Evaluative language in pro-vivisection letters to the editor in *The Times* between 1875 and 1884: The influence of *Cruelty to animals Act 1876* on what is evaluated and how

Anna Runsio

MA Thesis

English, Language Specialist Path

School of Languages and Translation Studies

Faculty of Humanities

University of Turku

November 2020

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

UNIVERSITY OF TURKU

School of Languages and Translation Studies / Faculty of Humanities

RUNSIO, ANNA: Evaluative language in pro-vivisection letters to the editor in *The Times* between 1875 and 1884: The influence of *Cruelty to Animals Act 1876* on what is evaluated and how

MA Thesis, 91 pp., 2 appendices
English, Language Specialist Path
November 2020

The objective of this thesis is to examine the use of evaluative language in texts that in one way or another defend vivisection. The primary material consists of 33 letters to the editor published in *The Times* between 1875 and 1884. The aim is to find out what and who are evaluated when vivisection is defended, and what type of evaluations are utilised. Furthermore, changes in the evaluative language between the letters published before and after the *Cruelty to Animals Act 1876* are looked into, in order to find out whether the Act had influence on people´s attitudes concerning animal experimentation and thus the evaluative language used in the letters.

To investigate the evaluative language in the letters, appraisal theory (Martin and White 2005), a lexis-oriented classification system for analysing evaluations, is used. The framework is divided into three subtypes of Appraisal, but in this thesis, the focus is on Attitude, which deals with the actual feelings and opinions conveyed in texts. Attitude is further divided into Judgement, Appreciation and Affect, along with their subcategories. Besides the Attitude subtypes, the evaluations in the letters are categorised according to their target, valence and explicitness. The data are analysed both qualitatively and quantitatively.

Summarising the most relevant changes in the evaluative language and connecting them to vivisection itself, it can be concluded that there is a clear shift between the periods under examination in how the practice is seen and what aspects are highlighted: In the former letters, different types of animals, their use and their suffering are discussed relatively frequently, but patients, their suffering and diseases causing that suffering are hardly mentioned. In the latter letters, in turn, animals are rarely mentioned, but patients and diseases are discussed rather frequently. What is more, the utility of animal experimentation is raised substantially more frequently after the Act. It seems that before the Act, animals and their suffering are still considered worth discussing, but after it, people and their potential suffering replace animals in the discussion. In the same time, the role of the utility of vivisection, i.e. its potential for helping potentially suffering people, becomes increasingly important in people's minds. Therefore, the findings indicate that the Act did influence people's attitudes. Further, the findings support the idea that, instead of protecting animals, the Act protected vivisection by legitimising it and thus helping it become the standard method in biomedical research.

Keywords: animal experiment, appraisal theory, *Cruelty to Animals Act 1876*, Late Modern English, letter to the editor, vivisection

Table of contents

List of tables

1 Introduction

The 19th century was highly significant to the development of animal[1] protection and related legislation. The UK was the leading country in taking the first concrete steps towards better treatment of animals, both in terms of animal welfare charity and animal welfare legislation. For example, the world's first animal welfare organization, the *Royal Society for the Prevention of Cruelty to Animals* (RSPCA) was founded in 1824 and was followed by several organisations focusing on different types of animal welfare issues. As for legislation, in 1822, the *Cruel Treatment of Cattle Act 1822*, the first significant piece of animal protection legislation in the world, was passed. It was expanded by the *Cruelty to Animals Act 1835*, and 14 years later, both Acts were replaced by the *Cruelty to Animals Act 1849*.

The century was of great importance to regulating animal experimentation as well. In 1875, the world's first anti-vivisection organization, the *National Anti-Vivisection Society* (NAVS) was established, the total abolition of vivisection as its prime objective. At the time, *vivisection* was understood to mean surgery or other painful operation conducted on a living, sentient animal[2]. The practice had been in use already in Ancient Greece and since then had formed a more or less systematic part of scientific research in some societies, but during the 17th and 18th century, animal experiments became a more widespread and regular part of medical and physiological investigation. In the 19th century, all types of scientific exploration increased dramatically both in Britain and elsewhere, and also medical research developed substantially, which resulted in a considerable increase in the use of experimental animals.

In July 1875, due to growing opposition to vivisection, the Royal Commission on Vivisection was set up by the government, and it ended up recommending that legislation be enacted to control the practice. In August 1876, the world's first legislation to regulate animal experimentation, *An Act to amend the Law relating to Cruelty to Animals Act 1876* (henceforth referred to as *Cruelty to Animals Act 1876*) was passed—and remained in force for the next 110 years. As Hamilton states, "[t]he nineteenth-century vivisection

[1] I use the term *animal* in this thesis—although it is not an ideal term to refer to non-human animals—because that is the term used in the primary material.

[2] Today the term sometimes has a broader meaning. For example, according to New England Anti-Vivisection Society's website, *vivisection* refers to "using animals in ways that cause distress and/or death in attempts to test the safety of drugs and biological products or of finding treatments, prevention, or cures for human diseases". Furthermore, nowadays the term is mainly used by the opponents of the practice, while defenders prefer terms such as *animal experimentation*, *animal research* and *in vivo testing*.

controversy in England is a distinctive shaping moment in the history of animal welfare and the changing relations between humans and animals" (2004, xiv).

In this thesis, the focus is in particular on the abovementioned vivisection controversy in England, concentrating on a ten-year period around the effective date of the *Cruelty to Animals Act 1876*. Since both the country and the decades are of such significance to the development of laboratory animal protection around the world, it is important to understand how the topic was dealt with at the time, e.g. what aspects were raised, what sort of arguments were used and what type of language was utilised. For the purpose of this study, the latter question is the one under examination; more precisely, the aim is to examine the use of evaluative language in letters to the editor in *The Times* that in one way or another defend vivisection. Further, I will look into possible differences in the use of evaluative language between the letters published before and after the *Cruelty to Animals Act 1876* came into effect.

To analyse the use of evaluative language in the letters, I will use *appraisal theory* (Martin and White 2005), and I will also make some suggestions concerning the theory. This particular framework was chosen for the purpose because it provides a lexis-oriented, discourse-based, detailed and multi-layered classification system for analysing evaluations. The material contains a considerable amount of explicitly evaluative lexis, which is why I find this type of lexis-oriented perspective particularly fruitful. Moreover, the theory takes into account the wider contexts—textual and social—in which individuals evaluations occur, the importance of which increases even further when analysing implicit evaluations, which compose the majority of my data. Finally, a less detailed framework might not do justice to the diverse and colourful language used in the material.

The 19th century vivisection debate, the rise of the anti-vivisection movement and the significance of the *Cruelty to Animals Act 1876* have been dealt with extensively in previous research (e.g. French 1975), but I have not been able to find any linguistic study concerning these topics. As for appraisal theory, it has been used in a dissertation that examines emotion-based strategies in modern anti-vivisection and pro-research mobilisation (Grivas 2008) and also in an article studying the portrayal of murderers and their victims in late 19th century newspapers (Nevala 2016), but, as far as I know, it has not been applied to 19th century letters to the editor of any topic nor to other historical texts opposing or defending vivisection.

In a nutshell, the theory is about linguistic resources of various types that speakers and writers use both to express evaluations of people, objects and processes—i.e. targets—and to engage themselves to the ideas presented in their texts (Martin and White 2001, 1). The theory is divided into three subtypes of appraisal—*Attitude, Engagement* and *Graduation*—but in this thesis, the main focus will be on Attitude and its subsystems *Judgement, Appreciation* and *Affect*. Both qualitative and quantitative analysis will be conducted in order to gain better understanding of the language and possible differences between the time periods under examination. For annotating the letters and running statistical analyses, I will use UAM CorpusTool, a text annotation software that has an editable Appraisal scheme. The research questions I will be seeking answers to are as follows:

1) What and who are the targets of evaluation when vivisection is defended?
2) What types of evaluation are used when vivisection is defended?
3) How does the use of evaluative language change after the *Cruelty to Animals Act 1876* is passed?

To answer the third research question, which naturally concerns the two other questions as well, it is important to consider the possible effects of the *Cruelty to Animals Act 1876* on the attitudes towards vivisection and the people involved. Before the Act was passed, the practice of vivisection was quite a wild west, allowing anybody to do practically anything to animals in the name of science. At the time the Act was under negotiation, I would say there were roughly speaking three groups of people with different objectives with regard to vivisection and the new legislation: those who demanded the total abolition of vivisection, those who wanted the practice to be regulated and those who were of the opinion that the matter should be left to vivisectionists' discretion (e.g. French). Those that were advocates of animal welfare, naturally hoped for a legislation that would protect animals. However, it seems that besides affording protection to certain animals in certain situations, above all it afforded protection to vivisection by institutionalising and legitimising the practice. As Hamilton states, "[c]ontrol and regulation of [vivisection] was fundamental to experimental science's rising professional legitimacy and expert status" (2013, n.p.). Apparently under cover of that legitimacy and expert status, by 1883, The Association for the Advancement of Medicine by Research (AAMR) managed to be

> involved in the daily administration of the Cruelty to Animals Act, reviewing license applications, the certification of physiologists and their experiments, and passing along their recommendations to the home secretary. Under this arrangement, licenses increased one-hundred fold in a twenty-year period. (Hamilton 2013, n.p.)

Furthermore, while the number of animal experiments towards the end of the century could still be counted in thousands (e.g. 7500 in 1896) (French 1975, 173), these figures were just an overture to the further development of animal use in experimental research; in 2019, there were 3.4 million scientific procedures conducted on living animals in Great Britain alone (Home Office 2019).

People's awareness of vivisection was still relatively limited in the beginning of the 1800s[3], but towards the end of the century, vivisection was not only commonly known, but also widely objected (Bates 2017, 14). As Bates describes,

> [d]uring the nineteenth century, the anti-cruelty lobby went from being largely unaware of vivisection to passionately opposing it, largely due to a few high-profile incidents. By the century's end, anti-vivisection had become a humanitarian cause celebre, a mainstream issue with great public support and many societies dedicated to it. (2017, 14)

In fact, people actively opposing vivisection were always more numerous in Britain than those supporting it, and in the 19th century, anti-vivisectionists collected more signatures for anti-vivisection petitions than anybody for any other cause at the time (ibid.). Despite the popularity of the anti-vivisection cause, animal experimentation became increasingly common towards the end of the century—as mentioned above—and increased exponentially in the 1900s (Rowan and Lowen 2001). As Bates states,

> since the nineteenth century, [animal] experimentation has become the gold standard of academic medicine, shaping not only its approach to solving problems, but also the moral conduct and education of doctors. (Bates, 2017, 13)

Considering the above-mentioned development, it does not seem that far-fetched that maybe in the end the new legislation has been even counter-productive to animals themselves. This is also a question Svärd raises, referring to two opposing points of view

[3] Apparently even Richard Martin, a passionate campaigner against cruelty to animals and the initiator of the *Cruel Treatment of Cattle Act 1822,* was not aware of the practice starting to gain a foothold in Britain—I assume they would have included experimental animals in the bill if they had realised what was going on, and where it was leading.

with regard to the historical function of animal welfarism (*welfarism* here refers to the view that ethical use of animals can be achieved by regulating the use; see e.g. Marino 2016). According to Svärd, in the abolitionists' view, "the gains made under the welfarist regime have largely been illusory" and its main function "has been to cover over the ugly realities of animal exploitation and lull the public into accepting ever-multiplied atrocities" (2018, 8). Without taking up any particular stand in the matter, I do believe the viewpoint is worth considering; it is possible that the Act, instead of protecting animals, helped vivisection become, by legitimising it, the established and generally accepted practice it still is today.

The reason why this is interesting from a philological point of view and with regard to this thesis is that this type of changes unavoidably influence people's attitudes and, most importantly, the ways they talk and write about the matters in question. As for the question of the Act's influence on the development of animal protection in the long run, the changing attitudes might also, for their part, shed some light to that. Naturally, I do not expect to find a comprehensive explanation for why animal experimentation has developed the way it has from my analysis, but I do aim to find out whether there is something in the evaluative language in the letters that might indicate that *cruelty to Animals Act 1876* really influenced people´s attitudes in a way that would from then on make them see animal experimentation in a different light—light that would be rather unfavourable to animals.

I assume there is a change in the use of evaluative language after the *Cruelty to Animals Act 1876* is passed, and I have some hypotheses about their nature. One possibility is that the legitimacy afforded by the new Act made the defenders of vivisection more confident and therefore more arrogant and aggressive. In the use of evaluative language, this might be manifested e.g. in the increased use of both (explicit) negative Judgements targeted at anti-vivisectionists and (explicit) positive Judgements at vivisectionists. Alternatively, increased confidence might have made them feel less need to convince their audience and hence use fewer (explicit) positive Appreciations targeted at vivisection and fewer (explicit) positive Judgements at vivisectionists. Next, I will present the outline of this thesis.

Section 2 concerns the development of vivisection in the 19th century, and in section 3, appraisal theory will be presented. In section 4, I will introduce the primary material of this thesis, in section 5, the analysis will be dealt with, and in section 6, the

findings will be presented. Finally, sections 7 and 8 are for the discussion and the conclusion, respectively.

2 Vivisection – From a feared continental practice to a regulated scientific method

This section will deal with the history of vivisection in the 19th century, more particularly how medicine developed in Europe, what kind of consequences the change had for vivisection, the characteristics ascribed to pro-vivisectionists and anti-vivisectionists of the time, and the *Cruelty to Animals Act 1876*.

2.1 Vivisection as the key to the progress of Science

Medicine was going through fundamental changes in Europe during the first half of the 19th century (Franco 2013, chap. 5). This could be seen in concrete changes in medical practice—new hospitals were built, new methods and instruments were invented, and doctors were trained in universities—but also in a more profound shift in how the function of the body was understood:

> There was also a growing acknowledgement by the medical community that most medical practice, up to that period, was based on unproven traditions and beliefs and that most therapies were not only ineffective but often worsened the patient's condition. As a result, medical practice increasingly began to focus more on understanding pathology and disease progression, pursuing more accurate diagnosis and prognosis. (ibid.)

As expected, moving from basically faith-based healing to more scientific medical practices would also change people's attitudes towards those practicing them and those producing the knowledge. As Franco states, "[t]his paradigm shift would help give more credit and recognition to medical doctors and scientists, who, at that time, were often viewed with disdain and suspicion by the general public" (ibid.).

The change was also happening in experimental science, "[change] that would ultimately provide the consistent basic science on which twentieth-century modern medicine would set its foundations" (Franco 2013, chap. 5). In France, for example, the *Académie Royale de Médecine* was founded in 1820, and as Franco describes its significance for the development of medicine, it was "a thriving academic environment

where science—and physiology, chemistry, and pharmacy, in particular—would finally be incorporated into medicine". They continue by describing the development as follows:

> The acknowledgment of the great knowledge gap in physiology and pathology, and the openness to positivist views on scientific knowledge, led to the definitive abandonment of the quasi-esoteric and, up to that time, dominant vitalistic[4] theories in physiology […] This led to a generalization of the understanding of all bodily processes as an expression of physical and chemical factors, (Franco 2013, chap. 5)

The new understanding of bodily functions, in turn, "led to a greater relevance given to animal experiments for answering scientific questions" (ibid.), and, according to Franco, "[a]t the Académie, animal experiments were being increasingly prompted by existing clinical problems, and carried out with the ultimate goal of developing new therapeutic approaches to tackle these issues (ibid.).

Two French physiologists were of a particular significance for experimental physiology of the time, François Magendie—"the father of experimental physiology" (e.g. Stahnisch 2009)—and their disciple Claude Bernard (Franco 2013, chap. 5). As Franco states,

> Bernard's experimental epistemology, unlike his tutor's more exploratory approach, advocated that only properly controlled and rigorously conducted animal experiments could provide reliable information on physiology and pathology of medical relevance, setting the landmark of experimental medicine. (ibid.)

However, Magendie and Bernard did not achieve renown only for their contributions to science, but both became notorious for their extremely cruel experiments (ibid.).

The same type of development was taking place in the Prussian/German physiology circles (Franco 2013, chap. 5), and both the researchers there and e.g. earlier-mentioned Magendie and Bernard had a fundamental influence on the spread of animal experimentation around the Western world:

> Thousands of students flocked to attend medical schools in Germanic universities (and French institutes, although to a lesser extent) […] This, in turn, would lead to an unprecedented rise in animal research-based advancement

[4] According to these theories, "a vital principle, the 'soul', was the main source of living functions in organisms, rather than biochemical reactions" (Franco 2013, chap. 5).

> in biological and medical knowledge in the late nineteenth century—with important consequences for public health and quality of life. (ibid.)

While Continental researchers were establishing the vivisectional practices—and "had few qualms about animal experimentation" (French 1975, 39)—their counterparts in Britain were not—at least not unanimously—very keen on joining them (ibid.; Franco, 2013 chap. 5). However, in the 1870s, due to e.g. the publication of *Handbook for the Physiological Laboratory* (1873) by John Burdon-Sanderson, the relevance of vivisection became increasingly recognised also in the British medical circles (Franco 2013, chap. 5).

2.2 Characteristics of pro-vivisectionists and anti-vivisectionists

The debate on animal experimentation has naturally changed over time. Whereas today's debate focuses primarily on animal rights and the utility of the practice, in the 19th century the arguments were not only different, but also more numerous. As far as I can tell, previous studies on vivisection controversy have mainly focused on the anti-vivisection movement and anti-vivisectionists' motives, whereas pro-vivisectionists' perspective has not been studied in such depth. However, since pro-vivisectionists'—like anybody else's—reasoning have originated and developed in a more or less constant dialogue with others, considering the anti-vivisectionist viewpoint as well can help understand how pro-vivisectionists' attitudes and arguments were formed. In this subsection, I will briefly discuss the most relevant arguments in the 19th century vivisection controversy, emphasising those that have most relevance with regard to my own study.

According to Bates, the 19th century debate concerned, rather than the utility of vivisection, the character of the experimenter (2017, 7); more specifically, people were worried about the possible consequences it might have for themselves if doctors and scientists engaged in such a cruel practice (Bates 2017, 18–19). As Bates continues, paraphrasing Boddice (2008[5]), "the suffering experienced by animals and their rights or interests were of lesser importance than the effects of vivisection on the experimenter and on society" (Bates 2017, 20). In fact, according to Bates, "the ethical arguments that sustained [anti-vivisection movement] from its beginning and throughout its heyday" (2017, 4) can be summarised into two major concerns:

[5] Boddice, Rob. 2008. *A History of Attitudes and Behaviours toward Animals in Eighteenth- and Nineteenth-Century Britain: Anthropocentrism and the Emergence of Animals*.

> that it is socially irresponsible to permit cruelty, that Christianity, and other faiths, require animals to be treated as more than means to an end, and that a balanced, holistic approach to medicine must draw on emotional and spiritual insights as well as on the results of experiment. (ibid.)

The anthropocentric perspective of the anti-vivisectionists at the time becomes clear also from the reasons why Animals' friend Society was against vivisection. In 1833, they listed five objections to the practice, all related to humans, directly or indirectly (Bates 2017, 197). As Hamilton notes,

> [a]t a time when the opponents of vivisection concern themselves almost exclusively with the rights and interests of animals […] it is salutary to recall that the radical Animals' Friend Society's five objections to vivisection did not mention animals at all: according to them, [vivisection] was a moral failing, created public animosity against scientists, fostered cruelty towards humans, diverted charity away from human causes, and offended God. On these principals was built an anti-cruelty movement unequalled anywhere in the world. (ibid.)

The main theme of the opposition seems to have been the cruelness and immorality of vivisection, and, as expected, many people found vivisectionists cruel and unempathetic (e.g. French 1975, 20, 22). These qualities were considered particularly problematic in those practising vivisection—doctors and scientists; they were judged according to different norms than those abusing other types of non-human animals, e.g. farm animals (Bates 2017, 14). Different standards were applied to them

> partly because those responsible were linked with the healing and academic professions, whose morality was supposed to be beyond reproach, and also because it had implications beyond animal welfare: for the way society made ethical choices, for how science should be conducted, and for how humans saw themselves in relation to the rest of creation. (ibid.)

Medical doctors in particular were expected to be compassionate, and many of them were worried about losing people's trust if they were connected to vivisection:

> [w]hen the Continental fashion for vivisection first touched Britain in the 1820s, many doctors chose to distance themselves from it for the sake of their reputation, and the few who did undertake it felt the need to defend a choice that seemed at odds with the ethos of their profession. (Bates 2017, 13)

In fact, in the mid-century, "when vivisection was introduced into British laboratories and medical schools […], much of the opposition to it came from doctors" (Bates 2013, 1).

A single incident that probably contributed substantially to doctors' fears—and other people's as well—was Magendie's public dissection of a dog in England in 1824, when anaesthetics were not yet available (for details on the experimentation, see e.g. Tubbs et al. 2008). As Franco notes, paraphrasing other researchers, "[d]espite the broad recognition of [Magendie's] contributions to science by most peers, he was also amongst the most infamous of his time for the disdain he held for his experimental subjects" (2013, chap. 5). According to Franco, however, Magendie—or their disciple Bernard—did not see themselves the same way as their critics; quite the contrary, they considered themselves as humanists (ibid.). As Franco continues,

> their view that animals did not deserve the same moral consideration as humans made them condemn experiments in humans without previous work on animals, the general principle on which the use of animal models in biomedical science is still grounded. (ibid.)

Cruel or not, Magendie's notorious experiments had very long-lasting effects: even in the report of the first Royal Commission on Vivisection from 1876, Magendie's experiments are referred to as a proof of vivisectors' cruelness and thus a need for a vivisection legislation. In fact, the need for a new legislation had been recognised already in 1824, when Magendie had visited London and Martin's Act had been proven powerless against Magendie's experiments (Bates 2013, 17). However, there was another outcome of the outcry, which has relevance to the current study as well: from then on, pro-vivisectionists were aware of how important it was to highlight the utility of vivisection. As Bates argues,

> [t]he need to show they were compliant with anti-cruelty law inclined future experimenters to favour utilitarian arguments, because anticipated benefits to human health provided a clear, rational justification for their work. (2013, 17)

There was also another reason for British doctors to object to vivisection, besides saving their reputation as compassionate healers: as Bates notes, they "resented the introduction of novel, Continental experimental methods that challenged their tradition of observational bedside medicine" (2017, 15). According to Franco, who is paraphrasing other researchers,

> [t]aking advantage of the rising antivivisection trend, British anatomists explored the (undoubted) gruesomeness of Magendie's experiments, along with some nationalistic partisanship and xenophobic feelings against France, in their defense of anatomical observation as the primary method for advancing physiology, to the detriment of experiment through vivisection. (2013, chap. 5)

While medical doctors were trying to convince people of their humaneness and competence, scientists engaging in vivisection underlined the importance of one's objectivity, which, in turn, required strong self-restraint (Bates 2017, 6–7). In Bates' view, vivisectors "thought they were doing something that needed to be done, and many genuinely disliked doing it" (ibid.). While anti-vivisectionists found them "cold, heartless and indifferent", [vivisectors considered themselves] cool, objective and scientific instead" (ibid.). As Bates notes, "the culture of masculinity was strong in medicine and […] many members of this quintessentially caring profession were driven to regard sentimentality as a weakness of character" (2017, 7). As for the pain inflicted to the experimental animals, it was "though regrettable [but] a necessary element in the experimental method and the medical benefits to humans that might ensue from experimentation" (Hamilton 2013, chap. "Pain and Anesthetics"). As Bates summarises, "[v]ivisectionists […] defended themselves with utilitarian arguments […] and also tried to show that their motives were virtuous" (Bates 2017, 23). While vivisectors saw themselves as objective scientists and generous humanists, they accused anti-vivisectionists of being "soft, sentimental, and womanish, [and] of valuing other animals above their own species and hampering life-saving research because they were too weak to stomach the necessary experiments" (Bates 2017, 7).

The fact that vivisectors were able to supress their emotions obviously did not mean that they did not have them or that they were not concerned about the subject. As Boddice describes,

> British medical scientists in the 1870s and 1880s were […] acutely aware of the reflexive problems of causing pain. At worst, it might adversely affect their own 'nerve', and prevent them from following through their inquiries to the fullest extent. The infliction of pain on an animal, where unnecessary, might betray a callousness that could affect society at large. (2012, 6)

Despite various views on non-human animals' ability to suffer (Boddice 2012, 3–6), generally speaking, physiologists of the time were of the opinion that "vivisection without

anaesthetic was difficult because animal suffering was, however mitigated, real" (Boddice 2012, 6). Considering the potential benefits, however, it was worthwhile (ibid.).

By the late 19th century, animal experimentation had become the leading method for developing medical treatments (Bates 2017, 4), which naturally changed the public's attitudes towards vivisectors as well:

> though [vivisectors] were disliked and sometimes feared by the public, they were also admired for their fortitude and commitment to the pursuit of science. If medical progress required experiments on animals, then the scientist's cool indifference to vivisecting them signified dedication and self-mastery rather than callousness or cruelty. (Bates 2017, 4–5)

What is more, attitudes towards anti-vivisectionists were becoming increasingly negative: by the early 1900s, "to be pro-vivisection was to be for science, progress, and the relief of human suffering, while anti-vivisectionists were enemies of science, whose sentimentality and squeamishness were obstacles to be overcome" (Bates 2017, 5).

2.3 Cruelty to Animals Act 1876

As discussed above, the anti-vivisection movement was becoming increasingly strong and influential towards the last fourth of the 19th century (French 1975, 55). However, it had become clear that without new legislation, there was little anti-vivisectionists could do to change the way non-human animals were treated in the name of science (Hamilton, 2013, chap. "Demonstration and Expertise"). Already in the 1820s, after Magendie had performed their notorious experiments, "Martin's Act", which concerned wanton and cruel acts against cattle, had been put to test and proved to be ineffectual in controlling vivisection:

> [the] law was powerless to stop it because scientific experiments were performed in a deliberate, calculated manner and not 'wantonly', and so could not, by definition, be cruel under the law. (Bates 2017, 17)

In the *Cruelty to Animals Act 1835*, also dogs and cats were included, but it still only concerned wanton and cruel acts. From the *Cruelty to Animals Act 1849*, which replaced the previous Acts, the wantonness had been left out, but the acts would still have to be done cruelly in order for them to be seen as illegal. This naturally made it practically impossible to do anything to "scientific experimentations" with the current legislation.

However, anti-vivisectionists were not the only ones to publicly promote the regulation of vivisection: for example, in 1870, a committee for formulating guidelines for animal experimentation was formed by the General Committee of the British Association for the Advancement of Science (French, 1975, 45). According to French, "[t]he physiologists knew they were treating a subject of considerable sensitivity, but they still trusted that the statement of careful guidelines and the avowal of good intentions might suffice" (1975, 46). In Hamilton's view, "[a]nimal pain appears here to have been a kind of originating concern" (2017, chap. "Pain and Anesthetics"), which can be seen in the proposed regulations:

> first, to use anesthesia whenever possible; second, teaching demonstrations involving live animals were either to be painless or must use anaesthesia; third, painful research experiments were to be performed solely by skilled people using proper instruments and laboratory facilities; and, fourth, veterinary education was not to use vivisection to improve manual dexterity. (ibid.)

As can be seen from the regulations, pro-vivisectionists were aware that people were concerned about the pain inflicted to experimental animals—and that it was important to convince the public of vivisectors being able to regulate the practice themselves (Hamilton, 2017, chap. "Pain and Anesthetics"). In Franco's view, on the other hand, formulating the recommendations just meant that "British physiologists had set themselves guidelines for responsible research" (Franco, 2013, chap. 5). Radford seems to be conforming to French and Hamilton's thoughts:

> the scientific community, fearful that the legality of vivisection would fall to be determined by magistrates, as a result of their interpretation of the anti-cruelty legislation, were moving towards the view that legislation specifically permitting the practice might be required. (2001, 68)

Due to the increasing pressure from both the anti-vivisection movement and vivisectionists themselves, in 1875, a Royal Commission to inquire into the practice of vivisection was constituted (Bates, 2017, 26; Germain, Chiapperino and Testa 2017, 77). The Commission's report was completed in the beginning of the following year, and it recommended that a legislation to regulate vivisection be enacted (Franco 2013, chap. 5). Later that year, 15 August 1876, *An Act to amend the Law relating to Cruelty to Animals 1876* was passed (ibid.).

The Act consists of 22 clauses[6]: the first one presents the short title of the Act, and the five following ones concern regulations of painful experiments; clauses 7–12 have to do with the administration of law, e.g. registration of places for experimentation, licenses to perform experiments, etc.; the next 9 clauses, clauses 13–21, concern legal proceedings resulting from offending against the Act; and clause 22 concerns the delimitation of the target group: "[t]his Act shall not apply to invertebrate animals" (39 & 40 Vict. c. 77, 3). What is to be noted is that neither does the Act concern non-human animals that are killed before the experimentation nor those used in experimentations that are expected not to cause pain. As it reads in the Act,

> [w]hereas it is expedient to amend the law relating to cruelty to Animals by extending it to the cases of animals which for medical, physiological, or other scientific purposes are subjected when alive to experiments calculated to inflict pain. (ibid.)

The Act does not contain any references to other type of animal experiments but those expected to cause pain.

The basic idea of the Act is summed up in the second clause: "A person shall not perform on a living animal any experiment calculated to give pain, except subject to the restrictions imposed by this Act" (39 & 40 Vict. c. 77, 3). In clause three, there are six subclauses[7] (39 & 40 Vict. c. 77, 3–4):

> (1.) The experiment must be performed with a view to the advancement by new discovery of physiological knowledge which will be useful for saving or prolonging life or alleviating suffering.
>
> (2.) The experiment must be performed by a person holding such license […] as in this Act mentioned […]
>
> (3.) The animal must during the whole of the experiment be under the influence of some anæsthetic of sufficient power to prevent the animal feeling pain.
>
> (4.) The animal must, if the pain is likely to continue after the effect of the anæsthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anæsthetic […]

[6] Nowadays sections
[7] Nowadays subsections

(5.) The experiment shall not be performed as an illustration of lectures in medical schools, hospitals, colleges, or elsewhere.

(6.) The experiment shall not be performed for the purpose of attaining manual skill.

After these subclauses, there are additional four subclauses supplementing them (39 & 40 Vict. c. 77, 4–5):

(1.) Experiments may be performed […] by a person giving illustrations of lectures in medical schools, hospitals, or colleges, or elsewhere [in case] the proposed experiments are absolutely necessary […]

(2.) Experiments may be performed without anæsthetics [in case] insensibility cannot be produced without necessarily frustrating the object of such experiments […]

(3.) Experiments may be performed without [the animal being] killed before it recovers from the influence of the anæsthetic [in case] the so killing the animal would necessarily frustrate the object of the experiment […]

(4.) Experiments may be performed not directly for the advancement by new discovery of physiological knowledge, or of knowledge which will be useful for saving or prolonging life or alleviating suffering, but for the purpose of testing a particular former discovery alleged to have been made for the advancement of such knowledge as last aforesaid [or in case] such testing is absolutely necessary for the effectual advancement of such knowledge.

Further, clause 4 prohibits the use of curare as an anæsthetic (39 & 40 Vict. c. 77, 5). Clause 5 concerns the use of cats, dogs, horses, asses and mules (ibid.):

5. [A]n experiment calculated to give pain shall not be performed without anæsthetics on a dog or cat [unless otherwise] the object of the experiment will be necessarily frustrated […] [A]n experiment calculated to give pain shall not be performed on any horse, ass, or mule [unless otherwise] the object of the experiment will be necessarily frustrated.

In clause 6, any exhibition to the general public of painful experiments is prohibited (39 & 40 Vict. c. 77, 5).

It seems that the Act did very little to protect animals from exploitation and abuse. As Bates describes the Act, it was "permissive rather that regulatory" (2017, 27), and according to Germain, Chiapperino and Testa, it "proved very soft on scientists" (2017,

77). Considering the indeed permissive contents of the Act, one cannot help wondering about its true objective.

3 Appraisal theory

Appraisal theory has its origins in systemic functional linguistics, a function-focused theory of language, mainly developed by M. A. K. Halliday (see e.g. Halliday and Matthiessen 2013 for more information on SFL). In this thesis, however, appraisal theory is treated as an independent framework. As Bednarek notes, "[e]ven though appraisal theory works within systemic functional linguistics (SFL), it can also be adopted in a more theory-neutral way to the analysis of language" (2008, 12). Consequently, SFL will not be introduced further, and no prior knowledge of SFL is required from the reader.

As mentioned earlier, appraisal theory deals with language of evaluation. More particularly, it has to do with linguistic resources that are used, on one hand, to express evaluations and, on the other hand, the evaluator's commitment to these evaluations (White 2015b, chap. 1). The theory is divided into three subtypes of appraisal—*Attitude, Engagement* and *Graduation*, and as White describes, the subtypes deal with, respectively, "those meanings by which texts convey positive or negative assessments, [those] by which the intensity or directness of such attitudinal utterances is strengthened or weakened and [those] by which speakers/writers engage dialogistically with prior speakers or with potential respondents to the current proposition" (ibid.). However, considering the scope of my research and the complexity of each subtype alone, I will focus on Attitude, i.e. the actual opinions and feelings conveyed.

In this section, I will describe appraisal theory, using *The Appraisal Website* (White 2015a) and *The Language of Evaluation: Appraisal in English* (2005) as the starting point, but bringing up other researchers' viewpoints as well. *The Appraisal Website* was initially published in 2001 and has been extended over the past decades, and the book is the first comprehensive account of the theory, written by James R. Martin and Peter R. R. White, who—together with other colleagues—developed the theory in the 1990s and 2000s (White 2015a). However, like is the case with all seminal works, the ideas presented in the book have later been developed and also challenged. As White described almost two decades ago, and Wei et al. more recently, the theory seems to be under continuous improvement process:

> [A]ppraisal theory is very much an on-going research project - many problems are still to be solved and many lexicogrammatical and semantic issues have yet to be addressed. There are numerous registers and discourse domains to which the theory has not yet been applied. (White 2015a)
>
> Appraisal Theory is an effective framework for analyzing attitudes expressed and interpersonal meanings in various types of discourse such as literary works, news, legal, scientific and academic discourse. There are still some arguments about the theory itself and future studies are recommended to focus on the identification and classification of appraisal resources. (Wei et al. 2015, 1)

In my view, both quotations are still relevant today, and in this thesis, I will try—maybe not to solve, but to discuss—at least some of those problems and arguments related to the framework. Some of the issues are mainly discussed in the theory section, as they do not have a significant role in my analysis, but most of them are clearly visible in the analysis section as well.

3.1 Attitude

Attitude is concerned with "[v]alues by which speakers pass judgements and associate emotional responses with participants and processes" (White 2015a). In other words, it deals with how people express—through their or somebody else's thoughts or feelings—evaluations of different kinds of targets. The theory is further divided into Judgement (evaluation of human behaviour), Appreciation (evaluation of objects and processes) and Affect (emotional response), each with several subtypes (ibid.). The three subsystems, along with their subtypes, will be dealt with in their own subsections below. Furthermore, I will discuss a couple of points that concern the valence (polarity in Martin and White 2005) of appraisal (3.1.4) and distinguishing between Judgement and Appreciation (3.1.4).

3.1.1 Judgement

Judgement deals with attitudes towards people's character and behaviour—attitudes based on society's shared values, expectations and institutionalised norms (Martin and White 2005, 52; White 2015a), like in the following example:

> (1) He **corruptly** agreed to accept money from those bidding for the contract (White 2015a)

Depending on what type of consequences result from violating the social norms, Martin and White divide judgements into those of *social sanction* and those of *social esteem* (White 2015a). Those of social sanction have to do with morality and legality and "involve an assertion that some set of rules or regulations, more or less explicitly codified by the culture, are at issue" (ibid.), and often, violations of these rules or regulations are seen as sins or crimes, depending on the context (ibid.). Violations of norms related to social esteem, in turn, do not cause moral or legal consequences but rather result in less appreciation of the judged individual by the community members; "negative values of social esteem will be seen as dysfunctional or inappropriate or to be discouraged" (ibid.).

Judgement of Social sanction is further divided into two subcategories, *Veracity* and *Propriety,* and that of Social esteem into *Capacity*, *Tenacity* and *Normality* (Martin and White 2005, 52–53). Simply put, Veracity concerns people's truthfulness, Propriety their ethics, Capacity their capability, Tenacity their determination and dependability and Normality their specialness (ibid.). As one can notice, the first four categories are fairly self-explanatory, but the fifth one, Normality, might require some clarification; as far as I understand it, Normality can be described as follows: when one is seen as e.g. "natural", "familiar" or "predictable", they are considered "normal enough", while when seen as e.g. "lucky", "avant garde" or "celebrated", they are considered "unnormal enough", i.e. "special enough" (Examples of possible realisations od Appreciation taken from Martin and White 2005, 53). Therefore, both being normal and unnormal can be considered positive or negative. What is more, a point that is not explicitly mentioned in Martin and White (2005) but I find important with respect to distinguishing between the Judgement categories is related to the essential difference between Normality and the rest of the categories: In my view, Normality values are related to how people are seen in comparison to other people, hence the term 'normality', while other Judgement values are actual qualities ascribed to the targets. In fact, often ascribing other Judgement values to somebody makes us see them as normal or unnormal. For example, if you are insane enough, you are probably considered odd; if you are reckless, deceitful or unfair, you are also unpredictable; if you are educated, you are most likely to be considered lucky; and if you are very successful, it is likely you are celebrated as well.

Illustrative realisations for each subcategory of Judgement are listed in tables 1 and 2 below (examples taken from Martin and White 2005, 53). Although all of them are adjectives, it is important to keep in mind that Judgement can be conveyed by various types of realisations, not just adjectives, which naturally applies to all Attitude subtypes.

However, since the purpose of the tables is to illustrate what types of values each subcategory of Judgement covers, I find it sensible to focus on the actual features connected to the judged individual, not the way the judging is done (whether it is done using noun, verb, adjective, invoked evaluation, etc.). Furthermore, like this the lists are as uniform as possible and thus easy to follow. It is to be noted that the adjectives in the right column are not supposed to be the negative counterparts of the ones in the middle, but the aim is to provide the reader with a concise list of words that represent the categories comprehensively enough for the time being.

Table 1 Possible realisations for subcategories of Judgement – Social sanction

Judgement – Social sanction	**Positive**	**Negative**
Veracity	Truthful, direct, discreet [*sic*][8]	Deceitful, manipulative, blunt[9]
Propriety	Ethical, kind, polite	Unfair, insensitive, selfish

Table 2 Possible realisations for subcategories of Judgement - Social esteem

Judgement – Social esteem	**Positive**	**Negative**
Tenacity	Brave, careful, resolute	Impatient, unreliable, stubborn
Capacity	Powerful, clever, productive	Helpless, ignorant, incompetent
Normality	Charmed, predictable, celebrated, unsung[10]	Eccentric, dated, obscure

[8] Martin and White (2015, 53, table 2.7) list *discrete* and *tactful* under Veracity, apparently considering them "positive dishonesty", as in "dishonest enough to be tactful". However, I see them better suiting either Capacity, as in "skilful or clever enough to act according to the situation in question" or Propriety, as in "kind or polite enough to behave discreetly".

[9] Martin and White (ibid.) list also *blunt* and *blabbermouth* under Veracity, apparently considering them as "negative honesty", as in "too honest to be tactful". However, I see them better suiting either Capacity, as in "too stupid or socially incompetent to act according to the situation in question" or Propriety, as in "too insensitive or discourteous to behave discreetly".

[10] Martin and White (ibid.) list *unsung* under **positive** Normality, but, the definition of the word being "not noticed or praised for doing hard work, being brave, or achieving results" (*CD*, s.v. "unsung," adj.), I would rather say it is either a **negative** value of Normality or a positive value of **Capacity** or **Tenacity**; "Not noticed or praised" means roughly the same as obscure, and doing hard work or achieving results is usually connected with people's capability, and being brave with their determination and dependability.

However, it is important to bear in mind—when choosing the right Appraisal categories for different lexical items—that not always can this be done as straightforwardly as the tables above might suggest; as Martin and White note, the meaning of a lexical item can vary from context to context—and might even change from negative to positive, and vice versa (cf. *slow person* vs. *slow food*), and consequently "[the word list] should not be treated as a dictionary of the value of judgement which can be mechanically applied in a text analysis" (Martin and White 2005, 52). The importance of understanding the context in which evaluative language is used will be dealt with in more detail later in this thesis.

3.1.2 Appreciation

While Judgement deals with evaluations made of a person's character and their behaviour, Appreciation primarily concerns evaluating inanimate things, or as White puts it, products and processes; these can be e.g. natural or manufactured objects, texts, policies, performances and natural phenomena (White, 2015a; Martin and White 2005, 36, 56), like in the following examples:

(2) a **beautiful** sunset (White 2015a)

(3) an **ugly** scar (ibid.)

However, evaluations of Appreciation can also be made of humans when they are "viewed more as entities than as participants who behave" (White 2015a), like below:

(4) Sophie's little suit makes her look […] **curvily sexy** (White 2015a; underlining omitted)

Appreciation covers values related to both aesthetics [as in sensori-emotional values, not just beauty] and social valuation and is further divided into three subcategories, *Reaction, Composition* and *Valuation* (White 2015a).

The subcategories of Appreciation are fairly self-explanatory: reaction has to do with the reactions things arouse in us, Composition with how well things are formed and Valuation with whether things are worthwhile or not (White 2015a). According to Martin and White, the latter category, Valuation, is "especially sensitive to field since the value

of things depends so much on our institutional focus" (2005, 57). This is illustrated by comparing values associated with a certain artist's music—*pure, hardcore* and *vintage*—and those associated with academic work—*penetrating, significant* and *profound* (ibid.).

Reaction is further divided into *Impact* and *Quality* and Composition into *Balance* and *Complexity*, the whole system therefore being comprised of five types of Appreciation (Martin and White 2005, 56). Impact has to do with whether and how things catch one's attention, while Quality focuses on whether things are likeable or not; Balance encompasses the values related to the coherence of things and Complexity those related to, well, how complex things are. (ibid.). In the case of Complexity, a similar point is to be noted as was with Normality in section 4.1.1; as I understand it, Complexity can be described as follows: when something is seen as e.g. "detailed" or "precise", it is considered "complex enough", while when seen as e.g. "simple" or "elegant", it is considered "uncomplex enough". Furthermore, if something is "lucid" or "clear", it could be described as "perfectly complex", i.e. "of not too much nor too little complexity" (example evaluative items taken from Martin and White 2005, 56). Therefore, both being complex and uncomplex can be considered positive or negative.

A point that is not explicitly discussed in Martin and White (2005) but in my view is a rather important one is the essential difference between Reaction and the rest of the Appreciation categories: while values of Composition and Valuation are more directly attached to the targets themselves, values of Reaction reveal how we feel about the targets: "did it grab me?" or "did I like it", as Martin and White put it (2005, 56). In fact, often ascribing values of Composition and Valuation to something probably leads us to connect values of Reaction to that something as well. For example, a harmonious or detailed piece of art is often considered beautiful or arresting, and a penetrating or creative analysis is likely to be seen as a good and fascinating one (example values from table 2.8 in Martin and White, 2005, 56).

Illustrative realisations for each subcategory of Appreciation are listed in table 3 below (examples taken from Martin and White 2005, 56).

Table 3 Illustrative realisations for the subcategories of Appreciation

Appreciation	**Positive**	**Negative**
Reaction – Impact	Arresting, moving, remarkable	Boring, uninviting, monotonous

Reaction – Quality	Fine, beautiful, welcome	Nasty, grotesque, repulsive
Composition – Balance	Harmonious, consistent, curvaceous	Uneven, disorganised, amorphous
Composition – Complexity	Simple, clear, detailed	Byzantine, woolly, simplistic
Valuation	Profound, timely, authentic, effective	Derivative, common, worthless

In the next subsection, the final subsystem of Attitude—Affect—is presented. After discussing briefly what Affect is about in general terms, I will move on to presenting its five subcategories, most of which is also divided into lower-level categories, like was the case with Judgement and Appreciation in the previous sections. However, while the categorisation of Judgement and Appreciation was fully based on Martin and White's ideas, that of Affect is a combination of their categories and those of Bednarek's (2008).

3.1.3 Affect

Affect is about making evaluations by connecting emotions to different sorts of targets—be they people, products or processes (White 2015a). While Judgement and Appreciation have in common that they both are oriented towards the Appraised object, Affect in turn is more focused on the one that is doing the evaluation (White 2015a). In practice this means that in Judgement and Appreciation, evaluative items describe the targets of Appraisal, but in Affect, they describe the Appraiser's emotions that are triggered by the targets, like in the following example:

(5) I **like** chocolate (White 2015a)

Accordingly, the experiencer of these emotions, in this case *I*, is called *Emoter*, and what or who causes the emotion, in this case *chocolate*, is *Trigger* (Martin and White 2005, 46). However in this thesis, I will refer to the former as Emoter, but to the latter I will refer to as both Trigger and Target.

Martin and White divide Affect into three subsystems according to what type of emotions they cover. They describe these subsystems, *Happiness, Satisfaction* and *Security,* as follows:

> The un/happiness variable covers emotions concerned with 'affairs of the heart' – sadness, hate, happiness and love; the in/security variable covers emotions concerned with ecosocial well-being – anxiety, fear, confidence and trust; the dis/satisfaction variable covers emotions concerned with telos (the pursuit of goals) – ennui, displeasure, curiosity, respect. (2005, 49)

Each of the three subsystems is further divided into two more specific categories—Happiness into *Cheer* and *Affection,* with their negative counterparts *Misery* and *Antipathy;* Satisfaction into *Interest* and *Pleasure*, and their negative counterparts *Ennui* and *Displeasure;* and Security into *Confidence* and *Trust*, with their negative counterparts *Disquiet* and *Surprise* (Martin and White 2005, 49–51).

To put it rather simply, the difference between the subcategories of Happiness is that while Affection and Antipathy cover the feelings of un/happiness that are directed at somebody, Cheer and Misery, in turn, have more to do with the mood of the Emoter (Martin and White 2005, 49). As to the subcategories of Satisfaction, Interest and Ennui are related to how excited one feels about something, and Pleasure and Displeasure to whether one is satisfied or not (Martin and White 2005, 51). Confidence deals with how confident one feels, while Disquiet is rather related to whether one feels anxious or not; finally, Trust deals with how much one trusts someone or something to happen and Surprise with whether they are surprised or not (Martin and White 2005, 50).

Martin and White categorise feelings also on the grounds of whether they "involve intention (rather that reaction), with respect to a stimulus that is irrealis (rather that realis)" (2005, 48; parentheses as in the original). As they note, "[g]rammatically this distinction is constructed as the opposition between desiderative and emotive mental processes (*I'd like to* vs *I like it*)" (ibid.; parenthesis as in the original). To further illustrate the difference between realis Affect and irrealis Affect—and between realis and irrealis stimuli—they give the following two sentences to compare (ibid.; emphases as in the original):

(6) the captain **disliked** leaving (realis)

(7) the captain **feared** leaving (irrealis)

As I understand it, in the first example, the captain does not like something they have already experienced or are experiencing at that moment, while in the second example, they are afraid of doing something that is still to come, regardless of whether they have experienced it or not.

Martin and White categorise feelings of irrealis Affect under *Inclination* and its subcategories *Desire* and *Fear* (2005, 48). However, what is important to note is that they do not seem to view Inclination as a fourth subsystem of Affect, along with the abovementioned Happiness, Satisfaction and Security, but as one of the six factors by which Affect can be classified; other five factors have to do with how the feelings are graded, whether they are positive or negative or directed or undirected, whether they are realised as mental disposition terms or behavioural surge terms—and to which emotion-related subsystem of Affect they belong to (Happiness, Satisfaction or Security) (2005, 46–49).

For the most part, Bednarek's categorisation complies with that of Martin and White's, but there are, however, some dissimilarities concerning Security and Inclination. As one may have already noticed, the positive subcategories of Happiness and Satisfaction—Cheer, Affection, Interest and Pleasure—clearly correspond to the negative ones—Misery, Antipathy, Ennui and Displeasure—but the Security subcategories do not seem to work quite the same way. As Bednarek notes, this is especially the case with Trust and Surprise (2008, 160). To make the categorisation more coherent, Bednarek suggests "setting up the system of in/security […] with the positive and negative categories 'mirroring' each other" (ibid.) and proposes the following:

> Compared to the old system, confidence becomes subsumed under the more general (technical) term of *quiet*, having to do with emotional calm, as it were, as realized for example by lexical items such as *comforted, reassured, confident, solace.* Trust is now opposed to its opposite emotional response, distrust, rather than surprise, which falls out of the system […] In fact, I propose to set up surprise as a separate type of affect, and to treat it on its own terms (2008, 161; parenthesis as in the original)

The reason for not including Surprise in the Security category is the following:

> Apart from this new classification resulting in a more 'logical' structural organization of the in/security sub-category, it is based on the belief that surprise is not culturally construed as negative – which would be the implication if surprise were included as the 'negative' part of in/security. (ibid.)

Therefore, the modified system of Security consists of the subcategories Quiet vs Disquiet and Trust vs Distrust, and Surprise is no longer a negative subcategory of Security but a separate type of Affect, along with Happiness, Satisfaction and Security (Bednarek 2008, 161).

As for the differences between Martin and White's views on Inclination and those of Bednarek's, Bednarek views it "as indicating a certain kind of emotion in the same way as un/happiness, in/security and dis/satisfaction" (2008, 165)—although "different from the other types of Affect in not allowing a realis trigger" (2008, 106)—and thus considers it a subcategory of Affect (ibid.). However, as Bednarek notes,

> if we compare in/security and dis/inclination there seems to be some possibility for overlap between disinclination: fear and insecurity: disquiet, with both relating to emotions of anxiety or fear (2008, 165)

Consequently, Bednarek proposes Inclination to be

> re-construed not in terms of a positive (desire) or negative (fear) emotion, but rather with respect to polarity, referring to desire (volition) and non-desire (non-volition). (ibid; parentheses as in the original)

In other words, to decrease the overlap between Insecurity and Disinclination, feelings of fear belong exclusively to Insecurity, and Dis/Inclination concerns solely the question of wanting or not wanting something.

In summary, the modified Affect system consist of Happiness, Satisfaction, Security, Inclination and Surprise. Possible realisations for each subcategory of Affect are listed in table 4 below (examples taken from Martin and White 2005, 48–51 and Bednarek 2008, 173–175). The names of the Affect categories and their subcategories are from Bednarek (2008, 169).

Table 4 Possible realisations for the subcategories of Affect

Happiness	Cheer: Happy, amused, cheery	Affection: Love, cherish, devotion
Unhappiness	Misery: Agony, sad, painful	Antipathy: Resent, hate, horrified
Satisfaction	Interest: Involved, curious, excited	Pleasure: Enjoy, impressed, thankful
Dissatisfaction	Ennui: Boredom, stale	Displeasure: Anger, discontent, furious
Security	Quiet: Together, assured, relax	Trust: Trusting, optimistic

Insecurity	Disquiet: Anxious, fear, embarrass	Distrust: Doubtfully, suspicious
Inclination	Desire: Want, eager, hope	Non-desire: Disinclined, reluctant
Surprise	Astonishment, shocked,	surprised, staggered

3.1.4 Valence of appraisal

An essential aspect related to Attitude is whether values ascribed to the targets are positive or negative. With respect to Affect, Martin and White consider valence as one of the six factors by which Affect can be classified (2005, 46). They base the division on the following idea:

> Are the feelings popularly construed by the culture as positive (good vibes that are enjoyable to experience) or negative ones (bad vibes that are better avoided)? We are not concerned here with the value that a particular uncommon sense psychological framework might place on one or another emotion (cf. 'It's probably productive that you're feeling sad because it's a sign that …'). (ibid.; parentheses as in the original)

As for the valence of Judgement and Appreciation, Martin and White add that, similarly to Affect, "we can recognise positive and negative evaluations – traits we admire alongside those we criticise" (2005, 52) and "properties we value alongside those we do not" (2005, 56), respectively. In other words, generally speaking, the Attitude subtypes can be categorised as positive or negative. However, there are some exceptions.

Two exceptions I will discuss here are Bednarek's Affect categories Surprise and Dis/inclination. The former is considered to include values that are neutral with respect to valence; unlike other emotions, "[s]urprise […] is conjoined much more equally with both 'positive' and 'negative' emotion terms" (2008, 163), which "seems to support the assumption that surprise is not clearly construed culturally as a negative (or positive) emotion" (2008, 164; parenthesis as in the original). In addition to Surprise, Bednarek considers Inclination "not culturally construed as positive or negative" (2008, 171). In the lengthy quotation below, they argue for their point of view:

> This classification of dis/inclination in terms of polarity rather that positive/negative cultural construal takes into account the fact that neither desire nor non-desire seem to be unequivocally construed culturally as positive or negative. And the evaluation implied by desire and non-desire terms may also depend on the context: if I desire something that you do not think I deserve, or if I desire something that you think is bad […], your evaluation of me is presumably negative [and vice versa]. (Bednarek, 2008, 166)

As to Surprise, I find Bednarek's view perfectly reasonable. However, while I understand Bednarek's motivation to modify the Inclination category—and consider the modified system more justified than that of Martin and White's, as discussed in 3.1.3—I do not see why Inclination could not be seen as positive or negative the same way as Happiness, Security and Satisfaction; in my view, e.g. wanting something indicates a positive evaluation of the wanted target the same way as loving or admiring something, and similarly, not wanting something indicates a negative evaluation of the target. The major difference between Inclination and the three above-mentioned Affect categories is that the more specific emotion—the one construed culturally as positive or negative—behind the wanting or not wanting is not stated; for example, we do not know whether it is sadness, fear or anger what makes Mary refuse to go to school, we only know that they do not want to go there. But that is enough for us to know who the Emoter is, whether they feel positive or negative about the target and that the target is 'going to school'. Simply put, I would say that the difference between Inclination and the three above-mentioned Affect categories is more related to what type of a mental process is going on than to whether the evaluation is positive or negative. As for the challenge mentioned concerning implied evaluation in the quotation, as far as I understand, it applies to other Affect categories as well: if I like/trust/am interested in something you think is bad, you will probably evaluate me negatively.

Another point to be noted is that Martin and White make a distinction between 'negative feelings' (e.g. *sad*) and 'grammatically negated positive feelings (e.g. *not happy*) (2005, 73). 'Morphologically negated feelings' (e.g. *unhappy*), in turn, should be coded as 'negative feelings', the same way as *sad* above (ibid.). This distinction will be taken into consideration also in this thesis. Next, let us move on to discussing how to distinguish between Judgement and Appreciation.

3.1.5 Distinguishing between Judgement and Appreciation – Whether to prioritise target or lexis, form or meaning?

In examples (1), (2), (3) and (5) in the previous subsections, the appraisals were straightforwardly of Judgement (*He* ***corruptly*** *agreed to accept*), Appreciation (*a* ***beautiful*** *sunset*, *an* ***ugly*** *scar*) and Affect (*I* ***like*** *chocolate*). As Bednarek notes,

> in cases where appreciating lexis is used to appreciate things/situations, where affective lexis is used to attribute emotional responses to Emoters, and where judging lexis is used to judge people and their behaviour, the APPRAISAL is simply and straightforwardly analysable as APPRECIATION, AFFECT and JUDGEMENT. (2009, 182)

What is more, the targets fit unambiguously the descriptions of targets of Judgement, Appreciation and Affect, respectively: *he* refers to a person, *sunset* to a natural phenomenon, *scar* to a tissue formation with aesthetic consequences, and *like* to an affective mental process. However, as one can expect, this is not always the case. In this subsection, I will discuss some issues concerning how to distinguish between Judgement and Appreciation and what aspects can be taken into consideration when deciding on the category. The researchers whose ideas I will be presenting are Martin and White (2005), White (2015a), Bednarek (2006 and 2009) and Thompson (2014).

According to Martin and White, one way to distinguish between Judgement, Appreciation and Affect is to place the adjectives that are used to make evaluations in certain grammatical frames: for example, one can test whether an evaluation is of Judgement with the frame "It was **Judgement** of person to do that"; to see if an evaluation is one of Appreciation, in turn, one can use e.g. the frame "Person considers something **appreciation**"; further, for recognising Affect, the frame "person feels **affect** about something" might prove useful (2005, 58–59). In my view, however, there are at least two major reasons why this kind of a strategy can only work in limited cases: first, very often evaluations are made by other means than using adjectives or words derived from them (e.g. *I* ***like*** *chocolate* above), which is of course something Martin and White themselves have discussed as well (e.g. 2005, 46). Second, since the context can influence so considerably the interpretation of the evaluative items under consideration, it is often impossible to categorise them solely based on their denotative meanings. The influence of context on the meaning is also something that has naturally been discussed by Martin and White (e.g. 2005, 52).

An illustrative example of a case where the context changes the meaning of an evaluative item and thus the Appraisal category it belongs to, resulting in the distinguishing frames not working ideally, is *beautiful*. At first sight, the word seems to be fitting perfectly the Appreciation frame: *Person considers something* ***beautiful***, and also Martin and White use the word in the example sentences for the frame: *I consider it* ***beautiful*** and *They see it as* ***beautiful*** (2005, 59). However, it can just as well be used in the Judgement frame above, as in *It was* ***beautiful*** *of person to do that*. The effects of this type of unconventional usage naturally differ from those of the more common one, but nevertheless, it is perfectly possible. Given that *beautiful* can also be used to evaluate humans when they are seen as entities, instead of behavers, it is possible to use this particular adjective both to Appreciate things and to Judge or Appreciate people.

Despite having discussed the considerable role of the context and the multiple means of making evaluations, Martin and White do not mention them explicitly when discussing the distinguishing frames. They do note, however, that in certain situations, this type of frames do not work ideally, namely with so called "borderline categories" (2005, 67). According to Martin and White,

> [w]here nominal groups construe a conscious participant in an institutional role or name a complex process as a thing then virtually the same attitudinal lexis can be used either to **judge** or **appreciate** […] (although not always with exactly the same meaning). (Martin and White 2005, 60; emphases and parenthesis as in the original)

What is to be noted is that the lexis they refer to is lexis which is primarily seen as either Appreciating **or** Judging, but which in practice can function as either, like in the following examples:

(8) He proved a balanced player – It was a balanced innings (Appreciation:Balance) (ibid.)

(9) He was an honest player (Judgement:Veracity) – It was an honest innings (ibid.)

In my view, however, irrespective of possible borderline categories, using this type of frames for distinguishing between the Attitude subtypes seems rather laborious and, above all, unreliable. Naturally, they can be helpful in automatic annotation (see e.g. Bednarek 2006: Bednarek 2009), but when the wider context is available to the analyst, I

do not see how the use of frames could facilitate or improve the analysis. Next, let us consider other factors and suggestions discussed in previous research concerning the the topic of this subsection. As one might expect, researchers lay emphasis on different aspects when analysing evaluations—for example on target over lexis, or on form over meaning.

One challenge concerning the distinction between Judgement and Appreciation is how to define the target of evaluation. Martin and White's definition for a target of Appreciation is fairly broad: according to them, targets of Appreciation are "'things', especially things we make and performances we give but also including natural phenomena […] whether concrete or abstract, material or semiotic" (2005, 56, 59). This naturally means that it might not always be clear from the target whether an evaluation is one of Appreciation or one of Judgement. As White describes,

> [t]he instances of APPRECIATION which can, perhaps, be most easily distinguished from JUDGEMENT values are those involving aesthetic evaluation of physical objects or material circumstances/state of affairs - for example, `a beautiful sunset', `an ugly scar', `a striking vista', `the sleek lines of the E-type Jaguar', `the squat, constricted form of the Morris Minor'. Such assessments clearly do not reference human behaviour, at least not directly. They don't involve assessments of right and wrong or correct and incorrect. (2015a; emphases as in the original)

However, very often targets are different from those listed in the quotation, and the more closely they are associated with human behaviour, the more difficult it naturally becomes to distinguish Appreciation from Judgement. For illustration, let us look at the examples below from Martin and White (2005, 59; emphases as in the original; underlinings omitted; parentheses added). The phrases describe virtually the same phenomenon—somebody hitting a great innings—but utilise different means to indicate evaluation. In the examples, the same value—skilfulness—is ascribed to the player **or** to their innings. What is to be noted here is that the only difference between (10) and (11) is that the value in the former is realised as an attributive adjective and in the latter as a manner adverb; in both, the person's capacity as a player is evaluated. The terms *behaviour* and *process* used in the parentheses are from Martin and White (2005, 59–60):

(10) He's a **skilful** player (person's behaviour)

(11) He played **skilfully** (person's behaviour)

(12) It was a **skilful** innings (process)

In Martin and White's view, the evaluations in (10) and (11) are targeted at a person's behaviour and therefore are of Judgement, whereas in (12), the evaluation is targeted at a process, i.e. the innings performed by the player, and thus is one of Appreciation (ibid.). However, as Martin and White note, "positive and negative valuations of something imply positive and negative **judgements** of the capacity of someone to create or perform" (2005, 58; emphasis as in the original).

Bednarek, in turn, suggests that Attitude subcategories can be classified either "according to the type of lexis used" or "according to the entity that is evaluated" (2009, 167). That is to say, "precedence can either be given to the lexis itself: is 'appreciating' lexis or 'judging' lexis or 'affect' lexis used? or to its context: is a thing/situation appreciated or a person/behaviour judged?" (ibid.). In practice this would mean—if one "rule" or the other were strictly followed—that examples (10), (11) and (12) above could be analysed in either of the following ways: If precedence were given to the lexis—in this case Judging lexis—all the clauses would be coded as Judgement. In case precedence were given to the context [or target more like] instead, the interpretation would be the same as Martin and White's above: examples (10) and (11) would be coded as Judgement and example (12) as Appreciation, according to the entities being evaluated, namely 'player' and 'innings', respectively. However, distinguishing between Judging and Appreciating lexis is not always simple—as illustrated with *beautiful* above—which might make the first option, i.e. prioritising the lexis, rather challenging in certain cases.

Bednarek considers it often easier to distinguish between Affect and the other two subcategories of Attitude than between Judgement and Appreciation (2009, 173). According to them,

> [w]hile in some cases it may be easy to categorise lexis as making an appeal to moral/ethical standards (**judging lexis**, e.g. *honest*, *truthful*, *intelligent*, *clever*) or as making an appeal to aesthetic standards (**appreciating lexis**, e.g. *beautiful*, *ugly*, *elegant*, *irregular*), in other cases this is much more difficult. (ibid.; emphases and parentheses as in the original)

In Bednarek's view, e.g. *important*, *genuine*, *expected*, *possible* and *necessary*, and their negative counterparts, are words that cannot straightforwardly be considered good or bad, or deriving from any ethical or aesthetic standard (ibid.). However, while I understand that this type of words might be a considerable challenge in distinguishing between Judgement and Appreciation in automatic annotation—which is what Bednarek (e.g.

2006 and 2009) is developing in their research—I believe the situation is quite different when the analyst close reads the material and is able to analyse the words in a wider context.

Another set of words Bednarek discusses is *good*, *bad* and *great*:

> [v]ery general evaluative adjectives such as *good*, *bad*, *great* while clearly inscribing positive/negative evaluation are also difficult to classify in terms of a specific evaluative (aesthetic or ethical) standard: rather, it seems to me that these adjectives are semantically 'underspecified' as far as a precise dimension of evaluation is concerned. (2009, 174; emphases and parentheses as in the original)

Since Bednarek approaches the question again from the automatic annotation perspective, I, as a manual annotator, see the challenge slightly differently: as long as the analyst is familiar with the broader context of, let us say, *bad researcher*, I do not see any possibility of them not being able to distinguish between Judgement and Appreciation, considering that the Target is known, and that it is compatible with the value ascribed to it. However, as far as this type of words are concerned, it indeed seems likely that classifying them in terms of any **more specific** ethical or aesthetic standard proves to be very difficult, even impossible, despite the context being available; for example, in many contexts, the above-mentioned *bad researcher* might be seen as Judgement:Propriety just as well as Judgement:Capacity, unless it is made clear that it is specifically the researcher's ethics that are assessed instead of their skills, or vice versa. However, as far as I understand from their article, Bednarek is not referring by "a specific evaluative (aesthetic or ethical) standard" (ibid.) to the subcategories of Judgement and Appreciation but the subcategories of Attitude.

Also Bednarek notes, however, that sometimes it is useful to take both the aspects of Appraisal, i.e. the lexis and the context/target into consideration. As they acknowledge,

> [o]ne argument against my claim above that it is often difficult to distinguish APPRECIATION from JUDGEMENT lexis might be that it is simply necessary to look at the context, i.e. the appraised entity (or attitudinal target) in order to decide whether APPRECIATION or JUDGEMENT is concerned. (2009, 180; parenthesis and emphases as in the original)

Based on this principal, as Bednarek continues, *an important man* would be analysed as Judgement:Capacity and *an important issue* as Appreciation:Valuation (ibid.), in the same way as examples (10/11) and (12) from Martin and White above (*player/innings*).

What is important to note here, however, is that, despite the apparent similarity between the two strategies, the underlying ideas behind them are different: Martin and White clearly prioritise the target and choose the Attitude subcategory according to that—and recognise that along with every explicit evaluation of a person or their behaviour there comes an implicit evaluation of their accomplishments, and vice versa (2005, 67); Bednarek, in turn, is more disposed to prioritise the lexis: referring to the coding of *an important issue* above, they state that "this is no longer purely a classification of APPRAISAL dependent on attitudinal lexis, but rather a classification of APPRAISAL dependent on the attitudinal target" (2009, 180) and suggest another type of classification for this type of cases:

> I would instead suggest classifying the second example [*an important issue*] as judging lexis which is used to appreciate. That is, what we need for APPRAISAL analysis is a classification of **attitudinal lexis** in terms of evaluative standards which are inscribed in this lexis, which constitutes our first starting point for the analysis of ATTITUDE. (ibid; parenthesis added; emphases as in the original)

Bednarek's preliminary classification of attitudinal lexis, drawing on earlier frameworks developed by e.g. Francis (1995) and Lemke (1998), consists of emotion lexis and opinion lexis; opinion (more or less) corresponds to Judgement and Appreciation in Martin and White (2005). Opinion lexis is divided into opinion types good/bad, important/unimportant, genuine/fake, expected/unexpected, possible/not possible and necessary/not necessary (Bednarek 2009, 181); all of them—except for good/bad—are based on the evaluative items discussed above that Bednarek considers "not easily classified […] as deriving from aesthetic or ethical standards or even necessarily as good-bad" (2009, 173). Opinion type good/bad is further divided into three subcategories, namely aesthetics (e.g. *beautiful*), ethics (e.g. *honest*) and general (e.g. *good*) (Bednarek 2009, 181), the latter consisting of the type of adjectives discussed above that Bednarek considers 'underspecified' (2009, 174). What is to be noted is that Bednarek's classification is based on the framework (presented in Bednarek 2006, 41–44) they developed while working on their doctoral thesis, the primary material of which was a corpus of "hard news" in British newspapers (2006, 5). What is more, as Bednarek themself notes, their framework is both theory-driven and text-driven, the latter meaning that "it derives from the actual analysis of naturally occurring data which guided the establishment of the framework" (2006, 37). Considering the material and the emphasis

given to it when developing the framework, it seems rather likely that not all the opinion types are necessarily the same useful or relevant in other types of studies. In other words, even if the evaluative items themselves are relevant, there may not be need for separate categories for them, but it might be more sensible to include them in the subtypes of Attitude suggested by Martin and White (2005).

According to Thompson, in turn, "there are a number of areas where the boundaries [between Judgement and Appreciation] are blurred. This happens when there appears to be a mismatch of some kind between the Target and the AV [ascribed value]" (2014, 57). This can occur for example when a person is evaluated using lexis associated with Appreciation, or when a product is evaluated using lexis associated with Judgement (Thompson 2014, 57–58; cf. Bednarek's *appreciating* and *judging lexis*). The following examples from Thompson (2014, 57; emphases added; parentheses as in the original) deal with a similar situation as the examples (10), (11) and (12) from Martin and White above, concerning who/what is targeted, a player or an innings:

(13) an **intelligent** film director (people's characteristics)
(14) his **intelligent** direction of the film (people's actions)
(15) an **intelligent** film (the outcome of people's actions)

As one can notice, Thompson's example (13) is practically identical to (10) from Martin and White above (He's a **skilful** player): in both, a person is evaluated, and the lexis is typically associated with judging humans, not objects; as Thompson states, "[t]he first of these is unproblematically a judgement of the person" (2014, 59–57). Example (15), in turn, is slightly more complex: "the evaluative term actually indicates the intellectual qualities of the person who directed the film; and yet the wording attributes this quality to the product" (Thompson 2014, 58). As for example (14), the target is a nominalisation of the verb direct, which naturally directs the interpretation even more towards the filmmaker's doings, and therefore their capacity as a director. As Thompson states,

> when behaviour is nominalised it moves into a grey area between action and product; and, although the grammatical structure takes it towards product (a 'thing' rather that a person) and therefore APPRECIATION, the evaluative terms chosen are frequently associated with JUDGEMENT. (ibid.)

At first glance, example (15) seems fairly identical to (12) from Martin and White; in both, the target of evaluation (*film*/*innings*) is something somebody has accomplished, a result of that somebody's capacity. However, the targets differ from each other in that while a film is a concrete, semiotic outcome of a filmmaker's actions, an innings is more of a process a player performs during a game. In a way, a film is more straightforwardly a 'thing' or an 'object' and thus fits more conveniently the description of a target of Appreciation than an innings; an innings is more of a peripheral member of the category, associated more likely with the actions performed by the player. As for the targets in examples (12) and (14), they are also very similar to one another on the one hand but differ from each other on the other: in my view, they both, *innings* and *direction of the film*, can be seen as describing the complex **process** (Martin and White's term above) in question, but *direction*—a nominalisation of the verb direct—refers more directly to the actual doings of the person in question, i.e. their **actions** (Thompson's term above).

In Thompson´s view, it is possible to treat this type of evaluations, in which "behaviour is nominalised [and] it moves into a grey area between action and product" , in two ways: either as Judgements, regardless of the form, and prioritising the meaning, or as Appreciation, according to its target, which is a nominalisation, i.e. a non-human entity (2014, 58). Thompson prefers the latter approach, i.e. "relying on the formal nature of the Target" (ibid.), which allows for "the distinction between conscious and non-conscious entities" (ibid.). According to them,

> [t]his kind of constraint on at least the initial categorization seems essential if an examination of APPRAISAL in a text is to retain as much of a footing in **replicable** linguistic analysis as possible, rather than being a subjective commentary on one person's reading of the text. There is also the fundamental point that the speaker/writer could, in principle, have chosen the wording of the paraphrase but did not […] While meaning certainly must be taken into account at some point, the analysis should therefore start from what was said rather than what might have been meant. (Thompson 2014, 58–59; emphasis added)

3.2 Implicit Appraisal and the cumulative nature of evaluation

In all the examples so far, evaluation is expressed explicitly, i.e. using overtly attitudinal lexis. However, evaluation is not always communicated directly but can also be conveyed implicitly. This applies to both Judgement, Appreciation and Affect, and the means of implying evaluation are varied. In this section, several of them will be presented. However, before moving on to the actual means of implicit evaluation, let us look at an

important aspect concerning implicit Appraisal, namely the cumulative—or prosodic—nature of evaluative meaning.

Martin and White call this cumulativeness of evaluation 'prosody', drawing on Halliday's (1979, 66–67) thoughts on the cumulative nature of interpersonal meaning: "this type of realisation [is] 'prosodic', since the meaning is distributed like a prosody throughout a continuous stretch of discourse" (Martin and White 2005, 19). As Martin and White describe it, emphasising the influence of explicit evaluations on the interpretation of the rest of the text:

> the prosodic nature of the realisation of interpersonal meaning such as **attitude** means that inscriptions tend to colour more of a text than their local grammatical environment circumscribes. The inscriptions act as sign-posts, in other words, telling us how to read the ideational selections that surround them. (2005, 63)

In Hood's synthesis of several researchers' ways to describe the phenomenon, the potential of interpersonal meanings to "colour" a text accumulatively is emphasised: "[p]rosodies of interpersonal meaning are variously described as the spread, sprawl, smear or diffusion of interpersonal meanings that accumulate, reinforce, or resonate with each other to construct an evaluative 'key' over an extended segment of text" (2010, 141). Hunston starts with a similar idea, i.e. describing the cumulative nature of evaluation, but in the latter part of the quotation, they highlight the fact that sometimes stretches of text become evaluative only when explicit evaluations guide the reader towards an evaluative interpretation or the text is evaluatively coloured by other textual evidence:

> [E]valuative meanings tend to cluster together. In a book review, for example, the assessment of the book could be said to be the accumulation of all the different things said about it. Where evaluation is highly implicit, however, it could be said that it is only the accumulation of evaluation that makes it noticeable […] [I]t is possible that some evaluation in some texts remains only potential until it is actualised by the introduction of a more explicit statement or **by the sheer accumulation of evidence**. (2011, 16–17; emphasis added)

Martin and White introduce "three types of prosodic realisation [which are] useful for interpreting the ways in which appraisal operates as an ongoing cumulative motif" (2005, 19): *saturation*, *intensification* and *domination* (2005, 19–20). In brief, in saturation, "the prosody manifests where it can" (2005, 19), like in the example (16), which is filled with realisations of modality of possibility:

(16) I **suppose** he **might possibly** have **mightn't** he. (Martin and White, 2005, 20; emphasis as in the original)

However, saturation is not restricted to any particular type of lexical or grammatical choices. Another example of the phenomenon illustrates how a text can be saturated with Appraisal by the use of expletives:

(17) **Fucken Hell** man, who **the hell** told you I liked doing this kind of **shit.** (Martin and White, 2005, 24; emphasis as in the original)

What is to be noted here is that Martin and White suggest we "treat expletives […] as outbursts of evaluation which are underspecified as far as type of **attitude** is concerned" (2005, 69; emphasis as in the original).

Intensification, in turn, has to do with amplifying the impact of evaluations conveyed in texts, e.g. by repetition (Martin and White, 2005, 20), like in the following example:

(18) It's a **dirty rotten stinking lousy bloody low filthy two-faced** lie. (ibid.; emphasis as in the original)

As one can notice, example (18) is somewhat similar to (16) and (17) above in that they all contain several semantically similar items in a relatively small space. The essential difference, in turn, is that when saturation is at stake, the prosody really manifests everywhere it can, like in (16) and (17) above: in every clause, insert and tag, in different clause elements and in words belonging to different word classes (slightly differently described in Martin and White 2005, 19–20); intensification has a much more limited scope. As to *domination*, as far as I understand, it is related to situating the evaluative material—explicit or implicit—in certain places in text, places where it has the largest potential to influence the reader (Martin, 2004, 330; Martin and White, 2005, 20–24).

As the reader might have already noticed, especially saturation and intensification resemble Graduation; indeed, they both are very similar to one of the modes of Intensification—repetition. While this type of Graduation can be created simply by repeating a certain lexical item, it can also be done by listing items that "are closely related semantically" (Martin and White, 2005, 144). An example Martin and White give of this type of a case is the following:

(19) [i]n fact it was probably the most immature, irresponsible, disgraceful and misleading address ever given by a British Prime Minister. (ibid.)

To be very precise, I would in fact say that examples (16), (17) and (18) exemplify Intensification more accurately than (19) from Martin and White, which contains semantically rather different adjectives. What is more, example (16) could also be an example of Engagement, more particularly of entertain, as it very emphatically "**entertains** or invokes […] dialogistic alternatives" (Martin and White, 2005, 98; emphasis as in the original). However, despite this overlap between different aspects of Appraisal, both saturation, intensification and domination certainly have an important role in guiding readers' interpretations of texts. In this thesis, these three phenomena and their realisations are treated as prosodic, and are thus considered falling under its scope.

So far, the discussion has mainly focussed on prosody and some of the ways the discourse can guide the reader to interpret stretches of text evaluatively—also those that do not contain anything explicitly evaluative. However, I would say that the three ways of prosodic realisation mentioned above, saturation, intensification and domination, are mainly related to how lexical items, words, clauses, sentences, etc., are situated in the discourse. Explicit evaluations acting as sign-posts, in turn, has to do with their role in how ideational meanings are interpreted; next, we will move on to the ways implicit evaluations can actually be made.

Martin and White describe the basic idea of implicit—or *Invoked*—evaluation in the following way: "[t]he general point […] is that the selection of ideational meanings is enough to invoke evaluation, even in the absence of attitudinal lexis that tells us directly how to feel" (2005, 62). They further specify three strategies for Invoking evaluation, namely *Affording*, *Flagging* and *Provoking* (2005, 63–68), the first one being about making the most implicit evaluations, and the last one referring to the most explicit ones. According to Martin and White, Affording is in question when a stretch of text does not contain any attitudinal lexis and the meaning of it as such is purely ideational (2005, 62). What they do not mention explicitly but is inferable from the text is that these "ideational tokens" or "invocations" (Martin and White, 2005, 75) do not contain any other textual clues either that would inform the reader about an evaluation being made (Martin and White, e.g. 64–67). Consequently, the explicit evaluations elsewhere in the text and the cumulative nature of evaluative meaning play an important role in how ideational tokens are interpreted, i.e. whether they are seen as evaluative or not (Martin and White, 2005, 63). As Martin and White describe this role in connection with one of their text samples,

"[i]nscribed **attitude** […] launches and subsequently reinforces a prosody which directs readers in their evaluation of non-attitudinal ideational material under its scope" (2005, 64).

Flagging, in turn, is in question when there is a textual clue that indicates there might be something more to the meaning than the purely ideational one (Martin and White, 2005, 65–67). The first strategy Martin and White suggest for Flagging evaluation is using "non-core vocabulary that has in some sense lexicalised a circumstance of manner by infusing it into the core meaning of a word" (2005, 65). For example, instead of using the verb *run* when describing somebody's movements, it is possible to use *gallop*, which "implicates a **judgement** of a person running this way" (ibid.). Simple intensification functions in a similar way: instead of using core vocabulary like *break*, one can use *damage*, *smash*, *tear to bits*, etc., in order to indicate negative Judgement of the person doing the breaking (Martin and White, 2005, 65–66). Another way to Flag evaluation Martin and White mention is "[c]onstruing some action or event as contrary to expectation" (2005, 66). The following extract is from an example Martin and White give of the effect of counter-expectancy:

> (20) This is another book by an American who writes about the pleasures and pains of owning a house in France. Barry, however, is something of an exception because, unlike other authors in this genre, she does not actually live in her house in France. (2005, 66)

By the use of *however* and *actually*, it becomes clear that the author does not meet the reviewer's expectation of somebody writing about living in France (Martin and White, 2005, 67).

Further, Provoked evaluations are made by using lexical metaphors. As Martin and White state, "ideational meaning can be used not just to invite but to provoke an attitudinal response in readers" (2005, 64). This is well illustrated in a government report on the Stolen Generations, in a statement by an indigenous Australian child describing how they were taken from their parents:

> (21) We was bought **like a market**. We was all lined up in white dresses, and they'd come around and pick you out **like you was for sale**. [BTH 90] (Martin and White, 2005, 65; emphasis as in the original)

Even though white authorities are not explicitly Judged in the statement, the lexical metaphors indicate rather clearly that they are seen as inhumane; “the treatment of people as commercial goods arguably does more that evoke a **judgement** – it provokes one” (ibid.; emphasis as in the original).

Since the basic idea of implicit evaluation is—as mentioned above—that ideational meanings have the potential to Invoke evaluation, naturally the more implicit the evaluation is, the greater influence the reader position has on the interpretation (Martin and White, 2005, 62, 66). This in turn means that also the risk of subjectivity increases accordingly (ibid.). However, although taking implicit evaluations into consideration makes it more challenging to avoid subjectivity in the analysis, the alternative—the idea of leaving them out altogether—is even more unpleasant; doing that would suggest that they were chosen for no reason (ibid.). What is more, it would naturally also suggest they have no influence on how the text is understood. Therefore, since the probability of subjectivity increases when implicit evaluations are included in the analysis, “it is certainly critical to specify one’s reading position as far as possible with respect to [gender, generation, class, ethnicity and in/capacity] and also to declare whether one is reading a text compliantly, resistantly or tactically” (ibid). A resistant reader opposes the views supported by the text; a tactical reader, in turn, uses the text for other social objectives than what it was initially created for; and further, a compliant reader goes along with the views expressed and naturalised in the text (ibid.).

According to Don, there are more ways—besides the three suggested by Martin and White—to invoke evaluation in text (2016, chap. “Introduction”). As Don notes, several researchers have dealt with problems related to subjectivity of categorising Appraisal choices, but “the ‘cline of invocation’ itself has not been substantially reviewed” (ibid.). Therefore, they propose “that analysts attend to a wider array of discursive features and ‘strategies’ than has previously been taken into account, justifying decisions as to invoked attitude categories” (2016, chap. “A proposed amended cline”). However, Don is not proposing anything totally different from Martin and White’s taxonomy but

> an amended version of what has been proposed by Martin and White in the form of a set of overlapping 'categories' designed to fill gaps in the interpretive paradigm, and to call for a more precise means of tracking and identifying how attitude is invoked in texts. (2016, chap. “Introduction”)

Don's "invocation spectrum" is divided into two broader subtypes, namely *Evoked* and *Provoked*; Evoked corresponds to Martin and White's (2005) Afford, while Provoked combines their categories Provoke and Flag (Don, 2016, chap. "The spectrum of invocations"). With this kind of categorisation, Don highlights an essential difference between the two broader Invocation types:

> [There are] invocations which rely entirely on assumed (e.g. cultural, intertextual) knowledge or values for the attitudinal inference to arise (i.e. 'evoked') and those which, in addition to relying on assumed cultural knowledge, also involve local co-textual signals or other in-text indicators that an attitudinal value is at stake […] This two-way taxonomy gives prominence to this particular distinction (experiential meanings/cultural framing, versus textual signalling). (ibid.; parentheses as in the original)

In my view, this distinction clarifies the whole concept of implicit Appraisal considerably and adds welcome consistency to analysis. For some reason, however, as Don notes, this distinction "is obscured to some degree in Martin and White" (ibid.).

Another aspect emphasised by Don (2016), but in this particular sense not discussed by Martin and White (2005), is the role of intertextuality when implicit evaluations are analysed; according to Don, "all evaluation is inevitably intertextual in nature" (2016, chap. "Introduction"), and intertextuality "is central to […] the analysis of invoked attitude" (2016, chap. "Attitude, invocation and associations"). This is how they describe the way intertextuality connects the texts being analysed, via associations, to other texts that readers have encountered:

> [I]nstances of attitudinal stance in discourse are dependent on 'associations' attaching to phrases and other linguistic signs due to the way these signs have been used, and are typically used, in other texts. These associations and the attitudinal positions they invoke are thus ultimately a function of intertextuality, in the broadest sense of the term–i.e. in the sense which underlies Bakhtin's much quoted dictum that 'Each utterance is filled with echoes and reverberations of other utterances to which it is related by the communality of the sphere of speech communication' (Bakhtin 1986: 91). (Don, 2016, chap. "Attitude, invocation and associations")

Further, Don's spectrum of invocation differs from Martin and White's model in that it includes a wider selection of indicators of implicit evaluation (Don, 2016, chap. "The spectrum of invocations"). What is to be noted, however, is that some of them are included in the Graduation or Engagement system in Martin and White (2005) (Don,

2016, chap. “Alerting readers to stance”, “The spectrum of invocations”). Similarly, some of Martin and White’s strategies for Invoking Attitude overlap with Graduation (Martin and White, 2005, 67). In Don’s spectrum, there are eight (1–8) “mechanisms/textual arrangements potentially giving rise to attitudinal inferences”—and five submechanisms in the sixth mechanism (a–e) (2016, chap. “The spectrum of invocations). What is to be noted is that these mechanisms “are not presented as sub-types in a taxonomy of invoked attitude […] but rather are offered as some of the **key mechanisms** and textual features by which attitude may be indirectly ‘evoked’ or ‘provoked’” (ibid.; emphasis added). What is more, they “should not be seen as a typology, but rather considered as **overlapping sets of mechanisms** or text-strategies in context” (Don 2016, chap. “Conclusion”; emphasis added). Next, I will discuss in more detail these mechanisms, starting from the most implicit tokens.

As mentioned above, Don divides Invoked Appraisal into Evoked and Provoked evaluations (2016, chap. “The spectrum of invocations”). Simply put, Evoked evaluations are about what has happened and what has been said, while Provoked evaluations contain some type of in-text signals of Attitude (ibid.). For Evoking evaluation, Don lists four mechanisms: under the title *Experiential tokens*, there are *In-group allusions* and *Cultural doxa*, and under the title *Extra-vocalisation*, there are *Constitutive intertextuality* and *Manifest intertextuality* (ibid.). In-group allusions refer to “material which references attitudinally charged knowledge, beliefs and values likely to be exclusively held by members of the current smaller-scale discourse community” (Ibid.); Cultural doxa refers to “material which references widely held and attitudinally charged knowledge, beliefs and values” (ibid.); and Constitutive intertextuality refers to “indirect referencing of particular genres or registers so as potentially to activate attitudinal positions associated with these (ibid.), i.e. bringing features such as style or structure from another text to the one under creation, without directly or indirectly quoting the former. The last mechanism Don considers to Evoke evaluation, Manifest intertextuality, refers to “overt quoting of material from other texts by which attitudinal associations are called up for those readers with knowledge of these texts or at least of their provenance” (ibid.). As Don further elucidates, it is possible for a quotation to evoke evaluation e.g. when its source “is an authoritative one or is favoured in some way” (Don, 2016, chap. “Intertextuality”).

The mechanisms that are used to Provoke evaluation are *Ventriloquism*, *Local signals/flagging* (henceforth referred to as *Local signals*, to differentiate it from Martin

and White′s Flagging), *Attitudinal tokens* and *Figurative tokens* (Don, 2016, chap. "The spectrum of invocations"). Ventriloquism refers to

> pseudo or parodic quoting of other sources – typically via free indirect speech involving intensification and/or counter-expectancy – so as to activate negative assessments of these sources and their value positions, i.e. as ridiculous, extreme, unfeeling etc; often interpreted as ironic. (ibid.)

Local signalling can be done e.g. by denial, counter-expectancy or up- or downscaling of intensity, quantity or measure, just to mention a few possibilities (ibid.). Attitudinal tokens in turn refer to situations where "an inscribed attitudinal assessment of one type invokes an attitudinal assessment of a different type (ibid.). What is worth mentioning here is that also Martin and White discuss this type of implicit evaluations (2005, 67–68), but they do not—at least explicitly—categorise them as either of the subtypes of Invoked Attitude. Instead, they "allow for double codings of the borderline categories" like this (ibid.). The final mechanism, Figurative tokens, refers to a situation where a lexical metaphor is used to invoke evaluation (ibid.); this is identical with Martin and White's Provoked evaluation, which is also done by using lexical metaphor. As Don notes, "lexical metaphor shades into inscribed attitude" (2016, chap. "Attitudinal Tokens") which, I assume, is the reason Martin and White suggest a separate category for them—for the most explicit cases among implicit Invocations.

In my view, Don's categorisation definitely has its advantages compared to Martin and White's discussed above. First, as mentioned, Don's two-way taxonomy emphasises the important difference between Evoked and Provoked evaluation, which, in my view, is of particular importance because it offers a somewhat concrete tool for a linguist to analyse invocations: if there is a textual signal in a stretch of text which gives rise—or has the potential to do so—to attitudinal inference, it is a Provoked evaluation; if the evaluative interpretation of a stretch of text is entirely dependent on the reader's values and prior knowledge, an Evoked evaluation is at stake. Second, I find it important and well-grounded that Don emphasises the importance of intertextuality in implicit appraisal: texts we have earlier encountered indeed influence how we receive and interpret new ones, even if their role is different in different situations. Don only discusses explicitly the significance of intertextuality with respect to In-group allusions, Cultural doxa, Constitutive intertextuality, Manifest intertextuality and Ventriloquism (2005, chap.

"Intertextuality"), but in my view, actually, it influences the way at least some of the other mechanisms function as well. As Don states,

> instances of attitudinal stance in discourse are dependent on 'associations' attaching to phrases and **other linguistic signs** due to the way these signs have been used, and are typically used, in other texts". (2016, chap. "Attitude, invocation and associations"; emphasis added)

To give a very simple example, in order for a lexical metaphor in *Your father is a **chicken*** to invoke certain, evaluative associations, one needs to be aware of how the metaphor is typically used, not what a chicken is. Thirdly, with a wider selection of indicators of implicit evaluation, it is possible to add transparency and objectivity to the analysis. Next, let us move on to another important aspect of sppraisal, namely the identification of appraisal units.

3.3 The Identification of appraisal units

An aspect of appraisal that does not seem to have been very eagerly discussed in research literature is how to **identify** evaluative expressions in texts. As Hunston notes, "many writers on the topic [evaluation] avoid the issue of identification altogether and focus on classifying and analyzing instances of evaluation and other aspects of interpersonal meaning" (2004, 2). According to Fuoli, this "seems to apply well to the case of appraisal theory, where the process of identification of evaluative expressions has not been sufficiently problematized" (2018, 3). I must agree with Fuoli in that

> Martin and White (2005) devote considerable space to describing the framework and presenting various analyses and worked-out examples. However, most of the coding choices made in the analyses are treated as self-evident and unproblematic. But identifying and coding evaluation in text is, in fact, a problematic task for a number of reasons (ibid.)

Naturally, everybody doing research on evaluation have their own—undoubtedly valid—reasons for focusing on and foregrounding certain aspects of the topic, and correspondingly focusing less on others. However, I find it highly likely that many avoid going very deep into the identification issue due to its nebulousness. I am sure everybody—be they researchers or not—is familiar with the feeling that some sort of a value judgement is being made, but it is difficult to get hold of how exactly. As Mauranen and Bondi describe it,

> [e]valuation in discourse is an elusive concept. As readers and writers, we seem to be vaguely aware of evaluation being constructed in texts we encounter and produce; it is harder to tell exactly how this happens, that is, which linguistic means are involved, and which (if any) are not. (2003, n.p.)

In this section, I will discuss some factors that have influence on whether something in a text is interpreted as evaluative, and furthermore, how to decide on the textual boundaries of evaluations.

Fuoli divides the challenge of identifying appraisal in four—in my view partly overlapping—components (2018, 3–6). The first one is the large number of possible realisations of evaluation. As they describe, "evaluation may be realized through an open-ended range of expressions of varying length and complexity and belonging to any word class" (2018, 4). Since possible realisations of appraisal were already discussed earlier in this thesis, suffice it to note that their large amount, or infinite more like, naturally makes it challenging to identify them. As Hunston notes, "evaluation is indicated by such a large range of lexical and other items that it would be pointless to try and list them" (Hunston 2011: 13). Therefore, the analyst themselves have the "ultimate responsibility to decide what counts as evaluation in any given text, which is an inherently subjective process (Fuoli, 2018, 4). It seems that it is not an overstatement to say that one will only know what to look for when it is already found, and even then they are left uncertain about their choices.

The second complication is the context-dependency of meaning: as Fuoli states, "[t]he task of identifying appraisal is further complicated by the fact that evaluation is a highly context-dependent phenomenon" (2018, 4). In practice this means that the context and the text where a certain expression occurs determines whether the expression is interpreted as evaluative or not (ibid.). Fuoli (ibid.) gives a simple but illustrative example of such case:

> (22) There's thin and light. Then there's thin and light on a whole new level. iPodtouch has a super-thin aluminum body that feels barely there in your hand or pocket.

According to Fuoli, without context, adjectives *thin* and *light* would seem relatively neutral, but when they are used to advertise mobile phones, they become "value-laden, as they are clearly used to positively evaluate the advertised product, based on the implicit

assumption that thinner and lighter phones are better, more desirable phones" (ibid). In this case, the subgenre—mobile phone advertisement—is the context that tells the reader how to interpret the words.

In the next example concerning context-dependency of evaluation, the context that determines the meaning of the word or phrase under examination is the immediate words surrounding it (Hunston 2011, 14). In *electric fire* or *electric storm*, the word *electric* would be considered as non-evaluative, whereas in *her performance was electric* the word would be interpreted as evaluative (ibid.), and thus identified as evaluation.

The next component concerns unitising, i.e. where the textual boundaries of each evaluation should be set. As Fuoli states, one's unitization choices might, in quantitative studies in particular, change the outcome of the analysis considerably (2018, 5). They even claim that "[s]etting the textual boundaries of evaluative expressions (unitizing) is often a complicated and **arbitrary** exercise" (Fuoli 2016, slide 9; parenthesis as in the original; emphasis added). To illustrate possible unitising options, they use the following sentence (Fuoli 2018, 5; square brackets added):

(23) We are well-positioned to generate shareholder value with distinct competitive advantages and a [[[steadfast commitment] to the [highest standards]] of [[ethics], [safety], and [corporate citizenship]]].

According to Fuoli, evaluation in the sentence could be unitised in several ways: *steadfast commitments*, *highest standards*, *ethics*, *safety* and *corporate citizenship* could be annotated as five separate units. It could also be argued that there are only two evaluative units, namely *steadfast commitment to the highest standards* and *ethics*, *safety and corporate citizenship*. Further, the whole phrase *a steadfast commitment to the highest standards of ethics*, *safety and corporate citizenship* could be seen as one single appraisal unit (2018, 5).

Another question concerning unitisation has to do with coordinated words and expressions such as in the following example (Fuoli 2018, 5; brackets and emphasis added):

(24) our [[systematic] **and** [unwavering]] focus on safety

Fuoli sees two possible unitisation options here: *systematic* and *unwavering* may be annotated either as one single or two separate Appraisal units (ibid.). However, as they note, "[t]he implications of such a choice are considerable, given that the observed frequency of certain annotated types could substantially increase if the 'separation rule' was applied to a text that included several such expressions" (ibid.).

A further issue Fuoli mentions concerning unitisation is how to handle evaluations that are discontinuous, like in their example from Carretero and Taboada (2014, 228):

(25) That is the most **boring** (book) I have ever read (Fuoli 2018, 5; emphases and parenthesis added)

In this sentence, there is an expression of Attitude (**boring**) and that of Graduation (the most I have ever read), and addition to those, a non-evaluative word (book) in the middle, a situation which might be a problem when annotating a text (ibid.): the analyst would either have to annotate the Graduation expression as two separate units or accept the "redundancy and 'noise' in the coding" (ibid.) caused by the extra items (ibid.). As Fuoli notes again, also "decisions concerning how to handle discontinuous evaluative expressions may have implications for how evaluation in text is quantified" (2018, 6).

Also Read and Carroll deal with the unitisation issue. In order to make their annotation system as consistent as possible, they considered various unitisation options: first they were thinking of allowing only one token per appraisal unit but had to realise that very often evaluations consisted of more than one word (2012, chap. "Annotation methodology"). However, allowing multi-word annotations had its limitations as well: as Read and Carroll state, it "increases the complexity of the annotation task, and reduces the likelihood of agreement between [analysts], as the annotated tokens of one [analyst] may be a subset of, or overlap with, those of another" (ibid.). Therefore, they also considered having whole sentences as appraisal units, but then the problem was that there could be several appraisals per sentence (ibid.). Yet another option they had in mind is from Bruce and Wiebe (1999): "to create units from every non-compound sentence and each conjunct of every compound sentence" (ibid.). However, even this was not a functioning strategy as naturally also these smaller grammatical units could contain more than one evaluation (ibid.). Finally, Read and Carroll decided on allowing any number of Appraisal units of any length per sentence, in order to capture all the evaluations in the material under consideration, even though it might have increased to some extent the level of inconsistency (ibid.).

The last identification challenge Fuoli raises is the distinction between explicit and implicit Appraisal:

> While intuitively appealing, this distinction raises several issues. Distinguishing between inscribed and invoked evaluation in text is far from straightforward. As seen above, even apparently descriptive and neutral terms may perform an evaluative function in certain contexts. This entails that there is no simple rule that can be consistently applied to discern the two types. (Fuoli 2018, 6)

In my view, however, distinguishing between explicit and implicit evaluation does not so much concern **identification** of evaluative expressions but is rather a matter of **classifying** them, i.e. deciding on which sort of Appraisal is being conveyed by that particular expression. As far as I understand, in Fuoli's view the classification issue only concerns Appraisal categories "proper", more particularly those of Attitude and Engagement, for example Judgement and Entertain (2018, 7, 10). I, in turn, suggest that when a stretch of text needs to be categorised as a certain type of appraisal (Judgement, Evoked, negative, etc.), it is a matter of **classification**; **Identification** in turn is in question when the aim is to recognise the stretches of text that are evaluative, be they of any type of appraisal. In the next section, the primary material will be presented.

4 Primary material – letters to the editor

The primary material for this thesis consists of letters to the editor that were published in *The Times* between 1875 and 1884. They were collected from *The Times Digital Archive,* which contains the facsimiles of the issues from 1785 to 2014. *The Times* was chosen for the purpose because, besides being widely read, people from various backgrounds had access to it. I wanted to study texts that were available to as many people as possible, not just e.g. to scholars or otherwise particularly privileged people. Furthermore, although vivisection-related texts were also published in other sections, besides Letters to the Editor, I wanted to focus on letters to the editor in particular, in order to examine the language use of people who were not professional newspaper writers. What is more, the material consists of texts the purpose of which is to defend something and which are meant to be published in a public forum for expressing opinions. I believe it is safe to assume that this type of material, i.e. letters to the editor, intended for a wide, heterogeneous audience, written by non-professional writers, can reveal rather much about people's attitudes towards the topic in question.

The material consists of 33 letters to the editor that in one way or another defend vivisection; 16 of them were published before and 17 after 15 August 1876, the day the *Cruelty to Animals Act 1876* was passed (henceforth, collections A and B, respectively). I started the search by selecting the article type (Letters to the Editor) and the publication date (Before 16 August 1876 / After 15 August 1876) and by using the search term "vivisection". I also searched by terms such as "animal experimentation" and "experimentation on living animals" etc., but it turned out that "vivisection" was the term almost exclusively used to refer to animal experimentation in the letters. In order to make sure no letter containing the word *vivisection* escaped my notice due to possible optical text recognition errors, I also used wildcards in the searches.

However, I was not able to detect all the vivisection-related letters directly in the searches; a couple of them I found by accident as they happened to be on the same page as letters I had already spotted. For example, in one such letter, the pseudonym W. refers to the concept of vivisection explicitly only when expressing his gratitude to professor Ferrier, "who could not have obtained his extraordinary power unless […] by the **sacrifice under anaesthetics of a few rabbits and monkeys**." (letter B14; emphasis added). Otherwise the letter consists of a description of a patient's brain injury, the treatment given to him and his recovery, and thus only implicitly supports vivisection. Words like "vivisection", "experiment" and "animal" are not mentioned at any point. Therefore, I was quite lucky to get hold of this letter—and those alike—which naturally means that it is more than possible that some letters related to vivisection I might have missed completely. However, I do not consider this a significant risk to the reliability of the analysis; even if I was not able to detect every single vivisection-related letter, I believe the material still represents fairly well the discussion that took place in the letters to the editor section at the time.

At this point, I had a set of letters published during the time frame and in one way or the other related to vivisection. I read the letters starting from those published closest to the day the Act was passed and selected those defending the practice. While reading the letters, a few of them were excluded as it turned out that they did not suit the purpose of the thesis, even though in a sense they dealt with vivisection; for example, one letter that contained the word "vivisection" did not actually handle animal experimentation, but the word referred to a punishment by torture. There was also a letter in which the word "vivisection" did refer to animal experimentation, but the letter itself was not about the topic but used the term to draw parallels between animal experimentation and the

mistreatment of sentries. Furthermore, there were letters in which *vivisection* did refer to animal experimentation and the actual topic of which it also was, but since no sides were taken for or against the practice, they were not included in the material. I kept reading until I had enough texts to form a representative sample—estimated by comparing with other theses using Appraisal—and the collections were approximately of the same size. Fortunately, since the amount of data at this point seemed perfectly manageable in terms of conducting the analysis, there was no need for any random selection, but all the letters defending vivisection that were found could be included in the material.

The collections consist of 9,920 and 9,741 word tokens, the total number being ca. 19,700. The length of the letters vary from 72 to 1313 tokens, but the collections, however, are rather similar to each other with respect to the length of single letters; in the collections the letters consist of 64 to 1,313 (A) and 204 to 1,184 (B) tokens, and in both of them there are texts of various sizes, in addition to these extremes.

Both collections presumably contain texts from several writers, but since many write under a pseudonym, it is impossible to know how many distinct writers there really are. It is also impossible to know whether the "real" names really belong to the writers, but it is probable that there would have been some consequences and subsequent comments—which, to my knowledge, there were not—in the letters to the editor section in case any misuse of names had occurred. Therefore, I am working on the assumption that the 28 different names and pseudonyms give good grounds for believing that the letters represent opinions and attitudes of enough people to assume they give a fairly representative picture of the public discussion on vivisection at the time. The details of the primary material are shown in appendix 1.

As for possible limitations of the primary material, there are two things that I want to discuss: the difference between the length of the time periods during which the letter collections A and B were published, and a year-long gap in publishing any vivisection-related letters in the newspaper after the Act was passed. The time span of the publication dates of the earlier collection is approximately one and a half years (30 January 1875–7 August 1876), while that of the later collection is ca. seven and a half years (24 July 1877–26 December 1884). The disparity results from the fact that the discussion on vivisection in the letters to the editor section is very lively and letters that oppose vivisection relatively rare during the two years before the Act is passed, whereas after it the discussion subsides dramatically and in addition to that, the number of opposing letters increase. However, since there is this "natural" explanation for the difference, and the

difference is not likely to jeopardise the objective of this thesis—to find out what types of evaluation and of what targets are used in the letters before and after the Act is passed—I consider it more of a rather common challenge philologists encounter than a limitation. What I perceive as more relevant to my research is that the total time of examination is less than ten years; this means that no considerable changes in the writing conventions presumably occurred during the time the letters were written. With regard to the gap after the Act was passed, I actually see it more as an advantage than a limitation; one of my research questions deals with the influence of the new legislation on the writers' language use, and since it is likely that it took some time for possible effects to take place, letters not immediately written after 15 August 1876 might even be a more reliable source of data with respect to the change in the use of evaluative language.

The arguments for vivisection in the letters are numerous, which indicates that the discussion is many-sided and the topic is approached from different viewpoints; they are often related to the usefulness or the painlessness of the practice, The reason why this is relevant with regard to the thesis at hand is that the more varied the matters discussed are, the more comprehensive a picture the data give of the examined linguistic phenomena. What is more, since the purpose of this thesis is to examine the evaluative language used by defenders of vivisection—and the reasons for the use—it is important to also understand the "ultimate" goal of the writers; evaluative language is not an end in itself but a means to influence the audience, in this case convince them of vivisection being an appropriate way to do scientific research and hence improve the wellbeing of the humankind. In the next section, I will describe the analysis.

5 Analysis

Naturally, when starting analysing the letters included in the primary material, I had already read each of them at least once during the material gathering process and thus knew that they contained a great deal of attitudinal lexis; that was also one of the reasons why I chose to examine the use of evaluative language in them in the first place. However, I wanted to have a more accurate idea of what I was dealing with before taking the UAM CorpusTool into use, so I conducted a "preliminary" analysis on the letters with pen and paper. The aim was to familiarise myself with the material before the annotations "proper" so that I would have to return to and modify the annotations as little as possible. However, in the end I modified the annotation system so many times I stopped counting at some point, but finally I reached the stage where I could say the annotations were

ready—and in this section, I will describe the outcome of that process. What is to be noted is that before moving on to annotating them, the letters needed to be transcribed, converted to txt documents and added to the annotation tool. Since the optical character recognition of *The Times Digital Archive* could not recognise the characters in the letters very accurately, the transcriptions were partially created manually.

To return briefly to the challenges related to distinguishing between Judgement and Appreciation, in my view, the safest way seems to be to rely on the form, i.e. what has actually been said: that way, as little as possible is left open to interpretation. However, as became clear earlier in this subsection, this decision is only one part of the question of how to distinguish between Judgement and Appreciation. As for the other aspects discussed above, I believe it depends rather much on the purpose of the study in question what aspects should be prioritised. For example, in this thesis, in which one of the research questions is about defining the targets of evaluation in the material, the natural starting point is the target of each evaluation. However, even if I did not have that type of a question to answer, I would probably prefer prioritising the target; considering the influence of the context on the meaning of a word, I find it rather impossible to define what items belong to Judging or Appreciating lexis. However, this does not mean that no linguistic item should ever be referred to as e.g. "appreciating lexis", as often that type of labelling helps distinguishing between different types of evaluations. But depending very much on the lexis in the initial phase of analysis might not work. Bednarek notes, with regard to target-based analysis, that "it must be clear that this is no longer purely a classification of APPRAISAL dependent on attitudinal lexis, but rather a classification of APPRAISAL dependent on the attitudinal target" (2009, 20). It seems to me that "a classification of APPRAISAL dependent on attitudinal lexis" (ibid.) is purely impossible, but as soon as the target is defined, it should be examined as accurately as possible how that target is evaluated, i.e. what appraisal categories, what grammatical means and what lexis is used. This naturally applies to all evaluations, not just Judgements or Appreciations.

I will start by describing how the targets of appraisal were identified and how they were grouped into more general categories. Then I will describe the analysis concerning Judgement, Appreciation and Affect, after which I will discuss how implicit evaluations and the cumulativeness of appraisal show in the material. Finally, I will discuss the general principles of identifying the appraisal units, i.e. what was included in the data and why.

5.1 Targets of appraisal

Already in an early stage of the analysis, I could naturally make different types of observations about the targets in the material, but many things could be figured out only when the whole analysis was done. The whole process can be divided roughly into two phases—although in practice they often overlapped each other—i.e. identifying the targets, which was fairly straightforward for the most part, and grouping them, which in turn turned out to be somewhat more complex than expected; in order to answer the research questions, I needed to not only identify all the relevant targets in the material but also categorise them in a way that would enable a productive data analysis. Next, I will present the process in more detail and—when considered useful for the reader—illustrate some of the points with examples taken from the letters.

The first research question being "What and who are the targets of evaluation when vivisection is defended?", the aim naturally was to identify all the targets in the material, without focusing on any particular target type. This part of the analysis consisted broadly speaking of the following three, partly overlapping, stages: recognising all the actual targets of evaluation in the material, determining what target category, i.e. Target, they belonged to, and, if needed, creating umbrella categories for them, in order to organise the data in the most appropriate manner.

In some cases, it was somewhat uncomplicated to determine the Target and understand what types of lexical items referred to them. For example, Vivisectionist and Vivisection were among the first Targets to recognise, and lexical items referring to them were usually easy to detect due to the wider context—be the item the clause, the sentence or the larger discourse unit the target occurred in. For example, vivisectionist can appear in the letters as e.g. *physiologist*, *physician*, *teacher*, *professor*, *surgeon*, and *master*, like in the example below. The *great masters* refer to certain vivisectors in the past that were discussed earlier in the letter.

(25) It may, I think, be safely left to those who follow in the footsteps of these **great masters** to carry on the work of alleviating human suffering (A1)

Vivisection in turn can be referred to for example as *experiment on animals*, *experimentation on animals*, *experiment*, *(physiological) research*, *operation*, *demonstration*, *(experimental) study* and *physiological exploration*. Actually, it is rather rare that the words *vivisectionist* and *vivisection* are used in the letters, which was of

course expected, giving their negative associations. However, *vivisection* is mentioned at least once in almost every letter—mostly in the titles.

Some of the Targets were merged so that comparing them would be as useful as possible, i.e. have the potential for revealing relevant information on the topic. In fact, when I started the analysis, I expected there would be need for both *Vivisector*[11] and *Vivisectionist*, the latter at that point referring to those who support vivisection but not necessarily practise it themselves. However, when all the targets had been gathered, I learnt there were few cases where the target was clearly "just" an advocate of vivisection, not a vivisector. Therefore, due to both this over-representation of vivisectors and the considerable overlap in the two—it is reasonable to assume that those who practise vivisection also support it—Vivisector and Vivisectionist were emerged into one. Since the word vivisectionist[12] can refer to both those who support and those who practice vivisection, it was sensible to name the category based on that term. Furthermore, in order to avoid creating an impression of anti-vivisectionists being the only ones taking a stand and acting accordingly, I modified the term into *Pro-vivisectionist*. What is to be noted is that *Pro-vivisectionist* can also refer to the writers of the letters.

Another example of such Target is *Animal user*[13]: the term covers both those who treat or kill animals in an inhumane or violent manner for their own pleasure; those who otherwise exploit or kill animals for their own benefit; and those who have animals exploited or killed for the same reasons. The target group includes individuals such as fox hunters and alike participating in blood sports, owners of working animals, recreational fishermen, maggot and worm breeders, rabbit and pheasant farmers, cooks, epicures, people killing flies, etc. The aim was not to discover how evaluations made of all these separate types of "animal users" differ from one another, but the relevance lies in the difference between how the writers evaluate those using animals for scientific purposes and those using them to other ends—and how this difference serves the goal of the defenders of vivisection.

The category Legal documents and procedures, in turn, is an example of an umbrella category. It comprises eight Targets, namely Memorial, Investigation, Commission's report, Bill, Act, Amendment, Regulation and Abolition. These Targets

[11] *Vivisector*, 'one who vivisects or practises vivisection' (OED, s.v. "vivisector," n.)

[12] *Vivisectionist*, 'one who practises or defends vivisection' (OED, s.v. "vivisectionist," n.)

[13] Unfortunately, *Animal user* is a somewhat ambiguous term, as today it is also used to refer to people working with animals in research and teaching, which practically means the same as *Vivisector* in this study. However, having such a loose meaning, *user* seems to be the best term to cover several types of animal use.

appear in the letters mostly in the form of the name of the Target they represent, but in a few cases, other terms are used, like in the following evaluations targeted at Regulation and Abolition, respectively:

(26) [T]he Commissioners show that **restrictive legislation** is desirable to prevent abuse. (A7)

(27) [B]oth the practical and the logical objections to **total prohibition** are so numerous and strong. (B3)

So far, I have only discussed cases where targets are expressed explicitly, but very often they are implicit and need to be inferred from the context, which, however, is usually fairly easy. For example, in the sentence below, both *foreigners* and *Englishmen* (in **bold**) clearly refer to Vivisectionists, even though their denotative meanings have no reference to animal experimentation:

(28) [h]ow is it that we see eminent **foreigners** rather that eminent **Englishmen** making <u>such enormous strides into the true nature of hydrophobia, cholera, and tubercle</u>? (B14)

In the same example above, there is an implicit evaluation targeted at Vivisection (<u>underlined</u>). However, there is no specific lexical item referring to the practice—like *Englishmen* refers to vivisectionists—but it is the context that reveals what the sentence is about. Further, in some evaluations the target was indicated explicitly, but since the target in question was not included in the Targets of this study, the evaluation was coded as targeted at one of the Targets which where. However, this was only done in case the explicit target had a clear connection to some of the Targets. For example, the actual target of the evaluations in the example below is *medical science*, which is evaluated as precise and veracious, but since I did not consider it useful to include medical science in the Targets—but it has a clear connection to one of them, namely Vivisection—the evaluations were coded as Provoked Appreciations targeted at Vivisection:

(29) It [a medical case] […] reveals impressively the **precision** and **veracity** of modern medical science. (B10)

After briefly discussing these main points related to defining and grouping targets of evaluation, I will move on to the analysis concerning the Attitude subtypes.

5.2 Judgement

In this subsection, I will present some of those evaluations that were somewhat unambiguously analysable as Judgement; in all the examples, typical targets of Judgement are evaluated by using **typical** Judging lexis (as discussed in 3.1.5, I do not find it possible to define e.g. Judging lexis). I will also discuss briefly the reasons behind the decisions. The first example is of negative Judgement of Veracity, targeted at Anti-vivisectionists:

(30) and yet they have not hesitated **to deceive** the public by representing mere automatic movements as indications of "intense and protracted agony." (A4)

Here norms of Social sanction are clearly violated; deceiving has to do with one's truthfulness and is generally considered immoral, even a sin. In principle, it would even be possible to hold the deceiver legally responsible for their actions. What is more, the evaluation is targeted at people, more particularly their behaviour, which is characteristic of Judgements.

The second example is of negative Judgement of Propriety, targeted at the Government:

(31) We have already been **rudely** handled by an authority which represents force; (A13)

In this sentence, the Government's behaviour is evaluated as rude, which means that society's shared expectations regarding good behaviour and ethics are not answered. Further, the Target is a human collective, a typical target of Judgement. What is to be noted is that the wider context of *rudely* reveals that the word refers to disrespectful and unfair behaviour, not behaviour that is due to one's ignorance: for example, in the next sentence in the letter, the Government is accused of threatening vivisectionists.

The next example contains two negative Judgements of Capacity, targeted at Anti-vivisectionists:

(32) he is profoundly **ignorant** of cerebral anatomy […] and is therefore quite **incapable** of discussing the subject (B16)

The third example is a negative Judgement of Tenacity, targeted at Anti-vivisectionists:

(33) [a]ll the random accusations of **reckless** agitators (A7)

In both (32) and (33), norms of Social esteem are violated; the above-mentioned qualities are not usually valued or encouraged in society, but they are not, however, considered immoral or illegal. In the former, the mental capacity of an Anti-vivisectionist is doubted, whereas in the latter, their dependability is at stake.

The next example is a positive Judgement of Normality, targeted at Vivisectionists:

(34) a few men of **known character and reputation** (A8)

In this phrase, vivisectionists are described as widely known for their positive qualities, and thus the evaluative items refer to positive abnormality, the same way as *celebrated* in Martin and White's table 2.6 (2005, 53).

As mentioned, it is not always this straightforward to classify Judgement values into the Judgement subcategories, which I will illustrate with an example from the data, namely *pioneers of knowledge*, an item that could be seen as an evaluation of either Normality or Capacity:

(35) It is to be hoped that the united remonstrances […] may still have some force in the house of Commons to set free the hands of the **pioneers of knowledge**. (A11)

In my view, *Pioneers of knowledge* could be seen as referring to the target's intellectual capacity the same way as e.g. *inventor*/*inventive* or *creator*/*creative*. However, since *pioneers* does not actually refer to a trait or a quality ascribed to vivisectionists but has more to do with how vivisectionists and their work is seen in comparison to the rest of the community, the Appraisal unit was coded as positive Judgement:Normality. In other words, vivisectionists are considered to do something that has not been done before and thus special enough to stand out from the ordinary mortals.

5.3 Appreciation

In this subsection, I will present some of those evaluations that were unambiguously analysable as Appreciation. In each example, the evaluative item is in **bold**. The first three examples are of Valuation, targeted at Vivisection. In each example, I will introduce a value of Valuation that was relatively frequently used in the material.

(36) Biological science requires the sacrifice of **a limited number** of animals. (A13)

(37) [O]f the **necessity**, in modern medical education of a certain number of such **painless** demonstrations, under given conditions, I entertain no doubt. (A1)

(38) [F]or certain objects, and in certain surroundings, [vivisection] is entirely **justifiable**. (A16)

In examples (36), (37) and (38) above, Vivisection is evaluated as rare, useful and painless, and justified, respectively. Useful and justified are rather similar to the values of Valuation listed in Martin and White (2005, 56), but rare and painless do not seem to fit any of the Appreciation subtypes. Nevertheless, I coded them as values of Valuation because also today, they are values that are commonly ascribed to animal experimentation in order to present it as worthwhile. In a way, the negative consequences are diminished, in order to emphasise its value. This is, however, a somewhat forced categorisation, and the values do not only demonstrate well the especial field-dependency of Valuation discussed in 3.1.2, but also of the whole Appreciation. Another option would have been to create additional Appreciation categories, but for this study, it was not considered necessary.

Both things, humans and animals were evaluated in the material by using Appreciation. Examples (37) above and (39) below are positive Appreciations of Valuation, targeted at Vivisection and a Patient, respectively. Example (40) contains negative Appreciations of a sheep and many sparrows.

(39) He has been snatched from the grave and […] he will be restored to a life of comfort and **usefulness**. (B10)

(40) we have an authority higher than mere sentiment for holding the life of a man to be immeasurably more **sacred** than the life of a sheep, or even than the lives of many sparrows. (B13)

In both examples, the value ascribed to the Target is a prototypical realisation of Valuation: something necessary and useful is undoubtedly worthwhile.

As for values that in Bednarek's view cannot straightforwardly be categorised as good or bad (*important, genuine, expected, possible, necessary*) (see section 3.1.5), in my material and analysis, four of them were considered positive values of Valuation:

(41) These, however, were not experiments of illustration, but of high original research probably **little less important** in their results than those of Marshall Hall or Sir Charles Bell. (A2)

(42) the limitation of all experiments to registered places would tend seriously to obstruct **genuine** scientific inquiry. (A11)

(43) I believe that the total abolition of the practice is not only **not possible**, but is not even desirable, (A16)

(44) [T]hose who practise this mode of painless demonstration do so because they at least believe it **necessary**. (A2)

As one can see, in these cases, it is evident already from the immediate textual context, not to mention the wider context, that these values are positive—or good. In fact, their meaning is very close to core values of Valuation such as worthwhile and effective.

As for Composition, there were no appraisal units in the material coded as either Balance or Complexity, which, again, is a clear indication of the field-dependency of the whole Appreciation system; it can be expected that texts concerning Vivisection do not deal with values of Composition, unlike texts related to e.g. art, fashion or writing. There was one borderline case that at first sight seemed an evaluation of Composition:Complexity, the same way as e.g. 'woolly writing':

(45) After giving an **inaccurate** description of the mode of experiment adopted by Professor Ferrier in his important researches (A4)

However, since the value refers to the incorrectness of the description, not its organisation, the evaluation is of Valuation, the same way as e.g. misleading, and thus harmful or useless.

The next example is an Appreciation of Impact, targeted at the bill that became the Cruelty to Animals Act 1876.

(46) The **striking** feature of this whole vivisection legislation is the paltriness and unfairness of the whole thing. (A9)

The second example is Negative Appreciation of Quality, targeted at Anti-vivisectionists' accusations.

(47) I cannot think they would have […] sanctioned the circulation of **odious** charges resting on so flimsy a basis. (A2)

Striking and *odious* clearly refer to the reactions of the Appraisers, instead of directly telling us what the targets are actually like: the legislation astonishes the Appraiser, and Anti-vivisectionists' accusations are not liked.

5.4 Affect

In this section, I will present some of those evaluations that were somewhat unambiguously analysable as Affect; in all the examples, Emoters' feelings or reactions are described by using affective lexis. I will also discuss briefly the reasons behind the decisions concerning the more specific categorisation. I will only give examples of either the positive or the negative subcategory, i.e. either of Cheer or Misery, Affection or Antipathy, etc., like was the case with Judgement and Appreciation. In each example, the evaluative item is in **bold**. The first two examples are of Misery and Antipathy, respectively:

(48) Is it the extreme commonness of the habit that makes people admit […] that horrible sticky paper to which **miserable** flies adhere (A3)

(49) For my own part, not being either a sentimental vegetarian or a **hater** of sport (B17)

Both (48) and (49) are clear examples of Happiness. As Martin and White describe the category, "[i]t involves the moods of feeling happy or sad, and the possibility of directing these feelings at a Trigger by liking or disliking it" (2005, 49). The essential difference discussed in 4.1.3 between the two Happiness subcategories is also clearly noticeable: *miserable* describes the mood of the Emoter, whereas *hater* directs the feeling at the Trigger.

The next two examples are of Interest and Pleasure, respectively. It could not get much more straightforward than this, for obvious reasons:

(50) Any of your readers whose **interest** this letter may have excited (B9)

(51) any cruelty perpetrated in the pursuit of game is solely for the sake of the **pleasure** it affords (A5)

The next three examples are of In/security—(52) of Quiet and (53) of Disquiet, and (54) containing both Trust and Distrust:

(52) The man is now convalescent […] and full of gratitude for the **relief** afforded him. (B12)

(53) I confess that if [the Bill is not revised] I look with some **apprehension** to the future before us. (A16)

(54) We are **trusted** […] with the accidents of the birth […] but we are **not** to be **trusted** with the lives of the few animals required by our science. (A13)

As discussed in 3.1.3, Security system covers values related to our ecosocial well-being, such as relaxed, anxious and trust, like in the examples above. It is also illustrated in the examples how the positive and negative subcategories of the modified In/security system 'mirror' each other, resulting in a clearer and more coherent analysis.

The next example is of Desire:

(55) [i]t is to be **desired** that the Society for the Prevention of Cruelty to Animals should seriously undertake the duty of feeding or else destroying the [stray cats]. (B2)

This is a straightforward example of positive Inclination: the writer wants the Society to perform their duty. The case also illustrates the point discussed in 3.1.3 concerning the difference between Inclination and the other Affect categories: the actual emotion leading to desiring the Target is not stated. What is to be noted here is that Inclination does not concern the other meaning of desire, the sexual one. In fact, Martin and White (2005) do not discuss sexual desire at all, which, however was not a problem in terms of my analysis, as the material did not contain any reference to sexual desire.

The last example is of Surprise:

(56) [c]ostumed as we are to all sorts of exaggeration and calumny when vivisection is spoken of, we could not help being highly **surprised** at its transformation into vivicoction. (B1)

Here we can see in practice why Bednarek's Surprise as a separate type of Affect, instead of a negative subcategory of Security, is justified. First, *surprised* in this extract does not seem to refer to distrust: the writer and their fellow vivisectionists did not actually trust that anti-vivisectionists would not do X—they probably did not have any presumptions about the topic—they just got surprised when X happened. Second, *surprised* itself seems to be neutral here with respect to valence; it is only the wider, ironic context that reveals the vivisectionists' negative attitude towards Anti-vivisectionists' behaviour.

5.5 Pain – quality or feeling

The evaluations of Vivisection related to pain are made by using both Affect and Appreciation in the material, but the boundaries between the two categories are not always clear. Broadly speaking, the difference is the following: when there is an Emoter, i.e. an animal who is feeling or not feeling pain or suffering—explicitly or implicitly present—Affect is at stake:

(57) The **frog** or **turtle**, or whatever the creature may be, is already **dead-to pain**. (A1)

(58) The movements and cries [of the animal] produced by the faradization of the brain were **not expressive of suffering**, but simply of the stimulation of a motor centre, (A4)

The clearest case of Appreciation, in turn, is in question, when Vivisection is described as painless or not painful by the use of an attributive or predicative adjective, and animals' emotions are not mentioned (*apparently* in (60) does not refer to any concrete sings of pain):

(59) Of the propriety […] of such **painless** demonstrations […] I entertain no doubt. (A1)

(60) [T]he destruction of the brain by the methods described by Mr. Reid, **though apparently very painful, is not so in reality**, the brain being […] insensible to pain. (B9)

However, not all cases are that clear-cut. For example, in the Evoked evaluations of Vivisection below, Vivisection is not evaluated as painless by the use of attributive or predicative adjectives but by the use of ideational meanings that describe the use of anaesthetics during the experiments, which makes the evaluations not as prototypical Appreciations as (59) and (60) above. What is more, animals are mentioned explicitly, which, at first sight, seems to indicate that Emoters are present, which, in turn, would refer to Affect. However, neither of the evaluations below contain any description of any of the animals not feeling pain, but they are more about describing the procedure, i.e. how and to whom the experiments are done: animals are used, anaesthetics are given, and the animal is killed at a certain time. The latter point certainly implies that the animal does not suffer, because they are killed in time, but there is no actual reference to any feeling or lack of feeling of the animal.

(61) treatment that has been made practicable by the sacrifice, **under anaesthetics**, of few rabbits and monkeys. (B10)

(62) I have seen only one vivisection, that **under chloroform**, and the **animal being killed before the effects of the anaesthetic had disappeared**. (A10)

While (61) and (62) above were annotated as Evoked Appreciations, example (63) below is a borderline case that was annotated as Provoked Affect. Because the word *painful* is used, it first looks like an Appreciation. However, since there is a clear reference to an Emoter—i.e. *the animals* who are directly and clearly connected to the feeling of pain by the preposition *to*—it was considered more of a case of Affect that Appreciation. In other words, the author is not just describing an experiment, but by asking this rhetorical question (hence Provoked), the author questions whether the animals receive the experiment as painful:

(63) Is it **painful to the animals**? (A2)

As has been demonstrated, pain is connected to Vivisection both as a quality of the practice and as a feeling felt by an animal. Actually, to be precise, Vivisection is presented as painless, and the animals as not feeling pain.

5.6 Implicit appraisal and the accumulation of evaluation

In this subsection, I will discuss those implicit means of conveying evaluation that best represent the material or are otherwise relevant to the study at hand. First, I will discuss how prosody—the cumulative nature of evaluative meaning—is present in the letters, and second, I will demonstrate how Don´s mechanisms for Provoked and Evoked evaluation (see 3.2) are realised in the letters. However, before moving on to the analysis, I want to specify my reading position, which inevitably had an influence on how I interpreted the texts. With respect to the variables listed by Martin and White—gender, generation, etc., I define myself as a white, Finnish, able-bodied, middle-aged and middle-class cis-woman. However, with regard to the current thesis, I find it more relevant to define my reading position according to my view on animal experimentation: I find the practice ethically untenable, and therefore, read the letters resistantly. However, above all, as a thesis writer, I read the letters tactically, i.e. aiming at gathering linguistic evidence to answer the research questions.

I knew from an early state of the analysis that the letters contained a great deal of explicitly attitudinal lexis, but what I did not realise, was that they would also contain so much implicit evaluative material. On the other hand, this can be explained fairly exhaustively by two factors: First, the topic of the letters naturally directed the interpretation of the texts towards a certain direction. In other words, an excerpt that in other contexts might have been interpreted as non-evaluative, as evaluating another target, or as another type of evaluation, was analysed in a certain way in this thesis because the purpose of the letters—to defend vivisection—had been identified beforehand. For example, the sentence below, which is used in the letter to justify the need for animal experimentation, was coded as an Evoked Positive Appreciation:Valuation targeted at Vivisection, but in a different context, it could have been interpreted very differently:

> (64) [t]he fact really is that the operation known as transfusion of blood is a complete failure; a large number of different methods have been introduced for its performance, all of which are extremely defective and most exceedingly dangerous. (B11)

In fact, out of context, it would be impossible to connect the statement to animal experimentation. Instead, it could be targeted e.g. at the operation, the different methods, the developers of the methods or the doctors using them—or it could be targeted at somebody claiming that the operation is e.g. safe.

Second, since evaluative meaning is cumulative, evaluative content colours also its surroundings evaluatively. In my view, this can be understood broadly speaking in two ways: first, in the way it seems to be typically understood in previous research, i.e. that every evaluation—especially explicit—in a text guides the reader to interpret other parts of it evaluatively as well; and second, in another way Martin and White (2005, 19–20) discuss with regard to prosody, i.e. saturation, intensification and domination. However, as mentioned in 3.2, I consider the latter to concern mainly how evaluative material is situated within the text to increase the text's effectiveness. However, all the means discussed so far, in one way or the other, increases the text's potential to influence the reader.

In the letters, especially saturation, but also intensification, are used frequently. In the following examples, both are used, partly overlapping each other:

(65) [d]o turtles, frogs, and other animals, when rendered insensible by **chloroform**, **chloral, or other anaesthetics**, feel pain? (A2)

The sentence is saturated with meanings of painlessness, which is manifested in the direct object of the main clause (pain), in the subject predicative of the adverbial clause (insensible), and as the prepositional complement in the adverbial embedded in the adverbial clause (chloroform, chloral, or other anaesthetics). Further, the impression of painlessness is further intensified by the list of anaesthetic substances (**chloroform**, **chloral, or other anaesthetics**).

As for domination, it was either not used much in the letters, or I was not able to detect it due to such a large amount of evaluative material in them. Domination seems to be mainly realised in the last sentence of several letters, before the closing formula, like in the example below:

(66) To such **base practices** may not **ill-judged enthusiasm** or a **thirst for subscriptions reduce** even a **benevolent society!**
I am, Sir, your obedient servant,
J. CRICHTON BROWNE (A4)

Situated like this, i.e. at the end of the text, the sentence functions as a summary of the preceding text and thus further strengthens its overall effect. However, as one might have noticed, the sentence functions also as a realisation of saturation (in **bold**): evaluation is manifested in the prepositional object *such base practices*, in the subjects *ill-judged*

enthusiasm and *a thirst for subscriptions*, in the verb *reduce*[14] and in the object *a benevolent society*. What is more, the exclamation mark further emphasises the writer´s disapproving attitude. Next, I will move on to discussing how Don's mechanisms for making implicit evaluations are realised in the letters.

The material is very diverse with respect to implicit evaluations. This diversity will be illustrated both with examples in which Don´s mechanisms are utilised and with additional categories created based on the data. Let us start with Evoked, i.e. the most implicit evaluations. The first example is of cultural doxa: people's widely held knowledge of fox hunting and its popularity—and the controversy over the sport—is utilised to evaluate it as cruel.

(67) You have foxes preserved in order that they may be pursued to death for a whole day by a pack of hounds. (A9)

In example (68), in turn, in-group allusion is utilised: in order to fully understand the evaluation, the reader needs to be aware of the concerns about foreign vivisectors' inhumanity, which, I assume, were mainly familiar to those interested in the topic.

(68) Such regulations […] would have a fair chance of imitation abroad, and thus of teaching humanity to the German or Italian physiologists. (A7)

The next example is of manifest intertextuality: a motion agreed to by an esteemed authority is quoted directly, and the quotation functions as an Evoked Negative evaluation targeted at Carnarvon's bill.

(69) At a meeting of the Senate of the University of London on the 21st inst., the following motion was considered and agreed to by a majority of 14 to 4:–**"That the Senate do memorialize the Government on [Carnarvon's] Bill now before Parliament […] and do pray that the provisions of this Bill be so modified as to meet the objections stated in the Memorial of the General Medical Council, adopted the 1st of June, 1876."** (A11)

[14] '[t]o bring down or lower (a person) *to* engaging in an undesirable or unsatisfactory activity' (*OED*, s.v. "reduce," v.)

Example (70), in turn, illustrates the use of constitutive intertextuality: in the passage which has borrowed its style and imagery from the horror genre, anti-vivisectionists are ridiculed for their alleged concern about vivisectors turning into vivicoctionists:

(70) in happier days to come, the vivicoctionists will enjoy […] the advantage of taking their wives and children to the boiling, baking, and roasting rooms, and allowing them to tear to pieces, with nail and tooth, the quivering flesh of the half-cooked animals, and to quench their thirst with the foaming blood of the yelling victims. (B1)

Next, let us move on to Don's mechanisms for making Provoked evaluations. The first example is of ventriloquism: it is a pseudo quote of an imaginary anti-vivisectionist, involving intensification and intended to present anti-vivisectionists as thoughtless.

(71) Any man can cry, **Let animals be saved though science and medicine perish!** (B6)

The next evaluations are made by using local signals, more particularly downscaling of quantity, counter-expectancy and logico-semantic relations of contrast, just to give a few clear examples of the mechanism:

(72) Biological science requires the sacrifice of a **limited number** of animals. (A11)

(73) Startling though such a statement may appear, it is, **nevertheless**, essentially true. (B14)

(74) It is use and familiarity with old and common forms of necessary cruelty which makes us blind and callous to them, while a now one **of infinitely less extent** strikes us with horror. (B17)

Further, attitudinal tokens and figurative tokens are illustrated in the following examples, respectively:

(75) [T]hat one outlet of escape […] was open to him in an <u>operation</u> […] from which he might, perhaps, obtain complete relief. (B10)

(76) [T]hey [anti-vivisectionists] are habitually **straining at gnats and swallowing camels**. (B17)

Example (76) is fairly self-explanatory, but (75) might need some clarification: *operation* is the explicit target of the evaluation, but the actual Target is Vivisection, which has made the operation possible.

In addition to Don's mechanisms, there are other types of implicit evaluations in the letters; at least certain types of rhetorical questions (77), quotation marks used in a specific way (78) (*so-called* would belong to the same category) and glaring exaggerations like those in (79) would need their own categories.

(77) Why should dogs and cats be put in a position of immunity which they have not enjoyed since they were worshipped in Egypt? (A7)

(78) Since the **so-called "friends of animals"** have apparently repudiated all sympathy with these outcasts [stray cats] (B3)

(79) The very man whose **nerves will shrink** and whose **blood will boil** on meeting with the terrible word "vivisection" in innocent type, will pass a flock of sheep when being driven to the slaughterhouse without a thought of sympathy. (B17)

5.7 Identifying the Appraisal units in the material

The first task when doing Appraisal analysis is of course to determine what to analyse, that is to identify the Appraisal units in the primary material. Since the first objective of this study was to examine what and who are evaluated when vivisection is defended, and how these evaluations are made, I needed to gather all evaluations in the letters, without focusing on any particular types of evaluation. In other words, I included in the data all evaluations of Attitude, targeted at anything or anyone and made by anyone. Furthermore, both explicit and implicit, and positive and negative evaluations were included.

As discussed in 3.3, there are varying opinions on what aspects of appraisal count as questions of identification, and there is also a considerable overlap between them. In this section, however, the focus will be mainly on unitising, i.e. setting boundaries on Appraisal units, and recognising implicit evaluation, which intertwines considerably with the context-dependency of evaluative meanings, as mentioned earlier.

As discussed in earlier, there are different ways to unitise evaluation. What is more, it is claimed that although researchers' unitisation choices might influence significantly the results of the study, the different choices are equally valid (Fuoli 2018, 5). Based on my knowledge on the topic, however, I must disagree on that. I also claim that unitising choices might affect greatly both qualitative and quantitative analyses, not

mainly the former, as suggested earlier (ibid.). To clarify my point of view, let us look at examples X and X below. In the first one, the writer evaluates vivisection positively by comparing the destiny of stray cats living on the street with "[a]n hour or so under the hands of a skilful experimenter [which] would be infinitely less horrible" (B2):

(80) the slow **agony** of **death** by **hunger** and **thirst** (B2)

In (80), all the evaluative items are of Misery, **agony** an explicit one, and **death**, **hunger** and **thirst** implicit ones, describing physical states that in this context are considered to cause negative feelings. Furthermore, following e.g. Fuoli's (2018) thoughts, the phrase could be annotated in various ways: the whole phrase could be seen as one Appraisal unit; **agony** and [**death by hunger and thirst**] could be annotated as two separate units; **agony**, **death** and [**hunger and thirst**] as three separate units; or all four evaluative items could be coded separately. In this particular case, therefore, the unitisation choice does not have influence on the Attitude type of the given phrase, as all the evaluations are of Misery, but it does affect the amount of certain type of Attitude, in this case Affect:Misery, in the whole data.

Example (81) in turn, in which Anti-vivisectionists are evaluated, contains evaluations of Surprise, Propriety, Capacity and Tenacity:

(81) [i]t is indeed surprising that these well-meaning opponents of physiological investigation do not see that they are habitually straining at gnats and swallowing camels. (B15)

In this sentence, the writer is surprised by Anti-vivisectionists' inability to see how they are behaving (Surprise). Anti-vivisectionists are also described as *well-meaning* (Propriety) and *opponents of physiological investigation*, which implies that anti-vivisectionists oppose science and are willing to remain in ignorance (Capacity). Further, they are accused of straining at gnats and swallowing camels, which in this context refers to inconsistent behaviour: they disapprove of animal experimentation, which is relatively harmless, and yet treat animals much worse themselves (Tenacity).

As for unitisation, there are various options again: following Fuoli's (2018, 4–6) and Read and Carroll's (2012, chap. "Annotation methodology") ideas of possible unitisation strategies, the entire sentence can be seen as one appraisal unit, the three clauses can be annotated separately, or all the evaluation-bearing items (*surprising*, *well-*

meaning, *opponents of physiological investigation*, *do not see* and *straining at gnats and swallowing camels*) can be coded as separate units. It would also be possible to combine *well-meaning* and *opponents of physiological investigation* into one Appraisal unit and annotate it as Propriety **or** Capacity. However, the unitisation strategy I chose to use was to code all the above-mentioned evaluation-bearing items separately, except for *surprising* and *do not see*, as the latter is actually the Trigger that causes the Emoter to be surprised. Naturally, it would also be possible to code the entire rest of the sentence after *It is indeed surprising* as the Trigger, but that way several evaluations in the passage would remain uncoded. Therefore, in order to capture all the relevant evaluations in the sentence, *surprising*, *well-meaning*, *opponents of physiological investigation* and *straining at gnats and swallowing camels* were coded as separate appraisal units, and *do not see* as the Target Anti-vivisectionists' behaviour. What is to be noted is that in a different study, for example in one aiming at detecting all the Judgements in the material, it would be appropriate to code *do not see* as Judgement:Capacity, but in the one at hand, where the aim is to discover **how** the evaluations are made, it is important to identify and categorise all of them. However, since *It is indeed surprising* and *do not see* are components of the same appraisal unit—the former the appraisal itself and the latter the Target—only *It is indeed surprising* was coded as Appraisal. This leads us to the next question concerning unitisation, namely how to decide on the textual boundaries of the Appraisal units that overlap one another and/or share components.

The appraisal unit *It is indeed surprising…do not see* in the previous example is a good illustration of how evaluations are sometimes interrupted by other evaluations, and thus often seem incomplete taken out of the context. It also serves as an example of a situation where the analyst has to decide on which part is the primary part of the Appraisal unit in question and thus determines the Appraisal category of that particular unit. In the example above, as was mentioned earlier, it would have been possible to put more importance on the latter part of the unit and code the unit as Judgement:Capacity, but in the current study, it would not have been appropriate. Since the aim of this study is to analyse all the evaluations in the letters, and in this study, one appraisal unit cannot represent more than one appraisal category (proper) at the same time, it was necessary to take into account both *It is indeed surprising* and *do not see* and to choose the appraisal category based on one of them.

6 Findings

There are 1122 Appraisal units in the data, and each unit has been annotated according to their Target, Attitude type and subtype and Valence (Polarity in UAMCorpusTool), Explicitness. The relatively large number of evaluations can partly be explained by the decisions related to the implicit evaluations included and the unitisation strategies employed. There are 1122 targets of evaluation in the data, and these targets are classified into 58 different target groups, i.e. Targets. However, several of them only contain one or two targets, but since the targets in question could not be included in any other Target, they have to form their own. Furthermore, I have formed higher-level categories of some of the Targets, in order to analyse and present the data in the most fruitful way.

The two most common Targets in the material are Vivisection (284) and Anti-vivisectionists (241); these two Targets compose almost a half of all the targets (47%). Next comes a Target group that contains different types of Legal documents and procedures (178), and after that Pro-vivisectionists (113) and Other animal use (95). Other Targets of considerable size are Other animal users (39), People involved in legal procedures (37), Anti-vivisectionists' statements (30) and Diseases (21). Furthermore, there are 58 evaluations in which animals are either Emoters or Targets of evaluation and 26 evaluations in which Patients are either Emoters or Targets.

In order to save space for discussing the Targets that seem the most relevant with regard to the research questions and the hypotheses, the Target groups Legal documents and procedures and People involved in legal procedures were omitted from the more detailed description of the findings below. In the following subsections, the most relevant findings of the most relevant Targets and Emoters are presented, after which I will discuss the differences between the evaluations published before the *Cruelty to Animals Act 1876* and those published after it.

6.1 Vivisection

The most common Target of evaluation in the whole material is Vivisection, which was of course expected, considering that the letters were selected on the grounds of the topic—defending vivisection—and not e.g. the author, the year of publication, etc. Vivisection is evaluated 284 times, which is 25% of all the evaluations. It is evaluated by using Appreciation (Valuation and Reaction:Quality) and Affect (Un/happiness:Misery/Cheer, Dis/satisfaction:Dis/pleasure, In/security:Dis/quiet and Dis/inclination). 55 (20%)

evaluations are Inscribed, 63 (22%) Provoked and 166 (58%) Evoked. The majority of the evaluations of Vivisection, 257 (90%), is Positive.

When vivisection is evaluated, its usefulness is addressed much more frequently than other values: out of all the evaluations targeted at Vivisection, 166 (59%) are related to its usefulness. In fact, 15% of all evaluations in the material, 166 out of 1122, are related to the utility of the practice. Almost all of them, 164 (99%), are Positive.

The second most common value ascribed to Vivisection is painlessness/ painfulness, with 63 evaluations, which is 22% of the evaluations targeted at Vivisection. They are made by using both Affect and Appreciation. 51 (81%) of them are Positive. Out of the 12 Negative evaluations, in only one case, Vivisection is clearly and genuinely evaluated as causing suffering, without somehow diminishing the issue. However, even then avoiding using explicit words such as pain or suffering:

(82) That very **severe** experiments are constantly performed cannot be doubted by those who read the documentary evidence (A16)

In the rest, the Negative evaluation is either 1) used sarcastically, like in the following example:

(83) I succeeded in accomplishing my **"nefarious designs,"** and without causing pain to several dogs (B11),

or the evaluation is 2) targeted at foreign vivisection:

(84) The Bishop himself draws the very valid distinction between vivisection that is unobjectionable and **vivisection that is cruel**; why should the former be prohibited at home because the latter **is taken to be practised abroad**? (B13),

or the evaluation is 3) accompanied by some sort of a comment or structure that in some way weakens its effect, like in the examples below (cf. Engagement and Graduation): in (85), the existence of pain is practically denied by comparing it to the pain caused in blood sports and by down-scaling the small amount of it to even smaller by the pre-modification of the adjective:

(85) the pain caused by vivisectionists is, by **comparison with the pain caused in sport**, **extremely small**. (A5)

in (86), in turn, this is done by using a conditional construction, the modal auxiliary *may*, the verb *seem* that is used evidentially, and the last two nouns that further clarify that only minor changes might be needed, but vivisection as such is appropriate:

(86) But **if**, indeed, there be anything in our proceedings that **may seem** to require **modification** or **alteration** (A13)

The rest of the Negative evaluations, i.e. those that are not related to the painfulness or cruelness, are either 1) related to the demanding nature of the practice and thus actually evaluate vivisectors positively, like here:

(87) medical men in their researches, **laborious** and **unremunerative** researches (A7),

or they 2) evaluate Vivisection as common:

(88) That very severe **experiments are constantly performed** cannot be doubted (A16),

or they are 3) Evoked Negative evaluations: two passages describe how a patient's condition first gets worse and then they die, after an operation that was guided by knowledge gained from vivisection. Below is one of them:

(89) Intelligence has just reached me that the man from whom the tumor was removed, and who was regarded as convalescent, died unexpectedly (B18)

In summary, it is relatively rare that Vivisection is evaluated negatively (27/282). When it is, it is described as painful/cruel, demanding, common or not useful. Furthermore, in 10 out of 11 cases in which vivisection is evaluated as painful or cruel, it is related to foreign vivisection, or it is done sarcastically or diminishing the issue.

Besides the usefulness of vivisection and the pain related to it, also the frequency of the practice and the appropriateness of it are mentioned relatively often: f/Frequency is mentioned 23 times, which is 8% of all evaluations targeted at Vivisection. Almost all of them, 21 evaluations, are Positive, i.e. describing vivisection as rare. The appropriateness of Vivisection occurs 15 times in the material, which is 5% of the entire data. All of them are Positive. The rest of the evaluations targeted at Vivisection belong

to the categories ‘Underspecified’ or ‘Other’, the latter including all the values that are ascribed to Vivisection only once or twice, e.g. ‘modern’ (A1) and ‘veracity’ (B10).

6.2 Anti-vivisectionists

The total number of evaluations targeted at Anti-vivisectionists is 241, which is 21% of all evaluations in the material. The majority, 205 evaluations (85%), is Negative. More than a half (55%) of the Negative evaluations are related to anti-vivisectionists’ Capacity, with 112 evaluations. Further, 35 Negative evaluations are related to their Propriety (17%), 28 to their Tenacity (14%), and 25 to their Veracity (12%). There are also 4 Underspecified evaluations (2%) and 1 of Normality (0,5%) among the Negative evaluations. Most Negative evaluations are made by using Judgement, with 167 cases (81%), while 21 are made by using Nominalisation (10%) and 17 by using Affect resources (8%). What is to be noted again is that all the evaluations have been classified as belonging to one of the Judgement subtypes, irrespective of whether they are made by using Judgement, Nominalisation or Affect resources.

There are 36 Positive evaluations targeted at Anti-vivisectionists in the material (15%). Both Judgement and Affect resources are used to evaluate them. Almost a half of them are related to Anti-vivisectionists’ Propriety, 10 to their Capacity, and the rest is Underspecified, Other or of Veracity. However, the kind words of the authors do not always seem to be quite sincere; in fact, in my view, none of the Positive evaluations are genuinely positive. For example, in several evaluations of Propriety, Anti-vivisectionists are rather patronised than shown respect to, like in the example below:

(90) there is a great misapprehension in the minds of many **well-meaning** people as to the frequency of vivisections at medical schools. (A10)

In another example of Propriety below, **Positive Affect** is used to create an ironic evaluation that first indicates positive feelings towards Anti-vivisectionists—their good intentions in particular—after which it becomes evident that that is not at all how the author feels about the situation:

(91) [i]t is **satisfactory** to know that Mr. Hutton and the promoters of the Memorial against Vivisection did not aim at inflicting reprobation on any one; their language, however, in that case was singularly well adapted to conceal their meaning. (A2)

It is also common that compliments are actually in some way used against anti-vivisectionists or for vivisection. In the example below, by praising the secretary of another society, the author actually criticises Frances Power Cobbe, the founder of NAVS. The first value is Underspecified, the second one is of Capacity, and the third one is of Veracity:

(92) [w]riting of the secretary of another and universally **respected** society, whose action in circumstances of difficulty was, at least, prompted by **judicious sincerity**, Miss Cobbe remarks […] (B5)

In the example below, Auberon Herbert, an anti-vivisectionist, is praised using values related to their Capacity, but at the same time, it is suggested that without vivisection, there would not be much to praise:

(93) the great and ceaseless work of accumulating the vast stores of human knowledge, to which Mr. Auberon Herbert owes it at this moment that he is […] a man **of high sensibility and culture**, and not an untutored savage. (A5)

6.3 Pro-vivisectionists

The total number of evaluations targeted at Pro-vivisectionists is 113, which is 10% of all evaluations in the material. The majority, 101 evaluations (89%), is Positive. More than 2/3 of the Positive evaluations are related to vivisectionists' Capacity and Propriety, each category containing 34 evaluations (34%). The rest is distributed among Underspecified (17/17%), Tenacity (9/9%), Normality (4/5%) and Veracity (3/3%). Most Positive evaluations are made by using Judgement, with 87 cases (86%), while the rest, 14 evaluations, is made by using Affect resources. What is to be noted is that all the evaluations targeted at Pro-vivisectionists have been classified as belonging to one of the Judgement subtypes, irrespective of whether they are made by using Judgement or Affect resources.

There are 12 Negative evaluations targeted at Pro-vivisectionists, 9 of which are from one person, George Rolleston, who was one of the few authors sincerely advocating for the regulation of vivisection. These evaluations are genuinely Negative. However, 2 of them are comments on other Pro-vivisectionists' thinking and conversational skills, (Capacity), and the rest, which concern Pro-vivisectionists' ethics (Propriety), are citations from the report of the Royal Commission:

(94) I will quote some of the words of the Commission upon this point […] "It is not to be doubted that **inhumanity** may be found in persons of very high position as physiologists. We have seen that it was so in Maj/gendie. (A16)

In the other 3 evaluations, hypothetical future students of medicine are evaluated as 'thoughtless' (A7) and English vivisectors might, hypothetically speaking, be forced to break the law in order to do their job (A7, B13).

6.4 Anti-vivisectionists' statements

There are 30 evaluations targeted at Anti-vivisectionists' statements in the material, all of which, apart from one, are Negative. What is more, the one Positive evaluation—in example X below—is used sarcastically. The writer expresses their "satisfaction" with a statement given by an anti-vivisectionist, but from the letter as a whole it is clear that that is not at all how the writer feels.

(95) I desire to express **my thanks** to the Bishop of Oxford for his remarks upon vivisection, seeing that they furnish so good an example of the kind of "feeling" and the kind of "logic" against which we have now to contend. (B13)

The majority, 24 evaluations (80%), is made using Appreciation:Valuation, and all of them are related to the falsity or unreliability of the statements, like in the following example:

(96) [t]he assertion that I have ever suggested or desired the introduction of vivisection into the teaching of elementary physiology in schools is, I repeat, **contrary to fact**. (A6)

There are also 2 evaluations of Affect, like in example (X) above, and 4 evaluations of Appreciation:Reaction, which indicate rather strong negative feelings towards the statements:

(97) the huge and **repulsive** exaggerations (B8)

6.5 Animals

There are 58 evaluations in the material in which animals are either Emoters or Targets of evaluation; in 53 cases, they are Emoters, and in 5 cases, they are Targets. Further, in 20 evaluations, the Emoter is Experimental animal, and all these evaluations are Positive and made using Inscribed, Provoked or Evoked Negated Misery, like in the following examples, respectively:

(98) I make bold to say that animals under chloroform **do not suffer**, as it is certain men do not. (A2)

(99) **Do turtles, frogs, and other animals**, when rendered insensible by chloroform, chloral, or other anaesthetics, **feel pain**? (A2)

(100) it was essential to [Professor Ferrier's experiments'] success that the animals employed in them should be **unconscious** and incapable of […] making any voluntary effort. (A4)

In 33 evaluations, the Emoter is Other animal. Unlike the evaluations targeted at Experimental animals, all of these are Negative and made using Inscribed, Provoked and Evoked Misery. Below are examples of all three categories, respectively:

(101) These little animals are brought to life […] for the sole purpose of **suffering torture** as great and as prolonged as it is in their nature to endure. (A3)

(102) the rapid and **forcible efforts** of the **resisting** animal (A3)

(103) in the pursuit of game with a gun, whenever an animal is **shot but not killed**, the **wounded** bird, hare, or rabbit must be recovered (A8)

In the 5 evaluations in which animals are Targets, they are either described as 'distressing objects' (B3), their lives are considered less sacred than humans' (B13), or they trigger feelings of Happiness:Affection in the author, "a lover of animals" (B5, B6).

6.6 Other animal use

There are 95 evaluations in the material that are targeted at Other animal use, which is 8% of all the evaluations. The large number is partly due to one person, Henry Thompson (A3), making 48 evaluations. Most of the evaluations are Negative, and the Positive ones describe the feelings the Animal users get from the use—feelings that are actually used

against them by the authors. The majority, 60 evaluations, is Appreciations, and they are made by using both Valuation and Reaction:Quality, each making up 50% of the them. The 2 examples below illustrate the 4 values ascribed to Other animal use in the material. Valuation is used to evaluate it as painful, unnecessary and common, and Quality is used to evaluate it as cruel/atrocious:

(104) [I]t is impossible to regard the sport in any other light than as a **painful** and wholly **unnecessary** vivisection, (A3)

(105) Every year in this country alone rabbits are put to death in spring traps by torture as **atrocious** as the wildest delirium of an anti-vivisector could imagine, and this **in numbers that would supply all the physiological laboratories in Europe for all centuries to come**. (B5)

The rest of the evaluations targeted at Other animal use, 35 evaluations, is of Affect. They are mainly of Un/happiness, more particularly of Misery, with 23 cases. All 23 evaluations describe the suffering of different types of animals:

(106) [m]any **suffer** severely from the insertion of rings and wires in the nose, by branding with hot irons, and the like. (A8)

The rest of them, 10 evaluations, is of Dis/satisfaction, almost exclusively of Pleasure. The evaluations of Pleasure describe the positive feelings the Emoters get from eating, hunting, killing, etc. different types of animals:

(107) [h]e will eat his mutton with a calm conscience-nay, sometimes with gun in hand he will sally forth bent upon the **pleasure** of doing the killing himself. (B17)

6.7 Diseases and Patients

There are 21 evaluations in the material that are targeted at Disease, i.e. a condition or a disease that has been defeated or could be defeated with the help of vivisection. All of them are Negative, and they are made using both Affect (mainly Misery) and Appreciation (Reaction:Quality and Valuation). The Emoters of the former group are Different types of patients, and the Appraisers of the latter are Pro-vivisectionists. Below are examples of all the three Appraisal subtypes, respectively:

(108) But are [anti-vivisectionists] aware how much they are hindering that knowledge which would serve some **wretched** sufferer from accident or disease? (A11)

(109) the **fearful** ravages of smallpox before the discovery of Jenner (A7)

(110) The fits had been most **severe** during the voyage. (B12)

There are 26 evaluations in the material the Appraisers or Targets of which are Patients, i.e. people who have suffered, are suffering, or might suffer from a condition or a disease that has been cured or could be cured with the help of vivisection. All besides one (example X, usefulness) of the evaluations are of Affect, and they are distributed among all four Affect subtypes. The Negative evaluations are either targeted at Disease (cf previous paragraph), or they describe the Patients as poor. The Positive ones are either targeted at Vivisection, Operations (developed with the help of vivisection) or Doctors (performing those operations), or they describe the Patients as lucky or useful. In the following example, there is an evaluation of Satisfaction:Pleasure and another of Security:Quiet, respectively:

(111) [t]he man is now convalescent, having never had a bad symptom, and full of **gratitude** for the **relief** afforded him. (B10)

Example (X) below, in turn, is of Inclination:

(112) [t]he man, who had faith in his doctor and no fine-spun scruples about availing himself of the results of vivisectional discoveries, **eagerly chose** the operation. (B10)

In both evaluations above, the Patient is Emoter, whereas in the example below, The Patient is Target:

(113) suffering from a disease called progressive, pernicious anaemia, lay a **poor** man within a measurable distance of eternity. (B13)

6.8 Differences in the evaluative language between the letters before and those after the *Cruelty to Animals Act 1876* is passed

Before discussing the differences found in the letters, let us briefly return to my hypotheses. As proposed, the legitimacy afforded by the new Act could have made the defenders of vivisection more confident, which could have been manifested e.g. in the

increased use of (explicit) Negative Judgements targeted at Anti-vivisectionists and (explicit) Positive Judgements targeted at Pro-vivisectionists. Alternatively, the increased confidence could have made the writers feel less need to convince their audience and hence make fewer (explicit) positive Appreciations targeted at Vivisection and fewer (explicit) Positive Judgements targeted at Pro-vivisectionists. However, contrary to my hypotheses concerning Pro-vivisectionists, I did not find any notable differences between the data sets in the evaluations targeted at them. As to the hypothesis concerning Vivisection, there was no significant difference in the number of Positive evaluations targeted at the practice. There was, however, a slight change in how Anti-vivisectionists were evaluated, which will be discussed later in this section. The most considerable changes between the data sets concern values ascribed to Vivisection and evaluations related to animals. Furthermore, there are changes concerning the Targets Disease and Patient and the Emoter Patient.

There is a clear difference between the data sets in the amounts of evaluations: in the former, there are 687 evaluations, whereas in the latter, the number is 435. However, if the evaluations that are targeted at Legal documents and procedures or People involved in legal processes are omitted, the numbers are much closer to each other: 526 and 405, respectively. Naturally, the legal process that eventually led to passing of the Cruelty to Animals Act 1876 did not only activate people to participate in the Vivisection debate but also steered the discussion towards a certain direction, which explains the considerable difference between the numbers. This is important to know when evaluating the significance of the differences between the data sets; it might be more sensible to use the smaller figures as the reference point, which is taken into consideration when considered appropriate.

There are 142 evaluations targeted at Vivisection both before and after the Act. The most considerable change with regard to them is that while before the Act, Vivisection is evaluated 57 times as useful (40% of all the evaluations Targeted at Vivisection), afterwards the number is 107 (75%). There is also some change in how frequently and by what evaluative means suffering or cruelness are connected to the practice: before the Act, there are 40 such evaluations, and afterwards, the number is 11. What is more, in the former set, 21 evaluations are made using Affect, i.e. describing the animal as not suffering, while in the latter set, all the evaluations in question are Appreciations (examples in X). There is practically no difference in evaluating Vivisection as Justified/Appropriate—there are 8 cases before and 7 cases after the Act—

and with rarity the numbers are 15 (11% of all the evaluations targeted at Vivisection) and 7 (5%).

There are also other differences between the data sets with regard to Animals—both Experimental animals, Other animals and Other animal use. There are 41 evaluations before the Act where an Animal is the Emoter; in 19 cases, the Emoter is Experimental animal, and in 22 cases, it is Other animal. After the Act, there is one in each category (0,2% and 0,2%). These numbers comprise 8%, 4%, 4%, 0,2% and 0,2% of all the evaluations, respectively[15]. What is more, there are 77 evaluations targeted at Other animal use, whereas after the Act, the number is 18. These numbers make up 15 and 4 percent of all the evaluations[16], respectively. Otherwise there are no considerable differences with regard to Other animal use: in both sets, it is evaluated as painful, cruel, unnecessary and common (see section X for examples).

As for Diseases and Patients, there is a clear difference between the data sets in both the frequency and quality of the evaluations targeted at them. While before the Act, Disease is mentioned in 3 evaluations, after the Act the number is 18. Furthermore, Patient is either the Emoter or the Target in 1 evaluation in the former data set and in 25 in the latter. What is to be noted is that 7 evaluations targeted at Disease have Patient as the Emoter—1 in the earlier set and 6 in the later—which means that the total number of evaluations related to Disease or Patient is 40: 3 before and 37 after the Act, which compose 0,6 and 9 percent of all the evaluations[17].

There is also a difference between the data sets in the use of Nominalisation when Anti-vivisectionists are evaluated: there are 108 Negative evaluations in the earlier letters Targeted at Anti-vivisectionists, and 15 of them are made using Nominalisation. In the later letters, the number is 5. These numbers compose 14 and 5 percentage of all the Negative evaluations targeted at Anti-vivisectionists.

[15] Calculated with the smaller reference points; with the larger ones, the figures are 6%, 2%, 3%, 0,2% and 0,2%, respectively.
[16] Calculated with the smaller reference points; with the larger ones, the figures are 11% and 3%, respectively.
[17] Calculated with the smaller reference points; with the larger ones, the figures are 0,4% and 9%, respectively.

7 Discussion

In this section, I will discuss the findings presented in the previous section. I will start with Pro-vivisectionists and Anti-vivisectionists, after which I will move on to Vivisection. Finally, I will discuss the Targets Animal, Patient and Disease,

7.1 Anti-vivisectionists and Pro-vivisectionists

Considering how much the vivisection debate of the 19th century was focused on anti-vivisectionists' and pro-vivisectionists' characteristics, it was expected that a large proportion of the evaluations would be targeted at them. However, somewhat surprisingly, the number of evaluations targeted at Anti-vivisectionists is twice as high as the number of those targeted at Pro-vivisectionists, and there was no considerable change in the situation after the Act. I would have expected the former group to need more advocating, considering their more or less fear-provoking reputation and the yet unestablished status of Vivisection—especially before the Act—but it seems that it was more important to find fault with anti-vivisectionists than to praise pro-vivisectionists. However, it seems that anti-vivisectionists were treated slightly more gently before the Act, judging from the change in the use of Nominalisation in Negative evaluations targeted at Anti-vivisectionists' behaviour. Maybe vivisection having been legitimised by the Act really resulted in less need for amicability and thus less need for toning down negative evaluation.

Most of the evaluations targeted at Anti-vivisectionists are of Capacity, which is in line with previous research in that they were accused of being sentimental and squeamish—not to mention womanish—and there was probably little need for portraying them as morally acceptable since anti-vivisectionists' whole campaign against vivisection was based on ethical questions. Pro-vivisectionists, in turn, are mainly evaluated by using both Capacity and Propriety, which in my view is also in line with previous research: they saw themselves as medical professionals and objective scientists on a mission to save the humanity, and naturally they wanted others to see them like that as well—not as heartless animal abusers.

As discussed in 2.2, it has been argued that the 19th century vivisection debate concerned mainly the character of the experimenter—or virtue ethics—rather than the utility of vivisection, which, however, does not show in my material: 15% of all the evaluations, 166 out of 1122, are related to the utility of the practice, while 8%, 90 out of 1122, concern pro-vivisectionists' qualities. The proportion of the latter is even smaller

if only the values related to experimenters' ethics are included: 31 evaluations out of 1122 (3%) are of Propriety or Veracity.

7.2 Vivisection

As mentioned in section 6, the most common Target of evaluation in the whole material is Vivisection, which was expected, considering that the letters were selected on the grounds of the topic—defending vivisection—and not e.g. the author, the year of publication, etc. Further, the majority of these evaluations are related to the utility of Vivisection, which is probably due to at least three factors: First, as discussed in (X and X), the animal protection Acts from 1822, 1835 and 1849 concerned either wanton cruelty or cruelty, which encouraged Pro-vivisectionists to focus on the utility of Vivisection when the practice was discussed. The previous Acts were powerless against vivisection because the practice was considered to be performed deliberately, for a valid reason—not to inflict suffering for the sake of inflicting suffering—which made it impossible for them to be done wantonly or cruelly. Second, the Cruelty to Animals Act 1876 was very much focused on the utility of vivisection: Practically anything could be done, as long as it was useful. All the restrictions related to inflicting pain on animals—except for clause 6 concerning public exhibitions of painful experiments—are moderated, or practically reversed, on condition that the experiments are "useful for saving or prolonging life or alleviating suffering" "39 & 40 Vict. c. 77, 3). Third, since vivisection had already established itself as an indispensable part of scientific inquiry in many countries, and several discoveries had been made with the help of the practice, it is likely that pro-vivisectionists simply believed in the potential of vivisection and thus wanted to speak for it.

As for the rarity of Vivisection, indeed, vivisection was rarer in Britain than in many other countries at the time; it would become clearly more common only after the letters were published. Another question is why Pro-vivisectionists would evaluate vivisection as rare and see it as a positive value? All I know is that rarity of vivisection is one of the main arguments for vivisection of today's pro-vivisectionists as well. For example, one of the three Rs, "[t]he guiding principles underpinning the humane use of animals in scientific research" (Understanding Animal research 2020), is to "Reduce the number of animals used to a minimum, to obtain information from fewer animals or more information from the same number of animals" (ibid.). It seems that for pro-vivisectionists, regardless of the century, rarity of vivisection in a way justifies the

practice; as long as only some animals or as few animals as possible are exploited and abused, vivisection is a valid way to do research. Imagine if this were said about any type of violence against humans.

The fact that more than 1/5 of the evaluations targeted at Vivisection is related to animal suffering seems to be in line with previous research in that animals' interests were not the greatest concern of the time, but, nevertheless, vivisectors were aware of the feared consequences of causing them to suffer. What is more, it was only few years earlier that Sanderson's notorious book had been published, with well-known consequences (lisää historiaan!). Consequently, it was probably considered important to address the unpleasant problem, regardless of whether it was the experimental animal or society at large that would pay the highest price for the pain or death caused during or after the experiment. Furthermore, it was probably beneficial to convince people that vivisectors were not sadists who enjoyed causing pain to others, be they humans or animals; as discussed earlier, Magendie's experiments were still in people's minds at the time of the first Royal Commission on vivisection. Pro-vivisectionists'

Despite the fact that the pain and suffering related to Vivisection is mainly denied or diminished, the topic itself is addressed relatively frequently. One possible reason for that is something that I have not seen discussed much in previous research. While vivisectors have often been described as either heartless and indifferent or objective and committed, the possibility of them actually caring about the animals is very rarely brought up. On the contrary, in Boddice's view, "[t]he primary benefit of anaesthetics was **not** that the experimental animal no longer suffered" (Boddice 2012, 6; emphasis added). Instead, as Boddice lists, "the greater good could be sought unhindered, the operator would not lose his nerve, and he would safeguard his 'feeling' heart" (ibid.). Further, using anaesthetics would make operating easier by keeping the animal still (ibid.). While I find all these outcomes likely reasons for a vivisector to use anaesthetics, I do not see why they could not have also cared about the animals involved. What is more, I am not sure why a vivisector would have been concerned about losing their nerve or safeguarding their heart in the first place, unless they cared about the animals' suffering. As it has been argued, most vivisectors of the time were not sadists, nor indifferent, but they could suppress their feelings in order to be able to do their job—and save the humanity. Could it be that they did care, but this type of feelings simply were not something they could talk about openly—or even recognise in themselves—in society of rigid gender norms,

and in an academic field where strict masculinity was idealised and promoted? Maybe I am naïve, but would a cold-hearted monster describe anaesthetising an animal like this:

> (X) [c]hloroform is first given to the animal by holding a sponge soaked in the liquid before the creature's nose. It is then placed on a miniature operating table provided with a pillow and a mattress. (A12)

It is of course possible that the writer is describing the situation this way just to manipulate the reader and to present vivisectors as humane and caring, but another possible explanation is that they actually cared and this type of framing helped them to cope with the situation. Maybe it was easier to see the animal as somebody being taken care of and themselves as those looking after them, rather than facing the somewhat brutal truth. Besides framing the situation as some sort of a doctor–patient encounter, it was also possible—apparently—to see experimental animals as vivisectors' co-workers, idea that is also present in today's pro-vivisection discourse (e.g. Grivas 2008):

> (X) [f]or how […] can a man kill an animal to satisfy his own individual appetite […] and forthwith object to his neighbour killing another animal, or making it to do work in a laboratory for the purpose of gaining knowledge […]? (B6)

7.3 Animals, Patients and Diseases

What is particularly interesting about Animals, Patients and Diseases in the material is that while Animals are mainly present before the Act, most of the Patients and Diseases occur after it. In my view, this might indicate a shift from to some extent considering animals to focusing even more exclusively on humans. This change combined with the change in how Vivisection is evaluated—its usefulness is mentioned clearly more frequently after the Act than before it—one cannot but consider the possibility that the Act really had some influence on people's attitudes towards Vivisection and experimental animals.

It seems that the fundamental idea, and maybe purpose, of the Act is summed up in the first sentence of clause 2: "A person shall not perform on a living animal any experiment calculated to give pain, except subject to the restrictions imposed by this Act" (39 & 40 Vict. c. 77, 3). The clause could just as well be, for example, "A person is allowed to perform on a living animal any experiment calculated to give pain, in accordance with the restrictions imposed by this Act".

8 Conclusion

The objective of this thesis was to examine the use of evaluative language in texts that in one way or another defend vivisection. As the primary material, I used letters to the editor published in *The Times* between 1875 and 1884. My aim was to find out what and who were evaluated when the practice was defended, and what type of evaluations were utilised. Further, I looked into the changes in the evaluative language between the letters published before and after the *Cruelty to Animals Act 1876*—the world's first legislation concerning animal experimentation—was passed. My main hypothesis was that the Act had influenced people's attitudes concerning vivisection, and that the change would be visible in the language used in the letters. In fact, I considered it possible that, instead of protecting animals, the Act protected vivisectors by legitimising animal experimentation and thus helping it become the established and generally accepted practice it still is today.

To investigate the evaluative language in the letters, I used appraisal theory (Martin and White 2005), a lexis-oriented classification system for analysing evaluations. The theory is divided into three subtypes of appraisal, but in this thesis, the focus was on Attitude, which deals with the actual feelings and opinions conveyed in texts. Attitude is further divided into Judgement, Appreciation and Affect, along with their subcategories. Besides the Attitude subtypes, the evaluations were categorised according to their target, valence and explicitness, and the data were analysed both qualitatively and quantitatively.

I assumed that the legitimacy afforded by the new Act could have made the defenders of vivisection more confident, which could have been manifested e.g. in the increased use of (explicit) negative Judgements targeted at Anti-vivisectionists and (explicit) positive Judgements targeted at Pro-vivisectionists. Alternatively, the increased confidence could have made the writers feel less need to convince their audience and hence make fewer (explicit) positive Appreciations targeted at Vivisection and fewer (explicit) positive Judgements targeted at Pro-vivisectionists. However, I have not found any notable differences between the data sets in the evaluations targeted at Pro-vivisectionists, ant there is no significant difference in the number of (explicit) positive evaluations targeted at Vivisection either. There is, however, a slight change in how Anti-vivisectionists are evaluated: Nominalisation is used more frequently before the Act to evaluate Anti-vivisectionists' behaviour.

The main findings concerning the first research question, "What and who are the Targets of evaluation when vivisection is defended?", are as follows: the most common

Targets in the letters are Vivisection, Anti-vivisectionists, Legal documents and procedures, Pro-vivisectionists and Other animal use. Other Targets occurring relatively frequently are Other animal users, People involved in legal procedures, Anti-vivisectionists' statements, Diseases and Patients. However, the focus was on those Targets and Emoters—i.e. Appraisers—that in my view were the most relevant ones.

As for the second research question, "What types of evaluation are used when vivisection is defended?", the main findings are related to evaluations targeted at Vivisection, Other animal use, Other animal user, Anti-vivisectionist, Anti-vivisectionists' statements, Pro-vivisectionist, Disease and Patient, and those the Emoter of which is Animal or Patient. When Vivisection is evaluated, the value that is most frequently ascribed to it is usefulness. Vivisection is also described relatively frequently as painless or humane, and in a few times as justified or rare. Most of the few Negative evaluations are either dismissive of the problem, related to foreign vivisection, or used sarcastically. Other animal use, in turn, is mainly evaluated as Negative, more particularly as painful, cruel, unnecessary or common. The Positive evaluations describe Other animal users' feelings they get from the use. Animals appear in the material mainly as Emoters—either as Experimental animals or Other animals. Experimental animals are solely described as not feeling pain or not suffering, whereas Other animals are solely described as feeling pain or suffering.

As for the evaluations targeted at Anti-vivisectionists, they are mostly Negative and concern Anti-vivisectionists' capacity. The majority is of Judgement, but there are also some evaluations that are made using Affect resources and Nominalisation. None of the Positive cases is genuinely positive, i.e. used sincerely. What is more, the one Positive evaluation—in example X below—is used sarcastically. Almost all evaluations targeted at Anti-vivisectionists' statements in the material are Negative. Pro-vivisectionists, in turn, are mainly evaluated as Positive, and most evaluations are related to their capacity and propriety. There are a few Negative evaluations, but they are mostly from one author, or somewhat trivial.

The evaluation targeted at Disease—condition or disease that has been defeated or could be defeated with the help of vivisection—are Negative, Appraised either by Patients or Pro-vivisectionists. Patients, in turn, appear in the material both as Emoters and Appraisers. Most Negative evaluations are targeted at Disease, and the Positive ones are targeted at Vivisection, operations (developed with the help of vivisection) or doctors (performing those operations).

The most relevant findings with regard to the third research question, "How does the use of evaluative language change after the Cruelty to Animals Act 1876 is passed?", concern the values ascribed to Vivisection, the evaluations related to Animals, those related to Patients, and the Target Disease: After the Act, Vivisection is evaluated much more frequently as useful but less frequently as cruel or painful than before it. Other animal use is discussed clearly more frequently before the Act than after it. What is more, Animals as Emoters, i.e. not suffering, are discussed much more frequently before the Act, whereas Patients—as Emoters or Targets—are mentioned clearly more often after the Act. Further, Disease is targeted clearly more often after the Act than before it.

As for my main hypothesis above, I believe it is safe to claim that there is a clear change in the evaluative language between the letters published before the *Cruelty to Animals Act 1876* and those published after it. Summarising the most relevant changes in the evaluative language and connecting them to vivisection itself, it can be concluded that there is a clear shift between the periods under examination in how the practice is seen and what aspects are highlighted: In the former letters, different types of animals, their use and their suffering are discussed relatively frequently, but patients, their suffering and diseases causing that suffering are hardly mentioned. In the latter letters, in turn, animals are rarely mentioned, but patients and diseases are discussed rather frequently. What is more, the utility of animal experimentation is raised substantially more frequently after the Act. It seems that before the Act, animals and their suffering were still considered worth discussing, but after it, people and their potential suffering replaced animals in the discussion. In the same time, the role of the utility of vivisection, i.e. its potential for helping potentially suffering people, becomes increasingly important in people's minds. Therefore, the findings support the idea that the Act failed to protect animals. Considering that soon after the Act, animal experimentation became the norm for many types of scientific research, which it still is, and that extremely painful experiments are still constantly performed, it indeed seems likely that the Act, instead of genuinely regulating vivisection, authorised vivisectors to continue performing their potentially useful experiments.

References

Primary sources

Letters to the editor in *The Times* (see appendix 1 for the details). Accessed 20 November 2020. The Times Digital Archive. https://go.gale.com/ps/dispBasicSearch.do?userGroupName=turkecco&prodId=TTDA.

An Act to amend the Law relating to Cruelty to Animals. 1876. Accessed 20 November 2020. https://www.legislation.gov.uk/ukpga/1876/77/pdfs/ukpga_18760077_en.pdf.

Secondary sources

Bates, A.W.H. 2017. *Anti-Vivisection and the Profession of Medicine in Britain*. London: Palgrave Macmillan. Accessed 20 November 2020. https://doi.org/10.1057/978-1-137-55697-4_1.

Bednarek, Monika. 2006. *Evaluation in Media Discourse: Analysis of a Newspaper Corpus.* New York: Continuum.

Bednarek, Monika. 2008. *Emotion Talk Across Corpora*. New York: Palgrave Macmillan.

Bednarek, Monika. 2009. "Language patterns and attitude." *Functions of Language* 16, no. 2: 165–192. Accessed 20 November 2020. Ebscohost.

Boddice, Rob. 2012. "Species of Compassion: Aesthetics, Anaesthetics, and Pain in the Physiological Laboratory." *Interdisciplinary Studies in the Long Nineteenth Century* no. 15. Accessed 20 November 2020. https://www.academia.edu/2256455/Species_of_Compassion_Aesthetics_Anaesthetics_and_Pain_in_the_Physiological_Laboratory?email_work_card=view-paper.

Don, Alexanne. 2016. "It is hard to mesh all this": Invoking attitude, persona and argument organisation." *Functional Linguist* 3 art. 9. Accessed 20 November 2020. https://doi.org/10.1186/s40554-016-0033-1.

Franco, Nuno. 2013. "Animal Experiments in Biomedical Research: A Historical Perspective." *Animals* 3 no. 1: 238–273. Accessed 20 November 2020. Proquest.

French, Richard D. 1975. *Antivivisection and Medical Science in Victorian Society*. Princeton University Press. Accessed 20 November 2020. https://doi-org.ezproxy.utu.fi/10.1515/9780691198446.

Fuoli, Matteo. 2016. *Annotating APPRAISAL in text and corpora: Challenges and strategies*. ISFC conference, 27th–31st July 2015, Aachen. (presentation). Accessed 20 November 2020. file:///C:/Users/Anna/AppData/Local/Temp/A_step-wise_methodology_for_annotating_A.pdf.

Fuoli, Matteo. 2018. "A step-wise method for annotating APPRAISAL." *Functions of Language* 25 no. 2: 229–258. Accessed 20 November 2020. https://doi.org/10.1075/fol.15016.fuo.

Germain, Pierre-Luc, Luca Chiapperino, and Giuseppe Testa. 2017. "The European politics of animal experimentation: From Victorian Britain to 'Stop Vivisection'." *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 64. 75–87. Accessed 20 November 2020. https://doi.org/10.1016/j.shpsc.2017.06.004.

Grivas, Rebecca. 2008. *An Examination of Emotion-Based Strategies in 'Altruistic' Mobilisation: A Case Study of the Animal Rights Movement*. Dissertation. Accessed 20 November 2020. https://digital.library.adelaide.edu.au/dspace/bitstream/2440/49884/8/02whole.pdf

Halliday, M.A.K., and Christian M.I.M. Matthiessen. 2013. *Halliday's Introduction to Functional Grammar.* Accessed 20 November 2020. https://doi.org/10.4324/9780203431269 .

Hamilton, Susan. 2004. *Animal Welfare & Anti-Vivisection 1870-1910 Nineteenth-Century Woman's Mission.* London: Routledge. Accessed 20 November 2020. Volter.

Hamilton, Susan. 2013. "On the Cruelty to Animals Act, 15 August 1876." *BRANCH: Britain, Representation and Nineteenth-Century History*. Ed. Dino Franco Felluga. Accessed 20 November 2020. http://www.branchcollective.org/?ps_articles=susan-hamilton-on-the-cruelty-to-animals-act-15-august-1876.

Home Office. 2020. *Annual Statistics of Scientific Procedures on Living Animals Great Britain 2019*. Accessed 20 November 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/901224/annual-statistics-scientific-procedures-living-animals-2019.pdf.

Hood, Susan. 2010. "Prosodies of Attitude." In: *Appraising Research: Evaluation in Academic Writing*. London: Palgrave Macmillan. Accessed 20 November 2020. https://link.springer.com/chap./10.1057/9780230274662_5#citeas

Hunston, Susan. 2004. "Counting the uncountable: Problems of Identifying Evaluation in a Text and in a Corpus." Accessed 20 November 2020. https://www.researchgate.net/profile/Susan_Hunston/publication/313443928_Counting_the_Uncountable_Problems_of_Identifying_Evaluation_in_a_Text_and_in_a_Corpus/links/585a840708ae3852d2571d4f/Counting-the-Uncountable-Problems-of-Identifying-Evaluation-in-a-Text-and-in-a-Corpus.pdf.

Hunston, Susan. 2011. *Corpus Approaches to Evaluation.* New York: Routledge. https://ebookcentral.proquest.com/lib/kutu/reader.action?docID=592987

Marino, Lori. 2016. "Why animal welfarism continues to fail." *Animal Sentience*. https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1084&context=animsent

Martin, J. R., and P. R. R. White. 2005. *The Language of Evaluation: Appraisal in English.* New York: Palgrave Macmillan.

Mauranen, Anna, and M. Bondi. 2003. "Evaluative language use in academic discourse." *Journal of English for academic purposes* 2, no. 4: 269–271. Accessed 20 November 2020. https://doi.org/10.1016/S1475-1585(03)00045-6.

Nevala, Minna. 2016. "Solidarity in evaluation: The portrayal of murderers and their victims in late nineteenth-century newspapers." *The Pragmatics and Stylistics of Identity Construction and Characterisation* 17. Accessed 20 November 2020. https://varieng.helsinki.fi/series/volumes/17/nevala/.

Read, J., and John Carroll. 2012. "Annotating Expressions of Appraisal in English." *Language Resources and Evaluation* 46, no. 3: 421–447. Accessed 29 March 2019. https://doi.org/10.1007/s10579-010-9135-7.

Rowan, Andrew N., and Loew, Franklin M. 2001. "Animal Research: A Review of Developments, 1950–2000". In D.J. Salem and A.N. Rowan, eds. The state of the animals 2001. 111–120. Washington, DC: Humane Society Press. Accessed 20 November 2020.

https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1006&context=sota_2001.
Stahnisch, F.W. 2009. "François Magendie (1783–1855)." *J Neurol.* No. 256: 1950–1952. Accessed 20 November 2020. https://link.springer.com/article/10.1007/s00415-009-5291-3.
Svärd, Per-Anders. 2015. *Problem animals: A critical genealogy of animal cruelty and animal welfare in Swedish politics 1844–1944.* Dissertation. file:///C:/Users/Anna/AppData/Local/Temp/ProblemAnimals.pdf.
Thompson, Geoff. 2014. "AFFECT and emotion, target-value mismatches, and Russian dolls: Refining the APPRAISAL model*," in *Evaluation in context*, eds. Thompson, Geoff, and Laura Alba-Juez. Accessed 16 November 2020. EBSCOhost.
Tubbs, Shane R., Marios Loukas, Mohammadali M. Shoja, Ghaffar Shokouhi, and Jerry Oakes. 2008. "François Magendie (1783–1855) and his contributions to the foundations of neuroscience and neurosurgery." *Journal of Neurosurgery* 108, no. 5: 1038–42. Accessed 20 November 2020. https://pubmed.ncbi.nlm.nih.gov/18447728/.
Understanding Animal Research. 2020. "The 3Rs and Animal Welfare." *Understanding Animal Research*. Accessed 15 November 2020. https://www.understandinganimalresearch.org.uk/animals/three-rs/.
Wei, Yakun, Michael Wherrity, and Yi Zhang. 2015. "An Analysis of Current Research on the Appraisal Theory." *Linguistics and Literature Studies* 3: 235–239. Accessed 3 April 2019. http://dx.doi.org/10.13189/lls.2015.030506.
White, Peter R. R. 2002. "Appraisal." In *Handbook of Pragmatics Online*, edited by Jan-Ola Östman, and Jef Verschueren, Vol. 8. Amsterdam: John Benjamins Publishing Company. Accessed 16 November 2020. https://doi.org/10.1075/hop.8.app2.
White, P. R. R. 2015a. *The Appraisal Website.* Accessed 3 April 2019. https://www.grammatics.com/appraisal/index.html.
White, P. R. R. 2015b. "Appraisal theory." In *The International Encyclopedia of Language and Social Interaction*, edited by Karen Tracy, 54–60. Hoboken, NJ: John Wiley & Sons, Inc. Accessed 3 April 2019. https://doi.org/10.1002/9781118611463/wbielsi041.

Appendix 1. Primary material

Table 1 Primary material

Letters before Act (A)	Title of the letter	Publication date	Author/ pseudonym[18]	Word tokens[19]
A1	VIVISECTION.	30 Jan 1875	Ernest Hart	860
A2	VIVISECTION.	4 Feb 1875	Ernest Hart	742
A3	VIVISECTION.	10 May 1875	Henry Thompson	985
A4	VIVISECTION.	4 Aug 1875	J. Crichton Browne	421
A5	VIVISECTION.	18 Jan 1876	Henry Thompson	368
A6	PROFESSOR HUXLEY ON LORD SHAFTESBURY.	26 May 1876	T. H. Huxley	349
A7	VIVISECTION.	May 30 1876	Common sense	1313
A8	VIVISECTION.	3 Jun 1876	Consistent	496
A9	VIVISECTION.	20 Jun 1876	Fair play	1214
A10	VIVISECTION.	21 Jun 1876	A medical student	131
A11	VIVISECTION.	29 Jun 1876	William W. Gull	871
A12	VIVISECTION.	14 Jul 1876	A student of medicine	203
A13	VIVISECTION.	17 Jul 1876	Erasmus Wilson, F.R.S.	307
A14		17 Jul 1876	A fellow of the Royal College of Surgeons	64
A15	THE VIVISECTION BILL.	18 Jul 1876	F. R. S.	529
A16	THE CRUELTY TO ANIMALS BILL.	7 Aug 1876	George Rolleston, M.D. F.R.S.	1067
				9920

[18] The names are in capitals in the letters, but in order to save space, I use lower case letters in the table. After each title, there is the text TO THE EDITOR OF THE TIMES.

[19] This column contains the number of word tokens in each letter, authors' personal details and the text TO THE EDITOR OF THE TIMES excluded.

Letters after Act (B)	Title of the letter	Publication date	Author/ pseudonym	Word tokens
B1	VIVISECTION.	24 Jul 1877	Professor Alexander Herzen	435
B2 ed3	STARVING CATS.	26 Aug 1878	True humanity	258
B3 ed4	VIVISECTION.	8 Jul 1880	Pembroke	557
B4 ed 5	MR. DARWIN ON VIVISECTION.	22 Apr 1881	Charles Darwin	491
B5 ed 7	VIVISECTION.	25 Apr 1881	George J. Romanes	724
B6 ed 8	VIVISECTION.	09 May 1881	George J. Romanes	1152
B7 ed 9	The PRACTICAL VALUE of VIVISECTION.	7 Nov 1881	Urban Pritchard, M.D., F.R.C.S.	261
B8 ed10	TREPANNING THE SKULL.	23 Nov 1881	A hospital physician.	204
B9 ed11	THE FRUITS OF VIVISECTION.	9 Apr 1883	Charles Cameron, M.P., M.D.	562
B10 edB12	BRAIN SURGERY.	16 Dec 1884	F.R.S.	1184
B11 ed 13	SURGERY AND VIVISECTION.	19 Dec 1884	Charles Egerton Jennings, M.S., M.B., F.R.C.S. Eng.	1130
B12 ed14	No separate title[20]	19 Dec 1884	W.	310
B13 ed15	SURGERY AND VIVISECTION.	25 Dec 1884	Another F.R.S.	745
B14 ed16	No separate title[21]	25 Dec 1884	A. A. M.	320
B15 ed17	No separate title[22]	25 Dec 1884	W. S. P.	205
B16 ed18	No separate title[23]	26 Dec 1884	F.R.S.	735

[20] The letter is under the previous title, which covers all the vivisection-related letters on the page.
[21] See footnote 20.
[22] The letter is under the title SURGERY AND VIVISECTION, which is the title of a letter opposing vivisection; the title covers all the vivisection-related letters on the page.
[23] See footnote 22.

B17 ed19	No separate title[24]	26 Dec 1884	H.	468
				9741

[24] See footnote 22.

Appendix 2. Finnish summary

Evaluatiivinen kieli eläinkokeita puolustavissa yleisöosastokirjoituksissa, jotka on julkaistu *The Times* -sanomalehdessä vuosina 1875–1884: *Cruelty to Animals Act 1876* -lain vaikutus siihen, mitä evaluoidaan ja miten

Tutkimus käsittelee Britanniassa 1800-luvun loppupuoliskolla käytyä eläinkokeisiin liittyvää keskustelua, tarkemmin ottaen eläinkokeita puolustavien kannanottojen sisältöjä. Aineistona on 33 *The Times* -sanomalehden mielipideosastolla vuosina 1875—1884 julkaistua, eläinkokeita tavalla tai toisella puolustavaa mielipidekirjoitusta. Tutkimuksen tarkoituksena on selvittää, mitä asioita kirjoituksissa arvotetaan ja millaista arvottavaa kieltä niissä käytetään. Lisäksi tarkastellaan, vaikuttaako 15.8.1876 voimaan tullut *Cruelty to Animals Act 1876*, maailman ensimmäinen merkittävä koe-eläinten kohtelua koskeva laki, kirjoituksissa esiintyvään arvottavaan kieleen. Tutkimuskysymykseni ovat seuraavat:

1) Mitkä tai ketkä ovat evaluaation kohteina, kun vivisektiota puolustetaan?
2) Minkä tyyppisiä evaluaatiota esiintyy, kun vivisektiota puolustetaan?
3) Miten evaluatiivinen kieli muuttuu, kun *Cruelty to Animals Act 1876* tulee voimaan?

Kirjoituksissa esiintyvää arvottavaa kieltä tarkastellaan J. R. Martinin ja Peter R. R. Whiten kehittämän appraisal-teorian avulla. Teoriaa täydennetään mm. Monika Bednarekin (2006, 2008 ja 2009), Geoff Thompsonin (2014), Alexanne Donin (2016) ja Matteo Fuolin (2018) ajatuksilla. Teoria jakaantuu kolmeen samanaikaisesti vaikuttavaan osa-alueeseen, *Asenteeseen* (Attitude), *Voimakkuuteen* (Graduation) sekä *Sitoutumiseen* (Engagement), mutta omassa tutkimuksessani keskitytään *Asenteeseen*, joka—nimensä mukaisesti—koskee varsinaisia mielipiteitä ja tunteita, joita erilaisista arvottamisen kohteista muodostetaan. *Asenne* jakautuu kolmeen kategoriaan sen mukaan, mitä arvotetaan ja millaisin kielellisin keinoin; kyse on *Tuominnasta* (Judgement), kun ihmisen persoonaa tai käyttäytymistä arvotetaan; *Arvostus* (Appreciation) puolestaan liittyy esineiden, ilmiöiden ja prosessien arvottamiseen joko niiden esteettisyyden tai hyödyllisyyden perusteella. Kolmanteen kategoriaan, *Tunteeseen* (Affect) sen sijaan kuuluvat sellaiset arvottamiset, jotka ilmaistaan jonkin emootion kautta.

Edellä mainitut kolme *Asenteen* alakategoriaa jakautuvat lisäksi alatyyppeihin: Tuominnan alatyypit ovat *Normaalius* (Normality)*, Pystyvyys* (Capacity) ja *Sinnikkyys* (Tenacity), jotka kuuluvat *Sosiaalisen arvostuksen* (Social esteem) piiriin, sekä *Rehellisyys* (Veracity) ja *Soveliaisuus* (Propriety), jotka ovat puolestaan *Sosiaalisen hyväksynnän* (Social sanction) alakategorioita; Arvostuksen alatyypit ovat *Reaktio:Puoleensavetävyys* (Reaction:Impact)*, Reaktio:Laatu* (Reaction:Quality), *Koostumus:Tasapaino* (Composition:Balance)*, Koostumus:Kompleksisuus* (Composition:Complexity) ja *Arvo* (Valuation); Tunteen alatyypit ovat *Onnellisuus:Ilo* (Happiness:Cheer), *Onnellisuus:Kiintymys* (Happiness:Affection), *Tyytyväisyys:Mielihyvä* (Satisfaction:Pleasure), *Tyytyväisyys:Kiinnostus* (Satisfaction:Interest), *Turvallisuus:Itsevarma* (Security:Quiet), *Turvallisuus:Luottamus* (Security:Trust) sekä *Halu* (Inclination) ja *Yllättyneisyys* (Hämmästys). Uskoakseni suurimmasta osaa kategorioiden nimiä käy melko hyvin ilmi, minkä tyyppisiä tunteita ne kuvaavat, joten en käsittele asiaa niiden osalta tämän enempää. Osa arvostuksen alatyypeistä saattaa sen sijaan jäädä hieman epäselväksi: Reaktio:Laatu sisältää ominaisuudet, jotka kuvaavat kohdetta sen miellyttävyyden kannalta; Koostumus liittyy joko kohteen osien järejestymiseen tai sen tarkkuuteen ja yksityiskohtaisuuteen; Arvo puolestaan käsittää ominaisuudet, jotka liittyvät kohteen merkitykseen esim. sen toimivuuden tai autenttisuuden suhteen.

Ominaisuudet eivät kuitenkaan aina kuulu yksiselitteisesti tiettyyn Asenne-kategoriaan, jolloin eri tutkijat painottavat evaluaation erilaisia aspekteja. Esimerkiksi Martin ja White (2005) priorisoivat evaluaation kohdetta analyysin lähtökohtana, kun taas Bednarek (2009) pitää evaluatiivista *sanastoa* (lexis) ensiarvoisena. Tästä painotuksesta huolimatta myös Bednarekin mielestä on kuitenkin tietyissä tilanteissa järkevää ottaa huomioon sekä kohde että sanasto, jotta evaluaation laatu voidaan määrittää. Thompson puolestaan priorisoi määrittämisen kohteena olevan kielielementin *muotoa* (form) *merkityksen* (meaning) sijaan; on tärkeää, että selvitetään, mitä on varsinaisesti sanottu, sen sijaan että pohdittaisiin, mitä on mahdollisesti tarkoitettu. Omassa tutkimuksessani kohdetta ja muotoa pidetään analyysin lähtökohtana, ja vasta näiden jälkeen selvitetään mahdollisimman tarkasti, millä sanoin ja millä kieliopillisin keinoin kohdetta on arvotettu.

Lähtökohtaisesti tunteiden ja ominaisuuksien, joita Asenne-kategorioilla ilmaistaan ja liitetään kohteisiin, nähdään olevan joko positiivisia tai negatiivisia, mutta esim. Halun ja Hämmästyksen suhteen on jonkin verran erimielisyyttä. Tässä

tutkimuksessa vain Hämmästyksen nähdään olevan neutraali *valenssin* (valence; usein polarity aiemmassa tutkimuksessa) suhteen, eli Hämmästykseen liittyvät tunteet eivät sinällään ilmaise tuntijan (emoter) positiivista tai negatiivista suhtautumista tunteen *kohteeseen* (trigger tai target).

Evaluaatiot voivat olla joko eksplisiittisiä tai implisiittisiä, eli ne voidaan ilmaista joko suoraan evaluatiivistä sanastoa käyttäen, tai ne voivat olla sinällään ei-evaluatiivisia mutta kontekstissaan evaluatiivisia. Arvottamisen implisiittisyyttä on tutkittu paljon, ja sen nähdään tekevän evaluaatioiden analysoinnista paikoin hyvin haastavaa. Martin ja White (2005) jakavat implisiittiset evaluaatiot kolmeen kategoriaan, joiden pohjalta Don (2016) on kehittänyt oman *spektrinsä* (spectrum), joka kuvaa mekanismeja, joiden avulla implisiittisiä evaluaatioita voi ilmaista. Spektri sisältää kahdeksan mekanismia ja viisi alatyyppiä, mutta Don korostaa, että nämä ovat vain keskeisimmät implisiittisen evaluaation mekanismit. Lisäksi usea mekanismi voi operoida samanaikaisesti. Tässä tutkimuksessa käytetään Donin mekanismeja.

Evaluaation implisiittisyyteen keskeisesti liittyvä ilmiö on *prosodia* (prosody) eli evaluaation kumulatiivinen vaikutus. Ilmiö kuvaa sitä, miten evaluaatio ikään kuin leviää koskettamaan laajempaa tekstiosuutta kuin sen varsinainen kohde tai sen välittömässä läheisyydessä oleva materiaali. Tässä tutkimuksessa ilmiöön liitetään sekä eksplisiittisten evaluaatioiden vaikutus implisiittisen materiaalin tulkintaan että kaiken evaluatiiviseksi tulkitun materiaalin vaikutus tuleviin tulkintoihin, ja lisäksi asiaa lähestytään kolmen, Martinin ja Whiten (2005) käsittelemän prosodian ilmenemistavan kautta. Prosodia voi ilmetä *kyllästämisenä* (saturation), *voimistamisena* (intensification) sekä *hallintana* (domination).

Tutkimuksessa käsitellään myös evaluaatioiden *tunnistamista* (identification) eli sitä, mikä lasketaan evaluaatioksi. Tästäkin on erilaisia näkemyksiä tutkijoiden keskuudessa, mutta tässä tutkimuksessa lähdetään siitä ajatuksesta, että analyysiin sisälletään periaatteessa kaikki evaluatiivinen materiaali, mitä aineistossa on. Tunnistamista käsitellään kolmesta, Donin (2016) määrittelemästä näkökulmasta. Ensimmäinen haaste on suuri, tai oikeastaan ääretön määrä tapoja, joilla evaluaatioita voidaan ilmaista. Toinen Donin mainitsema tekijä on kontekstin vaikutus tekstin tulkitsemiseen. Kolmantena käsitellään yksittäisten evaluaatioiden rajojen määrittämistä eli sitä, mitä lasketaan kuuluvaksi kuhunkin evaluaatioon. Don käsittelee tunnistamisen yhteydessä myös eksplisiittisten ja implisiittisten evaluaatioiden kategorisoimista, mutta omasta mielestäni se on pikemminkin kategorisointia koskeva kysymys, ei niinkään

tunnistamista. Sen sijaan se, miten implisiittiset evaluaatiot ylipäänsä löydetään tekstistä, on mielestäni tunnistamiseen liittyvä haaste.

Tutkimuksen analyysiosuus alkaa evaluaatioiden kohteiden tunnistamisella ja ryhmittelyllä. Varsinaiset kohteet (esim. fysiologi/physiologist, opettaja/teacher ja tutkija/researcher) tulee ensin löytää aineistosta, minkä jälkeen niille määritetään yleistermi (tässä tapauksessa vivisektion tekijä/vivisector), joka toimii analyysissä Kohteena. Lisäksi joistain Kohteista muodostetaan laajempia ryhmiä, jotka mahdollistavat hedelmällisemmän analyysin tekemisen. Esimerkiksi erilaisista muussa kuin koe-eläintoiminnassa hyödynnettävistä eläimistä (esim. kettujahdissa käytettävät ketut tai karjataloudessa käytettävät emakot) muodostetaan yhteinen kategoria muut eläimet (other animals).

Kohteiden tunnistamisen ja ryhmittelyn jälkeen suoritetaan varsinainen appraisal-analyysi yllä esitettyjen kategorioiden mukaisesti. Analyysissä käsitellään lisäksi eläinten kipuun ja kärsimykseen liittyviä evaluaatioita. Seuraavaksi on vuorossa evaluaation kumulatiivisuuteen ja implisiittisiin evaluaatioihin liittyvä osuus. Lopuksi esitellään, miten materiaalissa esiintyvien evaluaatioiden rajat määritettiin.

Alustava hypoteesini oli, että eläinten suojelemisen ja koe-eläinten käytön todellisen rajoittamisen sijaan laki legitimoi koe-eläintoiminnan ja sitä kautta tuki sen kehittymistä vakiintuneeksi ja välttämättömäksi osaksi lääketieteellistä ja monenlaista muuta tieteellistä tutkimusta. Oletin, että tämä muutos puolestaan näkyisi arvottavassa kielessä jollakin tavalla. Pidin mahdollisena, että lain tuoma legitimiteetti tekisi eläinkokeiden puolustajista itsevarmempia, mikä saattaisi näkyä kirjeissä esim. vivisektion vastustajiin kohdistuvien, (eksplisiittisten) negatiivisten Tuomintojen tai vivisektion puolustajiin kohdistuvien, (eksplisiittisten) positiivisten Tuomintojen määrän kasvuna. Vaihtoehtoisesti, itsevarmuus saattaisi aiheuttaa sen, että kirjoittajat—jotka ovat siis vivisektion vastustajia—tuntisivat vähemmän tarvetta vakuuttaa lukijoitaan ja näin ollen käyttäisivät vähemmän vivisektioon kohdistuvia, (eksplisiittisiä) positiivisia Arvostuksia tai vivisektion puolustajiin kohdistuvia, (ekplisiittisiä) positiivisia Tuomintoja.

Analyysin perusteella merkittävimmät evaluoinnin kohteet kirjeissä ovat vivisektio (vivisection), vivisektion vastustajat (anti-vivisectionists), vivisektion puolustajat (pro-vivisectionists), vivisektion puolustajien lausunnot (anti-vivisectionists' statements), eläimet (animals), muu eläinten käyttö (other animal use) sekä sairaudet (disease) ja potilaat (patient). Vivisektion puolustajat evaluoidaan lähes aina positiivisesti

ja useimmiten liittyen heidän pystyvyyteensä tai soveliaisuuteensa. Vivisektion vastustajat sen sijaan evaluoidaan lähes aina negatiivisesti ja useimmiten heidän pystyvyyteensä liittyen. Vivisektion puolustajien lausunnot evaluoidaan aina negatiivisesti, lukuun ottamatta yhtä positiivista tapausta, jota käytetään sarkastisesti. Eläimet ovat aineistossa useimmiten tuntijoina, mutta muutaman kerran myös evaluaation kohteina. Koe-eläinten kipu kielletään vivisektiota arvottavissa evaluaatioissa käyttämällä evaluaatioita, joissa eläimen negatiivinen tunne kielletään (negated positive evaluation), esim. ”is not suffering”. Muita eläimiä koskeva käytön kuvataan sen sijaan aiheuttavan ko. eläimille kipua ja kärsimystä käyttämällä negatiivisia evaluaatioita, esim. ”suffers”. Kaikki aineistossa esiintyvät sairauksia koskevat evaluaatiot ovat negatiivisia ja ilmaistu sekä Tunteen että Arvostuksen avulla. Potilaisiin liittyvät evaluaatiot ovat sekä negatiivisia että positiivisia ja potilas esiityy niissä sekä tuntijana että kohteena. Negatiiviset evaluaatiot kohdistuvat potilaiden itsensä lisäksi sairauksiin. Positiiviset evaluaatiot joko kuvaavat potilaita onnekkaina (lucky) tai hyödyllisinä (useful), tai potilas evaluoi niissä eläinkokeita, lääketieteellisiä operaatioita (jotka on kehitetty eläinkokeiden avulla) tai lääkäreitä (jotka suorittavat näitä operaatioita).

Merkittävimmät muutokset liittyen *Cruelty to Animals Act 1876* -lakiin sen sijaan liittyvät vivisektioon liitettäviin ominaisuuksiin, eläimiin, sairauksiin ja potilaisiin: lain voimaantulon jälkeen eläinkokeet evaluoidaan hyödyllisiksi selkeästi useammin kuin ennen lakia. Tämän lisäksi eläimet ovat sekä evaluaation kohteina että erityisesti evaluaatioiden tekijöinä tunteidensa kautta—eli tuntijoina—selkeästi useammin ennen lakia kuin sen jälkeen, kun taas potilaat ja sairaudet, eli ihmiset ja heidän mahdolliset sairautensa, ovat puheenaiheina selkeästi useammin lain voimaantulon jälkeen kuin sitä ennen.

Nämä tulokset osoittavat mielestäni selvästi, että yleisönosastokirjoitusten evaluatiivisessa kielessä on tapahtunut muutos sen jälkeen, kun *Cruelty to Animals Act 1876* tuli voimaan. Tulokset viittaavat myös siihen, että lain voimaantulo muutti ihmisten asenteita vivisektiota kohtaan eläinten kannalta epäedulliseen suuntaan. Vaikuttaa siltä, että kun ennen lakia eläimet ja eläinten kärsimys olivat vielä suhteellisen usein keskustelunaiheena, niin lakimuutokseen jälkeen eläimet saivat väistyä eläinkokeiden mahdollisten hyötyjen ja ihmisten hyvinvoinnin tieltä. Tämä puolestaan antaa viitteitä siitä, että maailman ensimmäinen koe-eläimiä koskeva laki tosiaan suojelikin koe-eläintoimintaa itse eläinten sijaan ja samalla tuki eläinkokeiden nousemista erittäin paljon

käytetyksi ja vakiintuneeksi tavaksi tehdä sekä lääketieteellistä että monenlaista muuta tieteellistä tutkimusta.