribute to structure the place of science in contemporary societies.

To thread this claim we start from the vast work by historians on the onset of modern antivivisectionism in late 19th and early 20th century, in order to show how antivivisectionist movements – more than just grappling with the question of animals’ intrinsic moral interests – enshrined a deeper political concern for asymmetries of power both embodied in and sustained by individual scientists and their work. We then turn to the analysis of two recent cases in which similar features can be observed. The first is concerned with the Italian debate surrounding the implementation of the [European Directive 2010/63/EC](#) regulating the use of animals in biomedical research. The Italian case is particularly interesting because it represents a prototypical and powerful example of how contemporary debates, while still questioning the accountability of science, have moved the question from the need to oversee *scientists’* treatment of animals to the scrutiny of the social contract for *science* as an authoritative and reliable system of knowledge-production ([Gibbons, 1999](#)), especially in terms of its immunity to private economic interests. This transformation takes its full-blown form in the case we analyse in the third section, namely the recent European Citizens’ Initiative (ECI) ‘Stop Vivisection’, which explicitly addresses animal experimentation as a matter of negotiating the governance of science and its role in promoting a community’s collective project. In the face of a controversy that is still underway, the paper concludes that highlighting the common socio-political disagreement at the basis of our case studies fleshes out a core testing ground for regulatory and normative closure of public controversies surrounding animal experimentation, and provides broader reflections on science and its position in an open society ([Popper, 1962](#)).

## 2. The origins of modern antivivisectionism

To understand the nature of the debate on animal experimentation, it is useful to look at what is generally considered the birthplace of modern antivivisectionism: Victorian Britain. This is not to say that animal experimentation was not practised earlier, nor that there was no debate as to its legitimacy, but that it “did not develop into a major, public controversy” until then and there ([Rupke, 1987](#), p. 1). Debates emerging elsewhere in the Western world were strikingly similar ([Rupke, 1987](#)), and most often explicitly modelled onto the British movement ([French, 1975](#), p. 233). Our aim, here, is not to attempt a history of the movement, but to build on the work of historians to pick up relevant and often neglected threads that appear more useful than previous narratives for the analysis of the current debates.

The Victorian antivivisection movement was largely religious and conservative in background, its politically powerful allies were nearly all of Tory allegiance and it enjoyed little support from the working poor ([French, 1975](#); especially p.236–239; see also; [Kean, 1998](#)). In fact, it was born out of Puritans’ broader program of reformation of the masses, and was therefore dismissed as sheer hypocrisy by Marxists ([Marx and Engels 1948](#), p.31; [Lafargue, 1881](#)). It was a complex phenomenon, simultaneously weaving in elements of a reactionary, bourgeois Christian movement, with feminist aspects along with the first signs of resistance (on the side of declining elites) to some emerging powers, especially those of medico-scientific elites.

The public figure who influenced it most was Frances Power Cobbe, a fierce militant of the *Royal Society for the Prevention of Cruelty to Animals* before she founded the *Society for the Protection of Animals Liable to Vivisection*. Of note, Cobbe was a meat-eater and did not believe in animal rights ([Elston, 1987](#), p. 276; see also; [Rupke, 1987](#), p. 5), which is particularly illustrative of the nature of

the movement.<sup>3</sup> In fact, if animal cruelty was constantly depicted in antivivisection literature, *it was not only (and arguably not even primarily) out of care for the animals, but to question the morality of experimenters*<sup>4</sup>. For instance, a particularly influential antivivisection pamphlet recounting a physiology lecture does not simply describe the cruel experiments, but emphasizes especially how *comical* the physiologists were finding them (Hageby & Schartau, 1903). Similarly, an American physician attending lectures by Magendie (a reputed vivisectionist and mentor of Claude Bernard) noted “Monsieur M. has not only lost all feeling for the victims he tortures, but he really likes his business. When the animal squeaks a little, the operator grins; when loud screams are uttered, he sometimes laughs outright.” (cited in Olmsted, 1944). More than being just morally repugnant, vivisectionists inspired fear and conjured an image of the scientist as driven by an unquenchable if not perverse curiosity, prone to *débordements* beyond humanity—as famously illustrated by H.G. Wells’ “Dr. Moreau” (1896).<sup>5</sup> People readily identified with the laboratory animals (Kete, 2002, p. 29) to the point that there was literally a “fear of being vivisected” (Miller, 2009, p. 336). As antivivisectionists saw it:

“There is no argument in favor of Vivisection which does not apply more completely, more forcibly, to men than to animals. If the inferior is justly sacrificed to the higher, the legality of the surrender to scientific torture of idiots, criminals, those incurably diseased, and, indeed, all ignorant and brutalized men, including vivisectionists, is beyond question.” (Cobbe, 1890, pp. 5–6; see also; Buettinger, 1997, p. 864, p.864).

Such connections between laboratory animals and the powerless members of our society have been framed as “ontologies of vulnerability” (WGOCAE, 2015, p.30), according to which mobilization and solicitude towards animals are prompted by the vulnerability they share with the weak and voiceless in our society (e.g. children, mentally ill). This is especially visible in the close ties between antivivisection and feminism. Although numbers are difficult to establish, the available evidence suggests that up to 60% of the antivivisection leadership, and three quarters of the audience attending their meetings, were female (French, 1975, pp. 239–240). Despite serious conflicts with parts of the feminist movement (Mitchell, 2004), Cobbe herself was also a feminist, and both of her battles – feminism and antivivisectionism – represented, in her view, a broader fight against ruthless male abuses. On top of enjoying a lower social and legal status, women perceived themselves also specifically as victims of the exclusively male medical establishment. This feeling was exacerbated by the ‘Contagious

Diseases Acts’ of 1864, which subjected prostitutes (but not their clients) to compulsory and humiliating medical examinations as well as confinement, triggering an agitation that challenged this public health measure on ethical grounds. A similar association is visible in the early 1900’s Suffragette movement, which advocated the extension of voting rights to women. Its sympathisers reacted simultaneously to the government and to its allied, dominantly male medico-scientific establishment (Miller, 2009). Following strategies well-established by the earlier anti-slavery movements, antivivisectionists therefore sought further support by framing the movement as a broader defence of the weak against wanton power held by the medico-scientific apparatus (French, 1975, p. 408). An antivivisection pamphlet published during an electoral campaign puts it quite explicitly:

“If you have a vote [...] give it to a candidate who will heartily oppose Vivisection. You may be tolerably sure that in other questions he will support the cause of the weak against the strong, of religion against materialism, and of the right against might.” (1880 pamphlet, quoted in French, 1975, p. 166).

The relationship with women’s issue must however also be cast in a different light. Not enjoying professional authority, women positioned themselves by adapting the “maternal tradition” into a broader aesthetic and moral (often religious) standpoint, simultaneously claiming to represent and to educate the public (Lightman 2007).<sup>6</sup> Along with the clergy, they framed themselves as defenders of virtues and sentiments that the insensitive men of science failed to heed. For while vivisectionists justified the suppression of their immediate compassion through a more abstract compassion toward humanity (Boddice, 2012), this insensitivity and the very utilitarian reason allegedly at its roots were deemed dangerous by many (Buettinger, 1997; Carroll, 1875; Lee, 1894, p.6, p.864). In other words, the convergence between the feminist and the antivivisectionist cause was not only motivated by the ontologies of vulnerability associating the condition of women and animals against the backdrop of male oppression, but was also animated by questions regarding the nature of emotions and their role in the public sphere (Boddice, 2012; White, 2009). This can for instance be seen in the fact that, contrary to the physiologists’ expectations, the debate all but subsided with the introduction of anaesthesia (Boddice, 2012). As Boddice writes, antivivisectionist fears were principally fuelled “by physiologists’ apparent lack of regard for them, or for public feeling at large.” (Boddice, 2012, p.16).

Pressured by the antivivisection movement, the British government created in 1875 a Royal Commission to regulate the practice of vivisection. The Commission’s report recommended special legislation which led to the Cruelty to Animals Acts of 1876 – a piece of regulation which proved very soft on scientists, and greatly disappointing for antivivisectionists. While the Act restricted animal experimentation and limited it to licensed scientists, it put however licensing in the hands of the scientific community. The Commission explicitly framed the problem in terms of a trade-off between human interest in the advancement of science and medicine and animal interests. A critical issue was, and to a great extent still is, to evaluate the two sides of the balance: who shall evaluate suffering and judge the importance and potential benefits of an experiment?

To limit the “hindrance” (Clark, Bryant, Paget, Wilks, & Paget, 1891, p. 158) of antivivisectionism, in 1882 scientists formed the Association for the Advancement of Medicine by Research (AAMR),

<sup>3</sup> Obviously, many anti-vivisectionists were also promoting vegetarianism (e.g. P.B. Shelley, H. Salt, J. Wesley, J. Ritson, J. Oswald, etc. See for instance Kean, 1998), and issues such as slaughterhouse reforms were occasionally discussed in antivivisectionist periodicals (French, 1975, p. 260). Our argument is not that antivivisection was insulated from other such issues, but rather that it was entirely possible, and in fact rather common, to have strong views against antivivisection without more general commitment to animal rights, and that antivivisection arguably had more to do with spiritual hygiene movements than with animal rights.

<sup>4</sup> It was at least in part also to give subjectivity to the voiceless, pitching compassion against utilitarian thinking. As Mayer writes, for vivisection advocates, “To represent the animal with feelings was to confuse public discussion of the utility of vivisection. [...] Similarly, by rhetorically transforming the animal research subject into abstract images of volatile natural forces holding life-saving information, vivisection advocates assumed public ownership of a rational, unsentimental picture of the nonhuman, while effectively excluding the animal from public representation.” (Mayer, 2009, p.201).

<sup>5</sup> From some of Jules Verne’s scientists to Mary Shelley’s “Frankenstein” (1818) and, in the very heat of the antivivisection movement, Wilkie Collins’ “Dr. Benjulia” (1883), scientists are described at best as secluded eccentrics, obsessed with matters detached from practical concerns, and at worst as damned beings, lacking any humanity and enlivened by a taste for cruelty.

<sup>6</sup> Excluded and dismissed as prone to sentimentalism by the champions of science, women came instead to be associated with mass culture, simultaneously opposing the elitist professionalization of science and filling the niche opened by scientists’ adversarial representation of the public.

that was to greatly influence Government. The AAMR argued that “lay people were unqualified to exercise judgement in a matter involving esoteric professional knowledge” (French, 1975, p. 217), and indeed after only a few years the responsibility for licensing vivisection was transferred entirely to them. Complaining about this conflict of interest, antivivisectionists would later write of the AAMR that “[t]heir whole policy has been a policy of concealment; or undermining that which they could not pull down, and attacking in the rear those they feared to face.” (Zoophilist 1894, quoted in French, 1975, p. 213). As a contemporary notes:

“A complete autocracy was claimed by the chief ministers at the shrine of physiology, and by some few others who worshipped before the dripping altar [...] All that the public has to do with the matter is to find institutions in which the practising physiologist may carry on operations, which require appliances that are beyond his private means; and all that the legislature is bound to do in the matter is, to protect the physiologist in his practices, to the extent dictated by his scientific purposes – according to his own conscience, of which it is presumption for ‘outsiders’ to form a moral judgment.” (B. Grant, quoted in French, 1975, p. 335, original emphasis).

In other words, while the Commission formally acknowledged antivivisectionists’ concerns by recommending regulation, it denied *de facto* their salience for scientific practice and even reinforced, by institutionalization, the autocracy of science on regulation of animal experimentation.

This historical sketch of early antivivisectionism shows that such social movement was never simply – and apparently not even primarily – about protecting the interests of animals and opposing their trade-off with human interests. At the core of the conflict lied a broader problem with scientists, their power and their relation to the rest of bourgeois society. Of course, to some extent this more overtly political dimension was also instrumentalised in the recruitment of support for animal welfare, but the very fact that such arguments gained traction testifies to the importance of these political tensions. As White wrote, “the stakes (in human terms) were the authority of laboratory practices and scientific medicine and the role of people outside of these professions to intervene in debates about their natures, their bodies, and the care of the animals who gave significance to their world.” (White, 2009, p.75–76) As we shall see, much of the same unfolds in today’s debates.

### 3. The Italian adoption of the EU directive on animal experimentation

The last few years have seen the emergence of a heated public debate surrounding the European governance of animal experimentation, of which we will discuss two major episodes. In this section, we focus on the Italian debate surrounding the national amendments to the European Directive 2010/63/EC, which regulates the use of animals in biomedical research, and commits to their progressive replacement. We show how, despite major transformations in discourses on animal welfare throughout the 20th century, the Italian debate around the implementation of the Directive revives, and simultaneously transforms, some of the rhetoric and power struggles observed in the Victorian case.

The 2013 Italian delegation law n.96<sup>7</sup> (Senato della Repubblica 2013, article 13) for the implementation of the EU directive

contained several additional restrictions on animal experimentation, including (among other things) restrictions regarding genetically-modified animals, a ban on animal use in research on warfare and addiction, a prohibition on the breeding of dogs, cats, and primates for scientific purposes, and a ban on xenotransplantation that especially threatened cancer and stem cell research across the country.

Posing as the voice of the people, supporters of the law such as Michela Vittoria Brambilla – a member of Parliament who also leads the animal rights movement “La Coscienza degli Animali” – attempted to justify these restrictions by insisting, often without any evidence, that animal experiments are simply unnecessary for the advancement of biomedicine.<sup>8</sup> The vast majority of scientists was taken aback, unable to understand the apparent arbitrariness of the restrictions, and even unaware of the delegation law until it was voted in Parliament on the 6th of August. Their reaction was mostly confined to the aftermath of the law’s approval, and took shape through the Pro-Test Italia association, a vocal non-profit organization managed by young scientists, aimed at defending biomedical research and “establishing a close contact between the reality of animal experimentation and that of lay people, often unaware and ill-informed about it”.<sup>9</sup> Pro-Test embraced squarely the “deficit model” of public understanding of science (Felt & Wynne, 2007), pointing to the public and parliamentary representatives’ ignorance as the sole cause of the controversial and restrictive implementation of the EU directive. Their strategy was thus to highlight and disseminate “knowledge” about all the limitations of the proposed legislation, in particular through a letter to the members of Parliament (Pro-Test Italia 2013a). Echoing Victorian physiologists, they also underscored the competitive disadvantage Italian scientists would incur, with respect to scientists in other member states, if the restrictive implementation were approved. No doubt Pro-Test’s letter successfully debunked some prejudices and fallacies in their opponents’ discourse (Pro-Test Italia 2013b). It showed that major scientific publications still rely heavily on experiments involving animals, and consequently that it is far from established whether such experiments are (un)necessary to the advancement of science<sup>10</sup>. Yet, these arguments failed to address the deeper concerns of their opponents, namely the protection of animal welfare and the responsibilities of science (as an institutionalized, publicly-funded, collective endeavor) in promoting it. While anti-vivisectionists welcomed the law as the beginning of the end for the “vivisectionist empire”, and the recognition of “the right of sentient beings who are assaulted in the name of false science” (Lega Anti Vivisezione, 2013a), members of Pro-Test were rather concerned with “the reasons of research and Science”; namely, with the idea that stricter regulations on experiments involving animals would hinder effective competition of Italian researchers with their European colleagues. In doing so, they presented the value and necessity of animal experimentation as *self-evident* and instrumental to Italian science, rather than confronting directly the epistemic and normative disagreement on the implementation of the EU directive. The Pro-Test reaction to the delegation law did not consider the possibility that the argument on competitiveness with other European scientists did not address, and hence could not be expected to trump, the societal concerns

<sup>7</sup> Within the Italian legislative system, a “delegation law” (i.e. *Legge Delegata*) is a piece of legislation, which deputizes to the government the legislative function that belongs, by constitutional principle, to the Parliament. A delegation law has the objective of providing a general framework for the legislative action to be undertaken by the government, which then issues a “legislative decree” (i.e. *Decreto Legislativo*) on the designated matter of the delegation law.

<sup>8</sup> The group’s Manifesto clearly states that animal experimentation has no “real scientific validity” See: <http://www.lacoscienzadeglianimali.it/index.php/il-manifesto>. Accessed: 06 December 2016. (See also Healthdesk, 2014.)

<sup>9</sup> From: <https://protestitalia.wordpress.com/chi-siamo>. Accessed 06 December 2016. Emphasis added.

<sup>10</sup> See Phillips and Sechzer (1989, especially pp.79–80) for a similar observation regarding the American debate between 1966 and 1986.

expressed by activists. Similarly to what the AAMR had done in the face of Victorian antivivisectionism, the scientific community and the Pro-Test activists aimed instead at lobbying the Government to issue favorable implementation decrees to enact the approved delegation law (amounting in this case to the implementation of the implementation of a directive, in a powerful display of the stratification of incremental layers of power negotiation that defines the emerging European political edifice). The result was a relative loosening of the restrictive delegation law proposed by the Parliament, namely the interpretation of xenografts as the transplantation of whole organs rather than dissociated cells, thereby safeguarding key scientific interests (*Gazzetta Ufficiale* 2014).<sup>11</sup>

In sum, and contrary to the activists' frequent claim of representing the citizenry against scientific and economic interests, the modalities of Italy's adoption of the EU directive show how both camps engaged in symmetrical lobbying efforts on the governing body.<sup>12</sup> On the one hand, the activists and their parliamentary representatives acted as a different kind of elite with respect to the medico-scientific establishment, by approving a restrictive delegation law without stimulating a genuine public discussion on the matter (remember that, when this piece of legislation was approved, most of the scientific community was in the dark as to its content). On the other hand, the scientists countered the concerns of the activists by pressuring the government into a legislative compromise that disqualified non-expert opinions on the importance of animals for biomedical research, and aimed at preserving the scientists' stakes in the competition for resources within the European research sector.

Against this backdrop, our aim here is to trace the imaginaries that have shaped public discourse, including the public itself as a discursive entity, and how interventions of key actors strengthened them. In the midst of this dispute, a number of individual stories caught the attention of media and triggered major mobilizations on social networks, becoming polarizing anchors in the public discourse and thereby offering privileged vistas on the narratives animating this socio-political controversy. While a number of these stories convey similar narratives,<sup>13</sup> we take here as paradigmatic and arguably highest-impact example the clash around the telling vicissitudes of Caterina Simonsen, a 25 years old veterinary student suffering from four rare and debilitating diseases who became a national icon for both defenders and opponents of animal experimentation. Her popularity began in December 2013 when Caterina posted a picture (*La Repubblica* 2013a) on Facebook to support the cause of scientists and express her gratitude to those researchers who "gifted her with a future" thanks to "true scientific research, which involves animal experimentation". The reaction to her Facebook post was violent: many alleged animal rights activists attacked Caterina on social media, claiming that they would gladly

trade her life with that of the numerous innocent beings sacrificed daily for experiments. The story of Caterina rapidly spread over the major Italian newspapers (*Corriere della Sera*, 2013), blogs and webpages of political parties (*Amati*, 2013), as well as antivivisection organizations (*Lega Anti Vivisezione*, 2014) and pro-animal experimentation associations (*Pro-Test*, 2014) in the following weeks. The reaction was at first glance a unanimous condemnation of the violent language used against her: politicians, activists, journalists, scientists and patients, on both sides of the dispute, all stood with her proclaiming indignation over the personal attacks she had faced.

In the aftermath of Caterina's incident, however, many antivivisectionists, while distancing themselves and their organizations from the trolling storm that had targeted her, tried to dissect the most recent events and offer political analyses of their roots and impact. For example, the Italian Antivivisection League (*Lega Anti Vivisezione*, 2013b) deplored that the clamour generated by Caterina's story indeed led to an increase in public sympathy for the 'false science' supporting animal experimentation. Various analysts went further and tried to investigate the 'pedigree' of the alleged offenders (discrediting their membership to animal rights movements), by showing a contradiction between the blistering attack to Caterina and some of their habits displayed on social media, such as meat consumption, or the use of leather clothes (*Cossu*, 2013; *Indelicato*, 2014). Others focused instead on Caterina's own cyber-life (*D'Amico*, 2013b, 2013a). First, the fact that she shares the name with a US-based company providing rodent housing and production for biomedical research (i.e. Simonsen Laboratories) was used to suggest that she may have had a vested, economic interest in animal experimentation (*D'Amico*, 2013b). Second, her Facebook profile was thoroughly scrutinized so as to highlight a controversial post where she had attacked a court's decision to compensate some prisoners due to the poor conditions of their detention. Activists interpreted her stance as displaying ruthless political views on human rights, as if these were fundamentally tied to those expressed on non-human animals, and thus giving her famous Facebook post a neo-Victorian turn that suggested, when it did not positively forge, an alliance between animals and the least privileged humans. Most importantly, however, the reactions of antivivisectionists to Caterina's story emphasized how her defence of animal experimentation should be understood as the result of a broader cultural context where economic and scientific interests conflate into an "organised propaganda" (*Gallinae in Fabula*, 2014) in support of such practices. In this view, Caterina was – perhaps unintentionally – reiterating the message of a politico-scientific establishment indifferent to an allegedly factual disagreement on the utility of vivisection, and to the value-conflicts arising from trading animals' interests for the benefit of humans. Thus, well beyond the violent reaction of those she calls "nazi-animalists" (*La Repubblica* 2013b) to her support for animal experimentation, the story of Caterina epitomizes the core socio-political controversies at the basis of this debate, thereby enabling the identification of three important elements about the Italian debate that resonate with the other case we have investigated in this work.

First, while the Italian debate reiterates the classical form of a trade-off between animal suffering and human welfare through the advancement of science, the actors balance the two sides of the equation differently. Pro-Test defenders of "scientific freedom",<sup>14</sup> as well as important representatives of the Italian scientific

<sup>11</sup> These legislative decrees, together with the delegation law which instructs them, have become the matter of an infringement procedure the European Commission has announced against Italy (EC infringement number 2016/2013). Such tool allows the Commission to sanction member states who stretch their interpretation of a Directive beyond the limits it establishes, and thus violate the principle of subsidiarity (i.e. the founding principle of the European political architecture that distributes agency and jurisdiction between central European institutions and member states).

<sup>12</sup> Remarkably, a recent poll from *IPSOS Public Affairs*. (2014) shows the Italian population to be perfectly split with regard to animal experimentation: 49% find it totally acceptable or acceptable, and 49% find it absolutely unacceptable or unacceptable. More generally, different surveys across different social groups show stark discrepancies regarding the permissibility of animal experimentation (*Hagelin, Carlsson, & Hau*, 2003), and mass media coverage likely plays an important role in shaping these attitudes one way or another (*Kruse*, 2001).

<sup>13</sup> See for example the stories of Susanna Penco (*Il Giornale* 2013) and Michela Kuan (*Lega Anti Vivisezione*, 2014).

<sup>14</sup> See: <https://protestitalia.wordpress.com/chi-siamo>. Accessed 06 December 2016.

community such as Elena Cattaneo (both a prominent scientist and a member of the Senate), ground the legitimacy of animal experimentation on the *factual* recognition that science cannot yet renounce such experiments for its progress, and address dissent as a deficit of knowledge. Italy “is no country for scientists”, Cattaneo recently argued, if politicians proudly support the “tribal” battle against animal experimentation (Brocca, 2016). Within this context, Caterina represents the *embodiment* of such framing. She claims to be alive thanks to the “true research” involving non-human animals, and for this reason she decided to publicly express her support to researchers on Facebook. Her hope is to raise awareness on the benefits produced by animal experimentation through an anapodictic judgment: the fact that she is there does not call for any further demonstration of the usefulness of such practice. Perhaps insofar as based on the false premise that public knowledge is reducible to undisputable factual statements (Jasanoff, 2007), Caterina’s “facts” did not however persuade the activists, who had a very different view on the trade-off. To them, Caterina abides by the “propaganda” spread by the scientific community and the Pro-Test activists, which ignores both an alleged disagreement among scientists on the value of animal experimentation, as well as another important element of the trade-off establishing its legitimacy: the clash of moral interests between human and non-human animals. Simply put, the activists deemed both *unnecessary* and *unworthy* the suffering of the animals that had been exploited, albeit indirectly, to keep Caterina alive.

Second, and in contrast to the Victorian case, the story of Caterina reveals a perspective on scientists that is different from the one of a sadistic torturer. Rather than the evil of the scientist, the cause for concern here is the accountability of science and its institutions. Indeed, Caterina is presented as an *unwitting* spokesperson (she is a university student) of the propaganda on animal experimentation. Even her misadventure, with its reverberation in national news, was at times regarded as a plot to support the cause of pharmaceutical companies and scientists (Fuccillo, 2014). Caterina’s words are thus interpreted as *the product of the economic and political stakes* that scientists hold in experiments involving the use of animals. Differently from the debate characterizing Victorian Britain, activists in the Italian case did not primarily rise as defenders of moral virtues neglected by insensitive men of science. Rather, their complaints targeted science as a social, political and – most importantly – economic endeavor. In particular, the discourse they held against animal experimentation and its defenders (such as Caterina) sees scientific research as potentially open to biases and vested private interests, calling into question the present model of science governance in which scientists are granted public trust in exchange for holding higher responsibilities<sup>15</sup> than other sectors (see also Asdal, 2008). The activists’ narrative points to the alleged difficulties of delegating to science (i) the resolution of the factual controversies they identify in the practice of animal experimentation, and (ii) the containment of the powerful role of market forces in the configuration of collective notions of legitimacy and justification on this matter. Simply put, the exceptional mandate of science captured within special legislation does not suffice, according to them, to contain the power of economic incentives, and to prevent the spread of propaganda in favor of “false science” (Lega Anti Vivisezione, 2013a).

<sup>15</sup> This higher responsibility is for instance embodied in the country’s legislation. As prescribed by the law 189–2004 (Gazzetta Ufficiale 2004) and the legislative decree 26–2014 (Gazzetta Ufficiale 2014), failing to kill or anaesthetize a test animal leads to financial sanctions and a potential revocation of the research project’s authorization to conduct animal research, thus imposing sanctions to such scientific misconduct which *add to*, and are *greater than* the penal sanctions already foreseen in the general penal code for crimes against animals.

Third, besides their equivalent albeit specular engagement with political power, the debate on the Italian adoption of the EU directive highlights one more commonality between the elites championing the two opposing fronts, namely the exceptionality of science as a discursive resource that is apparently accepted by both camps (although with due differences) not only as unproblematic but as structuring the very boundaries of what should be discussed. Indeed, the Italian scientific community made only few attempts (Pro-Test Italia 2012) to link animal experimentation to other conspicuous uses of animals, such as those entailed in industrial farming and more generally in food and clothing production, despite both the sheer evidence of numbers, along with a wealth of moral arguments, readily available to counteract the salience being attached specifically to animal experimentation. Discrepancies in the treatment of animal experimentation and other uses of animals are pervasive in the Italian debate on both sides of the dispute. One example is Caterina, who declares herself vegetarian and to have chosen veterinary studies in order “to save animals” (Corriere della Sera, 2013), while making public her defense of animal experimentation. The same discordance can be found in the way Italian antivivisectionism addresses respectively practices of intensive breeding, farming of animals and their use in scientific research. The statutory and programmatic principles of major animal rights associations operate in fact the following distinction: while the involvement of animals in scientific research requires in their view an “institutional commitment to alternatives” and/or “a legislative ban”, the suffering of animals in the food industry instead calls primarily for a “change of menu”.<sup>16</sup> Finally, also scientists appear to have completely internalized these discrepancies by receding to a ‘damage-control’ strategy which adopts in full the logic of the 3Rs ethical framework (see Russell & Burch, 1959) to “Replace, Reduce and Refine the use of animals wherever possible”. By subjecting their practices to this ethical framework, scientific institutions thus reproduce the unbalanced distribution of moral duties across uses of animals in our societies, and reiterate the special status given to science. In sum, all sides of this controversy seem to agree on the exceptionality of science, and the need of a publicly accountable oversight of animals’ involvement in its activities. This, we argue, accounts (at least in part) for the shift of questions around animal experimentation from an ethos of animal welfare to a socio-political controversy over the collective means of controlling science. Indeed, while meat consumption is familiar to citizens, in the sense of falling within the responsibilities and judgements of every consumer, the little direct oversight citizens can claim over the means of biomedical research entails a fiduciary model whose legitimacy is currently put into question.

The Italian case shows how contemporary controversies around animal experimentation are neither simply due to public ignorance (as the Pro-Test activists and major scientific figures have argued; see Brocca, 2016), nor solely to the different “value” scientists and the public assign to the sacrifice of non-human sentient beings for human interests. Within the Italian context, as the confrontations growing out of Caterina’s story show, antivivisectionism directs its critical discourse at the place that political disagreements and public concerns hold in the governance of animal experimentation. Different degrees of expertise, basic epistemic disagreements (concerning what animal experimentation ought to be good for) and normative clashes usher into a distrustful account of the Italian institutional arrangements to control science – framed as an exceptional domain of activity and hence accountable to a special

<sup>16</sup> See: <http://www.lav.it/cosa-facciamo/allevamenti-e-alimentazione>; <http://www.lav.it/cosa-facciamo/vivisezione>; <http://www.lacoscienzadeglianimali.it/index.php/il-manifesto>. Accessed 06 December 2016.

political mandate – and their effectiveness in restraining its susceptibility to economic and political interests.

#### 4. The European Citizens’ Initiative

The Italian controversy was echoed at the continental scale through the European Citizens’ Initiative (ECI)<sup>17</sup> *Stop Vivisection*, registered in 2012 (ECI (2012)000007) and submitted to the European Commission on 03/03/2015 after having accumulated considerably more than the required one million signatures in several member countries. Interestingly, the vast majority of the signatures were gathered in Italy (Fig. 1A), and a considerable portion of the ECI’s budget came from Italian associations (ECI website). In fact, according to Google search trends, search queries for “stop vivisection” were in the last 4 years virtually all coming from Italy, leading in 2014 to a major spike in the worldwide search trends (Fig. 1B).

The ECI asked the Commission to abrogate the aforementioned European Directive 2010/63/EU on animal experimentation and effectively phase out animal experimentation. The directive, which

was touted as “among the world’s most advanced pieces of legislation concerning animal welfare”, builds upon the 3Rs ethical framework (see Russell & Burch, 1959) and commits to the “development, validation and uptake” of alternative methods (C(2015) 3773; Directive 2010/63, art. 47). In other words, the directive purports to do just what the ECI asked – phasing out, albeit *gradually*, animal experimentation. Such alternative methods are in fact, according to the legislator, not yet available (Directive 2010/63, L276/34). Predictably, therefore, after a public hearing<sup>18</sup> in front of the Commission on the 6th of May 2015, the EU reported its final decision (on June 3rd) not to alter the current legislation and to continue its current efforts in reducing the use of animals in research and developing alternatives. *Stop Vivisection* came, in the words of the European Commission, “at a time of transition” when the “significant progress in the development of alternative approaches” does not qualify yet as sufficient ground for complete replacement of animal experimentation (C(2015) 3773, p.2). Unsurprisingly, the response of the Commission solved none of the contentions of the ECI’s promoters.

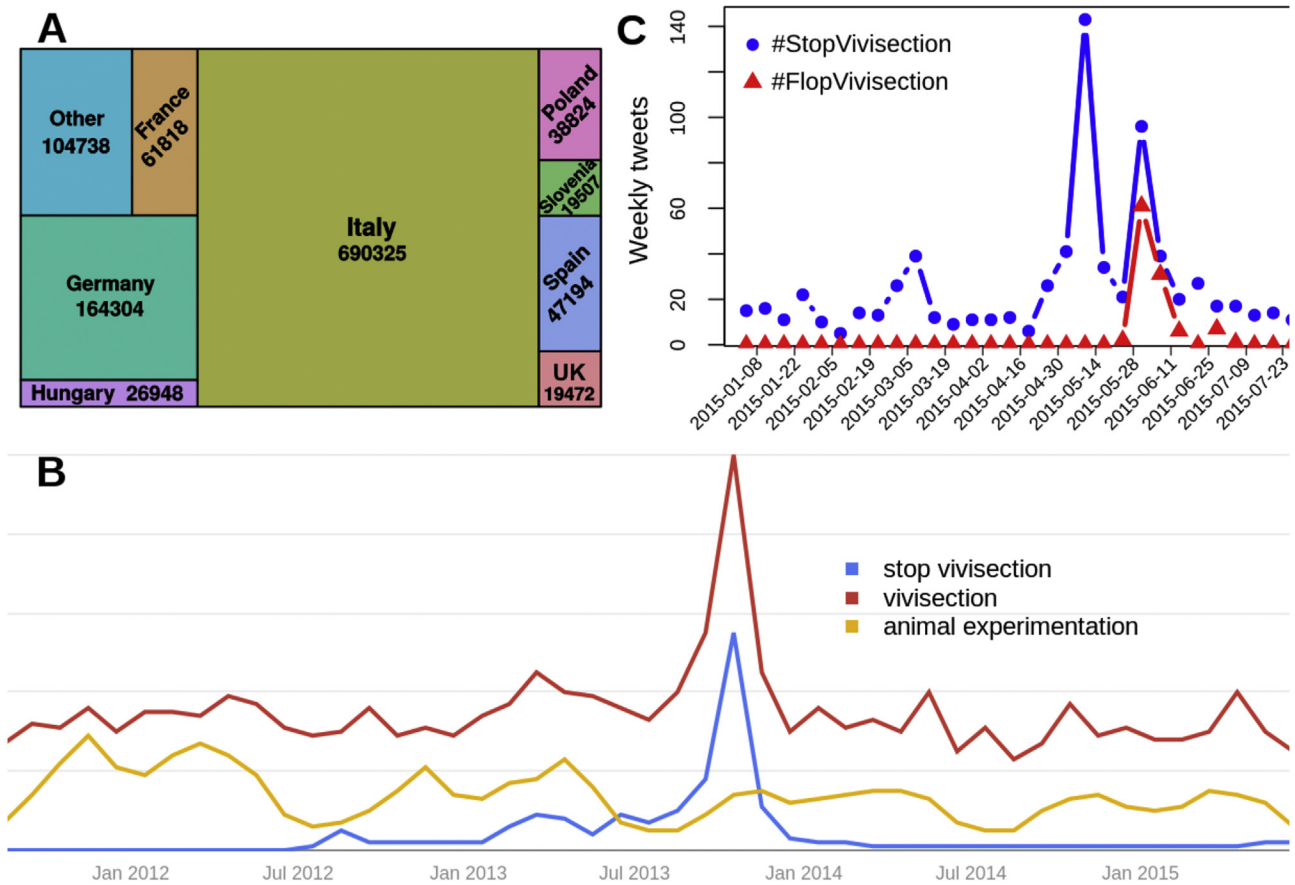


Fig. 1. A: Proportion of signatures obtained in each top country for the ECI “Stop Vivisection”. B: Google search trends for three relevant keywords during the course of the ECI. C: Tweets for key hashtags in the months surrounding the ECI hearing.

<sup>17</sup> A mechanism of the European Union enables citizens to force the Commission to discuss an issue by gathering enough signatures from enough countries. At the time of this writing, all three Citizens’ Initiatives were quickly dismissed, making this mechanism yet another parody of democracy.

<sup>18</sup> The recording of the ECI Hearing is available on the website of the European Parliament at the following address: <http://www.europarl.europa.eu/ep-live/en/committees/video?event=20150511-1500-COMMITTEE-AGRI-ENVI-ITRE-PETI> (last accessed 06 December 2016).



To understand the motivations behind the ECI, it is in fact worth noting that *Stop Vivisection* differed considerably from traditional animal protection campaigns. As the organizers repeatedly emphasized, the primary grounds for their rejection of animal experimentation were scientific, rather than ethical<sup>19</sup> – or ethical insofar they concerned *human* rather than animal welfare. They contended that Directive 2010/63 erroneously assumed that “the use of live animals continues to be necessary to protect human and animal health”; an assumption claimed to be both “confusing” and “out of step with modern knowledge of [...] the human and animal body” (Annex III of the ECI Dossier, 2015, p.30). “The real truth”, the ECI Dossier claims, “is that animal testing has never been validated.” (p.3). Thus, the ECI proponents not only argued that animal experimentation is unnecessary, but that it is so inefficient a means for toxicology studies, and biomedical research in general, that it is literally a danger for citizens’ health. The ECI Dossier provides what its proponents consider to be extensive evidence in support of “our inability to tackle [...] with adequate scientific methods” (p.7) the dramatic increase in all major morbidities (from cancer to diabetes and autism) affecting human health. This claim is framed in a crisis rhetoric, ranging from repeatedly blaming the so-called drug development crisis (decreasing number of drugs approved per million invested) on “the failings of animal-based biomedical research” (Mclvor, ECI hearing), to more apocalyptic scenarios threatening the survival of our species (Reiss, 2014, a message to candidates for the European Parliament).

As with Victorian antivivisection, it is interesting to note that each side respectively presents both replacement and continuation of animal experimentation as threats for human lives. “We don’t want human beings to be the real guinea pigs”, Tamino and the ECI organizers kept hammering during the hearing, and yet their solution relies at least in part on epidemiology (e.g. Menache & Nastrucci, 2012) and hence on human subjects. Nonetheless, to them such a careful post-marketing epidemiological monitoring appears considerably safer than the current testing standards involving animals. However, despite the fact that proponents of the ECI claim scientific evidence to be on their side and provide numerous references for their position, there is a near consensus against it in the scientific community. A number of associations and organizations supporting the use of animals in biomedical research have questioned the claims of the ECI’s proponents. Alternative explanations to the figures presented in the Dossier can be found on the websites of Cancer Research UK (2015), The Alzheimer’s Association (2015) and Diabetes UK (2014) – to name a few (see also Eyal, Hart, Onculer, Oren, & Rossi, 2010 regarding the purported rise in autism). Scientific interest groups such as the League of European Research Universities, as well as bodies involved in research for alternatives to animal experimentation, such as the Fund for the Replacement of Animals in Medical Experiments (FRAME) and the Virtual Physiological Human project, all positioned themselves against *Stop Vivisection*. Similarly, a 2011 survey conducted by the Nature Publishing Group reported that 92% of the surveyed scientists agreed with the statement that “Animal research is essential to the advancement of biomedical science” (Cressey, 2011, p. 453).

Therefore, while the debate shows a more or less widespread agreement across all parties that animal experimentation should be replaced, the terrain of the dispute appears to be the official position of the scientific community; namely, the “fact” that “we are not

there yet” (O’Keefe et al., 2015). Behind this view is indeed the claim that animal experimentation is a “necessary evil”, a position which the Commission’s answer simply reiterates, notwithstanding that this is precisely what proponents of the Initiative are arguing against. Animal experiments, the ECI proponents claim, are so misleading that they *cannot be useful, much less necessary*. Yet, and despite its claims to be “in the hearing mode” (Katainen, ECI hearing), the Commission seemed to turn a deaf ear to this concern, coming across to the anti-vivisectionists as having “avoid[ed] the scientific arguments regarding animal experimentation” (*Stop Vivisection*, 2016). And while the ECI’s committee and experts legitimized their claims on the basis of the evidence they recruited (their dossier contains in the order of hundreds scientific references), scientists (and the Commission) merely repeated instead what they considered to be obvious: that most progresses of medicine have rested on animal experimentation and must necessarily continue to do so. Nobel laureate Françoise Barre-Sinoussi, who participated to the hearings as an expert, seemed to consider it sufficient to ask, in a rhetorical manner, “Do you really think we didn’t learn anything from animal testing?”

This dialogue of deaf was fostered by a systematic misalignment of the two camps over the very object of the dispute, namely the scope of animal experimentation, with an impressive display of discursive resources and epistemic arguments side-stepping each other. Thus, although proponents of the Initiative do cite several damning reviews and meta-reviews, their line of argument is limited to evidence on the so-called predictive usages of animal experimentation, such as toxicology testing and drug screenings. Ray Greek, who was summoned to speak by ECI proponents as an expert on animal experimentation (and very much insisted on his expertise), is fully aware of this, and repeatedly wrote in his articles that his claims apply to these predictive usages, and not to fundamental research:

*“There is no doubt that careful biological studies of rats and mice can help clarify the general contours of mammalian biology. Such studies can also play a valuable heuristic role by prompting new ways of thinking about human biological problems of interest. The issue we are concerned with is this: notwithstanding these cautions, are animal models predictive of human outcomes in, say, toxicology, drug discovery, and the study of the causes and cures of human diseases?” (Shanks & Greek, 2009, p.29, emphasis added)*

Yet, in his presentation at the ECI’s hearing, Greek remained silent on such fundamental qualification of the evidence shown, and rather presented his arguments against “the minimal role” that animal tests have played in biomedical progress, by brushing over the fact that the ECI targets *all* of animal experimentation. As Mclvor of the Humane Society notes,

*“one of the things that I appreciate most about this Citizen Initiative is that the focus has moved from regulatory testing to all of the other uses of animals, and that of course includes biomedical research. [...] This Citizen Initiative is the opportunity of the animal protection community to bring biomedical research back onto agenda, and in a much bigger way, in a way that reflects the fact that over 90% of the animals used in the European Union are used for fundamental and applied biomedical research.” (Mclvor, ECI hearing)*

This is a critical point, and one of irreducible disagreement between the parties, for it shows how the evidence recruited by supporters of the ECI does not support the claim that animal

<sup>19</sup> In this regard, the arguments of the ECI’s proponents can be inscribed in the broader trend towards ‘evidence-based activism’ already identified in other European contexts such as patient advocacy organizations in France, Ireland, Portugal and UK (see Rabeharisoa et al., 2014).

experimentation is not necessary for biomedical research *writ large*. However, the debates following the experts' contribution to the hearing was precisely *not* focused on this issue, and instead reveals to what extent a *prima facie* factual controversy on the utility of animal testing was far from being addressed at a technical level. Nor was there any discussion of whether scientific research could produce "greater goods" other than medically actionable knowledge. In other words, it would be mistaken to interpret the unconvincing response of the scientific community as betraying a lack of reasons: there was a case to be made, which none of the actors deemed useful or necessary to make.

Interestingly, the intervention by McIvor at the hearing took off from a historical reconstruction of the 1993 action against the use of animals in cosmetic testing, requiring a ban on the commercialization of products derived from it. Politicians, she argued, took action upon the voiced protests of citizens, but the effective implementation of the ban (Regulation 1223/2009) required a major effort to come to terms with the economic interests in cosmetic testing. This concern for economic interests behind animal experimentation was echoed in the intervention of Claude Reiss, who highlighted that different animal models respond very differently to the same compounds, noting – beyond the simple fact that it casts some doubt on their ability to predict human response – that this allowed chemical and pharmaceutical industries to cherry-pick their animal model for toxicity testing. "This," he said, "is very handy for the producers who want to market a given chemical, but the reverse side of the coin is that it is a disaster for human health" (Reiss, ECI hearing). And herein lies the core of the controversy: animal testing, the whole regulatory framework including [directive 2010/63/EU](#), and in the end the European Commission itself, are all seen by the ECI proponents as failing to fulfil their function of neutrality, having been captured by "vested interests" ([Greek 2015/05/15](#)), and merely "help[ing] the pharma consortia" (Eck, Independent MEP, Germany, ECI hearing). "The pharmaceutical industry is duping us", said another MEP (Evi, ECI hearing)<sup>20</sup>.

Writing after the decision of the Commission, Greek was considerably more damning. In a blog post, he summarized the discussion as follows:

"That is what happened in Brussels: the [European Commission] was untouched by education but heavily swayed by the vested interest groups that gain from the status quo. Animal modeling is not going to end by appealing to those that profit from it nor by appealing to those who are controlled by those who profit from it." ([Greek 2015/06/06](#))

Greek's accusations are not merely aimed at politicians and industry, but also very much at scientists. In opening his talk at the hearing, after insisting on not having a financial interest in the issue, he observed:

"The reason I include the fact that I have no financial interest in the outcome is because many people quote surveys that have been conducted that purport to show that almost all scientists support the use of animals in research and testing. These surveys are misleading as 1) almost all the respondents do have a financial interest in animal modeling, and 2) none of the surveys addresses [...] the predictive value of animal modeling as a modality." (Greek, ECI hearing)

Indeed, in an earlier blog post Greek even accused the Fund for the Replacement of Animals in Medical Experiments (FRAME) of having an interest in, in fact, delaying the very replacement they are supposed to foster: "FRAME needs more of your money so they can spread their propaganda to more of society who will then give them even more money" ([Greek 2015/05/15](#)).

The economic interests are seen as all the more threatening in that they act, just like the practice of science, hidden from public sight, and hence escape democratic control. Indeed, transparency was by far the most recurrent issue raised by MEPs. Echoing Cobbe's making "light into the dark places" (1885), Italian MEP Fabio Massimo Castaldo said: "I think that there's a clear transparency issue, because we don't really know what is happening behind the closed doors of the lab", and even suggested that "the official statistics are probably fiddled with". Similarly, Nicola Caputo (another Italian MEP) pressed that "we need to make sure that animal testing is more transparent [...] those who use animal testing should present information on the objectives and targets of the project [...] the member states should make it publicly available so that the citizens know what's happening in the labs" (Caputo, ECI hearing). Importantly, the European Institutions themselves are also perceived as lacking transparency and not representing the citizens: "it's not just the pharmaceutical industry, it's the European agencies that are acting in an untransparent way." (Evi, ECI hearing). As noted by Mr. Eck,

"we need to see the fact that there is a value change in our society. Animals cannot be seen as a pure good to be exploited for whatever testing. If the Commission does not accept this initiative then you are gonna see what little remaining faith in the EU institutions is there at the moment will disappear in the future" (Eck, ECI hearing).

The application of Directive 2010/63 is perceived, in other words, as the legacy of a scientific "conservatism" (Mc Ivor, ECI hearing), and – as one of the organizers of the initiative puts it – a "betray[al of] public trust" (Menache, ECI hearing).<sup>21</sup> Consequently, both the organizers of the ECI and many of the MEPs have repeatedly asked for "an open and broad debate without any prejudice" (Caputo, ECI hearing) – a debate not only about what is "obviously wrong" in science (Heubech, ECI hearing), but also a scientific debate that is inclusive rather than deferred to a scientific establishment:

"The obstacle here is not the science, it's communicating a very complex message, which obviously we couldn't do today with experts speaking for 10 minutes or less. We need a serious scientific debate, because I think we will win this scientific debate." (Menache, ECI hearing)

According to the Stop Vivisection committee ([Stop Vivisection, 2016](#)), both the scientific community and the European institutions failed to meet the requests, or provide an elaborate rebuttal of the arguments of the citizens they seek to serve. The ECI was neither used as instrument of citizen-led politics in the Union, nor taken as an opportunity to discuss the knowledge and values at the basis of EU policy undertakings. The former would have required EU authorities to address the problem of animal

<sup>20</sup> Another noted that "Very often when it comes to animal modeling we get information skewed in the interest of big companies and big medicine" (open questions, ECI hearing).

<sup>21</sup> Similar concerns can also be found in the recent report of the Oxford Centre for Animal Ethics, which highlights problems in the current legal framework, especially conflicts of interest (p.54) and a "lack of transparency – if not outright secrecy" (WGOCAE, 2015, p.44).

experimentation starting from the concerns raised by the ECI, while the latter would have instead demanded a much deeper characterization and discussion of the factual claims in support of, or against animal experimentation. Instead, none of these two approaches has influenced the political establishment and its scientific delegates in their framing or discussion of the issue. As already shown by [Jasanoff \(2007, chapter 3\)](#), European Institutions have always been perceived as distant from the polity they purport to represent. Our case study shows that the problems of legitimacy and transparency remained just as salient despite the introduction of the ECI instrument, which was *precisely* meant to remedy to EU's deficiencies of representation.

Furthermore, the ECI represented a major change in the repertoire of antivivisectionists' arguments, shifting the battlefield from moral claims to the scientist's own arsenal – the language of facts. And yet, rather than accepting to joust with this new opponent on the scientific battleground, the European political and scientific establishment preferred to displace power from the weapon to the wielder. Karl Falkenberg, the Director General for Environment of the EU Commission, noted that the initiative's experts had certainly made their presentation “in good faith”, but that “in real life, scientific committees are still arguing” (Falkenberg, ECI hearing), thus suggesting that the “true science” on animal experimentation, and consequently not the one recruited by the ECI proponents, is far from settling the question about its epistemic value. Along the same line of reasoning, the chairman concluded the hearings on the same note: “we want to have the highest standards in Europe, but we also need to remember the limits of science” (Siekierski, ECI hearing).

## 5. Discussion

Throughout our analysis we have argued that the animal experimentation debate revolves not only, and indeed not even primarily, around the welfare of animals, but rather around the perceived power and (lack of) accountability of science and its institutions. This is perhaps best illustrated in the earlier passage from a 1880 antivivisection pamphlet enjoining the reader to vote for a representative who opposes vivisection on the ground that “you may be tolerably sure that in other questions he will support the cause of the weak against the strong” (quoted in [French, 1975, p. 166](#)). Animals, insofar as they are helpless, are the site at which, or the object on which, power reveals its arbitrary or unfathomable character. It appears therefore that, in antivivisectionism, the despotism of such power is more at stake than its consequences for animals. This is, in turn, the explanation we provide for the exceptionality of science, i.e. why laboratory animals appear to matter more than other animals in our societies. Indeed, while meat-consumption, for instance, appears to be protected by the familiarity of citizens' daily life, science is perceived as the obscure privilege of elected few, whose ends and means, in terms of the common good, appear to lie beyond public scrutiny and require a leap of faith from the layman.

As we have shown above, Victorian antivivisectionism provides particularly illustrative examples of dynamics that have partly persisted until today. First, linking feminist politics with antivivisectionism through the lens of the ontologies of vulnerability suggests that science's exceptionalism rests on its collusion with power and its elements of unchecked accountability. Second, the Victorian concern regarding the role of emotions and popular voices in the governance of animal experimentation challenges reasons, interests and utility calculus as the sole means to adjudicate its legitimacy. Indeed, both today's dismissal of popular voices as ignorant and sentimentalist (like in the Italian case), and the citizen-led hijack of the logic of utility calculus to disprove animal

experimentation (like in the ECI) all seem to grapple with a question strangely similar to that of women in Victorian Britain: who should be allowed to evaluate this practice, and through what means? Third, and very much related to the first elements, science comes across as secluded in the antivivisectionist imaginary: practised in secrecy by men whose heartless obsession and esotericism set apart from the rest of society. Scientists and scientific institutions are regarded by its critics, through the lens of antivivisectionism, as all the more threatening in that their power is *out of the public's reach*: (i) set apart from mundane life and from the triggers of both liberating and reactionary movements in the Victorian imaginary, (ii) taken over by economic interests in the Italian case; (iii) unresponsive to the demands of organised citizenry (against, among other things, those same economic interests) in the case of *Stop Vivisection*. As shown by [Asdal \(2008\)](#), animal experimentation is a paradigmatic example of how experimental medicine has been accommodated in society since the 19th century. By conceding to scientists the possibility of inflicting the kind of suffering on animals that is not granted to any citizen in ordinary contexts, she argues, the laboratory turns from a secluded space (impermeable to societal interests) to a *specified space* of society. Our work qualifies this notion further, by tracing the key resource through which this specification occurs, namely the severing of research from other uses of animals in society on the basis of an *exceptional* framing of science. Through this lens, our cases represent thus distinct but largely convergent historical occurrences of how animals get recruited, across different contexts, as a paradigmatic testing ground of a trade-off between secludedness and specification.

Of course, there are also important differences between our time and Victorian England. First, and despite the massive rise in meat consumption throughout the last century, concern with animal welfare has grown to be part of mainstream public discourses. Animal ethics and animal rights movements have attempted to change, with increasing success, the way we eat, the clothes we wear, and shaped new collective responsibilities for the protection of animal welfare (from regulations on livestock farming to the banning of cosmetic testing in animals). This broader trend certainly influenced antivivisectionist movements, and marks distinct ways of consolidating animals' role in biomedical research in the different historical contexts we analysed. Yet, our case studies show that we would be only partly capturing the nature of the controversy if we stopped at this narrative of moral progress. In fact, the debate is *not just* about a moral dimension being recognised: at least in the two contemporary cases analysed above, the value of animal lives is rather assumed by all sides of these controversies as an undisputable commitment. Differently from the Victorian debate, the matter is not deciding whether animals suffer, or whether they are worth of any sort of moral consideration. Our contemporary cases rather revolve around the need to establish acceptable constraining procedures for *governing* the acknowledged conflicts between moral concerns for other species and the technoscientific options of biomedical innovation.

Second, another difference between Victorian times and the recent cases pertains to how the scientist is publicly represented.<sup>22</sup> In brief, Victorian antivivisectionism lacks the breadth of the industrialized and neoliberal economy in which science is nowadays inscribed. This is visible in some of the arguments provided for, or against vivisection. For instance, Richard Owen's defence of vivisection, more than a century ago, emphasized the gratuitous cruelty of hunting ([Owen, 1882, pp. 35–36](#)) to downplay the

<sup>22</sup> [Shapin \(2008\)](#) offers an excellent analysis of perceptions (both self-perceptions and outside perceptions) of scientists from the mid-19th century to this day.

“necessary evils” of vivisection, while more recently a US report instead emphasized “the 5 billion animals used annually for food, clothing, and other purposes in the United States” (Committee on the Use of Laboratory Animals, 1988, p.2). The change of language from the cruelty of the practices to the sheer amount of animals involved marks also a shift in the nature of public representation of science. Today’s image of the scientist is not anymore that of the perverse vivisector, who sadistically tortures animals in a secluded laboratory, and may thus benefit from the comparison with sport hunting. Rather, the public perception of the scientist has gradually changed to take a more socio-economic dimension, which is nevertheless not entirely discontinuous with the ruthless and often perverse logic attributed to nineteenth century vivisectors. Indeed, while scientists repeatedly proclaimed their “normality” in reaction to the fearsome picture of the “mad scientist”<sup>23</sup>, they simultaneously became “just one more of society’s interest groups” (Feuer, 1963), whose stakes might well come to conflict with that of lay citizens.<sup>24</sup> The scientist is therefore represented as a powerful actor on the political stage, and one of its most recurrent figures is that of the scientist *entrepreneur*<sup>25</sup>, understood either literally (especially in the American scene, see Shapin, 2008, p. 17) or figuratively as the careerist researcher. In both cases, the entrepreneurial ethos conflicts with the fiduciary model of science in the antivivisectionist’s discourse, and questions the academic freedom of individual scientists. As Norbert Wiener once described it, the 20th century has seen “the degradation of the position of the scientist as an independent worker and thinker to that of morally irresponsible stooge in a science-factory” (Wiener 1948; quoted in Feuer, 1963, p. 399). Such an image of scientists and science is evident in the Italian case we analysed above, through the illustrative story of Caterina Simonsen. In fact, antivivisection activists present her at best as a victim of false scientific propaganda, or downright indict her of being part of the economic establishment misguiding science. Here lies the interesting difference brought about by the contemporary cases *vis à vis* the historical reconstruction of early antivivisectionism we provided. Science is no more abnormal because of the hideous nature of some of its members, but rather hijacked by economic and political interests unaccountable for, when not positively in conflict with the common good. Very much like the Golem who turns against the community it is supposed to help, science is perceived by opponents of animal experimentation as a “creature of our art and craft” (Collins & Pinch, 1993, p. 2) that has betrayed her mandate, the epiphenomenon of a broader malaise towards the dominance of vested interests over the common good. Importantly, the issue is most often not so much about the purported greed of scientists unwilling to sacrifice, say, a career and fame built on animal models in the name of scientific integrity: like

Caterina Simonsen or the Golem, scientists are most often seen as unwitting participants to the systemic dysfunction of science. Consequently, science cannot regain public legitimacy from its elite and bureaucrats, or by knowledge dissemination: it instead requires a direct encounter with the citizenry, starting with the protests voiced by its representatives.<sup>26</sup>

The value and necessity of this grass-root renegotiation of science in the polity has been analysed in the work of Callon, Lascoumes and Barthes (2009), who have shown how the recognition of uncertainties inherent to sociotechnical controversies reformulates problems and questions that had been assumed to have been already clearly laid out, largely through a reconfiguration of political and scientific actors in a new public space: hybrid forums. These represent the refusal of the so-called double-delegation, i.e. the respective delegation of decision-making to political and scientific experts as neatly allocated spokespersons for, respectively, values and facts. Hybrid forums “short-circuit” this division through the development of new public spaces where experts, politicians and laypersons can engage each other in solving such controversies. Hybrid forums are thus a place for discussing “the border between what is technical and social”, and “introduce an indeterminacy that will not be settled until the end of [a] controversy” (Callon, Lascoumes, & Barthe, 2009, p. 26). In some way, all three cases display a refusal of, or at least a resistance to, the double-delegation model: new groups and actors contributed to reconfigure the practice of animal experimentation, both on epistemic and sociopolitical grounds in these three different contexts. From the emergence of underrepresented voices and sentiments in the Victorian case, through that of pro-science activists’ association Pro-Test in the Italian debate, to the networking and scientific backing of antivivisectionist advocacy groups in the case of the ECI, all these debates entailed a socio-political, as well as technical exploration of (new) actors, objects, public *fora* and collectives engaged in the debate over science’s authority in infringing animal welfare.

*Prima facie* the ECI can be regarded as a particularly clear-cut example of how hybrid forums handle controversies at different levels, and from a diverse array of perspectives. Experts, politicians and citizens were given the opportunity, thanks to the institutional tool of Citizens’ Initiatives, to address the problems of animal experimentation within ethical, technical and economic domains alike. Yet, as shown above, *Stop Vivisection* represents also the example of a failure of EU’s scientific and political elites to engage with the public in a consideration of the values and facts that the initiative questioned. The result of the ECI therefore adds to the account of Callon et al. (2009) an exploration of the potential ways to *defuse the political creativity of hybrid forums* in the midst of major public outcries. Far from being committed to the renegotiation of identities and questions that pertain to the factual, as well as value-laden dimensions of animal experimentation, the ECI granted only a *pro forma* renegotiation of the governance of this practice. By requiring the decision of fading out experiments involving animals to depend on a simple hearing of experts from both sides, which in the end appeared to have no actual impact on the decision-making process, the ECI did not challenge the existing stakes and interests on animal experimentation. Rather, it reinforced the idea that the political and epistemic grounds of the controversy are to be distinguished, and that it is the responsibility of experts (in both politics and science) to give closure to the debate. In this framing, animal experimentation remained therefore out of reach of the organised citizenry, and this represented a very effective weapon against the dialogic and political creativity of the ECI *qua* hybrid forum. In a nutshell, the confrontation did not produce the renegotiation of interests, identities and categories of collective thinking about animal experimentation, which the

<sup>23</sup> See especially the passage on Charles Percy Snow in Shapin (2008), p. 65.

<sup>24</sup> Indeed, O’Brien noted that based on the US General Social Survey, “the extent to which scientists are thought to serve the nation’s best interests is the strongest determinant of attitudes about scientists as policy advisors.” (O’Brien, 2012, p.7).

<sup>25</sup> Interestingly, this image was already prefigured in the Victorian era by what French described as the “self-interested scientific *entrepreneurs*” (French, 1975, p. 299, original emphasis).

<sup>26</sup> It is interesting to note that a recent collaborative effort at establishing an interdisciplinary agenda on issues surrounding laboratory animal science identified “openness and public engagement” as a key issue to be fostered, and raises as one of its most urgent question: “How is the credibility of animal models and non-animal alternatives constructed, decided upon and challenged in different contexts?” (Davies et al., 2016) This also opens up a potentially productive parallel between the cases discussed here and general trends towards participation in biomedicine: the debate on animal experimentation can be seen as an example of a broader movement towards a renegotiation of roles and responsibilities in the governance of scientific innovation between the general public and the scientific establishment (Del Savio, Buyx, & Prainsack, 2016).

dialogic democracy of hybrid forums would require. Being more concerned with an exercise of a particular kind of democracy – namely, the delegative model in which facts are provided by experts and decisions are made by politics against the ochlocracy of organised citizens – the whole ECI mechanism has resisted, pretty much by institutional design, the potential of hybrid forums to create richer communities and collectives around the issues raised by technoscience. Neither the claim that animal experiments are unnecessary to biomedical research, nor the judgement that animal welfare deserves higher protection in the European polity, ended up being genuinely opened up for challenge, let alone renegotiated through these initiatives. Rather, at least in the eyes of its supporters, the ECI ended up representing a largely unsuccessful testing of the regulatory landscape and democratic accountability of European scientific and political institutions:

“We were told that the European Citizens Initiatives would allow one million citizens to participate directly in the development of EU policies, but the current events, as with the previous other ECIs, show that citizens participation provided by the Treaties is pure illusion. (Stop Vivisection, 2016; emphasis added).

### Conflict of interests

The laboratory of GT, in which PLG works, pursues some basic research on mouse models, although most of the lab works with and contributes to develop alternatives (patient-derived cellular models). LC is a moral philosopher and STS scholar with no current financial ties (or scientific credit based on) animal experimentation, but has a professional interest in making the issue of animal experimentation a live one, ideally requiring philosophical and sociological work. Similarly, all authors have a professional interest (e.g. publishing in a renowned journal) in there being a debate in the first place.

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