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INSTITUTO DE CIÊNCIAS BIOMÉDICAS ABEL SALAZAR
UNIVERSIDADE DO PORTO

WHY, WHAT AND HOW TO TEACH ETHICS TO VETERINARY STUDENTS IN EUROPE

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Tese de doutoramento em Ciências Veterinárias

Porto, 2014

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Este projecto de investigação teve o apoio de uma bolsa de doutoramento concedida pela Fundação para a Ciência e a Tecnologia (SFRH/BD/46879/2008).

This research project was supported by a doctoral grant from Fundação para a Ciência e a Tecnologia (SFRH/BD/46879/2008).

ABSTRACT

The teaching of ethics is now commonly included as part of undergraduate veterinary medical education in Europe. Despite the wide recognition that veterinary students need to acquire ethical competences, there is limited empirical research examining the reasons for teaching ethics (*why)*, the concepts and topics that are being taught (*what)* and the pedagogic approaches applied by veterinary schools (*how)*. It is, therefore, important to examine the main approaches used in veterinary schools across Europe, explore the aims of courses and review to what extent they may advance ethical competences in practicing veterinarians. The research presented in this thesis intends to contribute to the field of veterinary ethics education by addressing these same issues.

The research work used a mixed methods approach, combining quantitative – mapping of internet sources – and qualitative research strategies, including study programmes, interviews with educators and focus groups with students. The mapping of internet sources set out the way in which ethics is included within European veterinary curricula and notable differences were identified in terms of time dedicated to ethics, its place within the curriculum and contextual approaches used to teaching it. In particular, ethics was found to be taught within four main areas: Animal Welfare, Animal Law, History of Veterinary Medicine and Professionalism.

In order to get deeper insight into some of the experiences in teaching veterinary ethics identified in the internet search, a qualitative approach relying on the experiences of three veterinary schools was sought. Within a broader European diversity, three veterinary schools were selected as study cases: Faculty of Life Sciences, University of Copenhagen (Denmark); School of Veterinary Medicine and Science, University of Nottingham (United Kingdom), and Faculty of Veterinary Medicine, Technical University of Lisbon (Portugal). In each of the schools semi-structured interviews with educators and focus group sessions with students were performed. Data from the study programmes in ethics were used to inform the construction of the interview guides as well as to provide research themes for the content analysis of interviews and focus groups.

From this dataset ten objectives in teaching ethics were identified which can be grouped into four overarching themes: ethical awareness, ethical knowledge, ethical skills and individual and professional qualities. These include the recognition of values and ethical viewpoints, identifying norms and regulations, developing skills of communication and decision-making, as well as contributing to a professional identity. Whereas many of the objectives complement each other, there is a tension between the view of ethics teaching

to promote knowledge of professional rules and a view emphasizing critical reasoning skills. The wide range of objectives and the possible tensions between them highlight the challenges faced by educators as they attempt to prioritize between these goals of ethics teaching within a crowded veterinary curriculum.

Building on the results from the mapping of internet sources, the analysis of study syllabi and interviews with educators reinforced the perception that ethics teaching can be approached by means of four grounding concepts. These are Animal Welfare Science, Laws/Regulations, Theories/Concepts, and Professionalism. A conceptual model was developed which sets out the resulting concepts and the overlapping between them. In addition, the three schools are seen to represent a diversity of curricular approaches to ethics with many aspects being emphasized and combined differently. These findings were reinforced by the results from the focus groups sessions since different sets of ethical competences have been used by students at each school to resolve a clinical case with moral implications, which further suggests that the teaching of ethics received by students will impact the kind of veterinary professional formed in each school.

Schools were found to use a diversity of teaching methods including lectures, small group teaching, portfolios and excursions. In Copenhagen, students seem to gain interest in ethics as it moves away from the teaching of theories and progresses towards debates, small group exercises and excursions. In Lisbon, the use of discussion of cases within the lecture sessions has enabled to attract students' interest and curiosity. The wide inclusion of ethical topics into small group teaching sessions, together with the use of reflective portfolios, are probably the most prominent features of the teaching in Nottingham. Results also seem to indicate that there is no ideal or best point in veterinary training to teach ethics and that educators and students prefer having ethics taught integrated in the curriculum than only as a stand-alone subject.

In terms of assessment, what has emerged from the cases is that for several reasons schools have been changing the assessment of ethics in order to make it easier and more expeditious in measuring ethical competences. The ability to recognise and describe ethical theories, and apply them to practical cases, was found as the main competence assessed when examining students. Moreover, the assessment of ethical theories was found to be used as a proxy for measuring competences that are more challenging to measure, such as ethical reflection and decision-making.

Informed by the results from the empirical work, a theoretical framework for the teaching of veterinary ethics is proposed which is based on three concepts: professional rules, moral virtues and ethical skills. These reflect the possible educational aims and

approaches to ethics. The rules approach is based on the transmission of professional and social values by means of regulatory documents and it depends intimately on the knowledge that students have of those documents. The virtues approach involves the inculcation of moral values and virtues that will stimulate students to develop desirable attitudes and behaviours. The main focus of this approach to ethics is to develop attitudinal competences. Finally, the skills approach is focused on equipping the students with the necessary skills to recognise and respect of the plurality of ethical views that make part of contemporary society. It is expected that the results from the work conducted in the scope of this thesis will inform future curriculum development in veterinary ethics across European schools.

RESUMO

O ensino da ética faz hoje parte integrante da formação académica em medicina veterinária no espaço europeu. No entanto, e apesar de ser amplamente reconhecida a importância de competências éticas na formação de estudantes de medicina veterinária, a investigação empírica sobre as razões para se ensinar ética (*porquê*), sobre os conceitos e temas ensinados (*o quê*) e sobre as abordagens pedagógicas utilizadas (*como*) é ainda limitada. Torna-se, portanto, importante aferir as principais abordagens ao ensino da ética adoptadas pelas faculdades de medicina veterinária europeias, explorar os seus objectivos programáticos e compreender de que forma podem dotar os veterinários de competências éticas. A investigação apresentada nesta tese pretende abordar estas mesmas questões e assim contribuir para o ensino da ética em medicina veterinária.

O trabalho de pesquisa recorreu a métodos mistos de investigação, combinando uma análise quantitativa – mapeamento de informação curricular a partir de fontes de internet – e uma análise qualitativa, que incluiu a análise de conteúdos programáticos, entrevistas a professores e grupos focais com alunos. O mapeamento dos sítios de internet de cada faculdade foi o ponto de partida para compreender de que forma a ética está incluída nos currículos veterinários europeus e identificar diferenças relativamente ao tempo dedicado ao ensino da ética, o seu lugar no currículo e quais as abordagens contextuais utilizadas para a ensinar. Em particular, observou-se que a ética é ensinada em quatro áreas principais: Bem-estar Animal, Direito Animal, História da Medicina Veterinária e Profissionalismo.

De forma a obter uma visão mais aprofundada do ensino de ética veterinária efectuou-se um estudo qualitativo a três faculdades de medicina veterinária. Dentro de uma vasta diversidade europeia, três faculdades de veterinária foram seleccionadas como casos de estudo: *Faculty of Life Sciences*, da Universidade de Copenhaga (Dinamarca), *School of Veterinary Medicine and Science*, da Universidade de Nottingham (Reino Unido), e *Faculdade de Medicina Veterinári*a, da Universidade Técnica de Lisboa (Portugal). Em cada uma das faculdades foram realizadas entrevistas semi-estruturadas a professores e sessões de grupos focais com alunos. Os programas de estudo de ética foram utilizados como base na construção dos guias de entrevista, bem como na selecção de temas de pesquisa para a análise de conteúdo das entrevistas e dos grupos focais.

A partir deste conjunto de dados foram identificados dez objectivos no ensino da ética que podem ser agrupados em quatro temas: consciência ética, conhecimento ético,

destreza ética e qualidades individuais e profissionais. Estes temas incluem o reconhecimento de valores e pontos de vista éticos, a identificação de normas e regulamentos, o desenvolvimento de competências de comunicação e de tomadas de decisão, bem como o contributo para uma identidade profissional. Embora muitos dos objectivos definidos se complementem, foi identificado um foco de tensão entre o ponto de vista do ensino da ética que visa promover o conhecimento das regras profissionais e um outro que privilegia a destreza do raciocínio crítico. A panóplia de objectivos mencionados para o ensino de ética, assim como as possíveis tensões entre eles, demostram os desafios que os professores enfrentam na priorização destes mesmos objectivos no quadro de um currículo veterinário sobrelotado.

Com base nos resultados do mapeamento de informação obtida a partir de fontes da internet, a análise dos conteúdos programáticos e as entrevistas aos professores reforçaram a percepção de que o ensino de ética pode ser abordado através de quatro conceitos básicos: Ciência do Bem-estar Animal, Leis/Regulamentos, Teorias/Conceitos, e Profissionalismo. A partir deste resultado foi desenvolvido um modelo conceptual que relaciona estes conceitos e as sobreposições temáticas entre eles. Além disso, as três faculdades representam uma diversidade de abordagens temáticas à ética onde muitos tópicos são realçados e combinados de diferentes formas. Estas observações foram reforçadas pelos resultados obtidos nas sessões de grupos focais uma vez que os estudantes de cada faculdade recorreram a diferentes competências éticas para resolver um caso clínico com implicações éticas, o que sugere ainda, que o ensino de ética administrado terá impacto sobre o tipo de profissional que é formado em cada faculdade de medicina veterinária.

Esta pesquisa permitiu observar uma ampla diversidade de métodos de ensino nas faculdades incluindo aulas magistrais, exercícios de grupo, portfólios e visitas de estudo. Em Copenhaga, os alunos parecem demonstrar um interesse crescente em ética à medida que o ensino se afasta da apreensão de teorias e progride para debates, exercícios em pequenos grupos e visitas de estudo. Em Lisboa, a introdução de discussão de casos no contexto das aulas permitiu aumentar o interesse e a curiosidade dos alunos para esta temática. Provavelmente as características mais relevantes do ensino em Nottingham são a ampla inclusão de temas éticos em sessões com pequenos grupos, juntamente com a utilização de portfólios reflexivos. Os resultados também parecem indicar que não existe um momento ideal para se ensinar ética e que tanto os professores como os alunos preferem ter um ensino da ética integrado no currículo do que apenas como uma disciplina autónoma.

Em termos de avaliação, o que se observou a partir dos casos de estudo é que, por diversas razões, as faculdades têm vindo a alterar o formato da avaliação das disciplinas de ética, para aferir as competências éticas de forma mais simples e rápida. A principal competência observada na avaliação dos alunos é a capacidade de reconhecer e descrever teorias éticas, e a sua aplicação a casos práticos. Adicionalmente, observou-se que a avaliação das teorias éticas é utilizada como uma forma expedita de medir competências que são mais difíceis de aferir, como a reflexão ética e a destreza em tomar decisões.

A partir dos resultados do trabalho empírico, é proposto um quadro teórico para o ensino da ética veterinária, baseado em três conceitos: regras profissionais, virtudes morais e destrezas éticas. Estes conceitos reflectem possíveis abordagens à ética assim como aos objectivos do seu ensino. A abordagem pelo ensino de regras baseia-se na transmissão de valores profissionais e sociais, baseados em documentos normativos e intimamente dependente do conhecimento que os estudantes apresentam desses mesmos documentos. A abordagem pelo ensino das virtudes envolve a transmissão de valores e virtudes morais que estimulem os alunos a desenvolver as atitudes e os comportamentos desejados. O principal foco desta abordagem à ética reside no desenvolvimento de competências comportamentais. Por último, a abordagem pelo ensino de destreza ética está focada em dotar os alunos com as competências necessárias para reconhecer e respeitar a pluralidade de pontos de vista éticos que fazem parte da sociedade contemporânea. Espera-se que os resultados dos trabalhos realizados no âmbito desta tese forneçam informações relevantes para o desenvolvimento futuro de programas curriculares em ética nos planos de estudos de faculdades de medicina veterinária europeias.

Para os meus filhos,

Tiago e Duarte Maria

ACKNOWLEDGEMENTS

In a research project lasting about five years it is difficult to do justice to all those people who, in some way, have made it come to fruition. Therefore the following list runs the risk of not being exhaustive. My apologies to those that, eventually, have been forgotten.

This research was funded by a doctoral grant from Fundação para a Ciência e a Tecnologia (SFRH/BD/ 46879 / 2008) for which I am deeply grateful. Therefore I believe that the very first individuals to whom I owe my gratitude are the members of the jury who chose the project to get funded. I thank them for their vision and I do hope that this retribution reaches them.

Special thanks to my supervisors Anna Olsson, Kate Millar, Jesper Lassen and Peter Sandøe. They have been more than supportive and endured a countless number of telephone meetings, draft versions and vivid discussions. Their unsurpassed suggestions and advises have pulled me up and prevented me from drowning in several occasions. Forever grateful.

My deepest gratitude to Nuno Henrique Franco for all the help (and vision!) at the final stages of my research, especially for his outstanding work in revising the introductory chapters.

I also wish to thank:

The EUVG (Vasco da Gama Veterinary School) for having me conceded a five-year leave.

All the participants (teachers and students) who accepted to take part in this study. Without them it would not have been possible.

Alexandre Quintanilha (IBMC-UP), Miguel Ricou (FMUP), Wilson Pinto (CCMAR/UAlg), Luis Calafate and Fernando Tavares (FCUP) who accepted to take part in the pilot interviews with educators.

Ana Luisa, Francisco, Joana e Bruno, veterinary students at EUVG, for having accepted to take part in the pilot focus group session.

Trine Dich, Tina Hansen, George Stilwell and Kate Millar for recruiting the students to the focus group sessions. Also to Sérgio Sousa and Ana Catarina Figueira (EUVG), for the work they had in motivating students to join the pilot interview.

Tina Hansen and Trine Dich for all their work in organising my visits to Copenhagen.

Kate Millar for all her work in organising my visits to Nottingham.

Again, Kate Millar for the thorough revision, including English language revision, of a substantial part of this thesis.

Anna Olsson and Liliana Remuge for their help in transcribing the interviews.

Liz Mossop, for exchanging literature and knowledge.

Joel Ferraz, companion in bioethics, for all the vivid discussions we've had along the years and for his contribution to Figure 1.

Orsolya Varga and Pedro Pinho for their very useful advises.

My family, Mom and Dad, brothers and sister, for all their support.

My brother José Raimundo for his insights into ethics in the humanities, and especially for exploring the difference between deontology and ethics.

My wife Ana, for everything!

All of old.
Nothing else ever.
Ever tried.
Ever failed.
No matter.
Try again.
Fail again.
Fail better.

Worstward Ho, 1983
Pioravante marche
Samuel Beckett

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SECTION III - EMPIRICAL RESEARCH RESULTS

SECTION IV - THEORETICAL FRAMEWORK / GENERAL DISCUSSION

LIST OF ABBREVIATIONS

AHW – Animal Health and Welfare (Nottingham module)
AWSELVA – The Animal Welfare, Science, Ethics and Law Veterinary Association
CPC – Codes of Professional Conduct
CRS – Clinical Relevance Sessions (Nottingham task)
DIT – Defining Issues Test
DVA – Danish Veterinary Association
EAEVE - European Association of Establishments for Veterinary Education
ECTS – European Credit Transfer System
EMQ – Extended Matching Questions exam
EMS – Extra-mural studies
EU – European Union
FVE - Federation of Veterinarians of Europe
GMC – General Medical Council
GPC – RCVS Guide of Professional Conduct
MCQ – Multiple Choice Question exam
OIE – Office International des Epizooties (World Organisation for Animal Health)
OMV – Ordem dos Médicos Veterinários (Portuguese Veterinary Order)
OSPE – Objective Structured Practical Examination
PBL – Problem-based learning
PPS – Personal and Professional Skills (Nottingham module)
RCVS – Royal College of Veterinary Surgeons
RVC – Royal Veterinary College
UK – United Kingdom
US – United States (of America)
WSPA – World Society for Protection of Animals

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FOREWORD

Imagine you are a small animal veterinary practitioner, working at your own private practice, which you have to run. Imagine you are called in the middle of the night on a Sunday because a dog has 'suddenly' become sick. Imagine you do not have anyone to help you at that late hour. Imagine that, at arrival, you realize that the dog is severely ill, with signs of being beaten (or maybe used in dog fights) several days ago. Imagine the owner is being evasive and deceiving when answering your questions. Imagine the owner refuses to pay the deposit for the dog to be hospitalized. Imagine having to decide what to do with the suffering animal. Imagine having to decide how to deal with the cagey owner. Imagine… well, I suppose the reader could find the suggested scenario to be exceedingly imaginative, if it wasn't actually real.

This short story – taken from my own personal experience – is a typical example of the kind of practical challenges veterinary surgeons face on a daily basis after graduation and further examples could have been chosen from any other field of veterinary sciences. Dealing with such challenges demands a set of competences that include clinical knowledge, communication skills, decision-making abilities, professional identity, and ethical deliberation. A satisfactory resolution of a case such as this would imply balancing all the above competences. But because there is more than just one way to move forward, the road to follow would probably differ from person to person; some would try to explore the relational aspects of the veterinarian-client interaction in order to get more information about the animal (and an agreement on the deposit), while others would privilege defending animal welfare at any cost, and adjourning decisions about owner liability or the deposit. That doesn't mean, however, that finding a way to tackle a difficult professional scenario is all about relying on intransmissible personal talents or in acquired practical experience. In addition to scientific knowledge, competences of proper communication, decision-making, professionalism and ethics can also be acquired or improved through training. Therefore, they could – and, as I will argue in chapter 1 of this thesis should – be part of the undergraduate training of a veterinary surgeon.

A number of issues arise when addressing the teaching of ethics to veterinary students, ranging from what should be taught to what is expected to be achieved with such teaching. These issues are not specific to ethics teaching but the challenges they pose seem to be greater in ethics than for other subjects. When we speak of, for example,

anatomy[1], there is a common understanding by the academic community of the educational needs in terms of target species and contents. Veterinary students must be introduced to the topography of, at least, the more common domestic species (usually horse, cow, dog, cat, pig, chicken, sheep and goat) and that study should include skeleton, muscles, nervous system, vascular system and internal organs. Although different approaches can be used to teach anatomy (regional vs. body systems; comparative vs. clinically integrated) the goals of teaching remain the same: to teach the morphology of the relevant domestic species.

This same rationale, however, does not seem to apply to ethics, and to veterinary ethics in particular. Firstly, there is no standardised form of professional ethics to guide every activity within the field of veterinary medicine. Veterinary professional ethics could as easily deal with the use of steroids in race horses as the culling of a herd because of public health concerns. And secondly, as the main purpose of ethics training is not the transmission of factual information *per se*, there is little consensus on whether its objective should be to promote virtuous behaviours in students, to make them understand the need to rely on professional rule or norms, to foster the acquisition of ethical skills or a combination of these. Issues of what to teach in a course of veterinary ethics will be dealt in chapter 2 and further explored in chapter 7 when analysing the study cases.

In addition to *why* and *what* to teach, there is also little consensus on *how* ethics should be delivered in terms of methods, contents, place in the curriculum and assessment (chapter 3). Veterinary ethics is being taught throughout Europe, but little information is available on the approaches that are being used. Chapter 5 explores the results of a systematic search of web resources in veterinary ethics teaching across Europe, while chapter 8 explores the approaches used in three case studies with considerable detail.

The thesis is organized in four main sections: *Introduction*, *Methods*, *Results* and *Theoretical Framework/General Discussion*. In Section I (*Introduction*, comprising chapters 1, 2 and 3) the literature is reviewed in light of the three general research questions (*why*, *what* and *how*). Section II (*Empirical Research Methods*, covering chapter 4) describes the aims of the research, the empirical methods used, and the analysis made; further information can be found as annexes. The *Empirical Research Results* are presented in Section III (covering chapters 5 to 8). The findings have been organized in order to answer each of the research questions: why to teach ethics (chapter 6), what to teach (chapter 7) and how to teach it (chapter 8), in addition to a

[1] With anatomy I mean gross anatomy, excluding histology, cytology and embryology.

preliminary chapter reporting the findings of the internet search (chapter 5). Finally, Section IV presents a theoretical framework for veterinary ethics education built upon the relevant literature and the results from the empirical analysis (chapter 9). The thesis closes with a *General Discussion* (of results and methodologies), including some concluding remarks (chapter 10).

The reader will be faced with some degree of overlapping between the different chapters; it could also happen that a research question framed within the *why* section ends up being explored also within the context of the *what*. In fact, addressing the *why* question provides valuable input into the *what*, which, in turn, brings insights into the *how*. Hence, the contents of each chapter are more a reflection of structural and organizational choices than a conscious attempt to compartmentalize knowledge domains.

SECTION I

INTRODUCTION

1 WHY VETERINARY STUDENTS NEED TO KNOW ABOUT ETHICS

The importance of introducing veterinary students to ethics[2] has been increasingly acknowledged (Fox 1995, Schillo 1999, Wathes *et al.* 2013). The roles of veterinarians in society span across a wide range of prominent activities; from public health to clinical practice, veterinarians are expected to perform at the higher 'standard of proficiency' (RCVS 2001, p.28). This chapter brings together a diversity of topics that marry the importance of ethical competences for the veterinary profession with the need of teaching ethics to its students. This review of the literature will later be used to support the findings of the empirical research.

1.1 The role of ethical reasoning in veterinary practice

In order to unravel the reasons why veterinary students may need to know about ethics, let us start by taking a closer look at the some of the challenges that veterinarians usually face in practice and the role of ethical reasoning in helping meeting them. In their practice veterinarians are seen to be "enmeshed in a web of moral duties and obligations that can and often do conflict" (Rollin 1999, pp.18-19). In fact, veterinarians face a number of responsibilities towards several stakeholders: animal, client, colleagues, society at large and, of course, themselves. The process of decision-making in veterinary medicine involves considering the values and interests of all the aforementioned interested parties, as illustrated in the flowchart in Figure 1.

Veterinarians are animal doctors but they usually need human counterparts in order to have access to animals themselves. In moral grounds, clients and animals are both moral subjects[3] with resultant values of moral significance to be considered (Figure 1). Managing these sometimes conflicting values can result in complex ethical dilemmas which veterinarians are expected to know how to deal with. A recent study surveyed 58 practicing veterinarians in the UK and revealed that 91% of them faced at least one ethical dilemma a week (Batchelor & McKeegan 2012). Faced with three common ethical

[2] The words *ethics* (from the Greek *êthos*) and *morality* (from the Latin *moris*) have somewhat different meanings although they can be used interchangeably. Ethics is mostly used when referring to the broader philosophical concepts about what is good/bad, or right/wrong (such as theories and principles) while morality involves the application of those ethical concepts at societal, group or individual levels (and usually expressed through norms, codes and behaviours).

[3] Yeates (2009a) uses the expression *moral object* instead of *moral subject* to designate "the being to which moral agents have a responsibility". Yeates builds on the concept of veterinary responsibilities and differentiates between *agent-specific* and *agent-neutral* responsibilities and *object-specific* and *object-neutral* responsibilities.

scenarios, respondents considered that the restrictive effect of financial limitations over treatment options was, by far, the most common (55%), followed by continued treatments that compromise animal welfare (14%) and convenience euthanasia of healthy animals (7%).

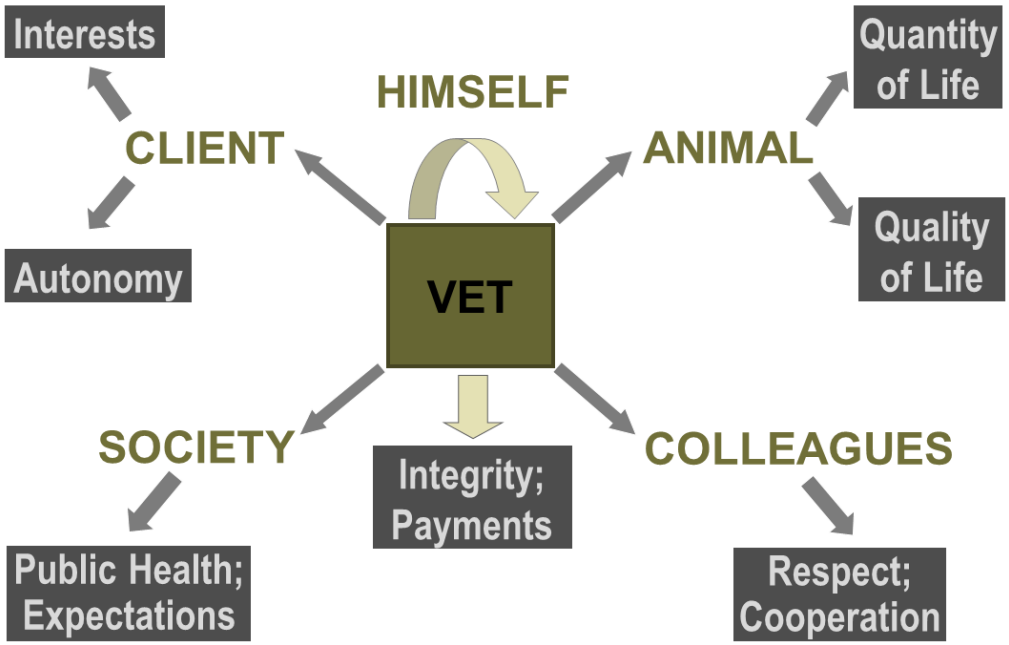


Figure 1 – Flowchart representing the web of moral responsibilities faced by veterinarians including some corresponding values to be considered.

The use of examples can clarify some of these challenges; a veterinarian could be asked to defend the interests of a client, whether to increase the profitability of a pig farm or to perform surgery in a dog. Problems arise, however, when these interests conflict with the best interests of the animal. For example, a vet could refuse administering growth promoters to pigs or performing ear cropping to the dog (and hence violating the will of the client) on the grounds that other values prevail, namely public health, responsible use of drugs, animal welfare and professional integrity. But although the veterinarian does not have to comply with every client's wish, there are limits to how much he or she can overrule each decision or judgment that the client, as a moral agent, might have made. A veterinarian wouldn't be allowed, for example, to impose alternative procedures without asking for the client's consent because, some say, that would violate his or her autonomy[4].

[4] 'Respect for autonomy' is considered by some authors in Bioethics as the chief principle in biomedical ethics (Beauchamp & Childress 2001).

From the animal welfare point of view, veterinarians are often faced with the seemingly intractable dilemma of avoiding harm to animals in their care and at the same time protecting their lives. In other words, the veterinarian needs to balance both quantity and quality of animal life (cf. Franco *et al.* 2014 for a related discussion). When a veterinarian takes the clinical decision of using fetotomy to resolve dystocia in a cow, he is also making a choice of severely impairing the well-being of that animal (causing it pain, distress, and often injuries) for the long run benefit of saving its life (while at the same time choosing to put an end to the life of the foetus, if not already dead). The opposite can also happen; when faced with a severely ill animal (such as an outdoor pet cat with chronic kidney failure) a veterinarian may recommend immediate euthanasia for the sake of its welfare, on the grounds that forcing the cat to confinement or leaving it outside but untreated are not viable alternatives. This is also the case in which the expectations of the client (treat the animal no matter what) may clash with what the veterinarian considers primordial (prevent further harm to the animal). Faced with situations such as these, veterinarians might legitimately exert influence over the owner's decision-making (Yeates & Main 2010, Main 2011).

A similar rationale can be used when considering other stakeholders. As far as society is concerned, defending the health and well-being of humans may conflict with other values. In the case of zoonotic epidemics, coercive culling of herds is often conducted because public health (and food safety) surpasses other considerations, such as the lives of farm animals, the livelihood of the farmers, and environmental concerns. But society also has expectations towards the treatment of animals that should be considered. That is the case of stray animals. A large portion of citizens approves and supports sheltering and fostering of stray animals and expects veterinarians to do so. Massive culling of stray dogs and cats is not considered an option not only because of practical or technical reasons but mainly because it is considered unacceptable by most of contemporary society.

Practicing veterinary medicine usually (if not always) involves team work. Whether it is at a private clinic or at a slaughterhouse, veterinarians are team members, working hand in hand with veterinary colleagues and members of other professions (nurses, technicians, slaughterers, managers, etc.). Veterinarians are expected to behave professionally, namely to treat others with respect and be willing to cooperate for the benefit of animals and humans. As members of an organized profession, veterinarians enjoy of considerable privileges, including license to practice, independent professional judgment and self-regulation (Hern 2000). The exercise of such privileges involves, amongst other things, compliance with the codes and rules of national regulatory bodies (e.g. Royal

College of Veterinary Surgeons (RCVS) Guide of Professional Conduct (GPC), Ordem dos Médicos Veterinários (OMV) Deontological Code, Danish Veterinary Association (DVA) Code of Ethics).

Finally, considerations towards the veterinary himself should be balanced with the previous. When in clinical practice, a veterinarian is, at the same time, a businessperson and an animal advocate. While working to make a living (and paying employees and retailers) a veterinarian is also asked to provide the best care to animals. These roles often oppose each other and may give rise to ethical dilemmas (Rollin 1999, case 23, case 53; Yeates & Main 2011; Batchelor & McKeegan 2012). This is particularly evident in small animal practice, where availability of more advanced (and often expensive) forms of diagnose and treatment has to be weighed against more conventional (yet less costly) alternatives. In order to resolve dilemmas such as these, David Main (2006) recommends that a veterinarian "should be actively selling good welfare". In this sense, best veterinary care would involve "maximis[ing] the best interests of the animal in terms of both quality and quantity of life" (Main 2006, p.65). However, Main's approach does not solve the dilemma between either extending the quantity of life or promoting quality of life (i.e. animal welfare). Looking back to the example of the cat with chronic kidney disease, a referral veterinary surgeon could suggest renal transplantation as the best practice because it allows extending the lifespan of the animal (cf. Schmiedt *et al.* 2008) in addition to professional fulfilment. This is of course an option that can only be achieved at the (high) expenses of the owner and after the instrumentalization of an additional donor cat, and hence raising additional ethical challenges.

Practical ethics often deals with everyday right or wrong decisions. But in most of the '*practical dilemmas*' faced by practicing veterinarians, a right answer may not always be possible to identify (Morgan & McDonald 2007). In conclusion, the main challenge posed to the veterinarian lies in managing a fair consideration of values. This is by no means easy and the great demands of the veterinary job could be related to the high occupational stress found in veterinary practice, which may result in increased risk of burnout in surgeons (Bartram *et al.* 2009; D'Souza *et al*. 2009; Batchelor & McKeegan 2012), nurses (Black *et al.* 2011) and support staff (Morales-Foster & Maples 2014). If these job stressors are not addressed (or ill-addressed) they may result in increased risk of depression and suicide in veterinarians[5] (Mellanby 2005; Jones-Fairnie *et al.* 2008; Bartram & Baldwin 2008, 2010).

[5] Following evidences of high incidence of suicide and depression in the veterinary profession, the highest within the health professions, the Veterinary Benevolent Fund (VBF) developed the website VETLIFE

1.2 The role of veterinarians in a changing society

The veterinary profession has changed immensely during the last few decades, a change that has been acknowledged for at least 25 years (cf. Pritchard 1988). During most of the second half of the 20th century veterinary practice was dominated by male veterinarians who focused on the medical aspects of agricultural animal production. A veterinarian was, to a great extent, a character of James Herriot's books[6], travelling the countryside working in mixed general practice. The decline of European livestock sector in the last few decades – with less farmers and a decrease of the overall number of animals – has resulted in fewer working opportunities for farm animal practitioners (Henry & Treanor 2012). Nowadays, most veterinarians are involved in small animal practice and working in teams with increasing specialization. A gender change toward a predominantly feminized veterinary profession has also taken place (Smith 2006; Irvine & Vermilya 2010). Current newcomers to the profession are mostly women from urban backgrounds (Serpell 2005), and presumably influenced by dozens of TV programs depicting the veterinary profession – usually small animal practice[7] – from *Emergency Vets* (s.1997) to *Animal Practice* (s.2012).

This shift in profile of the veterinary profession reflects a broader societal shift from rural to urban, which has also impacted on the status of animals. Fifty years ago, animals were mainly farm animals, widely seen as property, with welfare considerations interpreted in terms of productivity. For most of western society nowadays human-animal interactions are mainly – and sometimes exclusively – with companion animals. Companion animals are often seen as family members and are included in the same social connections that people establish with their human conspecifics. The perceived detachment of modern urbanised societies with agriculture and animal production has led some to say that "livestock species have become almost as exotic as elephants and anteaters" (Beaver 2005, p.419). In a survey of 302 (out of 329) first-year veterinary students at the University of Pennsylvania, 98.6% said to have had dogs and/or cats (with or without other kinds of animals) while less than 8% had kept farm animals (with or without other kinds of animals). Not surprisingly, veterinary undergraduates are more

(http://www.vetlife.org.uk/) providing information and support to veterinary professionals in the UK, namely in mental health, professional conduct and employment (since Sept. 2007). The VBF is also responsible for the Vet Helpline ("a friendly listening service open to vets, vet nurses and vet students") founded over twenty years ago.

[6] James Herriot (1916-1995) was a British veterinarian and writer, author of *It Shouldn't Happen to a Vet* (1972) and *All Creatures Great and Small* (1972), amongst other titles. The latter originated a TV series by BBC (1978-80) and also a movie (1979).

[7] Swabe (2000) offers some explanations into why television network programmers have tended to focus upon the work of small animal practitioners.

motivated to engage in small animal practice than in any other career path (Serpell 2005).

Moreover, the present feminization of the veterinary profession should not be neglected as it might influence how future vets perceive their role and choose to serve society (Rucker 2002; Smith 2006; Henry & Treanor 2012). In this regard, female students' refusal of a career in farm animal practice is, arguably, the most relevant finding in Serpell's study (2005). This trend has led to changes in veterinary curricular development across the globe; the Faculty of Veterinary Science at the University of Sydney, for example, has implemented several strategies to attract more students to livestock medicine and veterinary public health (Walsh 2009).

These changes have occurred at a time of notable social debate regarding the legal and social consideration for domesticated animals. Western societies are nowadays more pluralistic, allowing for multiple views on the moral status of animals – e.g. animal rights, utilitarian and contractarian – to coexist (cf. Taylor 2003). But alongside this pluralism, citizens are more aware of a professional's responsibilities and at times call for greater transparency in all forms of decision-making. In this context, members of the veterinary profession are not only seen as animal healers, but also as animal protectors, to whom society can rely on to defend animal welfare (Eurobarometer 2007). In fact, veterinarians are increasingly called to voice their options when these are seen to collide with the interests of animals. Television programmes *It shouldn't Happen at a Vets'* and *Pedigree Dogs Exposed*, both broadcasted in recent years in the UK[8], are good examples of this kind of challenge, and work as reminders of how society perceives issues involving the welfare of animals.

But veterinarians are not only animal doctors. Veterinarians are authorities in all matters regarding the use of non-human animals (Rawles 2000). Whether in private practice or at a state veterinary office, veterinarians are often asked to make use of their authority and expertise in advising clients, consumers and society at large. The public indeed expects veterinarians to have an opinion on matters concerning animal health and welfare which usually involves at least some degree of ethical deliberation (Rawles 2000) but, in fact, veterinarians seldom participate in the social debate on animal welfare (Algers 2008). Four possible reasons have been proposed to explain such lack of

[8] *It shouldn't Happen at a Vets'*, *Panorama*, BBC1, 22-07-2010; *Pedigree Dogs Exposed*, BBC1, 19-08-2008; *Pedigree Dogs Exposed – Three Years On*, BBC4, 27-02-2012. Equivalent examples can be also found at other European countries e.g., Portuguese media coverage of the use of kennel dogs for educational purposes at a veterinary school (Nov. 2010); Italian TV report on cattle unfit for transport going to slaughter (2012).

involvement (Hewson 2003): (i) insufficient education in animal welfare, (ii) the difficulty in assessing welfare in animals, (iii) different – and often opposing – views towards animals within the veterinary profession, and (iv) some degree of conflict between veterinarians' vocation and their economic responsibilities.

In a globalized world, the consequences of our actions go far beyond the sphere that surrounds us and include far-reaching considerations, in such diverse domains as environmental sustainability and distributive justice. Actions taken by veterinary professionals do impact society at different levels; for example, veterinarians should be aware that decisions affecting animal agriculture and international food markets can have a decisive influence in the livelihood of farmers at developing countries, together with issues of loss of biodiversity and environmental degradation (Fox 1995; Marshak 2005).

Taking all this into account, a key question is therefore, how should the veterinary profession deal with these changing circumstances? Veterinary Schools and Faculties have always privileged scientific knowledge and, as a result, responded by introducing new subjects in their curricula such as applied ethology, oncology and neurosurgery. But to effectively address these new challenges in animal health and welfare involves more than just new ways of specialised veterinary training. Faced with public accountability, it is not enough for veterinarians to be technically competent; they should also be able to handle their ethical and legal responsibilities toward different stakeholders (farmers, consumers, clients, policy-makers, professional colleagues, and the environment) in addition to the animals in their care.

1.3 The role of non-technical competences in veterinary education

The process of learning a profession is about acquiring the required competences to effectively fulfil the demands of a future job. The term *competence*, however, can have somewhat different meanings (Hager & Gonczi 1996); nonetheless there is an agreement within the medical educational literature that *competence* involves a meaningful combination of a number of attributes or abilities such as knowledge, skills and attitudes (Hager & Gonczi 1996; Harden 2002; GMC 2003; Stewart 2005; Leinster 2005; Hatem *et al.* 2011). From a veterinary point of view, the OIE recommendations on the competences for Day 1 State Veterinary Officers (OIE 2012) consider competences as an overarching term including knowledge ("cognitive abilities, meaning mental skills"),

skills ("ability to perform specific tasks"), attitudes ("affective abilities, meaning feelings and emotions"), and aptitudes[9] ("a student's natural ability, talent, or capacity for learning"). However simple this definition might be, there is still the issue of formulating the aforementioned abilities and of how they relate with each other in practice.

Traditionally, professional training was about providing students with most of the technical knowledge they would need, and assuming that such knowledge would prevail throughout their professional lives (Jaarsma 2008). Veterinary education in particular has been accused of favouring the acquisition of facts at the expense of personal development (Thornburg 1992). Veterinary educators were considered to be responsible for training *omnicompetent* new graduates, i.e. graduates capable to perform all the envisaged tasks of a veterinary surgeon.

But as a consequence of scientific and technological developments, veterinary curricula have progressively become overloaded with novel information and additional course materials. This has led the RCVS Education Strategy Steering Group to describe the concept of 'omnicompetence' as being "unrealistic and fundamentally misguided in its assumptions". According to this consultation panel, "no other profession, to our knowledge, requires its final year undergraduates to be examined in everything there is to know, or to be equally competent across all species and disciplines" (RCVS 2001, p. 14)[10]. Driven by the changes in the veterinary profession in recent decades, the concept of 'omnicompetence' is gradually being replaced by more flexible views of the aims of veterinary education, and putting greater emphasis on what students learn rather than on what teachers teach (Fernandes 2005).

Box 1 – Non-technical competences in veterinary education (adapted from Lane & Bogue 2010)
Business skills
Communication skills
Creativity
Critical Thinking
Cultural competence
Ethics and moral responsibility
Flexibility
Leadership
Self-management; conflict management
Self-development and lifelong learning

Within this same tradition, the non-technical competences (also known as 'softer skills', Box 1) were not seen as part of the formal curriculum, not only because of lack of room

[9] Ethical aptitudes fall outside the scope of this thesis because they are not determined by the teaching approaches but instead seem to depend exclusively on the intellectual capacities and personal background of the individual student.

[10] A similar conclusion had been reached by the Pew Report (Pritchard 1988): ''there is no way that a single veterinary college can adequately cover all of veterinary medicine or even a large part of it''.

to accommodate them but also because communication and other professional skills were considered to be informally 'absorbed' during practical course works, and usually in extra-mural studies (EMS) (May 2008). As in any other profession, that is no longer the case in veterinary medicine and knowledge alone is seen as insufficient for meeting the needs and demands of the veterinary profession (Lane & Bogue 2010). Thus, together with technical competences, there is an increasing call for introducing veterinary students to the more generic and non-technical professional competences that may prepare them for their future life as veterinarians:

> The ultimate goal of higher education is to prepare students for the dynamic working environment of the current labour market, by ensuring that they have acquired the appropriate competences. Communication skills, leadership skills, skills in information use and management, independence, and planning and organisational skills are often cited as desired work competences for a broad range of contexts and situations. (Jaarsma *et al*. 2009, p.825)

Although not mentioned by Jaarsma and colleagues, ethical knowledge, skills and attitudes could also be considered as relevant non-technical competences for veterinary students and the reasons for that have been laid out in this chapter. In their assessment of non-technical competences associated with success in the veterinary profession, Lewis and Klausner (2003) also fail to recognise ethics, although they consider demonstrating integrity as an important self-management competence. In a questionnaire aimed at understanding the perception of members from seven North American veterinary schools regarding the teaching of 14 different non-technical competences, Lane and Bogue (2010) found a shared recognition on the personal responsibility for the teaching of critical thinking (98%), communication skills (96%), self-development and life-long learning (93%), and ethics and moral responsibility (90%). In this same study however, the description of *ethics and moral responsibility* provided to the respondents ("[student] demonstrates integrity, in consistency with the principles of the profession and one's own convictions") is far from representing the wide range of ethical competences that veterinary students can have, as will be later discussed in chapter 2.7 of this thesis.

Science education is often what Schillo (1997) refers as "a system of knowledge". Science teachers, who work as experts in their field of knowledge, are responsible for transmitting objective facts to their students. Educators[11] rely on textbooks or ICT

[11] The words 'educator' and 'teacher' are used interchangeably throughout this thesis; the word 'teacher' emphasizes the role of imparting information while the word 'educator' can have a broader sense as someone responsible for educating students.

resources that provide recommended state-of-the-art information on their subject matter, while practical training involves coaching students on the correct hands-on procedures. In return, during the assessment, students are rewarded for showing to have retained exactly the same knowledge (theoretical and practical) that they have been taught. The learning experience is thus more focused on making sure students reach the objectives set beforehand by their educators rather than on concentrating in the achievements of each individual in terms of competences (Jaarsma 2008).

From what was said, traditional teaching of science might give the impression that the point of view presented by the teacher is not only the best but sometimes the only one admissible. This teacher-centred approach to science has been criticized for hampering both intellectual and ethical development of (animal) science students (Schillo 1997). In addition, science is frequently presented as being value-free, with ethical deliberations being considered as falling outside the established domain of science (Wolpe 2006). The veterinary undergraduate education can also be included within this same positivistic tradition of science teaching (Fox 1995). In fact, it has been suggested that the hierarchical and paternalistic pedagogic tradition used in veterinary medical education inhibits students' moral reasoning development (Self *et al*. 1991; 1996).

Science is, after all, full of uncertainties: from anthropogenic climate change (Hillerbrand & Ghil 2008) to animal welfare issues (Sandøe *et al.* 2004), scientific claims are imbedded with value-laden assumptions which need to be acknowledged:

> Simply put, facts do not speak for themselves. Facts require interpretation, and interpretation reflects the perspective of those who generate or use the facts. (Schillo 1999, p.155)

In addition to facts, science students – and veterinary students in particular (Fox 1995) – need to be aware of the debate around disparate scientific opinions, well as of the broader economic, social, philosophical – and sometimes religious – issues that surround them. Following the argument made before on the fact that veterinarians are authorities, they must also be able to look at issues from a broader viewpoint and communicate their expert assessment effectively. Within this perspective, education in ethics is essential to promote critical thinking[12] and reflective skills in future veterinarians and making them able of making informed judgments about the challenges they will meet

[12] *Critical thinking* can be defined as "reasonable reflective thinking focused on deciding on what to believe or do", or as "being appropriately moved by reasons" or as "awareness of one's own and others' assumptions and point of view" (Ennis 1997, p.2). Throughout this thesis, the use of the term *critical thinking* has been privileged, instead of alternative, but yet related, terms such as *critical reflection* (Smith 2011) or *reflective practice* (Johns 2009).

(Fox 1995, Schillo 1999). But ethics is not the only useful subject[13] for developing these competences. Other topics that can stimulate and provide relevant knowledge for critical thinking within a veterinary context include scientific literacy (Schillo 1997), history and philosophy of science (Cantor 2001), effective communication (Kennedy 2001; Adams *et al.* 2006; Adams & Kurtz 2006; Cornell *et al*. 2007; Mossop & Gray 2008), human-animal bond (Sherman & Serpell 2008; Wensley 2008), as well as a plethora of non-technical competences including leadership, self-management, business, and interpersonal skills (Lewis & Klausner 2003).

1.4 The role of ethics education in making good veterinarians

The concept of being a good professional is inherent to every field of activity. Good professionalism is, however, complex to define. In human medicine, in particular, the role of medical schools in producing 'good' doctors - that are able to marry technical expertise with desirable personal qualities - has been subject to vivid discussions (cf. *British Medical Journal*, 28th Sept. 2002). Less has been written in respect to what makes a 'good' veterinarian. Mellanby *et al.* (2011) reported that clients and veterinarians have somewhat different perceptions on the relative importance of the attributes of a good vet. While veterinarians emphasize good communication skills, clients would privilege knowledge about veterinary medicine and surgery (and also being good with animals). This illustrates how the concept of a good vet cannot be separated from societal expectations in relation to the veterinary profession, since the role of veterinarians in society might also change (cf. section 1.2).

The meaning of a good vet is of course dependent of what is meant to be a vet. In 2012 the Federation of Veterinarians of Europe (FVE) has adopted a definition of *Veterinarian* that is seen to cover the complete range of tasks and duties of the veterinary profession. For the FVE a vet is:

> "a professional with a comprehensive scientific education, licensed by the legal authority, to carry out, in an independent, ethical and personally responsible capacity, all aspects of veterinary medicine, in the interest of the health and welfare of the animals, the client and society". (FVE 2012)

The definition brought in by the FVE combines scientific as well as ethical and personal capacities, which are used in the interest of animals, clients and society. Although the

[13] Courses on one of these subjects often contain elements from the others (e.g. in Adams & Kurtz (2006) communication includes leadership, human-animal interactions and ethics; according to Wensley (2008) the teaching of human-animal bond includes welfare science, ethics, and communication).

FVE provides only minimal recommendations on how this definition could be operationalized, it is possible to speculate that one important difference between a 'good enough' vet and a 'good' vet probably lies in how the abovementioned capacities and interests are balanced and combined.

The role of veterinary schools in making *good* vets is disputable not least because what is considered 'good' may differ from person to person. *Good* vets may be seen as unprofessional by acting according to a sound ethical principle (e.g. being good to animals) and failing to meet other responsibilities that fall outside that framework (e.g. protecting public health). They may even bring the profession into disrepute by challenging the institutional standards that collide with their personal beliefs of good veterinary practice.

It seems obvious, however, that veterinary schools should produce *professional* vets. A professional veterinarian would, at least, be able to comply with the essential competences required at graduation (Day One competences), and relying on the standards upheld by the European Association of Establishments for Veterinary Education (EAEVE). But some argue that there is a difference between *being* a professional and *acting* professionally (Jones 1994; Hafferty 2006). This distinction emphasizes the meaningful difference between someone who complies with the essential standards of the profession and someone who, in addition to that, behaves in a professional manner. The later relies on the view that genuine professional behaviour involves internalizing the core value orientations of the profession (Hafferty 2006). These include humanistic values such as "honesty and integrity, caring and compassion, altruism and empathy, respect for others, and trustworthiness" (Swick 2000, p.614). Sulmasy (2000) points out the importance of moral values in the making of a good doctor by saying how "we all know who the good doctors are. (…) They are the ones who could be trusted when no one is looking" (p.514). Within the same line of reasoning, Ozolins (2005, p.360) defends "that professional values cannot be separated from private values. A good professional person is expected to also be a good person". These conceptions of goodness seem to rely on the notion of virtuousness: a good vet is also a virtuous person. The question remains if veterinary schools should promote, as part of their learning objectives, the development of these desirable character traits in future veterinarians.

1.5 The role of ethics education in moral development

A chapter exploring the *why's* of teaching ethics would not be complete without a reference to moral developmental theories. The study of the development of moral reasoning abilities in children and adolescents has been grounded on the works of Lawrence Kohlberg (inspired by Jean Piaget's cognitive theory[14]) and Carol Gilligan (as a feminist response to Kohlberg), and both approaches have had great impact in understanding moral decision-making in students and the role of moral education in general, including at the undergraduate level.

According to Lawrence Kohlberg (1971), the development of moral reasoning follows six stages of increasing complexity, and grouped within three major levels (Annexe 1). It starts with pre-conventional responses based on obedience (to avoid punishment) and self-interest (to get rewards). It progresses towards a conventional level defined by the recognition of social norms (such as fair exchanges) and legal obligations (in order to become a member of society), and it eventually reaches a post-conventional level based on reflective social cooperation and respect for universal ethical principles. The *personal construction* of moral reasoning abilities is progressive and systematic; one cannot reach later stages without going through the former. Kohlberg's assessment of morality was performed exclusively in male subjects and it was based on the principle of fairness and justice; moral maturity is reached when individuals are capable of engaging on unselfish social contracts (and aiming for equitable solutions).

Kohlberg's theories have been subject of intense debate over the years. Criticism was made on the emphasis given to justice while ignoring other values of moral significance (cf. Rest *et al.* 2000; Bebeau 2002). One of his most prominent opponents was Carol Gilligan (1982) who claimed that Kohlberg´s theories were androcentric, not fully acknowledging women's moral orientations. Using female as well as male college students, Gilligan devised an alternative theory of moral development – the ethics of care. In her studies, males were ascribed with mostly a sense of justice while females tended to rely on caring and responsibility (Gilligan & Attanucci 1988). Gilligan's research, in turn, has not been less prone to criticism (Davis 1992). In their meta-analysis of 113 (out of 180) studies on gender differences between justice and care orientations, Jaffee & Hyde (2000) conclude that, although it can justify small differences in moral orientation towards justice (males) and care (females), gender should be seen

[14] Piaget J (1965) *The moral judgment of the child*. New York: Free Press. (Original work published in 1932).

only as one of many factors affecting moral decision-making such as age, socioeconomic status, or methodological differences in study design.

Moral reasoning is a psychological process and that can be developed by means of education (Self *et al.* 1994b). Educational approaches based on justice (Rest & Narváez 1994) and care (Noddings 2003) have been devised in order to elicit moral responses in students. The morality of justice is related to epistemological concepts such as fairness (reciprocity), respect, duties and rights while the morality of care is associated with the concepts of empathy, altruism, and compassion. The emphasis of neo-Kohlbergian approaches to moral education is on cognition, or reasoning (Goldman & Arbuthnot 1979; Rest *et al.* 2000), while the feminist approaches to moral development emphasize emotional states and affective relations (Nodding 2003, pp.171). Furthermore, others have offered theoretical frameworks to morality that aim to conciliate justice with caring approaches (e.g. Hoffman 2000).

Enrolment in veterinary education usually occurs when students are transiting from adolescence to adulthood, and they are not yet expected to perform as morally mature individuals. Furthermore, the effect that veterinary education may have on students' personal and moral development cannot be ignored. In a series of studies performed in the 1990's at Texas A&M University, Donnie Self and colleagues measured the moral reasoning abilities of a cohort of volunteer veterinary students at the beginning of the first year and at the end of the fourth year. The expected increase in students' moral reasoning scores – measured by Kohlberg's standard moral judgment interview (Self *et al.* 1991) and the Defining Issues Test (Self *et al.* 1996) – did not occur during the four year veterinary degree, suggesting that veterinary education could inhibit the development of moral reasoning abilities. Although these studies can be now outdated, to my knowledge, they have not been replicated since.

But in the same measure that teaching ethics can have a positive effect in student's moral development (Schlaefli *et al*. 1985; Self *et al*. 1989, 1992; Bebeau 2002; Clarkeburn *et al.* 2002; Goldie *et al.* 2002), the absence of moral education can also produce moral erosion (Self *et al.* 1989) and contribute to the development of cynicism, so often described in medical students (Testerman *et al.* 1996; Satterwhite *et al.* 2000; Campbell *et al.* 2007) as well as in veterinary students (Paul & Podberscek 2000). In fact, it has been suggested that the teaching of medical ethics can reduce the risk of cynicism in medical students (Self *et al.* 1989).

Ethics is seen to play a relevant role for the veterinary profession in a wide range of contexts and several arguments were here presented that help exploring the need to teach ethical competences to veterinary students. I explored in which way ethical reasoning helps veterinarians meeting practical challenges and informs them of their professional roles in a changing society. I explained that ethical competences may also prepare students for their future life as veterinarians. I suggested how ethics teaching promotes critical thinking and helps veterinary students dealing with scientific uncertainty. I proposed that being a good vet might not equate to being a professional vet and that these concepts should be considered in veterinary education. Finally, a relation was established between ethics teaching and students' moral development. These findings will be used as a starting point to build the empirical investigation on the reasons why ethics is presently taught to veterinary students (chapter 6). The following chapter addresses the competences in ethics that could be part of a curriculum in veterinary ethics and relate those with the present requirements in veterinary education.

2 WHAT TO TEACH IN A CURRICULUM OF VETERINARY ETHICS

A number of questions arise when addressing the teaching of ethics to veterinary students, namely what are the goals of the teaching and what should be taught (Downie & Clarkeburn 2005; Reiss 2005). These issues are not specific to ethics but the challenges they pose seem to be greater in this teaching field than in other subjects (Gjerris 2006). As it seems clear that the main purpose of ethics teaching is not the transmission of factual information, the learning process is likely different from that of most other disciplines. The pedagogic strategy applied to teach ethics (reflected in the educational aims[15]) ultimately depends on what one considers the task of ethics training to be and an analysis of the literature suggests a lack of agreement on the aims of teaching ethics. This chapter presents an overview of the literature on veterinary ethics teaching which, due to the limits of work in this area, is supported with literature on ethics teaching in the life sciences and in human medicine.

2.1 Framing the undergraduate curriculum

Before exploring what to teach in a curriculum of veterinary ethics, a number of key educational concepts that are used throughout this thesis need to be examined, including what is meant by *curriculum*. According to Harden (2005) the curriculum describes what should happen in a teaching programme. A curriculum usually includes the syllabus, the educational methods used, the learning objectives and/or outcomes, the study resources, as well as the assessment methods.

The undergraduate curriculum can be divided between a formal and an informal curriculum. A *formal* curriculum refers to the planned conventional curriculum that is taught in classes, explicitly mentioned in the syllabus and directly expressed in the learning objectives; the *informal* curriculum corresponds to the unstated forms of teaching (that are not reflected in the learning objectives) and of learning (including the hidden curriculum). Some authors further distinguish between the informal and the hidden curriculum. Hafferty (1998) uses the term *informal curriculum* at the level of

[15] There is a lot of confusion in the educational literature between the concepts of *aims* (or *goals*) and *objectives.* According to Dent (2005) *educational aims* (or *goals*) "indicate the general direction of the studies that the students are engaged with". This definition is virtually the same as Adam's (2006) description of *learning objectives* ("the general content, direction and intentions behind the module from the teacher point of view"). In this thesis I will not differentiate between these concepts. Furthermore, other authors also confuse *learning objectives* with *learning outcomes*, as explored in section 2.6.

interpersonal interactions within the faculty, namely effects of role-models, and the term *hidden curriculum* at the wider organizational and cultural levels, including rituals and customs. In contrast to Hafferty's suggestion, no distinction will be made between these two dimensions in this thesis because both convey the same set of influences and messages, and the use of the term *hidden curriculum* will be privileged.

Harden (2005) suggests an alternative approach to the medical curriculum. He divides the curriculum between what is *declared* (i.e. the curriculum expressed in the course descriptors), what is effectively *taught* (i.e. what really happens in practice) and what is *learned* by the student. The mismatch between what was declared and taught, and what was actually learned by students produces an area of informal learning that corresponds, in his view, to the *hidden* curriculum (Figure 2).

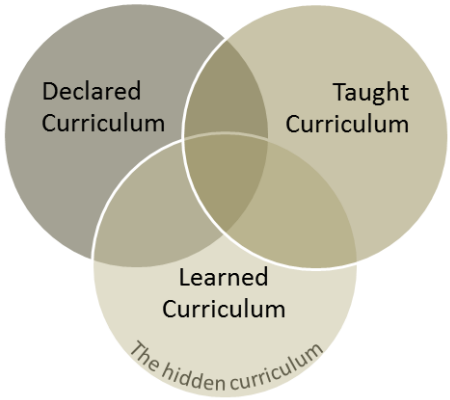


Figure 2 – The relation between the Declared Curriculum, the Taught Curriculum, the Learned Curriculum, and the Hidden Curriculum (adapted from Harden 2005).

From a student-centred perspective, the hidden messages that arise from learning environments can surpass the formal curricula in terms of learning experience (Anderson 1992; Hafferty 1998). Faculties should be aware of the influence of the hidden curriculum and the messages it conveys should be concordant with those from the conventional curriculum (Anderson 1992).

Curriculum development in higher education can be seen at three levels, representing three different – but yet interrelated – stages: the syllabus contents, the corresponding educational objectives and the intended learning outcomes (Figure 3).

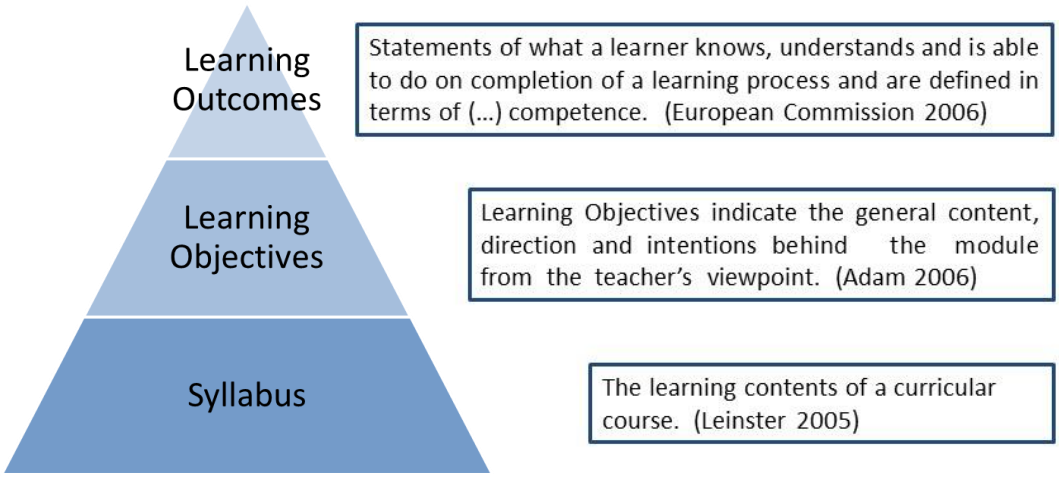


Figure 3 – Relation between learning outcomes, learning objectives, and syllabus contents. A top-down approach to curriculum development is focused in the acquisition of competences that are expressed in the learning outcomes. The learning objectives are designed in order to reflect the intended outcomes while the syllabus contents operationalizes the previously designed goals.

The syllabus describes what is declared as being taught in terms of curricular content; learning objectives reflect the pedagogic aims from the point of view of the educator (i.e. what teachers want students to learn) while learning outcomes can be seen as the core competences that students should gain at the end of the module or programme (and sometimes referred to as Day One competences). Learning outcomes are considered "a fundamental building block of the Bologna educational reforms" (Adam 2006, p.3). An outcome-based curriculum works by putting the focus on the acquisition of competences and less in assigning a prescriptive list of instructional objectives (Harden 2002; Taylor 2009). This represents also a shift form a teacher-centred to a student-centred approach to curriculum design in higher education and, at the same time, promoting a more flexible curricular development and improvement.

Educational aims are usually described using Bloom's taxonomy of learning objectives in the cognitive domain[16] developed in the 1950s[17]. Bloom and his colleagues composed a hierarchy of six levels of learning, organized by increasing complexity: Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation (Figure 4). Attaining a higher cognitive level depends of the attainment of the levels that are below it (Krathwohl 2002). Students' competences are described by appropriate action verbs that reflect each level or category of learning. As a result, Bloom's taxonomy enables a distinction between low level and high level cognitive competences, making it very useful for designing and describing learning objectives and outcomes (Kennedy *et al.* 2006), as explored in section 2.6 of this chapter.

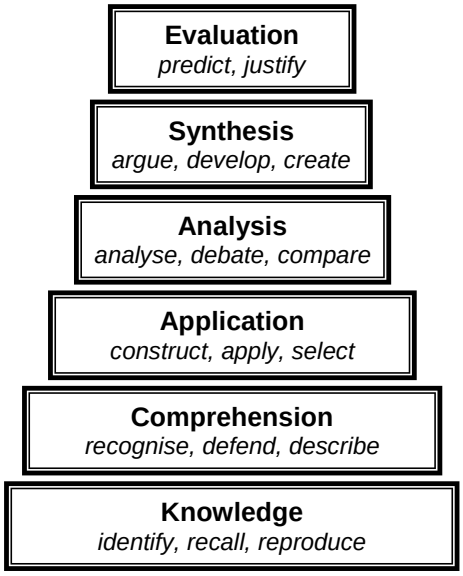


Figure 4 - Hierarchy of objectives of the cognitive domain of learning, and some of the action verbs considered appropriate to describe them (adapted from Kennedy *et al.* 2006).

[16] These categories apply only to the cognitive domain of learning (*knowledge* and *skills*).
[17] Bloom BS (Ed.), Engelhart MD, Furst EJ, Hill WH and Krathwohl DR (1956) *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain.* New York: David McKay.

2.2 Ethics within the context of European veterinary education

Examining the veterinary curriculum cannot be decontextualized from recent developments in terms of higher education in Europe. The 1999 Bologna Declaration[18] has set the pace for a deep restructuring in higher education centred on transparency and convergence. These reforms would allow the EU "to become the most competitive and dynamic knowledge-based economy in the world" (European Council 2000). Amongst these reforms, an overarching framework for qualifications was established comprising three cycles (defined in terms of outcomes), with each cycle conferring a certain number of ECTS credits (Bologna Process 2005). This would, on the one hand, create an environment where undergraduate students are invited to move freely across European schools (relying on exchange programmes like ERASMUS but also by personal means) looking for the best learning opportunities, and, on the other hand, promote a more readily recognition of university qualifications at a trans-national level (through the European Qualifications Framework[19]). Both of these circumstances have an impact in the harmonization of veterinary undergraduate curricula (first cycle and second cycle qualifications) across Europe.

In terms of harmonization, the veterinary profession is unique in two ways: it is one of only seven professions which concede automatic recognition across the EU[20], and it has a well-established trans-European evaluation system of the quality of the teaching at undergraduate level (run by EAEVE and FVE[21]). The evaluation of veterinary education in Europe focuses on the acquisition of adequate competences, namely knowledge and skills. The minimum requirements are, in large measure, based on the subjects listed in the European Directive 2005/36/EC of 7 September 2005[22], on the recognition of professional qualifications. This directive includes 'professional ethics' as a basic teaching subject for veterinary students. The term 'professional ethics', however, is unclear because, unlike other more established subjects in the veterinary curriculum, there is currently no 'tacit' consensus on what is understood by 'professional ethics' in

[18] Available at: http://ec.europa.eu/education/policies/educ/bologna/bologna.pdf. (27-12-2013)
[19] The European Qualifications Framework for life-long learning (EQF) was created to assist in understand, compare and recognise the national qualifications systems. Available at http://ec.europa.eu/eqf/home_en.htm. (27-12-2013)
[20] According to the Directive 2005/36/EC doctors, dentists, nurses, midwives, pharmacists, veterinary surgeons and architects are granted automatic recognition of their qualifications, based on harmonised minimum training requirements throughout the EU.
[21] The European Association of Establishments for Veterinary Education (EAEVE) is the official accreditation authority for veterinary education establishments within Europe; the Federation of Veterinarians of Europe (FVE) is an umbrella organization of veterinary organizations from 38 European countries.
[22] Available at: http://ec.europa.eu/internal_market/qualifications/future_en.htm. (27-12-2013)

veterinary education. By the same token, the Directive makes no explicit mention of animal welfare (science, ethics or law). In fact, the only subject relevant to welfare in the current Directive seems to be "Animal Ethology and Protection". Furthermore, this subject is only considered within the realm of (Food) Animal Production and not in relation to other uses of animals by society.

Directive 2005/36/EC is currently under review, including the articles and annexes regarding the competences and minimum training requirements of veterinary surgeons. The proposed new version of the Directive 2005/36/EC is expected to include Animal Welfare as a specific veterinary subject. Additionally, a list of minimum competences required for a Day One veterinary graduate is also being developed, which is set to highlight issues related to animal welfare science, ethics and law.

One important aspect of the aforementioned EAEVE-FVE evaluation system is the list of recommended essential competences[23] that students should attain at the time of graduation. These are known as the Day-One Competences[24] - similar to those devised by the RCVS[25] for UK veterinary graduates - and comprise a list of the essential learning outcomes demanded for the new veterinary graduates. A significant chapter of those documents, *General Professional Skills and Attributes*, refers to generic, non-technical competences, which include effective communication, working as part of a team, organization and management, professional development, and ethics. Specifically in terms of ethical competences the new veterinary graduate should be able to:

a) *Be aware of the ethical responsibilities of the veterinary surgeon in relation to individual animal care and client relations, and also more generally in the community in relation to their possible impact on the environment and society as a whole.*

b) *Act in a professional manner with regard to the veterinary surgeon's professional and legal responsibilities and understand and apply the ethical codes of the appropriate regulatory bodies.*

These descriptions, though succinct, mirror almost perfectly the balancing of value judgments in veterinary ethical decision-making described at the beginning of the

[23] *Competence* and *expertise* represent different levels in standards of performance. Day one graduates are expected to be competent but not experts: "to expect the new graduate to be operating at the level of a fully competent, experienced professional is unreasonable and may potentially lead to unrealistic expectations on the part of employers and the public, while also contributing to disillusionment and disenchantment of new graduates." (RCVS 2001, paragraph 53).

[24] These are often known as Day-one Skills (cf. EAEVE SOP). The name "Day-One Skills" is deceptive because the document integrates knowledge and attitudes as much as it includes skills.

[25] RCVS Day One competences. Available at: www.rcvs.org.uk/document-library/day-one-skills/ (4-6-2013). The Day One Competences are now in process of reviewing: www.rcvs.org.uk/about-us/consultations/our-consultations/review-of-the-day-one-competences/ (4-6-2013).

previous chapter (cf. section 1.1). What is interesting in these statements is that, while students should express ethical awareness and moral action, there is no mention of a need for ethical reflection[26]. From a somewhat different perspective, the World Organisation for Animal Health, in its recent Day One Competences for the National Veterinary Services (OIE 2012) describes the specific learning objectives for *veterinary legislation and ethics*. These include to:

a) *have a general knowledge of the fundamentals of national veterinary legislation and of specific rules and regulations governing the veterinary profession at the local, provincial, national, and regional level;*

b) *know where to find up-to-date and reliable information regarding veterinary legislation and the rules and regulations governing the veterinary profession in his/her own state, province, region and/or country;*

c) *understand and apply high standards of veterinary medical ethics in carrying out day-to-day duties;*

d) *provide leadership to society on ethical considerations involved in the use and care of animals by humans.*

In this particular case the emphasis is very much on rule-based professionalism (regulations, legislation and standards) and much less in ethical reasoning skills, probably reflecting the importance of enforcement of rules and laws in the activity of a veterinary officer. Significantly, animals are only mentioned in terms of their use by humans. These descriptions could be an indication that the educational aims and needs in terms of ethics might vary depending on the various professional roles within the field of veterinary medicine.

Exploring the undergraduate curriculum of veterinary ethics has obvious repercussions in terms of post-graduate education for veterinarians. The veterinary profession is split into several specialities and the challenges of teaching ethics also arise at the specialist level. In line with developments in the US (Beaver 2010), specialist training in animal welfare and ethics has become available in Europe through the establishment in April 2011 of an Animal Welfare Science, Ethics and Law sub-speciality of the European Veterinary College of Animal Welfare and Behavioural Medicine[27]. The work of this new college depends on creating suitable positions for its study such as residency

[26] In fact, new veterinary graduates seem to go from an awareness of their ethical responsibilities (*moral sensitivity*) to actually acting (*moral action* or *character*), without necessarily having to reflect upon these (*moral judgment*). One might claim that reflection is implicit in the statement but what often happens with this kind of recommendation documents is that what is not written fails to exist.

[27] Available at: http://www.ecawbm.org/ (27-12-2013).

programmes, a task challenged by the non-technical and multidisciplinary nature of the field of veterinary ethics.

2.3 Differences between human medical ethics and veterinary ethics

Contrary to the field of veterinary ethics education, the literature on human medical ethics education (including professionalism) is substantial and can be used as an aid reference. There are, however, notable differences between human medical ethics and veterinary ethics. One of the main reasons for those differences is that while the former is founded on the prevailing notions of human rights and dignity (Council of Europe 1997) and respect for autonomy of the patient (Beauchamp & Childress 2001), the latter is not supported by such tacit agreements. Neither rights and dignity nor autonomy (or any other attribute) are widely accepted concepts when applied to animals (in fact, far from it (cf. Taylor 2003)). As a consequence, and contrary to the medical profession[28], there is no basic common understanding on the moral status of patients/animals within the veterinary field.[29]

When looking at the medical ethics literature, ethics besides being viewed as a discipline in its own right has been described as part of teaching professionalism (Cruess & Cruess 1997) and evidence-based medicine (Rhodes *et al.* 2006). Although examining experiences of teaching medical ethics is useful, there are limitations due to the key differences between human and veterinary medical professions. As a more established subject area, human medical ethics relies on a consensual set of guiding principles for how to treat patients, whose role as primary stakeholders is uncontested and who are in the majority of situations able to express their own views and preferences. There is no corresponding consensus principle for veterinary ethics, veterinarians must deal with a diversity of views on the moral status of animals, conflicting stakeholder interests and the inherent challenges of acting as an advocate for the animal whose opinion cannot be asked (Morgan & McDonald 2007). In addition, medical ethics has, as a discipline, achieved an independent identity when related to fields such as moral philosophy, while the expertise in veterinary ethics is often found outside of the veterinary schools (Morton *et al.* 2013) and the subject is embryonic as a dedicated academic field.

[28] The argument made that in medical ethics there is a common ethical ground does not imply that everyone agrees with the usefulness of concepts such as dignity (e.g. Macklin 2003) or autonomy (e.g. Cowley 2005).
[29] The fact that there is no common understanding on the moral status of animals does not prevent the development of generally accepted principles for animal protection (cf. EU animal welfare legislation).

Another reason why looking at the medical experience in teaching ethics is useful only to some extent is because one of the most important aspects of veterinary ethics – animal welfare – has almost no comparable feature in human medical ethics[30]. In fact, by looking at the literature in veterinary medicine, the teaching in ethics is frequently referred as being part of, or strongly linked to, animal welfare (Stewart 1989; Friend 1990; de Boo & Knight 2005; Hewson *et al.* 2005; Main *et al.* 2005; Siegford *et al.* 2005; de Briyne 2008; Main 2010; Morton *et al.* 2013). Ethics, however, does not restrict itself to the moral challenges raised by the welfare of animals because although all animal welfare issues result in moral concerns, not all ethical issues involving animals are the result of welfare considerations.

The surrounding legal frameworks also contribute significantly to the differences between medical ethics and veterinary ethics: matters pertaining to human health and well-being are much more clearly defined by legislation than those belonging to animal health and welfare. This means that there is lesser ground for expressing personal values in the field of medical ethics. Veterinary ethics, on the other hand, is more pluralistic because different practices – supported by very different moral values – coexist side-by-side in contemporary society and veterinarians find themselves involved in complex ethical challenges where more is left for individual professional choice (cf. chapter 1.1).

2.4 Different educational aims in ethics teaching

One of the main discussions in the literature in ethics teaching in the life sciences is about the 'the virtue-skills dichotomy' (Miles *et al.* 1989; Hafferty & Franks 1994; Clarkeburn 2002; Eckles *et al.* 2005; Johnson 2010). On the one hand there is the teaching of ethical reasoning skills, usually involving a practical (or clinical) approach where students are expected to identify and consider diverse ethical viewpoints (Miles *et al.* 1989). On the other hand there is a model-based teaching centred on virtues where students are expected to observe appropriate attitudes and behaviours (Pellegrino 2002). These views represent two paradigms in the teaching of ethics which are often seen to compete against each other[31]. The virtue-skills dichotomy plays a relevant role in the field of human medical ethics education. The perils of making medical ethics "clinically relevant" have been brought to the attention of the medical community by

[30] Although the ideal of the ethical doctor involves concern for the wellbeing of human patients (Campbell *et al*. 2007), the level of complexity of the concept of animal welfare (scientifically, ethically and legally) is immeasurably greater than that of patient wellbeing.

[31] Some authors offer visions of ethics education that conciliate personal ethical reasoning skills with character development (e.g. Ozolins 2005; Gillam 2009).

Hafferty and Franks (1994) in what is arguably the most cited[32] article on medical ethics education. For these authors, delivering ethics using a clinically integrated approach could result in three detrimental consequences: i) a concept of ethics exceedingly centred on the medic-patient relationship; ii) a risk of underreport or distortion of the ethical issues as perceived by the students themselves and iii) the tendency to neglect the ideological concepts of 'professional attitudes' to the detriment of other skills. Hafferty and Franks not only oppose the idea of the practical approach to ethics but they also contest the primacy of ethical skills over virtues:

> The image of a physician armed with a phalanx of ethical skills but shorn of virtue is a frightening depiction of what might be claimed as ethical medicine and the ethical physician (Hafferty & Franks, 1994, p. 870).

This view, however, has been challenged during the years by studies reporting the benefits of teaching ethics in clinical settings and relying on strategies mostly focusing on skills (e.g. Clarkeburn *et al.* 2002; Alfandre & Rhodes 2009; Mills & Bryden 2010). From a philosophical standpoint, Steutel (1997) claims that all aims of moral education can be explained in terms of virtues and that only those morally good traits of character "that motivate the agent to act in accordance with moral rules or principles" (p.403) should be promoted. On a somewhat different note, Sandøe (2002) rejects the idea that ethics teaching should aim at reaching a single ethical standard on the grounds that the purpose of teaching philosophy in higher education is to equip students to think and not to tell them what to think. Lynn Gillam (2009) offers two possible aims for teaching ethics in the health professions, one that is rooted in the tradition of producing virtuous practitioners ("*Influencing students' thinking and behaviour in their future practice, with the ultimate purpose that they will practice ethically, however this is conceived"*) and another one that is grounded in the acquisition of ethical skills ("*to equip and encourage each practitioner to come to his or her own considered decision on ethical matters"*). Gillam points to the difference between teaching bioethics in the health professions and in the humanities, based on the vocational aspect: while in the humanities there is no intention to shape students' behaviour (which is often seen as an undesirable outcome), in the teaching of professional ethics - and in the health professions in particular - teachers are in fact responsible for the intended ethical competences of their students.

[32] With a total of 504 citations on the SCOPUS database (retrieved at 28-12-2013).

Another valuable insight into possible conceptual approaches to ethics in higher education is the one brought in by Susan Illingworth. Illingworth (2004) considers three approaches to the teaching of ethics, and the corresponding didactics:

a) Pragmatic – the teaching of Professionalism based around rules and on codes of conduct and enforced by professional sanctions.
b) Embedded – Also focused on professionalism but this time on the notion of professional identity and based on the conveying of desirable values and behaviours (Fitness for Practice). These are delivered using several methods: reflective practice, drama (use of actors or role-play) and narratives (films, plays, documentaries, etc.)
c) Theoretical – based on the knowledge of "moral theories, principles and concepts and subjecting them to critical appraisal". Together with theories, Illingworth describes some practical abilities (or skills) needed to resolve ethical issues (Box 4).

Illingworth´s *embedded* and *theoretical* approaches relate closely with the teaching of virtues and skills[33], respectively. Furthermore, Illingworth introduces a third dimension to the teaching of professional ethics, one that is rooted in the professional rules and the codes of ethics defined by regulatory bodies, the *pragmatic* approach.

In conclusion, there is little consensus in the literature on whether the objective of the teaching in ethics should be to promote virtuous behaviours in students (Steutel 1997; Shelton 1999; Pellegrino 2002), to make them understand the need to rely on professional rules/norms (Sinclair 2000), to foster the acquisition of ethical skills (Clarkeburn 2002; Sandøe 2002) or a combination of these (Illingworth 2004; Ozolins 2005; Gillam 2009). On chapter 9 of this thesis I will contribute to this debate when constructing a theoretical framework to the teaching of veterinary ethics that is informed by the literature and the results of the empirical research.

[33] There is an apparent contradiction from the fact that Illingworth´s theoretical approach could be, at the same time, a practical approach (focused on skills). Several authors in medical ethics education have argued against the teaching of ethical theories or principles and defended a more skills-based approach instead (Cowley 2005, Fiester 2007, Lawlor 2007, McCullough 2009). But here the discussion is somewhat different; it is between a teaching based on imparting virtuous behaviours and a teaching that promotes the development of ethical tools (or skills), whether or not they include ethical theories/principles.

2.5 Ethics teaching as a way to promote moral development

Another way of conceptualising the educational aims of ethics teaching is by relying on Kohlberg's theory of moral development (cf. chapter 1.5). According to Kohlberg's theory, the aim of moral education is in stimulating the student to reach the next step of moral development (Goldman & Arbuthnot 1979). This process is slow (it can take months or years) but it can be substantially enhanced by ethics' education (Schlaefli *et al.* 1985; Self *et al.* 1989, 1992; Bebeau 2002; Clarkeburn *et al.* 2002).

In order to achieve moral reasoning development the educational method must provoke "arousal of genuine moral conflict, uncertainty, and disagreement about genuinely problematic situations" (Goldman & Arbuthnot 1979, p.7). Within this view, a successful course in ethics should have a constructive and positive influence over students (Rest & Narváez 1994). However, from both conceptual and pedagogic points of view, there is no agreement on what should be considered as a "positive influence". In 1982, James Rest originally proposed a four-component model for moral behaviour as a framework to evaluating moral development. The model is composed of four progressive steps that expose the underlying psychological processes of moral behaviour (Rest 1982, 1986; Rest & Narváez 1994): (1) moral sensitivity (*how does a person interprets a situation*?), (2) moral judgement (*how does a person figure out the ideal course of action?*), (3) moral motivation (*how does the person decide what to do?*) and (4) moral character (*does the person implement what he or she intends to do?*).

Rest and his colleagues (2000) defend a form of moral education that promotes the development of individual morality: from pre-conventional do conventional; from conventional to post-conventional. Motivation and character are grounded on sensitivity and judgement (Pompe 2005) but do not always follow. As a way to help explaining the relation between moral behaviour and moral action, others have built upon Rest's model and added psychological components, including social context, educational competences and personality traits (Bredemeier & Shields 1994).

In terms of research and idea development that relates more closely to the research questions of this thesis, Reiss (1999, 2005) offers four possible aims for teaching animal bioethics to veterinary students that closely relate those described above: (1) to enhance students' ethical *sensitivity*; (2) to increase their ethical *knowledge;* (3) to improve their ethical *judgment* and (4) to make them *better people*. While some agree that the teaching of ethics should strive not only to make good professionals, but also good people (Swick 2000; Sulmasy 2000; Ozolins 2005; Hafferty 2006), others dismiss this idea on the grounds that character development and value inculcation are undesirable

outcomes in undergraduate ethics education (Clarkeburn 2002). Instead of promoting moral motivation and character, Clarkeburn (2002) defends that ethics education should focus on developing student's skills of moral sensitivity and moral judgment. Disagreements such as these bring us back to the question if ethics teaching should promote the development of character and/or ethical skills in students.

2.6 Educational aims in veterinary ethics teaching

Informed by the context of European veterinary education and the literature of ethics teaching in the life sciences (and medical ethics in particular), this section introduces the state of the art with regards to the educational aims of veterinary ethics.

Although not devoted to teaching, Jerrold Tannenbaum's seminal book *Veterinary Ethics* (1989) offers some interesting clues on what should be taught in a curriculum of veterinary ethics. Tannenbaum described veterinary ethics as having four branches:

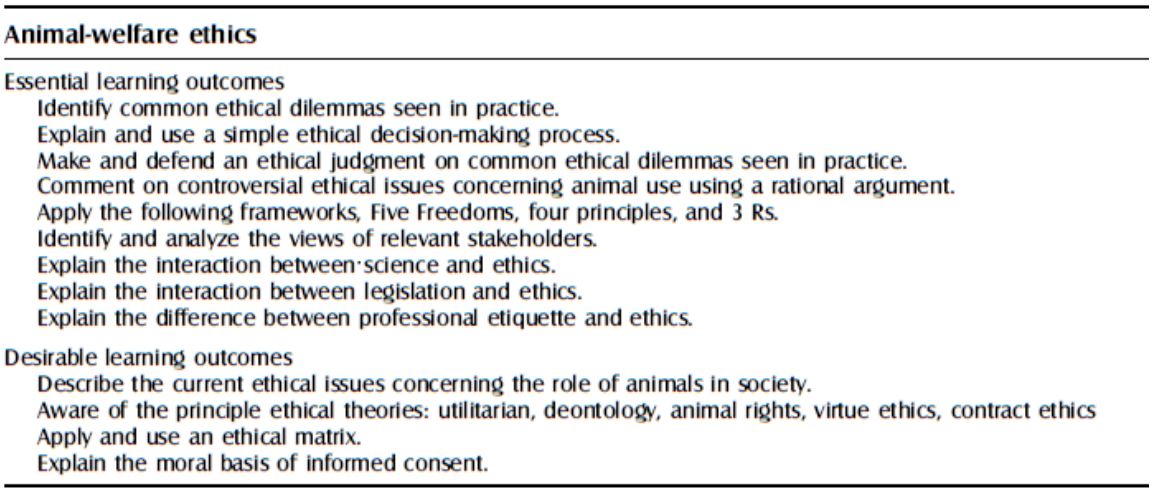
a) Descriptive Veterinary Ethics: the moral views and values of members of the veterinary profession that are expressed through behaviours and attitudes.
b) Official Veterinary Ethics: The official ethical standards adopted by professional organizations.
c) Administrative Veterinary Ethics: The application of ethical standards by (administrative) governmental bodies.
d) Normative Veterinary Ethics: The attempt to discover and apply correct moral standards (or norms) for veterinary practice ("What ought I do?").

According to Tannenbaum (1989), veterinary ethics should comprise the study of: a) professional values and attitudes; b) professional, as well as c) governmental standards; and d) normative explanations for personal moral values. It is notable that Tannenbaum refers to this last aspect as the most important branch of veterinary ethics.

In a position paper on ethics teaching in UK veterinary undergraduate courses, a working group of the Animal Welfare Science, Ethics and Law Veterinary Association (AWSELVA) proposed five objectives for ethics teaching (Thornton *et al.* 2001): a) to promote an appropriate attitude to animals, clients and other parties; b) to equip students with the necessary skills in recognising and dealing with ethical dilemmas; c) to improve the public perception of the veterinary profession; d) to enable veterinarians to contribute to public debate, and e) to provide the basis for postgraduate ethics training. This document also offers suggestions in terms of teaching contents, place in the curriculum, methods and assessment which will be explored in chapter 3 of this thesis. The lack of

references quoted in the AWSELVA document suggests that many of the positions taken by the working group are more the result of expert opinion than drawn from the literature or empirical data.

More recently, one of the authors of the AWSELVA position paper, David Main (2010), composed a set of the essential learning outcomes for animal welfare education (including science, ethics and law) for veterinary students and which can also be used as an aid reference. In terms of animal welfare ethics, Main (2010) recommends nine essential and four desirable learning outcomes (Figure 5):



Animal-welfare ethics

Essential learning outcomes
- Identify common ethical dilemmas seen in practice.
- Explain and use a simple ethical decision-making process.
- Make and defend an ethical judgment on common ethical dilemmas seen in practice.
- Comment on controversial ethical issues concerning animal use using a rational argument.
- Apply the following frameworks, Five Freedoms, four principles, and 3 Rs.
- Identify and analyze the views of relevant stakeholders.
- Explain the interaction between science and ethics.
- Explain the interaction between legislation and ethics.
- Explain the difference between professional etiquette and ethics.

Desirable learning outcomes
- Describe the current ethical issues concerning the role of animals in society.
- Aware of the principle ethical theories: utilitarian, deontology, animal rights, virtue ethics, contract ethics
- Apply and use an ethical matrix.
- Explain the moral basis of informed consent.

Figure 5 - Essential and desirable learning outcomes for animal-welfare ethics for newly qualified veterinary surgeons (*facsimile* from Main 2010, p.32).

According to Main, as a result of a curriculum in animal-welfare ethics, students should be able to demonstrate competences from: the *knowledge* domain (e.g. identify ethical dilemmas); the *comprehension* domain (describe current ethical issues involving animals); the *application* domain (apply ethical frameworks); the *analysis* domain (analyse the views of stakeholders); and the *evaluation* domain (explain the interactions between ethics and science, legislation, and professionalism). I will draw on one example from Main (2010) to illustrate the relation between objectives and outcomes. This author considers the awareness of ethical theories (such as utilitarianism and animal rights) as a (desirable) learning outcome in animal-welfare ethics (Figure 5). From a student point of view, however, there is little benefit from simply being aware that those theories exist. He/she will only benefit from that knowledge if, and only if, (s)he is able to make use of that knowledge. In order to achieve that outcome, the student is expected to e.g. *recall*, *select*, *compare*, *apply*, *formulate* and *assess* ethical theories. This does not

mean that awareness of ethical theories is unimportant - to apply a theory one has to be aware that it exists - but pedagogically being aware of ethical theories is considered a learning objective while applying ethical theories to daily practice is the intended learning outcome.

This impels us to further explore the difference between learning outcomes and learning objectives (cf. Harden 2002 for a deeper analysis). The difference lies in that learning outcomes should be broad and under a small number of headings, in order to "provide a context to help national authorities develop their own more detailed level descriptors" (Adam 2006, p.9). The list proposed by Main is, in fact, as much a list of learning objectives as it is a list of outcomes. The aforementioned list of Day One Competences (EAEVE-RCVS) is, *de facto*, a list of learning outcomes because it is organized in a small number of headings (41 competences for the entire veterinary course) and the statements are broad and not prescriptive (thus enabling the veterinary schools to adapt their own curriculum to meet these essential competences). On the other hand, learning objectives are extensive and detailed (as Main's) and they express more the pedagogic intentions of the teacher rather than the achievements from the part of students (Harden 2002; Adam 2006; Kennedy *et al.* 2006). When designing learning objectives these are usually divided into different learning abilities (i.e. knowledge, skills and attitudes) while learning outcomes usually incorporate several abilities within the same framework (Harden 2002).

The points presented by Thornton *et al.* (2001) and Main (2010) represent a move forward in defining the goals of veterinary ethics undergraduate education and could be used as a starting point to further reflection:

- what counts as an appropriate attitude?
- what skills are needed to recognise and deal with ethical dilemmas?
- how do professionalism and etiquette relate to the teaching of ethics?
- How do the teaching of legislation and ethics relate?

An answer to questions such as these will be sought in the remaining of this chapter. As a reference point, Box 2 recollects some of the most relevant educational concepts that are part of this thesis, and before I proceed to examining the competences that students can acquire as a result of the teaching of veterinary ethics.

Box 2 – Definition of some prominent educational concepts used in this thesis
Curriculum – a detailed description of the teaching programme, including syllabus contents, delivery methods, assessment methods, structure and resources.
Course – a teaching programme (here used with the same meaning as *curriculum*).
Syllabus - what is described as being taught in terms of curricular content.
Learning Objectives - educational aims from the point of view of the educator.
Learning Outcomes – statements of the competences that students should gain as a result of the learning process.
Competences - proven ability to use knowledge, skills and attitudes in work or study situations.
• **Knowledge -** mental cognitive abilities (aka *declarative knowledge*).
• **Skills -** practical cognitive abilities (aka *procedural knowledge*).
• **Attitudes -** affective abilities, meaning feelings, emotions and behaviours.

2.7 Core competences in veterinary ethics education

As laid out in chapter 1, teaching in higher education aims at providing students with the required competences for their future professional lives. The acquisition of competences involves three levels of abilities (Hager & Gonczi 1996; Harden 2002; GMC 2003; Stewart 2005; Leinster 2005; Hatem *et al.* 2011): cognitive abilities, including theoretical knowledge and practical skills, and abilities of the affective domain (attitudes). These abilities will be explored in terms of ethical competences.

2.7.1 Ethical Knowledge: the cognitive theoretical abilities

According to the European Qualifications Framework for lifelong learning, *knowledge* is defined as "the body of facts, principles, theories and practises that is related to a field of study or work" (European Commission 2006). Knowledge can be *factual* (reporting facts and figures) and *theoretical* (in the realm of enquiry) and is the outcome of the assimilation of information through learning.

Some of the disagreement on how the subject of ethics should be placed within the curricula of the health professions may have to do with the fact that ethics ranges widely in scope (Gillam 2009). When applied to the field of veterinary medicine, ethics can comprise several subject matters, as indicated by the contents of the standard textbooks for the subject (Tannenbaum 1989; Rollin 1999; Legood 2000; Sandøe & Christiansen 2008; Wathes *et al.* 2013), with sometimes little connection with one another (cf. Box 3).

Box 3 – Learning contents - list of subject matters which could be part of a syllabus in veterinary ethics (Rollin 1999; Legood 2000; Sandøe & Christiansen 2008; Wathes *et al.* 2013):
End-of-life issues (euthanasia, dysthanasia, slaughter, culling, grief)
Animal welfare ethics (pain evaluation, quality-of-life, five freedoms, 3 Rs)
Philosophical frameworks (ethical theories, moral principles, values, duties)
Professional Deontology (Codes of Good Practice, Guides of Conduct, statutory rules)
Different uses of animals (companion, production, laboratory, conservation)
Responsible use of drugs (AB, analgesics, growth promoters, steroids)
Animal Law (Veterinary Act, welfare legislation)
Role of veterinarian (practitioner, state officer, hygienist, researcher)
Risk Assessment (public health concerns)
Human-animal bond (animals in society, effective communication)
Biotechnologies (GMO's, animal enhancement, organ transplantation)

This could be due to a lack of standardised form of professional ethics common to every activity within the field of veterinary medicine (Sandøe & Christiansen 2008, p.54). This may also mean that the ethical competences for a veterinary officer may be understood to differ from those for a small animal practitioner. In fact, veterinary ethics can be understood at different levels by different people[34] because it encompasses philosophical, legal and scientific knowledge as well as personal and professional skills.

In order to shed some light to this discussion, a categorization of the theoretical content of ethics in the context of veterinary medicine is proposed. Illustrated in Figure 6 is an inverted pyramid diagram composed of five increasingly restricted knowledge domains: *ethics*, *bioethics*, *animal bioethics*, *veterinary ethics* and *veterinary deontology*.

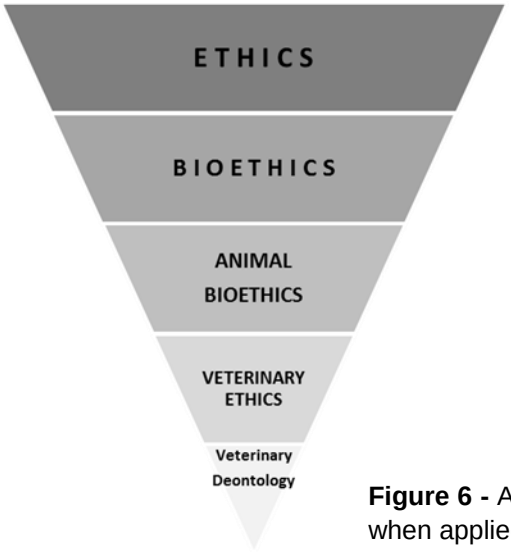


Figure 6 - A step categorization of ethics when applied to the veterinary field

Ethics refers to the philosophical frameworks (theories, principles) that attempt to examine issues of right and wrong, and how they may apply to practical cases; *bioethics* can be seen as a bridge linking ethical enquiry with the advances in biomedicine and ecological concerns (e.g. Potter 1971). *Animal bioethics* deals with the (bio)ethical considerations that derive from using animals for the benefit of humans. *Veterinary ethics* explores those topics from animal bioethics that fall within the realm of the veterinary care and the profession. Fox (2006) defines veterinary bioethics (and that I alternatively call *veterinary ethics*) as:

> "(…) evaluating the treatment and care of animals, in setting optimal welfare standards, and in determining what is best for animals from the perspectives of medicine (disease

[34] During the course of my research leading to the present thesis – and after explaining what I was doing – I would often be asked what I meant by 'ethics', a question I was not sure how to answer satisfactorily; I suspect I wouldn't be faced with the same question if I was working on the teaching of e.g. anatomy.

> prevention and treatment) and ethology (behavioral and related physiologic, psychologic, and environmental requirements)." (Fox, 2006, p.666)

Lastly, *veterinary deontology* refers to those professional codes, rules and guidelines which set out the duties and obligations that veterinarians have towards animals and society. 'Professional deontology' is an expression that is commonly found in some European countries (particularly in southern countries where courses in veterinary ethics are known by the name 'Deontology'[35]). Relying once again on Fox (2006), *veterinary deontology* is used here with a similar meaning of that of veterinary medical ethics:

> Veterinary medical ethics deals with professional standards of practice, business, and behavior and addresses the welfare of animals, as defined by law, from the perspectives of economics and scientific objectivity. (Fox, 2006, p.666)

Considering that not all ethical issues are equality relevant for a vet, the challenge lies on defining what constitutes necessary or suitable knowledge. If ethics is considered as a whole (cf. Singer 1993) there is arguably no need for a vet to study religious ethics[36] but it might be useful to know something about environmental ethics to e.g. help tackling the challenges of wildlife conservation or the ecological footprint of factory farming. In the same way, not all the issues of the bioethical debate (cf. Mepham 2005; Kuhse & Singer 2009) are relevant for a vet: abortion is much less of an ethical issue in veterinary medicine than it is in human medicine. But the opposite argument is also true: whilst a general medical practitioner might never (or only rarely) be confronted with a case of euthanasia, this ethical issue is dealt by practicing veterinarians on a daily basis and sometimes posing challenges as complex as in human medicine (Rollin 2006; Yeates & Main 2011).

In *Ethics of Animals Use* (Sandøe & Christiansen 2008), a wide range of topics relating to animal bioethics is addressed, including – but not limited to – the use of animals in food production and experiments, control of infectious diseases, biotechnologies, wild animals' management and concerns over companion animals. Most of these issues, and including euthanasia, could also be included within the realm of veterinary medical ethics. Indeed, a substantial overlap between the coverage of Sandøe and Christiansen and that of three seminal textbooks on veterinary ethics (Tannenbaum1989; Rollin 1999; Legood 2000) can be found. One distinction could be that veterinary ethics includes a

[35] This assumption is a result of the author's professional experience, namely with the EAEVE, which will be examined through the internet search of European veterinary ethics' curricula, as described in chapter 5 of this thesis.

[36] Against my own argument, some might claim that religious ethics is useful in understanding ritual slaughter.

deeper understanding and consideration of veterinary professionalism whilst animal bioethics usually does not. This conclusion however, needs to be seen with caution since the scope of veterinary ethics is also not well defined.

Finally, some remarks about veterinary deontology. One prominent aspect of the teaching of ethics to veterinary students has to do with professional regulatory aspects, namely the rules and regulations that ensure the standards of the veterinary profession (Gurler 2007; Magalhães-Sant'Ana *et al.* 2009, 2010). In this context, the word 'Deontology' is used not in a philosophical sense (e.g. referring to the approach of applying value principles over consequences[37]), but to refer to the notion of the moral justifications underpinning normative regulations.

From this brief analysis based on the relevant literature, it can be concluded that drawing a clear distinction between the aforementioned knowledge domains (*ethics, bioethics, animal bioethics, veterinary ethics, veterinary deontology*) is difficult, or yet impossible. Consequently, these should not be seen as absolute categories with the relation between them better represented as a gradient (Figure 7), rather than independent steps (Figure 6).

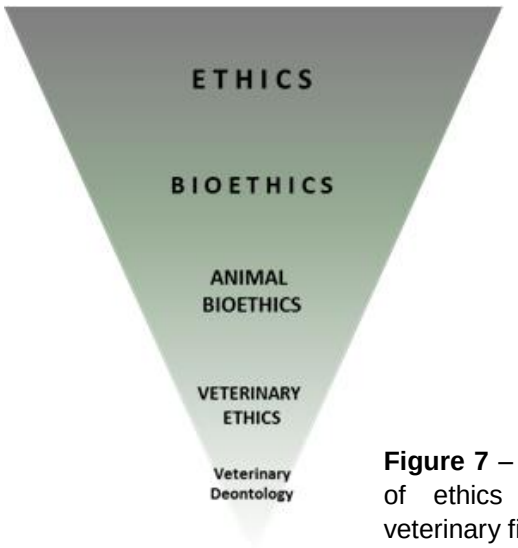


Figure 7 – A gradient categorization of ethics when applied to the veterinary field

Although this gradient representation seems more promising, it still does not help us to draw the line of what could be of interest for a veterinary ethics[38] course. In order to

[37] The term deontology (*deon* – duty) and (*logos* - study of) was first used by Jeremy Bentham in *Deontology, or the science of morality* (1834): "As an art is doing what is fit to be done; as a science, the knowing what is fit to be done in every occasion."

[38] In this essay, the term 'veterinary ethics' will be used in its broadest sense to refer to all teaching of ethics to veterinary students and not as an attempt to promote a specific categorization of ethics when applied to the field of veterinary medicine.

further explore this question, additional competences other than knowledge must be considered. Teaching in ethics should not restrict itself to facts and theories because knowledge alone will not guarantee that the student will behave ethically (Wear & Castellani 2000). Ethical reasoning, decision-making skills and appropriate conduct (character) are also, as addressed next, important aspects of ethics education.

2.7.2 Ethical Skills: the cognitive practical abilities

Aside what students should know at graduation, the learning experience should also make students develop the ability to use that knowledge in professional practice (i.e. practical skills). However, the learning of ethics differs from other subjects within the life sciences curricula in the sense that it requires the acquisition of skills that are different from those of scientific problem-solving (Clarkeburn *et al.* 2002). The paradigm of science education is based on the transmission of correct procedures that will enable students to solve practical problems (cf. section 1.3). In ethics, however, the focus is not in getting 'the right answer' - because there is often no such thing - and students are rather requested to critically reflect on the possible answers. In other words, science teaching mostly involves the apprehension of *technical* skills (statistical, laboratory, clinical, or surgical skills) while ethics makes mainly use of *reflective* skills. As a consequence, science students may disregard the importance of these reflective skills by considering the discussion of ethical issues to be just a matter of personal opinion or of common sense. This attitude could also indicate some inability from the part of science students to tackle philosophical problems (Cantor 2001), at the same time reflecting a wider divide between science and humanities, often described as being two opposing cultures:

> Science students often perceive themselves as having chosen science and thereby positively rejected humanities subjects. Moreover, whatever antipathy they possess towards the humanities is accentuated by their lack of the necessary experience, knowledge and skills to operate in an area in which they have not been trained. (Cantor 2001, p.18)

Johnson (2010) describes four skills which students need for the teaching of ethics in higher-education: essay writing, critical reading, verbal ability and note-taking proficiency. She concluded that, unless these aspects are being considered and incorporated into the science undergraduate curricula, little success can be expected from the teaching of ethics. In addition to these four proficiencies, Geoffrey Cantor (2001) also mentions the lack of confidence exhibited by students when moving away

from the “safe and familiar study of science” and offers some suggestions to help science students to improve writing, reading, speaking and note-taking. These suggestions include encouraging students to write down the key argumentative steps and provide them with leading questions that can help direct reading (Cantor 2001).

Moreover to foundational study skills, veterinary students also need reflective and decision-making skills which enable them to resolve practical challenges. Some of these procedural abilities, which are needed to resolve ethical issues, were described by Illingworth (2004) in her assessment of different approaches to ethics in higher education, and are reproduced in Box 4 (see also Box 9).

Box 4 – List of skills needed to resolve ethical issues (adapted from Illingworth 2004: 70-71)
Development of critical reasoning faculties.
Application of moral theories such as Rights, Virtue Ethics, Consequentialism or Kantian deontology to real-life situations.
Identification and analysis of morally challenging situations.
Acquisition of a facility with the language of moral discourse.
Awareness of multiple perspectives on contested issues.
Development of coherent principles of thought and action.
Capacity for verbal and written presentation.

Muriel Bebeau and colleagues (1995) developed a moral reasoning tool for promoting the discussion of ethical dilemmas in science students. It involves constructing arguments to resolve a controversial case study in research ethics, followed by a facilitated peer discussion of the responses. These researchers consider that a response is well reasoned, and hence ethically sound, if it fulfils four criteria, translated into four questions:

a) Does the response address each of the issues and points of ethical conflict?
b) Are the legitimate expectations of the interested parties being considered?
c) Are the consequences of acting recognised, described, and incorporated into the decision?
d) Are the duties or obligations of the protagonist described and grounded in moral considerations?

A systematic framework for ethical decision-making applied to veterinary practice was originally proposed by Mullan & Main (2001) and later developed for the WSPA’s

Concepts of Animal Welfare[39]. It provides a six-step framework for ethical deliberation in veterinary practice involving a) the identification of all possible courses of action, b) to establish interests of affected parties, c) to identify ethical issues involved d) to establish legal position of the dilemma e) to choose a course of action and f) to minimise the impact of the decision. It is asserted that a veterinarian following procedural guidelines such as these is in a better position to address ethical dilemmas and communicate with clients when difficult decisions arise (Morgan & MacDonald 2007).

Inspired by the principlistic approach to biomedical ethics (Beauchamp & Childress 2001), Ben Mepham devised a framework for ethical deliberation called the Ethical Matrix. It makes use of three chief principles of normative philosophical traditions (respect for: wellbeing, autonomy, and justice) and combines them with several interest groups in a matrix. The Ethical Matrix is a conceptual tool that aims to facilitate ethical reasoning and decision-making and its use can be extended to a variety of domains within the biosciences (Mepham 2005). In Mepham (2000) the Matrix is used to analyse the ethical impacts of the use of modern biotechnologies in food production with respect to the treated organism, the farmers, the consumers, and the environment (Biota).

Some of the most prominent ethical skills relevant to the veterinary field were briefly described. Ethical skills should help clinicians "to move from principles and facts to action-guiding moral conclusions" (Alfandre & Rhodes 2009, p.513). Regardless of the set of skills one considers to apply, they should work as tools that, if properly used, can help resolving ethical issues in practice. But some also defend that, other than just using tools, students need to be personally committed with the choices they make and aware of their own attitudes, i.e. the affective abilities.

2.7.3 Ethical Attitudes: the affective abilities

2.7.3.1 The concept of veterinary professionalism

Education in veterinary medicine is a vocational training and students that enrol in such a course aim to one day become members of the veterinary profession. Being a veterinarian entails privileges as well as legal and ethical responsibilities (Yeates 2009a). Veterinary training could be seen as a rite of passage from which lay-persons develop into qualified and recognised professionals (Arluke 1997). Turning a student into a

[39]Available at (27-12-2013):
www.animalmosaic.org/Images/M32_P_Role_of_Veterinarian_in_Animal_Welfare_tcm46-29416.ppt

veterinarian involves more than the cognitive professional competences of theoretical knowledge and practical skills. It also involves the affective domain of learning:

> The affective domain is about our values, attitudes and behaviours. It includes, in a hierarchy, an ability to listen, to respond in interactions with others, to demonstrate attitudes or values appropriate to particular situations, to demonstrate balance and consideration, and at the highest level, to display a commitment to principled practice on a day-to-day basis, alongside a willingness to revise judgement and change behaviour in the light of new evidence. (Shephard 2008, p.88)

In this respect, some experts believe that being educated in veterinary medicine involves the acquisition of a professional identity in addition to new ethical knowledge and ethical skills (Thornton *et al.* 2001). Promoting a sense of identity within the profession - what is also called the "professional self" (Hafferty 2006) - involves the conveying of appropriate attitudes and behaviours from faculty members to students. The role of the faculty in encouraging professional behaviours has been advocated in veterinary medicine (Mossop & Cobb 2013) as well as in other related professional fields such as human medicine (Hafferty & Franks 1994), pharmacy (Duncan-Hewitt 2005), and science and engineering (Hollander & Arenberg 2009). Unsurprisingly, the first of the main recommendations from the General Medical Council Tomorrow's Doctors (GMC 2003) is that "attitudes and behaviour that are suitable for a doctor must be developed" (in the undergraduate curriculum).

Within this context, the teaching of professionalism is increasingly seen as an important component of the veterinary curriculum (Mossop & Cobb 2013). The concept of professionalism, however, is "easy to recognise but difficult to define" (Swick 2000, p.612). Particularly in the medical literature, many definitions have been attempted (Swick 2000; Wagner *et al.* 2007; Martimianakis *et al.* 2009; Rogers & Ballantyne 2010), but there is still no common understanding of what professionalism actually means (van Mook 2009). Recently, a definition of veterinary professionalism has also been offered in order to accommodate the specific challenges of the veterinary profession:

> To demonstrate professionalism, veterinary surgeons should at all times consider their responsibilities to, and the expectations of, their clients, the animals under their care, society, and the veterinary practice that provides their employment. The ability to balance these demands and therefore demonstrate professionalism is helped by the following attributes: efficiency, technical competence, honesty, altruism, communication skills, personal values, autonomy, decision making, manners, empathy, confidence, acknowledgment of limitations. (Mossop & Cobb 2013, p. 224)

According to this definition, professionalism is an attitudinal concept, i.e. it only makes sense when demonstrated in practice. It involves the balance of responsibilities towards different stakeholders in a similar way that has been described at the beginning of this thesis (cf. section 1.1). But in addition to ethical deliberation, professionalism seems to involve such attributes as traits of character (such as honesty, altruism, empathy), professional skills (competence, communication, decision-making, acknowledgment of limitations), etiquette (manners) and personal values.

Four related terms derive from the concept of professionalism: professional behaviour, professional skills, professional conduct and professional etiquette. It is necessary here to clarify exactly what is meant by these terms. The following definitions are the result of my own reflections and are only partially inspired by the literature. While professional behaviour is used as an alternative expression to professionalism[40] (i.e. behaving in a professional manner), professional skills usually refer to those – usually practical – non-technical competences that are also part of professional training, which also include ethical skills (as discussed before: Box 1). Professional conduct (considered as a normative set of behaviours) is usually used for professional guidance, when referring to those behaviours that are embedded in professional codes or guidelines. Finally, (professional) etiquette includes those often tacit social behaviours that should be used in all kinds of settings, including professional ones (courtesy, good manners, politeness, dress-code). Professional skills, conduct, and etiquette can all be seen as being part of professionalism, although these terms are often used interchangeably.

2.7.3.2 The hidden curriculum

The teaching of attitudes is influenced by both formal and informal curricula (Martin *el al.* 2002; section 2.1). The inculcation of appropriate attitudes in students is usually achieved by mentoring, where teachers work as exemplary role models through both example and socialization (Paice *et al.* 2002; Cruess *et al.* 2008). Mentoring is a powerful and inescapable tool of ethical training and teachers, whether consciously or not[41], work as role models to their students (Stern & Papadakis 2006). Those attitudes, beliefs and values that educators express while teaching – and that are not part of the formal curriculum – can have a substantial influence on students, so great or even greater than what is overtly taught (Hafferty & Franks 1994; Goldie *et al.* 2003: Anzuino

[40] "Professional behaviour is a term mainly used in a European setting, and seems to contrast with the term professionalism mainly used in the United States and Canada" (van Luijk *et al.* 2010, p.734).
[41] "Role modeling is in the eye of the beholder – the student, not the teacher." (Stern & Papadakis 2006, p.1795).

2009). This set of implicit and unwritten professional rules and behaviours that fall outside the formal educational process is usually called *hidden curriculum*, a term introduced in medical education by Dixie Anderson in 1992[42].

The human medical education has a long tradition of using role modelling in the teaching of ethics and the positive effects of virtuous teachers in creating good physicians are widely documented (Passi *et al.* 2010). The GMC (2003) recommends that "every doctor who comes into contact with medical students should recognise the importance of role models in developing appropriate attitudes and behaviour towards patients and colleagues." The same can apply to veterinary education: a recent survey at the University of Queensland shows that the attributes used by senior veterinary students to describe clinical role models are similar to those used by medical residents: good communicators, well respected and respectful, and with exemplary knowledge and skills (Schull *et al.* 2012). However, the behaviours expressed by role models are not always the most suitable (Goldie *et al.* 2003), and the negative effect of unethical attitudes on students cannot be neglected:

> Albert Einstein once said "Most people say that it is the intellect which makes a great scientist. They are wrong: it is character." Behaving ethically is the principal way that mentors transfer the ethical standards of their profession to their trainees. All the formal ethics training in the world cannot compensate for an unethical mentor. (Wolpe 2006, p.1023)

Questions have been raised that teaching professionalism by only relying on role modelling could be unsuited to modern societal needs and that the medical profession should progressively move from paternalism towards pluralism (Paice *et al.* 2002). It has also been shown that medical students become progressively desensitized as they get greater exposure to poor role models, possibly as a coping mechanism (Testerman *et al.* 1996). Satterwhite *et al.* (2000) reported moral erosion in medical students – shown by an increasing acceptance of derogatory comments to patients from first year to fourth year – without apparently noticing any change in their personal code of ethics (what the authors deemed to be *an ethical paradox*). Analogous responses were found in terms of whistle blowing, with studies showing no improvement in students' performance (Goldie *et al.* 2003) or even a decrease in their responsibility to whistle blowing (Rennie &

[42] "The hidden curriculum can be defined as the indelible message, often nonverbal, that a person takes from an event or an experience. It is the essence, the soul, that which is remembered after the source is forgotten." (Anderson 1992, p.21) The term 'hidden curriculum' was first coined in the 1960's by Philip W. Jackson. Jackson recognised that children's learning was often unintentional (cf. Jackson PW (1968) *Life in Classrooms*. New York: Holt, Rinehart & Winston; Jackson PW (1966) The Student's World. *The Elementary School Journal* 66(7): 345-357).

Crosby 2002) as they progress through the medical course[43]. A study of Hojat *et al.* (2009) showed a significant decline in empathy scores in medical students starting at the end of third year and lasting until graduation, with students describing "fear of making mistakes, a demanding curriculum, time pressure, sleep loss, and a hostile environment" as distressful factors. Generalizations, however, have to be made with caution, as these studies are limited to one institution and relied on very different methodologies.

The study of the hidden curriculum in veterinary medicine has only taken the first steps (Mossop *et al.* 2013). Its effect is yet to be fully understood but there are evidences that the veterinary learning experience may have a negative impact on students' moral development (Self *et al.* 1991, 1994b, 1996), and attitudes toward animals (Paul & Podberscek 2000). When compared with other forms of professional training, undergraduate education in veterinary medicine has an increased potential of triggering unethical mentoring because it requires the use of live animals in addition to some of the challenges found in medical ethics. Moreover, students who chose to study veterinary medicine also do it based on their feelings for animals (Alruke 1997) and often find themselves faced with training procedures involving animals which conflict with their personal beliefs and attitudes (Arluke 2004).

Even if a school precludes any harmful animal use for anatomic, surgical[44], anaesthetic or pharmacological purposes, being able to handle, restrain and examine animals will nonetheless still be a prerequisite for entering the veterinary profession. Failure to cope with the use of animals in ways that students see as morally wrong can lead to disenchantment with the veterinary training experience as a whole (Tiplady 2012) and even psychological trauma (Capaldo 2004). Seemingly to what has been described in medical students (Firth 1986; Shapiro *et al.* 2000), high risk of stress, anxiety and depression in veterinary students have been widely detected (Kogan *et al.* 2005; Hafen Jr *et al.* 2006, 2008; Siqueira-Drake *et al.* 2012; Langebæk *et al.* 2012a, Langebæk *et al.* 2012b; Reisbig *et al*. 2012; Cardwell *et al*. 2013). This has led some to suggest that veterinary schools should change their undergraduate programmes in order to reduce academic stressors and support students' health and quality of life (Reisbig *et al*. 2012).

[43] These studies might be accused of oversimplifying students' responsibility to whistle blow. As explained by Yeates (2011) in the context of the veterinary profession, instead of encouraging whistle-blowing, faculties should promote a culture of "peer commentary", and open and constructive discussions.

[44] "The UK is the only major country in the developed world where harmful animal use has been removed from the veterinary surgical curriculum for decades. Instead, students gain practical experience by assisting with beneficial surgeries during extramural rotations at private veterinary clinics and elsewhere." (Knight 2010, p.8)

2.7.3.3 Empathy and emotions towards animals

The study of human-animal relationships is a vast field of research that can provide significant insights into the relevance of the affective abilities in veterinary education. Human relationships with animals are often ambiguous, and that ambiguity is particularly evident in veterinary environments (Swabe 2000). Veterinarians find themselves in between two worlds – human and animal – and are expected to mediate between the two (Swabe 2000). Veterinarians need awareness that they will be dealing with humans (pet owners as well as farmers) that may connect to animals differently from them. In addition, veterinarians should be aware that relationships between humans and animals have been evolving and changing, as has changed the role of the veterinary profession in society.

Several studies along the years have identified at least two basic human attitudes towards animals: one that is grounded on self-interest and utility and another based in affection and empathy (Kellert & Berry 1980; Serpell 2004). These two attitudinal domains – cognitive and emotional – may sometimes clash (Serpell 2004). James Serpell makes reference to dozens of studies that corroborate the perception that being woman, urban and highly educated are predispositions for having higher affective and lower utility moral attitudes towards animals (Serpell 2004). Additionally, early childhood pet keeping can also have a positive effect in empathy[45] while having a negative effect on utility orientations (Serpell 2004). Also, an Australian survey has shown that the vast majority of veterinary and animal science students have had animals as child (Hazel *et al.* 2011). The fact that the veterinary profession is increasingly feminine, urban and (by definition) highly educated is likely to have implications for how these students bond to animals, and makes it even more relevant to explore the role of emotional competences, such as empathy and compassion, in veterinary education. Questions such as these have driven the *Journal of Veterinary Medical Education* to dedicate an entire issue (2008, vol. 35, nr. 4) to the teaching of the Human-Animal Bond. Emotional concerns for animal welfare, heightened by the study of human-animal relationships, have had wide repercussions in veterinary education which has been progressively moving towards addressing the affective attitudes of students:

> The challenge for the veterinary profession is to ensure that widespread positive sentiment toward animals, which the human–animal bond generates, is translated in to

[45] Elizabeth Paul found only limited evidence to support the popular belief that emotional empathy towards animals and people are linked (Paul 2000). She suggests that animal-oriented and human-oriented empathy have both shared and non-shared components.

> human behavior and actions that are conducive to good animal welfare. This, it is suggested, can be achieved through adequate veterinary education in veterinary and animal welfare science, ethics, and communication (Wensley 2008, p.532)

Emotions are essential for the development of critical thinking (Adams *et al.* 2006) and emotional stress is known to have a negative effect on students' learning abilities (Shapiro *et al.* 2000). More than any other, empathy has emerged as a fundamental emotion for effective medical care (Spiro 2009; West 2012). According to Hoffman (2000) empathy is a biologically based disposition for altruistic behaviour. Although innate, there is evidence that empathic ability in medical students can be enhanced by appropriate learning experiences (Tavakol *et al.* 2012) but also that it may decrease when students reach the clinical years of the medical course (Hojat *et al.* 2009).

The study of emotions in veterinary students is still in its infancy. At least in the first years of their training, veterinary students find themselves divided between their view of animals as lay persons and their attitudes as professionals (Arluke 2004). The cross-sectional study of Paul and Podberscek (2000) revealed a reduction in self-rated emotional empathy with animals amongst male students as they progress through the course. Additionally, a general decrease in the appreciation of sentience in animals (dogs, cats, cows, but not pigs) was found in both males and females, suggesting "a degree of hardening and detachment" (Paul & Podberscek 2000, p.271). Langebæk and colleagues (2012a) questioned 26 (22 female and 4 male) Danish veterinary students about the emotions they experienced after doing surgery in live pigs. Lack of self-confidence was voted as the main source of negative emotions (100%), followed by unpleasant atmosphere, and responsibility for a live animal (81% each). It is somewhat surprising that feelings of guilt were only mentioned by two of them. It seems possible that the fact that the surgical procedure was being performed in research pigs due to be humanely euthanized at the end of the day, together with the fact that these were – probably 'desensitized' – fourth year students could have contributed to the apparent lack of empathic concerns (expressed as guilt) towards the animal.

The feminization of the veterinary profession may also be related with differences in attitudes toward animal welfare. A UK survey has shown that female veterinarians reported higher stress levels than their male counterparts in dealing with euthanasia of healthy animals and with prolonged treatments of animals with poor welfare (Batchelor and McKeegan 2012). Another study has revealed that veterinary students from farming backgrounds showed lower levels of concern with animal welfare than did students from urban backgrounds (Levine *et al.* 2005) while Serpell (2005) postulates that women

might be avoiding career choices with farm animals because of their greater sensitivity to animal welfare issues.

Thornton *et al.* (2001) defend that the inclusion of veterinary ethics teaching should contribute to the promotion of appropriate attitudes to animals (in addition to clients and stakeholders). From what was said, it becomes apparent that attitudinal learning objectives and concerns with students' affective abilities can be as much a responsibility of veterinary schools as it is to introduce them to ethical knowledge and ethical skills.

In this chapter the literature concerning what to teach in a curriculum of veterinary ethics was reviewed. After having clarified some key educational concepts, the teaching of professional ethics was contextualized with the requirements of European veterinary education. Subsequently, significant differences between the domains of human ethics and veterinary ethics were identified. The possible educational aims of ethics were explored in light of several conceptual approaches to its teaching, and namely in terms of virtues, skills and rules. I proceeded to investigate the educational aims of veterinary ethics and explored the difference between the concepts of learning outcomes and learning objectives. Finally, the competences in terms of ethics teaching were described in terms of theoretical knowledge, practical skills and affective attitudes. The next chapter deals with the educational methods that can be used to deliver and assess ethical competences.

3 HOW TO TEACH ETHICS TO VETERINARY STUDENTS

The empirical literature on *how* to teach veterinary ethics, while having increased steadily in the last few decades, is still scarce. Thus, as in the previous chapter addressing the *what* question, the present chapter will rely on relevant literature from other fields of education. Furthermore, these two questions – *what* and *how* – are intimately connected and should be considered in light of each other. Examining the question of *how* to teach veterinary professional ethics raises four main sub-questions:

a) What educational methods should be used?
b) Who should teach veterinary ethics?
c) When in the curriculum should it be placed?
d) How can ethics be successfully assessed?

The following sections critically examine these issues starting with a brief outlook on some of the most prominent developments and findings in veterinary ethics education, with a main focus in Europe (and Portugal).

3.1 Retrospective outlook of veterinary ethics education

Historically, addressing ethics to veterinary students involved the transmission of moral and social standards of the profession, by means of veterinary oaths (Self *et al.* 1994b; Bones & Yeates 2012) as well as codes of ethics (Fox 1995; Rollin 1999; Woods 2013). The purpose of medical oaths has been to proclaim the core values of the profession and to endorse the exercise of moral virtues, including compassion, honesty and integrity (Hurwitz & Richardson 1997). Veterinary oaths reflect the main concerns of the veterinary profession at a moment in time (Bones & Yeates 2012) and are used as passing rites of its cultural tradition from one generation to the next. However, the contribution of oaths in veterinary (as well as medical) education is still vastly unexplored.

Codes of professional conduct, on the other hand, serve three essential purposes: to ensure high standards of practice, to protect the public, and to guide practitioners in their decision-making (Barrett *et al.* 2012). Veterinary Codes of ethics are regulatory documents traditionally focused on matters of professional conduct and etiquette (dealing with colleagues, clients and other professionals) and less devoted to animal welfare or to wider social concerns. Rollin (1999) recalls of how the AVMA code of ethics, twenty years before, failed to address the euthanasia of healthy animals but, in

contrast, was prolific in regulating advertisement. It is noteworthy that this is still the case for the Portuguese Veterinary Deontological Code (cf. OMV 1998).

In this regard, ethical issues involving animals were not seen to be part of the traditional curricula in veterinary medicine. Formal teaching of ethics to veterinary students is commonly considered to have began in 1978 when American philosopher Bernard Rollin developed, at the Colorado State University, the first course in veterinary ethics "to anticipate where society was going in the area of animal ethics, so that the school could make its work compatible with changing social ethics" (Rollin 2005, p.108). Since then, veterinary schools across the globe have introduced similar courses or units but limited information is available on how and when this has happened. In a survey conducted in the spring of 1993 to all 27 US veterinary schools (Self *et al*. 1994a), formal teaching in ethics was mostly found to be integrated with other subjects such as jurisprudence, practice management, client relations and professional regulations while informal teaching of ethics within clinical settings was identified in every school. Formal contact hours averaged 15 h (from 4 to 43 h; median 15 h) and delivered predominantly in the first year, although spread across the curriculum (Self *et al.* 1994a).

In Europe, only but a few descriptions of experiences in teaching ethics to veterinary students can be found and, with the exception of the Danish study of Dich *et al.* 2005, these are usually considered within the realm of animal welfare teaching (Main *et al.* 2005; Hewson *et al*. 2005). One of the first – and ground-breaking – attempts to understand how animal ethics was being taught at the European level resulted from the EU SOCRATES Thematic Network for Agriculture, Forestry, Aquaculture and the Environment (the AFANet programme on Animal Bioethics) which resulted in a published textbook (Marie *et al.* 2005). On that occasion, a survey on the teaching of animal bioethics in Europe was conducted in 20 European countries (and completed in 17 of them). Results were presented at a Workshop held in Nancy, France, in 2002, and entitled "Teaching Animal Bioethics in Agricultural and Veterinary Higher Education in Europe" (cf. AFANet Workshop, 2002[46]). Of particular interest are the results from the Portuguese survey:

> Unfortunately bioethics related to other species other than humans is still not an important issue the Portuguese Universities dedicated to agricultural and veterinary teaching. This is the main, and sad, conclusion I take from the painful exercise that was trying to get different teachers to fill the inquiry about bioethics teaching. (Stilwell 2002)

[46] Available at: http://www.ensaia.inpl-nancy.fr/bioethics/workshop.html (27-12-2013).

As an explanation, the same author alludes to the ill-preparedness of agricultural and veterinary graduate courses in incorporating ethics-related subjects. Several years later, Pinto (2005) highlighted the need to include the study of animal ethics in Portuguese higher education, pointing out that ethics often "is thought to be a mere question of personal opinion and it is usually taught and understood as professional deontology"[47]. In 2008 others have also pointed out that in Portugal veterinary ethics was mostly seen as a synonym of professional deontology and approached through the normative appraisal of codes of conduct (Magalhães-Sant'Ana 2008).

In addition to country-by-country description, AFANet survey results are also presented by three broader geographical hubs: Southern Europe (Gandini & Monaghé 2002), West/Central Europe (Von Borrell 2002), and Northern Europe (Edwards 2002). All of these studies found notable inconsistencies in ethics education in terms of dedicated hours, availability and course content, both within and between countries. Some of the AFANet findings include a preference towards human-animal interactions and animal welfare ethics in detriment of environmental and socio-economic ethical issues (Edwards 2002), as well as a dearth of courses predominantly dedicated to bioethics along with a lack of teachers with a philosophy background (Gandini & Monaghé 2002; von Borell 2002).

The underreporting and underdevelopment of veterinary ethics courses may result from ethics not being traditionally seen as an independent subject and formal teaching in ethics not being explicitly set out in undergraduate veterinary programmes. Additionally, ethics can be related to a number of different subjects covered in veterinary training, such as animal welfare science, professionalism, animal law, and history of veterinary medicine (Magalhães-Sant'Ana *et al.* 2010). These different contextualizations of ethics as a subject could also represent dissimilar views of the aims and methods of teaching ethics.

An investigation on the teaching of Animal Welfare in European Veterinary Faculties by Nancy de Briyne concluded that "a specific evaluation of the animal welfare and ethics teaching per faculty, including the suggestion of recommendations for improvement, could be beneficial" (de Briyne 2008). Following this proposal, in January 2012 the FVE,

[47] Although Anabela Pinto makes no direct mention to Portuguese veterinary schools in the abstract, we assume that she is, in fact, referring to them because this communication was directed towards a veterinary audience, in what was - at the time - the most important veterinary scientific conference in Portugal.

together with the EAEVE and the EU FP7 research project AWARE[48], set up a working group on the development of a model curriculum for animal welfare (science, ethics and law) in European veterinary undergraduate education[49]. The working group took a top-down approach to curriculum development leading into a detailed syllabus based upon 6 chief intended learning outcomes (Morton *et al.* 2013). How this core curriculum is to be taught is only minimally described, enabling European schools to adapt the teaching of animal welfare science, ethics and law to their curricular strategies and objectives. In addition to drafting a list of recommendations on Day One competences, the working group also mapped the teaching of animal welfare science, ethics and law across Europe (Morton *et al.* 2013).

3.2 Educational Methodologies

The teaching of ethics can vary not only in terms of course contents (as discussed in the previously chapter) but also in terms of methodological approaches, i.e. the strategies used to develop ethical competences. Higher education has been traditionally focused on conventional methods of teaching that highpoint low-level cognitive competences. That is the case of teacher-centred approaches to teaching grounded on the transmission of knowledge (Jaarsma 2008). In Europe, educators have been progressively moving from deductive methods of teaching (such as lectures) to more inductive methods such as small group teaching (Jaarsma *et al.* 2009), a tendency further encouraged by the Bologna Declaration (cf. chapter 2.2). Inductive methods promote the acquisition of higher level competences by giving students a more active role in their own learning experience (Prince & Felder 2006). While effective lecturing intimately depends on the knowledge educators have on the subject (in order to properly instruct students), small group teaching relies more on the fact the educators' ability to facilitate learning, by triggering research questions and promoting the generation of new insights from all the students involved.

The following sections describe the most prominent methodological approaches to ethics teaching found in the literature, together with some of the arguments used for and against their use.

[48] AWARE – Animal Welfare Research in an Enlarged Europe. Available at: www.aware-welfare.eu/aware (27-12-2013).
[49] Available at: http://www.fve.org/news/papers.php?y=Animal%20Welfare (27-12-2013).

3.2.1 Lecturing and the use of ethical theories

Lectures are didactic methods of teaching and an effective way of imparting factual and theoretical knowledge. But lectures can achieve more than that: they also provide a 'human' face to the course, as well as an opportunity to arouse curiosity and interest in students (Dent 2005). In terms of intended learning outcomes, a traditional lecture format can only reach lower level cognitive competences which means that, as a result, students are expected to *recognise*, *recall* and *reproduce* the knowledge they were given (cf. Figure 4). But the development of higher level competences can be significantly enhanced with the introduction of interactive and cooperative learning techniques into the lecturing experience (Knight & Wood 2005), such as pre-class reading or quiz assignments, in-class personal response discussions (using 'clickers') and targeted feedback (Deslauriers *et al.* 2011). Results from a study in physics education suggest that inexperienced science teachers anchored on interactive and research-based teaching techniques can elicit more effective learning – along with higher attendance and engagement - than can experienced and highly rated instructors using traditional lectures (Deslauriers *et al.* 2011).

Lecturing is probably the main method used in the teaching of ethics (Ashcroft *et al.* 1998, Claudot *et al.* 2007). Additional didactic methods include seminars and workshops. Ozolins (2005) defends that the teaching of professional ethics should start by presenting the fundamental normative ethical theories (including virtue ethics, deontology and utilitarianism) followed by context specific case studies. Not surprisingly, these didactic methods have also been the traditional approach to medical ethics, with the inculcation of principlistic frameworks (Beauchamp & Childress 2001) dominating the teaching for several decades (Fiester 2007). Schillo (1997) argues that an ethics teaching approach limited to lectures fails to provide an adequate environment for students to make informed judgments since it does not promote critical thinking skills. The mere transmission of ethical knowledge can make students move away from their 'own moral experiences' (Molewijk 2008) and 'ethical intuitions' (Cowley 2005). In line with these observations, didactic methods of ethics teaching – emphasizing ethical theories – have been reported as being least successful in developing students' moral reasoning (Self *et al.* 1989; Clarkeburn 2002).

Several authors in medical ethics education have also argued against the teaching of ethical theories or principles and advocate for more practical approaches instead (Cowley 2005; Fiester 2007; Lawlor 2007; McCullough 2009). The criticism, however, is not against the validity of ethical theories or principles but against the way they are being

presented. Lawlor (2007) argues that the inherent complexity of philosophical theories (such as deontology and utilitarianism) does not allow students to retain their fundamental concepts. Alternatively, if the theory or principle is oversimplified for pedagogic reasons, the resulting 'caricature' will be of limited use to them (Lawlor 2007; Fiester 2007). Lawlor (2007) also cautions that the discussion of ethical theories could give the impression that ethical reasoning is just about applying an ethical theory to a case. Cowley (2005) discourages the use of ethical jargon – including the Four Principles – because it prevents students from using their 'ethical intuitions'. Cowley invites students and teachers to rely on their own vocabulary instead.

Despite of all criticism, the teaching of ethical frameworks has its place in bioethics education (cf. Kuhse & Singer 2009). As mentioned before (chapter 2.4), Illingworth (2004) puts great emphasis in the understanding of ethical theories in the development of ethical skills (in what she calls the *theoretical approach* to ethics) while others seem to use similar approaches in the teaching of animal bioethics (Hanlon *et al.* 2007; Sandøe & Christiansen 2008). In fact, ethical theories can work as "theoretical tools to help the reflective process" (Ozolins 2005, p.361). Ethical theories also may help students realize that ethical issues can be approached from different standpoints (Sandøe & Christiansen 2008). In addition, ethical theories are benchmarks against which students' personal moral identity can be built upon (Hanlon *et al.* 2007).

3.2.2 Small group teaching and the use of case studies

Small group teaching is a broad concept that includes several methods of self-directed learning in group settings that promote a student-centred education (as opposed to teacher-centred). Two main strategies are usually highlighted: Case-based Learning (CBL) and Problem-based Learning (PBL)[50]. While CBL relies on tutorial guidance to allow a structured follow-up of the case, PBL usually entails a more open-ended line of inquiry, leaving up to the student how to proceed with the case (Srinivasan *et al.* 2007). For the purposes of this thesis no distinction will be made between the two and the term 'small group teaching' will refer to any interactive instructional methods based on problem solving and peer discussion within small groups.

The benefits of small group teaching have been extensively described in medical ethics education. Self and colleagues (1989) compared the use of lectures and case study

[50] PBL and CBL are intimately related to other minimally guided approaches to teaching such as discovery learning, inquiry learning, experiential learning, constructivist learning and research-based learning. Exploring concepts such as these is outside the scope of this thesis.

analysis for incorporating ethics into the medical curriculum, in terms of the development of moral reasoning in students. While the differences between the two strategies were not statistically significant, the fact that students in the case-study group improved their moral reasoning scores suggested that small-group teaching can have better effects in students' moral reasoning development than the lecture format. In a later study, Self *et al.* 1998 showed that students exposed to 20 or more hours of small-group case-study discussion presented a significant increase in moral reasoning, while groups with less than 20 hours of teaching did not. The justification given for these benefits is that small group case study format sets-off 'cognitive dissonance', a mental conflict that stimulates students to look for novel and more sophisticated explanations to solve ethical issues, thus promoting a stepping-up in terms of stages of moral development (Self *et al.* 1989; 1998).

Hanlon (2005) offers a detailed account of the use of PBL for developing ethical skills in veterinary students. Preclinical students are presented with moral dilemmas in veterinary practice with the purpose of allowing them to identify the ethical issues involved, to critically reflect upon them and to discuss different points of view with the help of a facilitator. The PBL experience is enhanced if real-life clinical cases are used and these cases can be personalised in order to align with the session's intended learning outcomes. The outcomes of PBL are dependent of the experience of the facilitator and the support given to the students, the quality of the cases presented, and adequate timetabling (Hanlon 2005).

The use of small group teaching is not without shortfalls. When compared with lecturing, small group teaching is more demanding for the teaching staff, not only in terms of the numbers needed but also in terms of the required expertise (Mattick & Bligh 2006). In addition, Tarlinton *et al.* (2011) suggested that students' lack of confidence to speak in front of their colleagues can work as a barrier to the use of PBL in veterinary undergraduate education. The case has also been made that a curriculum based on problem solving, by itself, does not guarantee that critical thinking is being promoted (Thornburg 1992) and especially when peer-facilitation is used. In fact, it has been reported that medical students in peer-facilitated sessions can take astute 'short cuts' in order to simplify the assignments, getting them done faster, and even avoiding group discussion altogether (Steele *et al.* 2000).

Although case study methodology is considered a practical approach to teaching, it still does not engage students in genuine experiential learning. Ethical cases studies are imperfect substitutes of real-life dilemmas because ethical dilemmas take place in complex and dynamic social environments, which involve multiple stakeholders

(Atkinson 2008). Therefore, approaches to ethics teaching that allow exploring students' personal experiences are also needed.

3.2.3 Portfolios and other methods of self-directed learning

Portfolios - Portfolio is defined as "a collection of student work, which provides evidence of the achievement of knowledge, skills, attitudes, understanding and professional growth through a process of self-reflection over a period of time" (Davis & Ponnamperuma 2005, p.346). A portfolio is a self-directed method of learning that encourages the development of reflective skills in students (Mossop & Senior 2008), which can make it a very effective tool in the teaching and assessment of professionalism and ethics (Friedman Ben David *et al.* 2001; Mossop & Cobb 2013).
There are virtually no limits to what a portfolio might contain (Shumway & Harden 2003) and they can be used to record a wide range of learning environments, such as lectures, small group sessions, placements (EMS), and forums (Mossop & Senior 2008). Through portfolios, teachers can gain access to students' competences, including those from the affective domain (Davis & Ponnamperuma 2005), over a period of time and make a record of their learning performance. Students, on the other hand, are given the opportunity to describe and reflect upon all their teaching experiences, both formal (lectures, assignments) and informal (incidents, peer discussions). Few descriptions of the use of portfolios in veterinary education are available. Mossop and Senior (2008) describe the positive experiences of implementing portfolios at Nottingham and Liverpool; points for reflection include how to assess students' learning performance and differences in their level of engagement with the tool.

Other methods – Several methods of self-directed learning of ethics have been reported in the literature, such as web tools, role-play, drama, and critical writing/reading. Atkinson (2008) explores the use of **creative writing** to enhance the case-study teaching experience in courses of research ethics. Creative writing techniques promote cognitive processes, including critical thinking and moral reasoning (Atkinson 2008). Schillo (1999) has suggested a combination of **critical reading** and **role-playing** as a way to develop 'moral imagination' in students, i.e. the ability to understand moral issues and identify new ones, while Illingworth (2004) recommends the use of role-play in the teaching of ethics as a way to avoid 'deep theory'. Others have demonstrated the benefits of **short-film discussions** in the development of moral reasoning of first-year medical students (Self *et al.* 1993b).

Mills (1997) has reported the successful use of (live and video) **dramatic scenarios** for teaching "the human side of veterinary practice" to veterinary students, including end-of-life communication skills. Mills suggests that the opportunity to immediately discuss emotional responses, the use of realistic cases and anecdotal and humorous accounts have contributed to the success of the teaching. Measurement of success, however, was mostly based upon students' satisfaction with each learning exercise. The use of drama is limited by time, expertise and resources, including competent playwriting, trained actors, and video production.

The use of **e-learning tools** is becoming increasingly popular and several open access electronic tools have been developed to enhance teaching in animal welfare and ethics (*WSPA's Concepts in Animal Welfare,* de Boo & Knight 2005[51]; *Animal Ethics Dilemma,* Hanlon *et al.* 2007[52]; *Animal Welfare Judging and Assessment Competition*, Siegford *et al.* 2005[53]). These are readily available for veterinary educators worldwide and provide a diversity of insights into the topics. An important point to bear in mind is that an e-learning tool must be constructively aligned with the established learning outcomes.

3.3 Who should teach ethics and the role of educators

One of the main – and first – challenges for teaching professional ethics is defining who should teach it. Given the multidisciplinary nature of ethics, finding the suitable instructor can be difficult. An ethics teacher should not only have a strong background in ethical theory but also the educational qualities needed to adapt teaching approaches to the ethical reasoning skills of the students (Goldman & Arbuthnot 1979). He or she should also be familiar with the technical and professional issues at stake in the field of veterinary medicine, in order to provide a meaningful ground for the construction and application of ethical cases (de Cock Buning & ter Gast 2005). In order to tackle this conundrum, the literature fosters collaborative teaching between bioethicists and scientists (Illingworth 2004; Dich *et al.* 2005; Ozolins 2005; Gjerris 2006). Having two lecturers – one trained in the scientific field and another one trained in ethics – may enhance the teaching experience of professional ethics.

Another important issue concerns the role of the educator in an ethics session. In this regard, two competing educational approaches can be considered: one that puts the emphasis on the expertise of the teacher on prominent ethical issues – often used in

[51] Available at: http://www.animalmosaic.org/education/teaching-animal-welfare/ (27-12-2013).
[52] Available at: http://ae.imcode.com/ (27-12-2013).
[53] Available at: http://animalwelfare.msu.edu/animalwelfare/contest (27-12-2013).

lectures – and another that relies mostly on the views of students, in which teachers work as tutors and which is usually used in small group teaching.

Regarding these two approaches, it is sensible to acknowledge that lecturers can teach ethics without presenting their own views of the subjects. On the other hand, it is also reasonable to think that not all tutors are absolutely impartial. Anzuino (2009) considers that educators in ethics should be impartial for most of the time, presenting however several reasons why, at some point, they should express their own viewpoints. According to Anzuino (2009), conclusions and decisions should be drawn from every discussion (including ethical discussions) hence avoiding a relativistic view of ethics where all opinions are equally valid. Also, if a teacher is trying to get students to share their viewpoints he is also expected to do the same. Finally, teachers can work as specialists providing a knowledgeable view of ethical issues that can help students make sense of their own views (i.e. learning by example) and the views of others (media, books, relatives, etc).

3.4 When to teach and the place of ethics within the curriculum

Incorporating ethics within a veterinary curriculum can be achieved through two fundamental strategies: by integrating ethics into existing core courses or modules, or by introducing a separate course or module of ethics into the curriculum. Each strategy has its advantages and disadvantages, and usually a combination of both is endorsed by the literature. Thornton *et al.* (2001) for example, rely on the example of medical education to recommend a "vertical teaching with nodes" – a theme revisited by Main (2010) – where ethics is taught across the board, but with special emphasis at the beginning, halfway and closer to the end of the veterinary course. Teaching in the first year should make students *identify* ethical issues as well as their own ethical stance; the transition from pre-clinical to clinical training should be used to make students reflect upon and *evaluate* the ethical issues to which they have been exposed; in the clinical years students should be trained in ethical decision-making in order to address ethical issues in practice (Thornton *et al.* 2001; Main 2010). These authors seem to foster a teaching of veterinary ethics that is imbedded in the subject of animal welfare, a tradition that has been advocated for North American veterinary universities more than two decades ago (Friend 1990) and that is at the heart of the very recent report on European Veterinary Education in Animal Welfare Science, Ethics and Law (Morton *et al.* 2013).

Given the overlap between the subjects of 'ethics' and 'professionalism' – as previously discussed in section 2.7.3.1) – some authors in medical education consider that these subjects should be integrated and taught together (Cruess & Cruess 2008) while others

prefer to highpoint their distinctive identities (Rogers & Ballantyne 2010). The debate is often about whether the teaching of professionalism encompasses the subject of ethics (Wear & Kuczewski 2004) or, on the contrary, if "ethics trumps professionalism" (Hester & Kovach 2004, p. 52). This debate is yet to reach the arena of veterinary education, but two conflicting views are here described: grounded on the literature on medical professionalism, Mossop and Cobb (2013) consider that veterinary professionalism should be embedded throughout the curriculum instead of being taught as an independent subject; Thornton *et al.* (2001) seem to defend exactly the opposite for veterinary ethics: that it must be "taught as a separate entity" (p.214), a subject "in its own right and not be an 'add-on' or become part of another subject" (p.216).

3.5 Assessment Strategies

3.5.1 Assessing ethical competences in veterinary students

Although assessing students is only marginally a part of this research, it is nonetheless an important concept to consider, since the challenges put forth in ethics teaching also entail the question of how to assess learning. Measuring the moral competences of veterinary students is indeed complex and likely to be more troublesome than for other subjects. Ethical competence does not depend solely on the acquisition of cognitive abilities – as opposed to the more science-based disciplines – making it difficult to develop appropriate measures of student learning.

As a starting point for reflection, Hafferty (2006) poses three questions to the assessment of medical professionalism that can as easily apply to the teaching of veterinary ethics:

a) How to effectively assess a subject that is delivered through a variety of learning environments and both formally and informally?
b) How to assess a subject that is, at the same time practice and identity?
c) And how to design a system of evaluation that assesses both learners and their learning environments?

When assessing a subject like anatomy the focus is on the final answer and not in the process to get there. It is irrelevant how the student learned to correctly name the anatomical structures and to describe how they relate with each other. In assessing ethical reasoning, however, the focus is not on the final decision or answer but rather on how the student arrives at that decision. When faced with a complex ethical challenge

(e.g. what to do when confronted with a case of animal abuse?), two veterinarians might get to the same conclusion (e.g. I will report it to the authorities) through distinct reasoning paths, whether it is by applying rudimentary moral reasoning ('I can face disciplinary actions if I don't') or by making use of more sophisticated ethical principles and reasoning ('because it's my duty to protect the integrity of the animal'; 'because I could be rehabilitating the abuser'; 'because he might also abuse fellow humans'; 'because it is in the best interest of society'; etc.).

The literature on medical ethics is consensual in regard to ethics being a subject for which students' learning should be formally assessed[54] (Ashcroft et al. 1998; Goldie *et al.* 2002). Having a procedure of formal learning assessment a) allows that the aims and contents of the teaching are scrutinized and evaluated at the institutional level; and b) helps ethics gaining credibility amongst students (Calman & Downie 1987; Miles *et al. 1989;* Savulescu *et al.* 1999). It also sends a clear message – both to the faculty and to society - about the importance of ethics for medical practice (IME 2013). Similar arguments have been used to advocate formally assessing veterinary ethics (Thornton *et al.* 2001, Main 2010, Morton *et al.* 2013). Moreover, it cannot be expected that veterinary ethics emerges as an autonomous academic field if reliable and valid methods of assessment are not sought.

A 'gold standard' for assessing medical ethics is yet to be identified (Goldie 2000). The choice of assessment strategies will obviously depend of the competences students are expected to demonstrate. Hence, when devising a learning assessment method, the learning outcomes to be assessed must be clearly identified and aligned with the curricular programme (IME 2013). Moreover, those intended learning outcomes should be made available at the beginning of the exam so that students are fully aware of what is expected from them. Nevertheless, assessment standards should "measure competence rather than excellence" (Rogers & Ballantyne 2010, p.251), as students cannot be expected to act as fully trained professionals.

Written methods of assessment (such as Multiple Choice Question exams (MCQs) and short answer exams) are limited to assessing only basic *knowledge*, although they are reliable and cost-effective. Other methods allow a more in-depth assessment (measuring *understanding* and *analysis*) but are more staff-demanding and pose more challenges in terms of reliability and validity. These include short essays, case analysis written exams,

[54] Formal assessment can be *summative*, as a way to evaluate if students have reached the learning outcomes (usually through a final exam) or *formative*, which occur during the teaching period as a way to shape and promote students' learning (Fuentealba 2011).

portfolios, group presentations and observation of clinical performance (Shumway & Harden 2003; IME 2013; Figure 8).

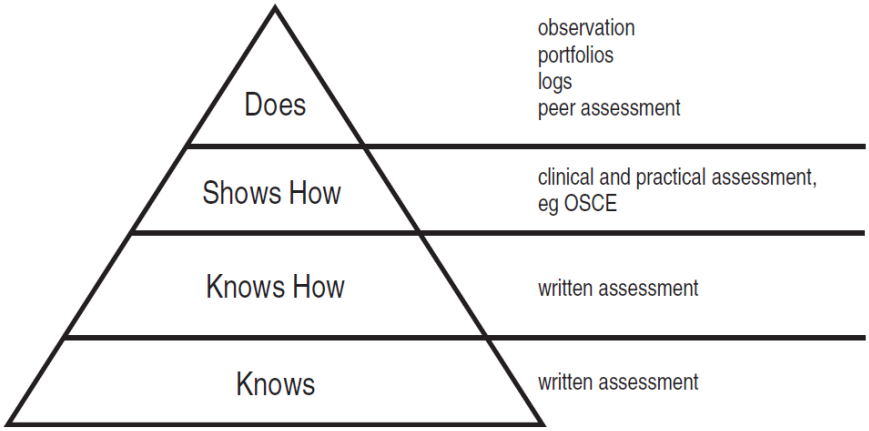


Figure 8 – The learning assessment pyramid based on Miller's (1990) Pyramid of Clinical Competence (*facsimile* from Shumway & Harden 2003, p.578).

With regards to ethics-related learning outcomes, Schillo (1997) suggests that take-home exams or projects might be preferable for measuring critical thinking skills because students need time to develop these competences. Ethics' topics can also be integrated into clinical and practical assessments using Objective Structured Practical Examinations (OSPE), including professionalism, value-aware communication, and ethical decision-making (IME 2013). Measuring affective competences – such as empathy and compassion – also raise additional challenges in terms of ethics assessment (Goldie 2000). Adopting a range of different methods is likely to be the best approach in order to obtain a meaningful picture of students' learning.

3.5.2 Assessing ethics teaching through cognitive moral development

Following Kohlberg's cognitive development theories in the second half of the 20th century (cf. chapters 1.5 and 2.5), considerable research has been devoted to the measurement of moral thought and of how teaching approaches may help in its development. Through the years, different tests have been devised in order to measure the moral development of students (e.g. Moral Judgment Interview (MJI), Defining issues Test (DIT), Problem Identification Test (PIT), Moral Justification Scale (MJS), Sociomoral Reflection Measure (SRM), Test of Ethical Sensitivity in Science (TESS)). Although different in terms of approach (interview, vignettes, written test, MCQ), these tests are comparable in their ability to measure the moral stage in which a person stands in

response to a predefined set of ethically challenging situations. The Defining issues Test (DIT), which started out as a "quick and dirty" (Rest *et al.* 2000, p. 391) alternative to the Kohlberg's moral judgment interview, has become the most popular and studied[55] tool for measuring moral competence and moral development (Savulescu *et al.* 1999; Bebeau 2002).

While most of the literature in terms of measurements of moral reasoning concentrates on young children and adolescents, studies have also been conducted in college students in fields such as human medicine (Self *et al.* 1989; Akabayashi *et al.* 2004), pharmacy (Latif 2000), biology (Clarkeburn *et al.* 2002) and veterinary medicine (Self *et al.* 1991; 1993a; 1996). However, comparisons are hard to make because of the methodological differences between them which can contribute to the emergence of contradictory findings (cf. Self *et al.* 1993a). Moreover, measuring students' moral reasoning by relying on moral development tests has been criticised for adopting a particular (justice-oriented) view of moral development and for failing to present students with ethical dilemmas that relate to practice (Goldie *et al.* 2002). Recent reports seem to indicate that the development of moral reasoning assessment tools specific for veterinary students may be under way (Wiseman-Orr *et al.* 2009).

The introduction of this thesis was devoted to explore, with as much detail as possible, the relevant literature that helps disclosing the reasons why ethics is important to veterinary students (*why*), the educational aims and core competences in ethics teaching (*what*), and the teaching and assessment methods used to deliver and evaluate those competences (*how*). The review of the literature will be used to inform the results from the in-depth examination of veterinary ethics teaching approaches, as presented in the following chapters.

[55] According to Rest *et al*. (2000) the DIT fulfills several criteria of reliability and robustness: a) DIT scores are significantly related to cognitive moral capacities as described by Kohlberg, and namely to post-conventional moral reasoning; b) DIT scores are sensitive to moral education interventions; c) DIT scores are significantly linked to desirable ethical behaviours and to increasing professional decision making abilities; d) DIT is equally valid for males and females, i.e. gender accounts for less than 0.5% of the test's variance.

SECTION II

EMPIRICAL RESEARCH METHODS

4 INTRODUCING THE EMPIRICAL RESEARCH

4.1 Aims of the research project

The teaching of ethics is now an integrating part of undergraduate life science curricula and the veterinary medical education is no exception. But in what way should ethics be introduced within veterinary education? One particular challenge with a topic such as ethics is the diversity of perceptions it may entail. People have different understandings of what an ethical veterinarian is. Ethics is a buzzword and not always used with the same meaning: for some veterinarians ethics could be about obeying to the rules of the profession while for others it is about behaving virtuously. Disagreement can also be found in terms of professional outcomes: a good veterinarian could be the one whose main drive is to protect the health of humans and animals; from a different perspective a good veterinarian is the one who seeks to defend animal welfare above all things. The plurality of conceptions of ethics, besides individual variations, can also be due to cultural differences or to the various roles veterinarians have within contemporary society, and may represent a further challenge to its inclusion in the European undergraduate veterinary curricula. In an environment where veterinary students are invited to move freely across the European Higher Education Area there is a need to understand how ethics is being taught in different countries, and how the teaching in ethics relates to the overall curriculum, and especially with professionalism, animal welfare and animal law.

A number of challenges are faced by those who deliver veterinary ethics courses. Despite the wide recognition that ethics needs to be part of undergraduate veterinary education, there is limited empirical research examining the reasons for teaching ethics to veterinary students (*Why)*, the concepts and topics that are being taught (*What)* and the educational approaches applied by veterinary schools (*How)*. With the overarching objective of increasing knowledge and understanding of ethics teaching in European vet schools, the specific aims of the research presented in this thesis are to:

a) map how ethics is presently taught at European veterinary schools (chapter 5);
b) identify the educational aims for teaching veterinary ethics (chapter 6);
c) identify the topics which are part of a curriculum of veterinary ethics (chapter 7);
d) examine how a curriculum of veterinary ethics can be operationalized (chapter 8);
e) develop a theoretical framework that can help exploring the concept of ethics in veterinary education (chapter 9).

The focus of this analysis is limited to undergraduate ethics education (bachelor and masters levels); in a context of harmonization of the European Higher Education Area (Bologna Process), a diploma in Veterinary Medicine from any of the schools within the EU that are recognised under the European Directive 2005/36/EC grants license for exercising the veterinary profession in any other EU country. Thus, by concentrating on the undergraduate veterinary curriculum, it is expected that the results from this investigation are also relevant for other European institutions. In addition, this investigation can contribute to the establishment of a European wide agreement on the learning requirements in veterinary ethics, which is also important in terms of professional mobility.

4.2 Overview of research methods

This research project had four main stages spanning four and a half years (Figure 9):

a) The mapping of ethics teaching in Europe (2010)
b) Analysis of case studies: documentation and interviews with educators (2011)
c) Analysis of case studies: focus groups with students (2011-2012)
d) Integrating the findings and publication outcomes (2012-2013)

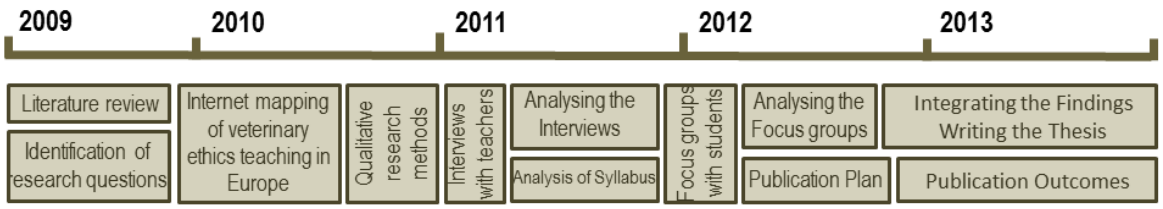


Figure 9 – Chronogram illustrating the timeline of the PhD project including the tasks and the methodological tools that were used.

The research project used a combination of quantitative – internet mapping – and qualitative research strategies, including analysis of study programmes, interviews with educators and focus groups with students. The methods chosen reflect the questions being addressed at a particular time of the project. The research started by identifying the approaches that could be used to teach ethics to veterinary students based on relevant literature and on three preliminary examples (Magalhães-Sant'Ana *et al.* 2009). Because the field of veterinary ethics is relatively new and the literature in veterinary ethics education is scarce, there was a need to look at the teaching in other health care professions, and especially the literature in medical ethics. Building on these preliminary

findings the study followed towards providing a general overview of how European veterinary faculties were addressing the topic of ethics at the present time. This was achieved by conducting a search of internet-based curriculum resources which is presented in detail in chapter 5.

The mapping of veterinary ethics teaching across Europe generated a set of hypotheses that needed to be further explored. In order to get deeper insight into some of the experiences in teaching veterinary ethics a qualitative approach relying on case studies was sought. Within a broader European diversity, three veterinary schools were selected as study cases: Faculty of Life Sciences, University of Copenhagen (Copenhagen); School of Veterinary Medicine and Science, University of Nottingham (Nottingham), and Faculty of Veterinary Medicine, Technical University of Lisbon (Lisbon).

Case study research is an inductive research strategy that allows a contextualized investigation of a given phenomenon (Gillham 2000). Case study investigation usually involves a combination of qualitative research strategies - such as observation, documentation and interviewing - and hence enabling data triangulation (Fitzpatrick & Boulton 1994). In each of the schools I performed semi-structured interviews with the educators somehow involved in ethics teaching and carried out focus group sessions with students at different stages of the veterinary course. Data from the syllabi in veterinary ethics were used to inform the construction of the interview guides as well as to provide research themes for the content analysis of interviews and focus groups.

Semi-structured interviews are a well-established qualitative methodology. They allow a flexible and in depth investigation of unexplored topics (Fitzpatrick & Boulton 1994, Sankar & Jones 2008) and were chosen as a way to generate as much relevant information as possible around the subject of ethics teaching More specifically, the purpose of the interviews was to investigate the aims, contents and methods used in teaching ethics and ultimately to address how the educational goals relate to the teaching approaches. In the case of the focus groups, the aims were in exploring how students perceive their learning experiences in ethics and its wider role in veterinary education. It was essential to stimulate a discussion where students could present their perceptions and feelings in a safe and friendly environment, and focus group methodology offered the best prospect of retrieving valuable and meaningful data (Simon & Mosavel 2008). The interviews with educators took place during the curricular year 2010-2011. Students' focus groups took place in the subsequent curricular year (2011-2012) in order to ensure that all the participants had been exposed to the same teaching described by the teachers. A step-by-step look into the methods that were used in this research follows.

4.2.1 Selection of case studies

In order to address the challenge of selecting the veterinary schools to be included as case studies some aspects have to be considered. There are more than one hundred veterinary teaching establishments throughout the European continent (and even further into the Middle East) that are members of the European Association of the Establishments for Veterinary Education (EAEVE). Although almost every country[56] has at least one veterinary school, the majority of the schools are situated in the Mediterranean region (Portugal, Spain, Italy and Turkey together account for almost half of them: 45).

Another important point to be taken into account is the diversity of curricular approaches found in European veterinary courses. Schools have the autonomy to organize the study program in order to apply their educational objectives and to reflect broader cultural values and national needs. With this in mind, three sites were used in this study, specifically Copenhagen, Lisbon and Nottingham. The three schools were chosen both as a matter of convenience but also and more importantly, because they, taken together, provide a range of the pedagogic[57] and historical dimensions seen in veterinary schools in Western Europe:

a) Copenhagen is the heir of one of the oldest veterinary schools in the world (s.1773) and the only veterinary school in Denmark. The recently restructured curriculum is horizontally integrated and partially differentiated (Jensen 2006).

b) Lisbon was the first Portuguese veterinary school (s.1830) and is placed in a southern European country with several national veterinary faculties. It has a traditional horizontal (non-integrated; non-differentiated) curriculum restructured in 2005 for compliance with the Bologna Process.

c) Nottingham is the first new veterinary school in the UK for more than 50 years (2006) - the first cohort of students graduated in 2011 - with a clinically integrated, outcomes-based programme and using a problem-oriented approach. The inclusion of ethics was part of the original programme development.

The three schools were also chosen because the initial scoping of the curriculum (namely using the abovementioned internet search) indicates that they represent a

[56] The exceptions are the smallest of the European countries (e.g. Andorra and Luxembourg).
[57] The three faculties have been approved by the EAEVE for fulfilling the requirements in quality of education.

diversity of curricular approaches to ethics. It is expected that this diversity will enrich the data set. In Nottingham, the teaching is integrated both horizontally and vertically, with ethics topics found in modules across the five years. In Copenhagen, the unit of ethics runs in the first year, with supplementary lectures later in the course. In Lisbon, ethics is mostly taught in the first year and is divided in two distinct components, professional deontology and bioethics. The curricula of ethics at the study cases are analysed in detail in chapter 8.

4.2.2 Study programmes

The study programmes (curricular year 2010-2011) of ethics-related subjects originated from two main sources: they were either retrieved from the website of the institution or provided by the teachers themselves. It was important to retrieve factual information directly from the teaching personnel since schools do not always provide detailed on-line information on the veterinary curriculum and the information that is available can be outdated or incomplete (as discussed above). That was seen to be the case at two of the study cases: in Copenhagen the study programmes were not accessible at the website of Faculty of Life Sciences and the information provided in Nottingham was limited. In addition, in Nottingham the modules have been changing, following the developments of the veterinary curriculum.

In order to minimize the gap between the declared and the taught curricula, additional materials have been collected from teachers at the three schools: in Copenhagen access was granted to the scheduling of the lectures, including the themes being discussed and the invited speakers. In Lisbon, a list of possible themes for the short essays (used as part of summative assessment) was provided. In Nottingham, access was granted to the problem solving exercises used in the first year module on Personal and Professional Skills (PPS1) and the ethics clinical relevance cases used in PPS2 (in the second year).The descriptors of the courses (or modules) in veterinary ethics (curricular year 2010-2011) are presented in Annexe 5.

4.2.3 Interviews with educators

Semi-structured interviews were carried out with educators involved in the teaching of veterinary ethics or ethics-related subjects at each of the three schools (curricular year 2010-2011). The purpose of the interviews was, in addition to get the facts of how the course works, to try to understand the reasons behind the teaching methods as well as more general personal views on veterinary ethics teaching.

Sixteen interviews took place between Jan.-Mar. 2011 and one in Nov. 2011. The 17 interviewees (13 women and 4 men; 10 veterinarians and 7 with a variety of backgrounds[58]) were selected via snowball sampling, starting from a list suggested by a designated key contact person at each school. Sampling respondents for the interviews was continued either until all individuals meeting the criteria were recruited or saturation was achieved. In Lisbon the three individuals who were identified to be involved in the teaching of ethics-related subjects were interviewed. In Copenhagen, the core teaching staff of the ethics course was interviewed, except one who is supervisor of this research project, as well as two veterinarians (one small animal practitioner and one large animal practitioner) who regularly participate in the teaching as invited guest lecturers. In Nottingham, full range saturation of interviewees was achieved after interviewing eight educators. One educator who supervised this research project was not interviewed or involved in the interview process.

Written consent was sought for every participant and an information sheet stating the aims and methods of the research was handed in advance. The face-to-face interviews lasted on average one hour (ranging from 35 to 95 minutes) using the interviewee's native language, except in Denmark where English was used. Each of the interviews was digitally recorded, transcribed verbatim and anonymised. Respondents were asked if they wished to provide feedback on their transcripts such as to check for errors or misspellings. One year later, some additional questions were made to four of the interviewees - including the brief 35 minute interview - in order to clarify some answers and explore some topics that needed further depth. These second meetings followed exactly the same procedures used for the original interviews.

In preparation for the interviews, a guide was developed and used in pilot interviews with four educators teaching ethics to other life science courses (medicine, biology and biochemistry) and revised appropriately. These sessions were also used to train the author in conducting semi-structured interviews. The interview began by introducing the research project, explaining the objectives of the interview and dealing with the issues of privacy, anonymity and informed consent. Interviews started by asking the interviewees to clarify their role in respect to ethics teaching and within the overall veterinary curriculum. This was followed by methodological questions focusing on teaching strategies, learning objectives and assessment methods. The interview ended with more exploratory questions on the relevance of ethics as a subject, its recognition as a part of

[58] The backgrounds include: sociology, theology, geography, physiology, zoology and biology.

veterinary education and suggestions for future improvements. The interview guide can be found in Annexe 3.

4.2.4 Focus Groups with students

One focus-group interview with students was carried out *on-site* at each school and moderated by the author (curricular year 2011-2012). The interviews at Copenhagen (N=7) and Lisbon (N=10; Picture 1) took place in December 2011 and lasted about two hours. The one in Nottingham (N=7) was held in March 2012 and lasted one and a half hours.

Recruitment was carried out by someone directly involved with the teaching of ethics within each faculty and following specific instructions described briefly here and also supplied as annexe (Annexe 4). Purposive sampling was used (Simon & Mosavel 2008), i.e. the selection of the students was done in such a way to ensure diversity in terms of gender, curricular year, background (rural, urban) and previous experience with animals (no experience, small animals, farm animals). Table 1 describes the sample frame for the focus group sessions:

Table 1 – Sample framing for the focus group sessions with students.

COPENHAGEN				LISBON				NOTTINGHAM			
Student	**Gender**	**Age**	**Year**	**Student**	**Gender**	**Age**	**Year**	**Student**	**Gender**	**Age**	**Year**
Cs-1	F	21	3	Ls-1	M	19	1	Ns-1	F	22	1
Cs-2	F	24	4	Ls-2	F	23	6	Ns-2	F	27	1
Cs-3	F	21	5	Ls-3	M	18	1	Ns-3	F	25	2
Cs-4	F	20	2	Ls-4	M	20	3	Ns-4	F	19	2
Cs-5	F	22	4	Ls-5	F	19	2	Ns-5	F	20	2
Cs-6	F	22	3	Ls-6	M	26	5	Ns-6	F	22	4
Cs-7	M	24	1	Ls-7	M	25	6	Ns-7	F	22	4
-	-	-	-	Ls-8	M	22	4	-	-	-	-
-	-	-	-	Ls-9	F	20	2	-	-	-	-
-	-	-	-	Ls-10	F	21	3	-	-	-	-
Previous experience includes: Pig farming, small animals, biomedicine, dairy farming, no previous experience				**Previous experience includes:** Horses, human medicine, biology, small animals, no previous experience				**Previous experience includes:** Horses, small animals, biology, humanities, no previous experience			

The reason for choosing purposive sampling was that group interaction is enhanced if participants are expected to express different opinions and insights. The more diverse the group is, the more likely it is to elicit meaningful data. The students interviewed included 17 female and 7 male students, ranging from 18 to 27 years of age (mean =

21,83; moda = 22). The interviews run using the students' native language, except in Denmark where English was used. In this case, student recruitment had considered proficiency in the English language.

Students had been given a hand-out inviting them to participate in a group discussion concerning some aspects of their graduate education and of how the veterinary education prepares them for a future life as veterinarians. They were oblivious to the specific objective of the interview. The students involved have had at least some teaching in ethics during the veterinary course. They also had no previous contact with the author, who conducted the interviews. At the start of the interview, each participant gave written informed consent to participate in the study. Refreshments were available at the start, and at the end of each interview participants were given small gifts (a key holder and notebook made out of cork).

Picture 1 – A room at the University of Lisbon has been prepared for the focus group with the students in order to promote a comfortable and friendly environment. The interview guide can be seen in the bottom left corner.

An interview guide had been developed and subjected to a pilot group of veterinary students at another school[59] and revised appropriately. This experience was also used to train the moderator. A semi-structured approach was used to guide the conversation towards ethics (cf. interview guide in Annexe 3). The discussion started by exploring the concept of being a good vet. Each student was asked to define in writing what they understood as being a good vet, followed by a facilitated discussion of the different definitions. Thereafter, the students as a group were asked to rank the relative importance of a series of subjects common to every European veterinary curriculum, and including Professional Ethics. Students were then presented to a practical ethical-clinical case (Box 6) in order to deal with it as a group. The interview ended with some descriptive questions about ethics, generating a discussion around the relevance of the subject and the way it was being delivered and assessed. Each session was digitally recorded, transcribed verbatim and anonymised. A more thorough description of the focus group methodology follows.

[59] Escola Universitária Vasco da Gama, Coimbra, Portugal, 3rd Nov. 2011 (N = 4; total time: 2h).

a) Introductions

Participants started by introducing themselves to create familiarity and including the answer to two questions: why they had decided to become vets and which were their future professional expectations. These were used not only to start the conversation going but especially to bring out differences between participants, which could be later used as a baseline to explore eventual ethical issues and to instigate discussion.

b) Concept of a Good Vet

Students were given several minutes to write on a small piece of paper what it meant for them to be a good vet. Students were then invited to read their answers to the rest of the group. The moderator made a few comments on the patterns and differences that emerge and invited participants to further explore their arguments. This exercise was purposely set out at the beginning of the interview in order to draw out each individual's description of the concept before a group discussion started. The purpose of having a description of a good vet – drawing on both the individual differences and the group discussion – was to shed light on the nature of the teaching in each of the veterinary schools. It was also expected that it may allude to some broader views of the veterinary profession at each country.

c) Ethics within the curriculum

Students were asked to - collectively - organize a group of ten subjects (using vignettes), compulsory at every European veterinary curriculum, by order of importance to their training as vets (Table 2). They were free to arrange the vignettes in any way they wanted. The purpose of this exercise was to promote a discussion around the contribution of each subject to their education as vets, and allowing ethics to be framed in relation to other prominent subjects. Eventually, this could make students talk about their learning experiences in ethics.

The European Directive 2005-36-EC on the recognition of professional qualifications was used as a starting point in order to select a set of nine subjects, included in the veterinary curriculum, alongside professional ethics. These subjects were chosen by a group of six experienced veterinarians (external to this research) and working in a combination of different fields of knowledge (pharmaceutical, academia, small animal practice and large animal practice). These respondents were invited to choose those subjects from the European Directive 2005/36/EC that they considered to be the most important in veterinary education: two Basic Sciences (out of ten), three Clinical Sciences (out of twelve), and three Animal Production subjects (out of seven). The most voted were

selected and professional ethics (which was not voted) added (Table 2). Food Hygiene, which comprises only one subject (Food Hygiene and Technology), was also not voted.

Table 2 – Selected subjects compulsory at every European veterinary curriculum (as per European Directive 2005/36/EC, on the recognition of professional qualifications).

CATEGORIES	Specific Subjects
BASIC SCIENCES	Anatomy (including histology and embryology)
	Physiology
	Professional Ethics
CLINICAL SCIENCES	Clinical medicine and surgery (including anaesthetics)
	Preventive Medicine
	Pathology (including pathological anatomy)
ANIMAL PRODUCTION	Animal Production
	Animal Nutrition
	Animal Ethology and Protection
FOOD HYGIENE	Food Hygiene and Technology

d) Ethical-Clinical case

Students were then presented to a practical ethical-clinical case (Box 6). The case was chosen because it depicts a typical moral dilemma caused by the conflict between the value of life versus the need to protect the welfare of the animal (to treat or to euthanize); it also involves communicating with a grieving owner and professional relations with a veterinary colleague. Although complex, the case is feasible and relates directly to practice, eventually

> You are a small animal practitioner, working at your own practice. You get a queen (a female cat) - which was neutered elsewhere two days ago - with a history of acute abdominal pain. The cat is obviously suffering (depression; tense abdomen; 10% dehydration; 40^{o}C; dyspnea) and the chances of recovery seem to be poor. The grieving owner threatens to press charges against the vet responsible for the routine surgery and asks for your opinion on it.
>
> *How would you deal with this case?*

Box 5 - Ethical-clinical case presented to the students in the focus-group session

making it more appealing to the students. In order to resolve the ethical-clinical case scenario students are expected to make use of different ethical competences and the results from this particular exercise are explored in great detail in chapter 7.

4.3 Data Analysis

A detailed description of the several qualitative analytical approaches used to answer the three main research questions can be found in the following section. The approaches have in common the fact that the transcripts from interviews and focus groups were analysed by content (Stemler 2001, Forman & Damschroder 2008) using NVIVO 10, a qualitative research analysis software (© QSR International 2013).

4.4 Ethical approval

This investigation was deemed to be a low-risk research study and the ethical approval procedures considered appropriate within each school and country were followed. This research involves the use of human participants and anonymised human data, in which participants consented to the future use of the data for research purposes. It does not involve the collection of sensible information and no foreseeable risks associated with taking part of it were identified.

All research participants were approached with permission from the institutions. All participants were provided with an information sheet in advance and the consent forms were read and signed by all participants. Formal ethical review (institutional authorisation) was not required at both Copenhagen and Lisbon. In Nottingham, an Ethics Form describing the research project was produced, reviewed and approved (February 2012) by the School of Veterinary Medicine and Science Ethical Review Committee.

SECTION III

EMPIRICAL RESEARCH RESULTS

5 MAPPING THE TEACHING OF VETERINARY ETHICS IN EUROPE

5.1 Introduction

Traditionally, veterinary surgeons have been seen as a collective authority, a homogeneous group of professionals to whom a shared ethical stance was believed to be enough to face the challenges of veterinary practice. However, the profession has changed over recent years from a community dominated by male farm animal practitioners to become increasingly mixed in terms of gender, background and specialization. The development of veterinary specializations reflects recent changes in animal use with more focus on companion animal medicine. This has been accompanied by a greater debate within society about the moral status of animals, where the veterinarian's view is far from uniform and increasingly questioned. This changing environment in combination with an increasing call for greater transparency in decision-making presents a new challenge for the veterinary profession. One of the ways in which this challenge may be effectively met at an institutional level is through veterinary ethics teaching.

European Directive 2005/36/EC of 7 September 2005, on the recognition of professional qualifications, considers professional ethics as a core subject of veterinary education without, however, any clear description of the competences that students are intended to acquire by the end of their course. In addition, there is very little understanding of how ethics is taught to veterinary students at the European level and, to our knowledge, only one European survey included questions relating to the teaching of ethics in undergraduate veterinary education. This survey was conducted between 2001 and 2002 and the results were presented in three different reports (Edwards 2002; Gandini & Monaghé 2002; von Borrell 2002).

Building on this previous knowledge, a web search was conducted to map the inclusion of ethics within European veterinary curricula. The methodology used has been described in the preceding chapter (section 4.2.1). The data here presented is the first phase of an extensive European-wide analysis of how ethics teaching is integrated into university training (1st and 2nd cycle qualifications) of veterinary surgeons.

5.2 Methodology and analysis

In order to identify ethics' related subjects within European veterinary curricula, a web search was conducted between 2 January and 17 February 2010. The aim of this analysis was to understand the extent and context of ethics teaching in undergraduate

veterinary courses. The website of the Federation of Veterinarians of Europe (FVE) was used as a starting point to decide which faculties to consider and then used to find the website of each individual faculty. The website of the FVE was chosen as the initial source of information for several reasons: a) the FVE is the European umbrella organization that represents national veterinary boards; b) the FVE, together with the European Association of Establishments of Veterinary Education (EAEVE), forms the European Committee on Veterinary Education (ECOVE) responsible for a trans-European evaluation system of veterinary faculties; and the FVE website offers in one resource (www.fve.org/education/index.html) contact information for 99 European veterinary schools.

Taking into consideration that ethics is often part of another subject, a set of key words was used to identify as much as possible the content that could relate to ethics (Box 5).

Box 6 - Keywords used in the web search of veterinary curricula
Ethics/Ethical
Moral/Morality
Professional/Professionalism
Conduct/Code of Conduct
Good Practice/Best Practices
Deontology/Deontological
Philosophy/Philosophical
Animal rights

When the computer-based search had identified a particular keyword, the related text was read carefully in order to confirm if the word was used within the context of ethics. Data sources were also used to retrieve information about descriptors, place in the curriculum (year), teaching methodologies, workload, ECTS and assessment methods. Only national veterinary curricula have been included, programs for foreign students (ERASMUS) have been excluded. This analysis refers only to compulsory curricular units as it was important to identify what were the ethics components that are included in the core curriculum and therefore common to the education of every student. Electives are considered only marginally.

The web search was performed by the author, a veterinary surgeon with background in bioethics and experience in undergraduate veterinary education. Vernacular languages, including those known to the researcher, were translated to English using the electronic translation tool *Google Translate*. If the website was available in English as well as in vernacular language, information was sought using both languages to confirm consistency and extent of the information provided. If sometimes two conflicting findings arose, preference was given to the most recent information. For practical reasons, Turkish veterinary faculties were not assessed. In total, 85 Veterinary Schools representing 32 countries are included in this study.

5.3 Results

The 85 schools can be divided into two groups on basis of the amount of ethics' teaching information available through the internet. Group A (n=55) refers to those faculties from which comprehensive information on the teaching of ethics was obtained or where the limited information retrieved enabled us to analyse the nature of ethics teaching (Annexe 2). Group B (n=30) comprised those faculties where no website was available or where it was impossible to retrieve any reliable information on the teaching of ethics. The following analysis includes only Group A.

Attention given to ethics varies greatly from school to school. For example, the curriculum of the Faculty of Veterinary Science at the University of Thessaly (Greece) does not include a unit of ethics, although it provides some teaching regarding the ethics of laboratory animal use and the roles of the veterinary profession. On the other hand, the Latvian Veterinary Faculty and the University of Nottingham both include five different units with at least some ethical content (cf. Annexe 2).

Within Group A, it was possible to identify at least one of the keywords within the title and/or descriptors of 98 compulsory units. By reading through these, some patterns emerged regarding the teaching of ethics and four underlying concepts were identified: History of Veterinary Medicine (HVM), Animal Welfare (AW), Animal Law (AL) and Professionalism (P). These concepts are often found in combination with each other and the schools were distributed on the basis of this analysis (Table 3).

Table 3 – Conceptual distribution of the teaching of ethics at 55 European veterinary faculties.
(HVM = History of Veterinary Medicine; AW = Animal Welfare; AL = Animal Law; P = Professionalism)

Group A	HVM	AW	AL	P	HVM + AW + AL	AW + AL	AW + AL + P	AW + P	AL + P	HVM + AW + AL + P
55	3	4	25	3	1	5	2	1	8	3

For some schools, ethics is addressed within the context of 'History of Veterinary Medicine' while for others ethics is part of 'Animal Welfare Science' and included within behavioural and/or welfare subject units. The teaching of ethics as part of 'Animal Law' is frequently found (whether alone, 25, or in combination with some of the other concepts, 19). Here the regulatory and legal standards are given an ethical appraisal (codes of conduct and professional legislation, including welfare law, and forensic medicine). The word 'Deontology', in particular, is often found within this context in a number of countries such as Belgium (*Droit et déontologie vétérinaires*, Liége), Bulgaria (*професионална деонтология*, Sofia), Italy (e.g. *Legislazione Veterinaria e Deontologia*, Padova), Poland (e.g. *Historia weterynarii i deontologia,* Warsaw), Portugal (e.g. *Deontologia Veterinária,* Porto), and Spain (e.g. *Deontología, Medicina Legal y Legislación Veterinaria,* Madrid). Finally, a group of units were considered within the realm of 'Professionalism' and that include a number of topics that are connected with professional competences: sociology (including professional roles and professional behaviour); philosophy (including ethical theories); and management and organization (including communication skills and conflicts resolution).

Following an analysis of course content, it was also possible to identify the teaching methodologies used in 66 of 98 ethics-related units. Lectures were documented as the basic pedagogic method used, whether alone (n=21), together with practical sessions (n=29) or with seminars (n=5). There is also a combination of lectures and practical sessions with seminars (n=6) and with field trips (n= 2). Seminars are used alone only twice and a workshop once.

The analysis showed that ethics is taught in every curricular year (Figure 10) with the highest incidence in the fifth year followed closely by the first year. Ethics teaching is slightly more prevalent in the final (typically clinical) years (4^{th} to 6^{th} - 56%) when compared to the early (typically preclinical) years (1^{st} to 3^{rd} - 44%).

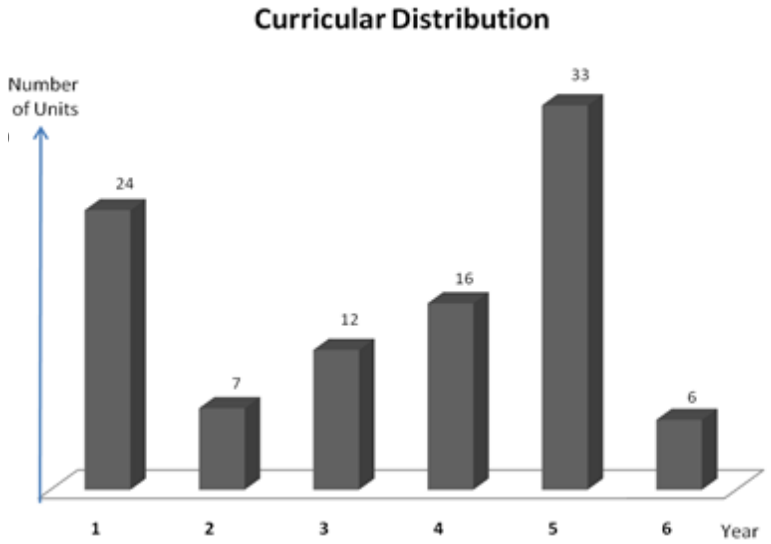


Figure 10 – Curricular distribution of 98 compulsory ethics' related units.

A combination of lectures with practical sessions is the teaching method most widely used (n=29), followed by the exclusive use of lectures (n=21). Mixed approaches combining lectures, practical sessions, seminars and field trips are less common. With only few exceptions, assessment involves at least one final exam.

The nature of the workload was difficult to assess as on many occasions ethics is taught as part of a wider unit and the information available does not discriminate between the different components. The same difficulty occurs when trying to assess the ECTS credits allocated to the teaching of ethics. Credits granted to ethics' education ranged from 0.5 to 10 ECTS, although most of these figures refer to an entire syllabus and not to the teaching of ethics in particular. Additionally, some inconsistencies were seen between the number of ECTS and the unit's workload, possibly depending on whether or not self-directed study is included.

Of the 58 units for which information on assessment methods was available, some type of summative assessment was always described. With only five exceptions, assessment involves at least one final exam (written, oral or both). Usually, assessment is mixed, involving combinations of exams, project/seminar work and involvement in classes.

The inclusion of elective units of *bioethics* is found in some veterinary faculties (e.g. Thessaloniki, Greece; Teramo, Italy; Torino, Italy). The existence of some other interesting elective units (e.g. "Hunting Law and Ethics" offered by Budapest, Hungary and "Animals, I care for eating them"[60]from Utrecht, The Netherlands) should also be noted.

[60] Free translation from the Dutch original: "Dieren, ik vind ze om op te eten".

5.4 Discussion

Although ethics was seen to be a part of the compulsory curriculum of 55 European veterinary faculties, the study data indicates notable differences in the contextual approaches used to teaching it. There is also great disparity in the number of ECTS, the time dedicated to ethics and its place within the curriculum. This study shows that lectures, together with practical sessions, are the main educational methods used to teaching veterinary ethics, similarly to what has been found in the teaching of medical ethics in Europe (Claudot *et al.* 2007).

Several reasons can justify the differences between schools in approaching ethics (Table 3). They could reflect no more than the relative interests of the individuals responsible for the teaching but they could also be the result of a wider cultural European diversity in terms of veterinary ethics and the veterinary profession in general. The diversity of combinations in which ethics is seen to be contextually framed could indicate that there is no explicit common aim in undergraduate veterinary ethics education across European schools.

Formal teaching in ethics was not explicitly set out in the original undergraduate veterinary programme and there seems to be little consensus on how, when and where to include it within the overall curriculum. Our findings are in line with the results of the previous survey on the inclusion of animal bioethics courses in Europe (Edwards 2002; Gandini & Monaghé 2002; von Borrell 2002). This previous study - which took place before the EU enlargement (accession of the ten new Member States in 2004 and 2007) and before the Bologna Process (2005) - also found inconsistencies in ethics education in terms of dedicated hours, availability and course content.

Nevertheless, the significant differences in methodological approaches between this previous survey and our own study should be highlighted. The internet-search has the potential of being more inclusive, allowing for the analysis of a wider range of schools whereas the questionnaire methodology is dependent on the willingness of respondents (and results could be biased by the opinion of those who are interested in ethics). On the other hand, the breath of information provided by the internet-search is limited to what is made publically available in the schools' websites whereas a questionnaire allows more insightful and flexible questions. The internet search does not identify all of the relevant information that should be assessed and included in the data set (e.g. the academic background of the instructors and the exact amount of work dedicated to the teaching of ethics). In addition, as a result of using an electronic translation tool, some aspects of the

ethics teaching in those languages not familiar to the researcher might have been missed.

Significant overlap was found between a few of the four concepts: animal welfare legislation is found both within the context of Animal Welfare and of Animal Law; codes of professional conduct were identified to be as much a part of the legal discourse as they were an important feature of Professionalism. Further research is needed in order to explore how these elements intersect and their overall role in the teaching of veterinary ethics.

It is interesting to note that the term 'deontology' emerges recurrently in the designation of ethics-related units in some European countries (cf. Annexe 2). From an analysis of the available course descriptors, the concept of 'veterinary deontology' appears to make reference to professional ethics based on regulatory documents set out by veterinary authorities, and namely by statutory bodies. These documents, which might include codes of conduct (cf. OMV 1998), professional rules, recommendations and policy papers, can vary greatly from country to country making it difficult to build a general reflection at the European level. The concept of 'veterinary deontology' corresponds to what Tannenbaum (1989) refers as *Official Veterinary Ethics*.

Although Turkish Universities were not accessed, valuable information could be retrieved from the literature that can complement our findings. Gurler (2007) explores the teaching of animal welfare related topics (in which ethics is included) in 17 Turkish veterinary schools. In her assessment, the compulsory courses identified included: History of Veterinary Medicine (16/17), Veterinary Legislation (12), Deontology (10), and Professional Ethics (7), Animal Welfare (7) and Animal Behaviour (5). Even though these results cannot be incorporated in our own analysis – due to differences in methodology and timeline - they still suggest a similar contextual outline of teaching approaches in terms of ethics.

Currently, there is no systematic approach that can be applied to identify what is understood by *ethics* in veterinary education. This web-based analysis is the first step in a broader study which aims to characterize ethics teaching to veterinary students, and the hypotheses generated from this work will be further explored using complementary qualitative approaches. Further research was conducted in order to investigate the significance of the four concepts, their applicability in concrete cases, and how they relate to each other (cf. chapter 7).

6 INVESTIGATING WHY ETHICS IS TAUGHT TO VETERINARY STUDENTS

6.1 Introduction

In a similar way to other life science courses, the place of ethics within the overall veterinary curriculum is far from undisputed (Downie & Clarkeburn 2005; Reiss 2005). However, veterinary ethics has only recently developed as a distinct knowledge domain and only a few reference books have been written in English (Tannenbaum 1989; Rollin 1999; Legood 2000; Sandøe & Christiansen 2008; Wathes *et al.* 2013). Publications on teaching veterinary ethics in Europe are also limited to a few descriptive papers on the experiences of such teaching, for example the Danish study of Dich *et al.* (2005), UK experiences from Main *et al.* (2005) and broader reviews such as Hewson *et al.* (2005).

Not uncharacteristic of a relatively new topic, ethics is rarely taught as an independent subject and there appears to be no widely agreed view of what is to be understood by ethics in veterinary education. A recent study mapping teaching activities showed substantial differences in terms of contextualization of ethics, methods, and place in the curriculum (Magalhães-Sant'Ana *et al.* 2010). Thus ethics is often taught in connection with different subjects covered in veterinary training, such as animal welfare science, professionalism, law and history (Magalhães-Sant'Ana *et al.* 2010). The association of ethics with these teaching areas appears to represent different constructions of ethics as a subject and may also relate to very different views of the aims and methods of teaching ethics, although there is no current empirical evidence to support this.

In a position paper on ethics teaching in UK veterinary undergraduate courses (Thornton *et al.* 2001), a working group of the Animal Welfare Science, Ethics and Law Veterinary Association (AWSELVA) proposed five objectives for ethics teaching: a) to promote an appropriate attitude to animals, clients and other parties; b) to equip students with the necessary skills in recognising and dealing with ethical dilemmas, and to understand the views of others; c) to improve the public perception of the veterinary profession; d) to enable veterinarians to contribute to public debate, and e) to provide the basis for postgraduate ethics training. These objectives highlight, but do not resolve, the challenges of scope and priority faced by educators as they develop ethics teaching in the veterinary curriculum. Furthermore, even though the profession and veterinary educators may agree that ethics training per se is important, it is not easy to identify what educators are trying to achieve, what specific elements should be taught, or which approaches are deemed to be the most appropriate or effective. In an already pressurised veterinary education programmes, obviously priorities will have to be made.

In an attempt to contribute to the important discussion concerning goals and priorities in ethics teaching for veterinary students, this paper gives voice to the viewpoints of a group of educators who are currently teaching veterinary ethics within European Veterinary Schools. These results will be complemented by some reflections from veterinary students at the same sites. While a number of studies have attempted to explore content and approaches through survey methods (cf. AFANet Workshop, 2002) the present study is based on the use of in-depth methods, in the form of semi-structured face-to-face interviews for the examination of educators' perspectives, and focus group sessions for the examination of students' views. Thus this chapter presents the first extensive empirical investigation into why teaching ethics is considered important by those who deliver ethics and ethics-related subjects.

6.2 Analysis

In order to explore the reasons why ethics is currently taught, a set of codes capturing different aspects of how the educators justified ethics teaching were developed. The codes were partly inspired by existing research and transpired partly from the data itself. These were used to inform the inductive process of analysis inspired in the model of argumentation originally devised by Stephen Toulmin in 1958. This argumentative method states that every claim is supported by grounds, both of which are linked by a warrant (Toulmin 1958). The developed version of Toulmin's model can be applied in more complex way, however here by identifying essential elements it is possible to make sense of how an argument is constructed (Karbach 1987). The application of this approach was useful when examining the interviewees' construction of why ethics should be taught to veterinary students and facilitated a more in-depth analysis.

In order to maximize intern validity, the coding and the empirical themes that then emerged from this coding were independently analysed by the author and one of the supervisors and further compared and discussed with all the remaining supervisors. A constructivist approach to coding agreement was used which means that agreement was reached through consensus and not by relying on quantitative measures of inter-coder agreement (as in the positivist approach) (Forman & Damschroder 2008). An example of how Toulmin's argumentative method was applied to this research – in this case by finding a connection between the teaching of ethics and communication - is presented as annexe (Annexe 6).

The focus groups with students were held on the subsequent curricular year from the interviews with educators and they were used to complement the information that was already collected. Content analysis was also performed; the thematic arrangement of the

learning objectives that emerged from the interviews with educators was used as a deductive source for coding, together with additional codes derived from the literature. These results are presented separately.

6.3 Results – interviews with educators

The analysis of the coded interviews resulted in the identification of ten objectives (Obj.) or arguments for why veterinary students should be taught ethics. The ten objectives can be set out in four overarching themes: (1) awareness, (2) knowledge, (3) skills or (4) qualities (Table 4). Some of the themes overlap and are interconnected yet the following distinctions appear to be valuable when exploring interviewees' perspectives.

Table 4 – The thematic arrangement of the learning objectives that emerged from the interviews. The learning objectives are described following Bloom's taxonomy (Kennedy *et al.* 2006; Figure 4).

THEME	LEARNING OBJECTIVE
Ethical Awareness	1. Recognise prominent ethical issues in veterinary practice
	2. Recognise the values and viewpoints of others
Ethical Knowledge	3. Identify veterinary norms, particularly codes of conduct
	4. Recall of laws and regulations, particularly animal welfare regulations
Ethical Skills	5. Develop ethical reasoning and the ability to reflect upon the ethical issues (critical thinking)
	6. Develop value-aware communication skills at a client and societal level
	7. Develop informed decision-making (acknowledging how actions and opinions relate to ethical values)
Individual and Professional Qualities	8. Develop a personal identity (recognise own ethical viewpoints)
	9. Develop a professional identity (role as an advocate for the welfare of animals)
	10. Contribute to professional identity (recognise the societal role of the veterinary profession).

6.3.1 Theme 1: Ethical Awareness

The ability to recognise issues and to identify the ethical 'nature' of an issue appears to be an important educational objective for a number of the interviewees. The notion of awareness ranges from the need to **identify prominent ethical issues in veterinary**

practice (Obj. 1) through to **recognising the values and viewpoints of others (Obj. 2)**. The notion of raising awareness emerges as a way of preparing students to act within a pluralistic society. This is described in terms of veterinarians having to interact with a wide range of people – especially clients – and '*realizing that what they think isn't necessarily what other people think*' (N4[61]). It also entails respecting people with a different view, such as '*understanding that animals may play different roles in humans' lives and that even though (...) some vets may think that how can you make those sorts of priorities (...) I think as a professional you should (...) meet that person with respect and say OK, so this is their situation and this animal is that important to them'* (C5).

This notion of raising awareness was also extended to recognising ethical challenges, such as when the ethical dimensions are less obvious (N2, N6) and also when there is no singular ethical authority figure (L3) or predefined ethical standpoint (N7) on which to rely.

Such awareness of underlying ethical values was also considered important to prevent future veterinarians from taking an inflexible or judgmental position (C2, C4, L3) or assuming that disagreement is based on differences in factual knowledge. Highlighting differences in opinions and the influence of values in a teaching setting also occurs through the interactions with fellow students and this may be a first step in raising awareness:

> our students start saying (…) I am here because I love animals and then they figure out that the fellow sitting next to them also loves animals but he thinks something else than I do. You can say [that ethics] is also making them aware of what is your own value and to respect that other people don't have your value but they have maybe another value and they will relate and bond to animals in a different way than you. (C3)

It was also noted that ethics teaching can give the opportunity for students to discuss their personal views and also to share their feelings in a relatively safe environment and in this way prepare them to cope with real-life situations (N4).

6.3.2 Theme 2: Ethical Knowledge

When discussing knowledge-based approaches to veterinary ethics, educators mention the need to **recognise the professional norms that apply to the members of the veterinary community (Obj. 3)**, namely codes of conduct, and the need to **learn the laws and regulations that apply to the treatment of animals in general (Obj. 4),**

[61] Educators are identified by a letter (C - Copenhagen; L - Lisbon; N - Nottingham) and a number.

particularly linked to animal welfare. Knowledge of prominent issues (such as policy statements and statutory rules) was also considered as important to some interviewees.

The importance of incorporating formal codes of conduct in ethics teaching was considered in two different ways by the interviewees. Some express a view that there is a professionally 'correct' way of acting and that codes provide rules that should be obeyed in order to avoid sanctions:

> [ethics] is about having a notion of what is the deontologically correct behaviour in the different professional situations which they will face. And within this also having the notion that there are sanctions of different degrees. And that they are subject to these sanctions, that these sanctions are applied by the [Veterinary] Order. (L2)

Others however refer to formal codes of conduct as guidance and working references of practice. They are useful because students '*need to gain (...) some sense of how they should behave, their professional conduct in practice*' (N7) and these are '*important in the sense that they can give you something to reflect on, but it doesn't always tell you what is right and wrong in a particular situation*' (C5) and that '[*veterinarians] are autonomous and we are supposed to make our own decision within the context of our profession*' (N3). However, one interviewee (C2) felt that even though the imparting of rules should be a component of the veterinary curriculum, they should not be considered as part of ethics teaching:

> Ethics is not giving people a book of rules. That's law. (…) Our job is not to tell them what is right and wrong but to help them figure it out, what they think is right and wrong. And so obviously they have to go and compare with what is the regulation and it could be that they don't agree with the regulation then they have to figure it out what to do but that's not our business (…) (C2)

6.3.3 Theme 3: Ethical Skills

A prominent objective presented as important in ethics teaching is the need to facilitate the **development of ethical reasoning and reflection (Obj. 5)**. It is not surprising that a number of interviewees claimed that training in ethics is intended to provide students with the reflective skills that will enable them to analyse ethical challenging situations. Students need to reflect upon the moral issues involved in order to devise appropriate responses that they can reasonably defend:

> In my mind [ethics] is not to say to [the students] when you come across a situation like bulldog breeding you will do X. It's about giving them the skills and abilities to think through the different dilemmas they're gonna come across so that when they are in a

> difficult situation they can come up with an answer that they can defend satisfactorily (N3).

Thinking critically about situations in terms of ethical challenges is something that veterinary students are not accustomed to doing and therefore they need to learn specifically through ethics teaching:

> Overall, I hope they are becoming critical thinkers. My impression is for students with mainly a science background this is sometimes difficult because they are used to having a yes/no answer. I'm trying to encourage them to tolerate other views or at least explore a variety of views and these are skills of debating, tolerance, critical thinking, skills of reflection, so some students seem to find reflection particularly difficult. (N5)

Practising ethical reflection at an early stage in professional training was also seen as important to ensure that students avoid giving instinctive responses that have not been fully considered:

> And therefore it seems to me [that ethics is important], above all, to open their minds, and I think that they will be facing dilemmas almost constantly. And that it is better they have already thought about the issue, otherwise what happens is that they react very emotionally at the time. And that is not always the best solution. (L3)

An important part of developing reflective skills is also that students understand that their **opinions are related to moral values** and can be understood within the greater contexts of ethical theories, to '*gain the ability to realize that their choices and opinions are based on values [and that from] understand[ing] these values you can actually understand something about true ethical theories*' (C2). The importance of **understanding how opinions relate to values** is reinforced by several interviewees in this context:

> it is very important to clarify to them that many of the disagreements we have about animals are based on different values. (...) our job is to show them that you can actually view the animal in different ways and none of them are neutral, none of them are more scientific than others. (C2)

As well as reflective skills, the **ability to communicate on clinical and ethical aspects** was identified as key skill set for veterinarians **(Obj. 6)**. Most interviewees describe this within the context of concrete situations, these include skills to explain effectively to clients the different elements that are considered when making a particular decision: '*[you] still have to be able to explain that [decision] to the owner, to your colleague, to your boss, and it's a language, it means you can explain things better and you can give more an in depth description of what you decided to do'* (N3). Communication at a societal level was also seen to be significant as it entails participating effectively in

societal debates about animal issues, where students need to prepare '*to enter debates in a more open mind than just thinking that I'm right and they're wrong*' (C2).

In relation to clients, two main communication features were referred to in the context of ethics teaching: one that involves addressing clients with respect (L2; C5) and another that involves dealing with the owners' as unique individuals, namely considering their expectations (N4), anxieties (C1) and ignorance (N2). Combining knowledge and awareness can help students when learning communication in that *'they've realized how to identify all of those things without consciously necessarily thinking that they are thinking about the different ethical frameworks... but they are using that in their communication'* (N8).

Associated with these skills of analysis and communication was the role of **informed decision-making (Obj. 7)** which play an important in the effective resolution of ethical challenges. This may require veterinarians' finding an effective way of dealing with potential tensions between adhering to one's own principles and take into account the positions of others in a professional setting, such as:

> it's fine that you don't want to treat a specific breed that has a specific problem, e.g. brachicephalic syndrome. It's fine that you don't want to treat them because you don't believe in that these breeds should even exist. But then that doesn't help that client and that particular animal so then you should be prepared to refer to somebody that knows more about it than you. (C1)

6.3.4 Theme 4: Individual and professional Qualities

Ethics education was said to be important to help students **recognise their own moral viewpoints as a means to develop a personal identity (Obj. 8)**. Understanding one's own position and developing a moral identity is considered essential in interacting with others:

> we'd like them to reflect on their own viewpoint and to make them aware that they have to develop their own identity (…) You can't go into a dialogue if you are not aware what your own viewpoint is. You should be open to other viewpoints but you should have your own ideas (C4)

Exploring and developing viewpoints was presented as a student-centred goal of ethics teaching. Supporting future vets and encouraging them to develop a personal ethic, and understanding the implications of this especially when their own moral judgement may conflict with client expectations: '*I think that's what I would like the students to really think about before they stand there in front of the owners. What they are comfortable with*

doing and what not, the way they draw the line in refusing to do something or referring it to somebody else' (N6). This was often described in the context of clinical practice and the need for students (as future vets) to find their own limits in terms of treatment options (C1, C3, N6, N8).

Within this theme of self-directed analysis was also the identification that individuals need to nurture a more general capacity to deal with the professional ethical challenges that a future veterinarian will face. These take the form of tensions between different interests and/or responsibilities. This can be tensions between what the veterinarian as a person believes is right/wrong and what he as a professional is asked to do, such as performing euthanasia of healthy companion animals for convenience reasons (C5) or mass culling of farm animals for disease control (N4). There is also a tension in the need to balance '*making money and still doing the right thing for the animal*' (N3). Being able to deal effectively with these tensions was also presented as a way to preventing for example, students from 'dropping out' after a few years in practice (N3).

The role of veterinarians in improving animal welfare and representing the interests of animals was expressed as a special case for promoting personal and professional attitudes by a number of educators (C6, L1, L3). Two of the interviewees (N2, N7) explicitly state that **advocacy for animal welfare (Obj. 9)** takes precedence over other interests, arguing that ethics teaching should therefore make students '*think about, because they [veterinarians] do in the end have certain responsibilities, so towards animals, that overrides other responsibilities but there are conflicts between the responsibilities that they have towards animals and towards their colleagues in other practices*' (N2).

Making students **recognise the societal role of the veterinary profession** and of how their conduct can affect the **public perception of veterinarians (Obj. 10)** was also considered an aim of ethics teaching (L2, N7). Ethics should make students '*respond appropriately and to always have in their mind their professional conduct and how they are perceived. I try to ask this question to the students, when they're doing the cases: 'how would the public perceive this scenario, should it be reported in the newspaper?''* (N7)

6.4 Results – focus groups with students

Students in Copenhagen expressed some ambivalence towards the relevance of ethics teaching. Students considered the course in ethics to be '*not very interesting'* (Cs-7[62]), or '*not that important because most of the professional ethics we have is from our own point of view*' (Cs-2). They are doubtful of the need of being taught something that they consider to already know and that is *in your background* (Cs-3). Cs-4 says: '*I remember thinking that for me it was all so obvious so why do I have to go to school to learn this...*'

Nonetheless, students seem to differentiate between the course of ethics and the relevance of ethical competences *per se*. Cs-2 acknowledges the fact that '*professional ethic is not so important as the subject under study but it is important to be a whole person*' while Cs-4 considers that professional ethics - similarly to anatomy and physiology – '*is something we use every day without thinking about it*' and that others could need ethics teaching '*because people would actually realize something that they never realized before*'. Eventually, the same student draws a meaningful difference between ethics and the remaining two subjects, based on the experiential awareness of ethics. Whereas for physiology '*you can read a book*' and in anatomy '*you can see the animal*', in the case of ethics,

> (…) you cannot say what you really think about treatment of cancer in dogs before you stand there with a person in front of you crying because she is going to lose her dog. And you cannot say what you think about treating race horses before you are there with an owner who is willing to pay 50 000 DKK [Danish Krone]. (Cs-4)

Students were able to recognise several objectives in relation to the ethics course. Students mentioned that the teaching in ethics promotes an understanding of wider societal issues, unlike any other subject (Cs-4). This awareness is mentioned together with the acquisition of ethical skills such as the ability to reflect upon contentious issues (Cs-4), respect the viewpoints of others (Cs-6), and participate in ethical debates (Cs-4, Cs-6):

> Cs-4: I think the central thing about this course is that it is the only course in our own system that is about people contact; that is about something in the society more than about if the H item goes together with the O item.
>
> Cs-6: I don't think is just about people contact. I think it's also about the acknowledgement that there is an ongoing discussion in relation to production animals but also to science animals and we need to be able to participate in this discussion…

[62] Students are identified by a capital letter (C - Copenhagen; L - Lisbon; N - Nottingham), followed by 's' (student), an hyphen, and a number.

The tension between the irrelevance of ethics-as-subject (something personal and intransmissible) and the utility of ethics-as-skills (that promotes critical thinking and decision-making) is well illustrated by the following dialogue:

> Cs-3: (…) I think there are still some big differences in people's ground ethics when you come from a production background or when you come from a small animal background. There is a big difference, so you can't learn this, you just have to trust in your own ethics, I think. It's not something you have to learn.
>
> Cs-1: Yes, but we have to handle the clients and what we learn in this course is that they are different. How do we handle these clients? Or how do you learn to think like them, understand why they are acting like they are acting?

The same ambivalence towards the importance of ethics teaching was found in Lisbon, with some students asserting that '*Professional Ethics (…) is as important as learning Anatomy and Physiology*' (Ls-4) and others defending exactly the opposite: '*is something that doesn't need to be taught like Anatomy and Physiology do*' (Ls-5). Students in Lisbon also differentiate between the relevance of ethics-as-subject and ethics-as-competence. Ls-9 says that '*if we take it [ethics] as a subject I think we could have the vet course nicely without it. But in our profession I find it impossible to work without ethics*'. The following segment illustrates how the relevance of ethical competences (in this case, decision-making) clashes with the prevailing notion about the subject of ethics:

> Ls-9: Professional ethics starts right here when we decided that we would treat the cat before dealing with the owner. Because we have set our priority: the welfare of the animal. And that is part of our ethics. We could have stayed there listening to the client complaining. I hope no one would...
>
> Ls-6: But did you need a subject of ethics for ... that?
>
> Ls-1: (Laughter)
>
> Ls-9: No, no, now we're not talking about subjects...
>
> Ls-2: To be honest, I don't think I used anything I was taught in Professional Ethics.

Professional ethics was considered to be more of an '*aptitude*' (Ls-6; Ls-9) than a subject matter; Ls-10 goes to consider her learning experience in bioethics as '*a wake-up call*'. In the exercise "ethics within the curriculum" (annexe 8), students chose not to place Professional Ethics together with the remaining subjects. Instead, it was said to 'hover upon' the entire curriculum because '*every subject has to be done with professional ethics*' (Ls-1). The objectives that students recognised as belonging to ethics teaching include: analyse the deontological code (Ls-2), recognise ethical issues in veterinary practice (Ls-10), and develop critical thinking (Ls-7), including ethical reasoning (Ls-9), and decision-making skills (Ls-6).

> Ls-2: I think the usefulness of (professional) ethics is just to force us to analyse the deontological code. I think it is the duty of each veterinarian to get informed about ethics and the code of ethics to be followed, which is a part of our profession.
>
> Ls-7: The aim of [Professional ethics] is mainly to make us think (…) All the training that we have had throughout our lives until we got here, is about moral issues and issues of social relationships that supposedly we should already have; this unit just makes us think about these issues and discuss them.

In Nottingham, the role of non-technical competences in the making of a veterinarian were highlighted. Students recognised that, notwithstanding the importance of technical knowledge, '*is ethics and animal welfare and knowledge appreciation that can make or break a vet*' (Ns-4). These competences include affective abilities such as compassion for animals:

> Ns-5: you can be amazing and be a really fantastic scientist but I think that if it is to develop as a person and if you're not that compassionate towards animals I think that you should be taught how to be, because, as a vet that's a really important quality.

The perceived objectives of the teaching of professional ethics also include recognising ethical issues and the viewpoints of others (Ns-1), knowledge of veterinary norms and regulations (Ns-4, Ns-6), promoting ethical reflection (Ns-6) and decision-making (Ns-4), developing effective communication (Ns-4) and building individual and professional qualities (Ns-1).

Professional ethics was described as '*one of those things that is always going to be a challenge throughout you career*' (Ns-5). Similarly to the other schools, a discussion arose about how ethics was being considered: if ethics-as-subject or ethics-as-competence. Again, students perceived that the importance of the acquired competences was greater than the subject itself:

> Ns-2: I don't think you need to spend as much time on professional ethics as you do on the other things because I think that professional ethics is something that will get developed outside of the course, just by your experience of going through university and developing as a person and interacting with all kinds of other things, so…
>
> Ns-1: Then I would still say that [professional ethics] is part of the training we received and (..) it doesn't make them any less important…
>
> Ns-2: I'm not saying they are less important, I'm just saying I think we don't need to spend as much time on them as the other things.

6.5 Discussion

This study provides valuable insight into the arguments put forward by educators as they discuss the goals of ethics teaching within the veterinary curriculum. Furthermore, additional findings emerge from the views that students have of their learning experiences in ethics. Particularly, this work provides empirical insight into the reasons why education in ethics is perceived as important for veterinary students at three EU (Copenhagen, Nottingham and Lisbon, curricular year 2010-2011). From this dataset ten prominent 'objectives' broadly setting within four themes have emerged from the analysis. A number of these are interrelated and so should not be seen in isolation, and the arguments used to justify one reason usually offer additional findings for shaping some of the others. The fact that the identified objectives emerge from an analysis of ethics teaching at three very different European veterinary schools support the hypothesis that similar justifications may also be found at other European institutions.

The identified objectives appear to overlap substantially with the objectives proposed by Thornton *et al.* (2001). These authors also stress the need for ethics teaching to enable students to recognise ethical issues and the viewpoints of others (*ethical awareness*), as well as to deal with those ethical issues and to participate in public debates on animal and professional issues (*ethical skills*). While Thornton *et al.* (2001) defend the promotion of appropriate attitudes to animals and clients and the improvement of the public perception of the veterinary profession as goals of ethics teaching, our research indicates that educators aim at developing *personal and professional qualities* in students. Among these are advocacy for animal welfare and recognition of the societal role of the profession. Contrary to Thornton *et al.* (2001) our findings identify the *knowledge of professional norms and laws* as additional drivers for teaching ethics. This regulatory component of ethics teaching has been described before in the literature (Magalhães-Sant'Ana *et al.* 2009, 2010) and seems to draw on the *Official* and *Administrative* ethical branches of veterinary ethics suggested by Tannenbaum (1989).

The findings from this study suggest that ethics educators perceive ethics education as important in order to improve students' awareness and reflective skills, including the recognition of ethical challenges (Obj. 1) and of others' viewpoints (Obj. 2), reflecting upon the range of ethical issues involved (Obj. 5), and informed decision-making (Obj. 7). Others have also identified skills focused ethics education as essential for promoting critical thinking and reflection in future veterinarians by helping individuals to make informed judgments about the challenges they will meet (Schillo 1999).

In addition, when presenting the need for core skills, the concept of effective value-aware communication is pervasive when educators talk about the importance of teaching ethics (Obj. 6), this strongly links to the suggestion in the literature that veterinary students need to be taught communication skills (Kennedy 2001; Adams *et al.* 2006; Adams & Kurtz 2006; Cornell *et al.* 2007; Mossop & Gray 2008). In a recent survey at three UK veterinary schools (Rhind *et al.* 2011), communication skills have been considered as the most important veterinary professional attributes by both final year students and recent graduates. Problem solving and decision-making also ranked amongst the 10 most important attributes (in an overall list of 42 attributes). It is interesting how for many of the interviewed educators the development of communication skills and ethical reason skills appears to be fundamentally linked.

One of the interesting differences in perspectives between the interviewed educators emerged through the discussion of the embedding knowledge of professional norms (Obj. 3) and as noted above this was expressed by educators in two ways: codes were identified as recommendations and hence providing guidance, and as regulations and hence providing rules. While the former seems to emphasise the autonomy of the veterinarian whereby he or she is an autonomous agent taking decisions within a framework, the latter seems to want to impose a 'right way' to deal with professional challenges and the sanctions that might be involved. Unlike the first approach which emphasises reflective skills, the teaching of regulations may however run the risk of leaving students somewhat lost if they come across a case that does not fit clearly with the set of taught rules. Significantly, one interviewee rejected that the purpose of ethics education should be to 'instruct' on rules and codes on the grounds that promoting reflective skills is in contrast with a view of ethics in which students should learn and obey the rules of the profession.

It should, however, be noted that many of the interviewees acknowledge that norms and regulations as well as reflective skills both should be part of ethics teaching. Still there appears to be a difference between educators who emphasise the relevance of professional rules in the teaching of ethics and educators finding that teaching rules is a minor and unimportant aspect of ethics teaching, rather supporting critical thinking as a skill. Some of the educators linked personal outcomes or character development to an expectation that the profession has of its students and as such they should behave in certain manner in order to maintain a good public image of the veterinary profession (Obj. 10). Further examination of this aspect and the weighting of the objectives is needed as these factors will have significant impact on the content and potential teaching approaches used in individual ethics courses and this observation supports

findings within the literature (Clarkeburn 2002; Illingworth 2004; Magalhães-Sant'Ana *et al.* 2009, 2010).

Finally, in terms of personal development, interestingly few educators directly referred to the need to build moral character, present role models or that ethics is taught to create ethical leaders of the future. Again, discussions of personal development were often linked to skills-oriented training (Obj. 8). When compared to other topics, surprisingly few remarks were made about the ethical responsibility of veterinary students to defend animal welfare as a justification for teaching ethics. Nonetheless, the arguments presented seem to acknowledge the special role that veterinarians have in protecting animal welfare (Obj. 9).

Although not central to answer the question of why to teach ethics, the findings from the focus groups with students provide additional clues for reflection. Students recognise most of the learning objectives put forth by their educators, including ethical awareness, ethical reflection and decision-making, and knowledge of professional codes. But one particular finding that emerged from the focus groups bears particular relevance: the fact that students differentiate between ethics-as-subject (and hence less relevant) and ethics as-competences (as something important). Furthermore, students not always acknowledge the purpose of what they are being taught at the time. Others have referred that former students in science only valued their ethics training in retrospect, and after being faced with ethical challenges (Hollander & Arenberg 2009). These findings support the idea that teaching in ethics has to be grounded on real-life scenarios and put into the veterinary context (Hanlon 2005) in order to be meaningful and concrete.

The above reflections highlight how the exploration of the 'why' and the identification of objectives can have implications for the 'when'. The above view implies that an integrated staggered inclusion of this subject may be needed in order to meet the learning objectives.

The wide range of objectives that emerged from this work highlight the challenges faced by educators as they attempt to include all of these aspects in ethics teaching within a busy veterinary curriculum. This study also highlights that although the recommendations for ethics teaching presented by AWSELVA can be found within the objectives identified in this study, more justifications have been presented by educators and these should also be considered. This takes us to the subsequent questions one faces when examining ethics teaching. How should ethics teaching with a veterinary curriculum prioritize between the goals of (1) awareness raising, (2) imparting new knowledge, (3) skills development or (4) development of character and/or professional qualities as a

whole? An equally challenging question is how should these goals be operationalised within the curriculum? Thus the work presented here provides one important element on which the answer to these questions concerning veterinary ethics education must rest.

7 INVESTIGATING WHAT TO TEACH IN A COURSE OF VETERINARY ETHICS

7.1 Introduction

The teaching of ethics is now commonly included as part of undergraduate veterinary medical education. A number of issues arise when addressing the teaching of ethics to veterinary students, namely what are the goals of the teaching and what should be taught (Reiss 2005). There has been notable disagreement on what way ethics should be included within the curricula of the health professions which may be due to the fact that there are many concepts of ethics and different justifications for teaching this subject (Gillam 2009).

When applied to the field of veterinary medicine, the subject area defined as ethics can comprise several different topics, as indicated by the focus of a number of influential books in this area (e.g. Tannenbaum 1989; Rollin 1999; Legood 2000; Sandøe & Christiansen 2008). As such, veterinary ethics can be understood at different levels because it encompasses a range of philosophical, social and scientific knowledge as well as professional skills and personal attitudes. But in addition to what is explicitly taught (i.e. the formal curriculum), the informal statements and the hidden messages that are part of the teaching process also have to be considered since they can have a substantial influence on students (Hafferty & Franks 1994; Hafferty 1998; Goldie *et al.* 2003; Anzuino 2009).

For those tasked with delivering courses in ethics there appears to be limited empirical research examining the types of teaching approaches applied by veterinary schools. Of the work reported, a web-mapping study of European vet schools (Magalhães-Sant'Ana *et al.* 2010) suggested that ethics is taught within four different framings, through: animal welfare, animal law, professionalism, and history of veterinary medicine. These different contextualizations of ethics may potentially represent different views of the aims of teaching ethics (cf. chapter 5).

Building upon the contextual framing of ethics proposed in chapter 5, the purpose of the work presented in this chapter is to characterise the way in which ethics has been constructed by teaching staff in three EU Veterinary Schools highlighting the different topics that are included and any differences in focus or coverage. In addition, the ethical competences used by students at each of the case schools to resolve an ethical dilemma will be explored. The following empirical work combines analysis of study programmes and interviews with educators to explore key issues, together with focus

groups with students to explore how these issues are operationalized[63]. It is intended that this work should inform future curriculum development of veterinary ethics in Europe.

7.2 Analysis

The analysis started with the examination of the contextual framing of ethics teaching formulated in chapter 5. The four concepts that emerged from this work were used as a deductive *a priori* coding source. These concepts were then compared against the study programmes and the findings from the interviews with educators. Emergent themes relevant to teaching content were also coded. The four concepts were re-examined in light of the inductive findings and revised appropriately. A visual representation (using a diagram) was developed as a conceptual model which sets out the resulting concepts and the overlapping between them (Fig. 11).

The same iterative method was used to identify the specific themes that are taught within the context of ethics. The study programmes and the interviews were coded and, as such, a set of emergent themes considered to be the most prominent was identified. These themes were incorporated into the conceptual model as topics. This further development is then represented in a diagram that sets out the most prominent topics that emerged from the empirical work (Fig. 12). The coded themes make reference to concrete topics (*Five Freedoms; code of conduct*) as well as to more abstract topics (*suffering, moral values*). Often these were not the exact words found in the study programmes or used during the interviews (in fact, *autonomy* was seldom used), but they were chosen because they represent key ethical topics that can be linked to the literature[64].

After performing the initial mapping of the themes the information was reviewed in order to identify any differences in approaches used at the three veterinary schools. Building on this work, three diagrams were designed that incorporate the topics that are part of the teaching in ethics at each school (Fig. 13). The topics were divided into two qualitative categories: core topics and associated topics. A topic was considered core when it was seen to be an essential element of the teaching because it was mentioned consistently by several respondents and/or because it was explicitly described as such

[63] For the purpose of structuring the thesis, a detailed description of the curricula in ethics at each school is only presented in the next chapter. However, some information provided there is also important for exploring the *what* question, namely the name of the subjects in which ethics is found to be taught.

[64] At this point it is relevant to say that this exercise is independent from the teaching methods. This means that *financial issues* is as much a topic whether there is a lesson specifically addressing financial issues or it is just imbedded (hidden) in the curriculum.

when interviewees explained the teaching process (e.g. *decision-making skills* in Copenhagen, *correct professional behaviour* in Lisbon, *communication skills* in Nottingham). Finally, the themes were re-evaluated through a form of refutation where examples were sought within the transcripts that challenged the current framing of the suggested topics or by identifying previous ignored themes. The working document that describes the method used for analysing what to teach in a course of veterinary ethics is presented in Annexe 7.

The data collected in the focus groups was used as a form of validation tool. More specifically, I was interested to know if the teaching approaches that had been identified at each school could emerge, in some form, in how students dealt with a hypothetical ethical-clinical dilemma. This research approach is built on the hypothesis that in order to resolve the ethical dilemma, students will make use of a number of competences, including those developed through their ethics training. Thus, the empirical work presented here assumes that by exploring the ethical competences that were used, this will reveal some interesting aspects of the teaching in ethics at each of the case school. The results from this exercise are presented separately.

7.3 Results

7.3.1 Study programmes and interviews with educators

As a result of the examination of the empirical findings from the interviews and study programmes, four concepts have emerged in which the teaching of ethics was found to be grounded or framed: Animal Welfare Science, Laws and Regulations, Theories and Concepts, and Professionalism. Some concepts partially overlap and a visual representation was designed which explores those intersections (Figure 11).

Figure 11 – Diagram representing the four concepts of veterinary ethics teaching, including the areas of overlapping.

In addition, a number of topics were identified as being part of the teaching of ethics at the three schools (cf. Annexe 7). The following results are presented by describing those topics (highlighted in bold). This description begins with the topics that are included in

the grey area between Professionalism and Laws/Regulations, and proceeds moving clockwise (as further illustrated in Figure 12).

In Lisbon and Nottingham, as part of the teaching in ethics, students learn about the **statutory bodies**, Ordem dos Médicos Veterinários (OMV) and Royal of College of Veterinary Surgeons (RCVS), respectively. In both cases a representative of the body is invited to address students and provide details on the statutes and disciplinary issues. In Copenhagen no such teaching was identified but a reference was made (C1) to the use of **policy papers** issued by the Danish Veterinary Association (e.g. statement about the treatment of animals with chronic diseases) in the discussion of the limits of animal use (as described below in this section).

In terms of **codes of conduct**, the RCVS Guide of Professional Conduct[65] (RCVS 2010) appeared to be used extensively in Nottingham, starting in the module of PPS1 in the first year with sessions that '*talk about professionalism and what it means to be a vet in practice*' (N3). It is also used as a resource in later years when discussing professional issues, especially in PP4 (fourth year) where there is a session dedicated to the role of the RCVS, up until the fifth year (during Ethics Day) when the GPC is used as a framework for discussing ethical dilemmas (N5). In Lisbon the OMV Deontological Code[66] is used as the main reference in the teaching of professional ethics (*Deontology*); the code is divided in its main areas and real-life scenarios are brought in for '*discussing correct procedures and possible sanctions*' (L2). The Danish Veterinary Association Code of Ethics[67] is not used by educators in Copenhagen, who described it as being meaningless (C2), disappointing (C6), addressed elsewhere in the course (C4) or even did not know it existed (C5).

Another prominent topic is the teaching of **veterinary legislation**. Veterinary legislation refers to legal documents directly or indirectly regulating the activity of the veterinary profession. That is the case, in Nottingham, of the Veterinary Surgeons Act 1966 (which is part of the teaching of professional ethics) and the Animals (Scientific) Procedures Act 1986 (part of the teaching for third year research projects). In Lisbon, L2 describes how legal provisions derived from the general law can sometimes override those from the code of conduct. In Copenhagen laws are usually not taught in the context of ethics but instead they may be mentioned in order to help a discussion of ethical issues:

[65] "The GPC has, since then, been replaced by the new Code of Professional Conduct, launched on 13 April 2012 by the veterinary profession's regulator, the Royal College of Veterinary Surgeons (RCVS). One of the important changes is the move from "should" to "must" in many areas of the Code to enhance professional responsibility". SOURCE: http://www.bva.co.uk/news/2783.aspx (27-12-2013).
[66] Available at: www.omv.pt/download/Codigo_Deontologico_site_t5e.pdf (27-12-2013).
[67] Available at: www.ddd.dk/omddd/vedtaegterogregler/etiskkodeks/Sider/default.aspx (27-12-2013).

> we don't have a lecture or an exercise that will be only about law. When we are discussing ethics we say: "Ok, what is the law saying about this? And what could the argument be for the law, if you connect it into a more ethical discussion?" (C3)

For the conceptual model a distinction was made between veterinary legislation in general and two specific **animal welfare regulations**: the Danish Animal Protection Act (used in Copenhagen) and the UK Animal Welfare Act 2006 (used in Nottingham). These are considered separately in the diagram.

In Lisbon, the teaching of *Deontology* is focused on transmitting to students their professional **obligations** and to '*the notion that there are different kinds of sanctions applied by the OMV, and that they are liable to those sanctions'* (L2). The concept of **liability** was also mentioned in Nottingham in the context of professional conduct. In Copenhagen, on the other hand, the notion of professional obligations was said to fall outside the remit of the course not because the teaching of rules and regulations does not have a place in veterinary education but because it was not considered to be within the realm of ethics:

> Obviously that there are some regulations in Denmark on what veterinarian can do and they learn them - not in our courses but in other courses. That's important because if they break the law they get in trouble. But I think that the point of ethics is not to teach students what to do, the point of ethics is to make people reflect on what they think is right and wrong. So our job is not to tell them what is right and wrong but to help them figure it out what they think is right and wrong (C2)

Across all of the case studies, ethics is also taught within the context of animal welfare science. In Copenhagen and Nottingham students are introduced to different perspectives of **animal welfare** from a philosophical viewpoint.

> In some discussions you can figure out that people will talk to but not understand each other because they are talking of animal welfare in different ways. Some will say that welfare is that animals don't have to feel pain. Some will say that welfare is that this animal will have food and good conditions and doesn't have to be outside in bad weather or something like that. We are trying to present these kinds of definitions and make students to see how does this relate to my subject [ethics] (C3).

Defining the **limits of animal use** was a concept often mentioned in Copenhagen as a way to address the challenges to animal welfare in veterinary practice, including advanced methods of treatment in companion animals (e.g. renal transplants or oncologic treatment (C1) or production diseases in cattle (C6)). This is linked with the concept of **quality of life** also found in Copenhagen while the **Five Freedoms** is one particular approach to animal welfare that is used in Nottingham. In Lisbon, contentious

welfare issues (e.g. hunting, bullfighting) are used as to illustrate the ethical implications of animal welfare.

> I say [to students]: let's consider hunting where I shoot an animal, killing it instantly. Is there any welfare issue involved? There ain't. The animal dies painlessly and instantly. But from a moral point of view one can question. (L1)

In the teaching of *Bioethics* in Lisbon there was a particular concern with the ethical relevance of **pain** management, especially in terms of farm animals while in Copenhagen the insight was in understanding different views on animal **suffering** as explained by C6:

> I ask the students: "If you were a horse and you were offered a hot iron branding or one year in a riding school with three different overweight women who can't ride, every day? What would you pick?" I would take the iron. Sort of to make clear that there are so many perspectives on suffering and on ethics that you shouldn't have double standards. (C6)

Animal euthanasia emerged as a theme mostly because it was a cross-cutting example of the kind of ethical challenges faced by practicing veterinarians. Additionally four sub-themes were included within the realm of euthanasia: the destruction of a healthy animal by the owners' request (C1; C6; L3; N3); the refusal by the owner to ending the life of a severely ill patient (C6; N4), the killing of an ill animal because the price of treatment is not covered by the value of the animal (C6), and the culling of a herd for public safety concerns (N4).

The teaching of **ethical theories** – including philosophical perspectives on animals and the environment – was identified at the three sites but the breadth of its inclusion varied greatly. In Lisbon it accounts for only a small fraction of the teaching in *Bioethics*; in Nottingham ethical frameworks are used consistently throughout the course but a tension was identified between their perceived usefulness and the overt resistance from some students in having to learn them:

> one student in particular said: "why do we need to know all this this jargon and terminology, deontology and all that sort of thing?". My explanation was that all sort of specialist areas have their terminology so that you can just sort of say one word and somebody else who knows the terminology knows what you're talking about. (N2)

On the same token, several educators (N3, N5) in Nottingham expressed some scepticism toward having to teach ethical theories:

> And in my mind this is still an issue in teaching the students ethical theory. I understand that it helps them to express their arguments but I still wonder whether some way we can teach them those elements without having to use those words like contractarianism and utilitarianism because those words just put them off, they just don't like them. (N3)

> I'm not sure that teaching ethical theory is the best way. We could teach principles or we could teach something else. But at the moment they get theories. They need to learn and understand a lot of difficult jargon like utilitarianism, it's a difficult word. (N5)

The theoretical framing of ethics – presented in lectures in the first year – is used extensively in Copenhagen and there seems to exist a consensus on the relevance of its inclusion. Educators describe how ethical theories are used as tools to develop moral reasoning abilities in a lecture setting. The application of these ethical theories will trigger debate (C1), make students reflect on their own beliefs (C6), and help them make more informed choices while respecting the opinions of others (C2). This is reflected in the high relevance given to the understanding of the plurality of **moral values** within society:

> What we hope is for students to see that their subject is not only about how to diagnose and cure animals. There will always be a lot of value questions and ethical aspects. (…) Every people can have values and there will be different values. As a vet you can meet people with different values from your own. (C3)

In Lisbon, the teaching of ethics also includes a session dedicated to the **historical context** of the veterinary profession[68]. In Copenhagen and Nottingham the teaching of ethics comprises the **human-animal bond** which involves making students '*understand that companion animal practice is a relational based practice*' (C1) and includes '*performing euthanasia sympathetically and empathetically, how to deliver bad news to clients and dealing with bereaved clients*' (N3).

The promotion of students' moral **autonomy** was highlighted in both Copenhagen and Nottingham, because veterinarians are expected to make their own decisions within the context of the profession (C1, N3). This topic was often found together with encouraging skills of **decision-making**. In Copenhagen, reference to decision-making emerged consistently and was deemed an essential part of the teaching in ethics because, as explained by C2, '*decisions are better understood if students understand ethics and understand the values that are present in a given situation*'. Respect for autonomy and decision-making are also related with the ability of **tolerating** other ethical viewpoints different from their own, a point addressed at the three schools. The promotion of **critical thinking** is also a pervasive notion when educators frame their views on the importance of teaching ethics, as exemplified by L3:

> And therefore it seems to me [that ethics is important], above all, to open their minds, and I think that they will be facing dilemmas almost constantly. And that it is better they have

[68] The teaching of *History of Veterinary Medicine* in Lisbon is at the origins of the implementation of formal training in ethics (cf. chapter 8.3).

> already thought about the issue, otherwise what happens is that they react very emotionally at the time. And that is not always the best solution. (L3)

In Nottingham and Lisbon the inclusion of issues about **professional behaviour** is an essential part of the teaching. In Lisbon '*students must be aware of what is the ethically correct behaviour before the various professional situations that they may face*' (L2) while in Nottingham the focus is in promoting good professional conduct such as '*respecting client's confidentiality, maintaining good relations with your professional colleagues and maintaining the reputation of the profession*' (N3). In Copenhagen there appears to be little emphasis on teaching professionalism, at least from the perspective of imparting correct or good behaviours:

> I think the problem is if you sort of say: "Ok, Professional conduct is to do this, this and this. And this is ethically right". Then you're just teaching them like you had the Bible because how do you know that those are the only values that are right? That's fundamentalism. And I think that's wrong when you do ethics. I think ethics should always be about make people reflect themselves. (C2)

Although issues around communicating with clients and other stakeholders are often implicit, an explicit reference to the use of **communication** in the teaching of ethics was only found in Nottingham. In line with these findings, communication skills are explicitly set out in the Nottingham descriptors of the personal and professional skills courses (i.e. PPS1, PPS2 and PPS3). They are absent in the descriptors of Deontologia e Bioética (Lisbon) and in Copenhagen there is only a brief mention of written communication skills (as part of the project-based work). Moreover, in Copenhagen, it was mentioned that communication is not taught in the remit of ethics (C2, C3).

Finally, **financial issues** in Copenhagen emerged as a central topic that should be taken into account when addressing clinical ethics because financial constrains work as a starting point from which ethical dilemmas are debated:

> … another thing we talk about, if you have owners coming with an animal and they can't pay, you know you can help them pretty easily – how much volunteer work are you going to offer, or are you going to be a hardcore businessman saying well I'm only going to work if I'm going to get the money for the work that I will do. You know, all these sorts of dilemmas that you will be facing… (C5)

In Lisbon and Nottingham financial issues have arisen mostly when dealing with the most important ethical challenges faced by vets (similarly to the case of euthanasia) and these are then reflected in the teaching approaches:

> … sometimes we deliberately put in issues to do with the cost of treatment, particularly in fourth year we make them actually cost out their treatments and think about how much

they are charging and whether their treatment is good value for money for the owner and the animal. (N6)

In order to construct a conceptual model for the teaching of veterinary ethics, the topics described above have been collated into the four-part visual representation. The resulting diagram (Figure 12) frames the ethics' topics that are taught at the three schools into the corresponding concepts.

In the following section, some results from the focus group sessions will be used as a validation tool to explore how the conceptual model applies to each of the schools.

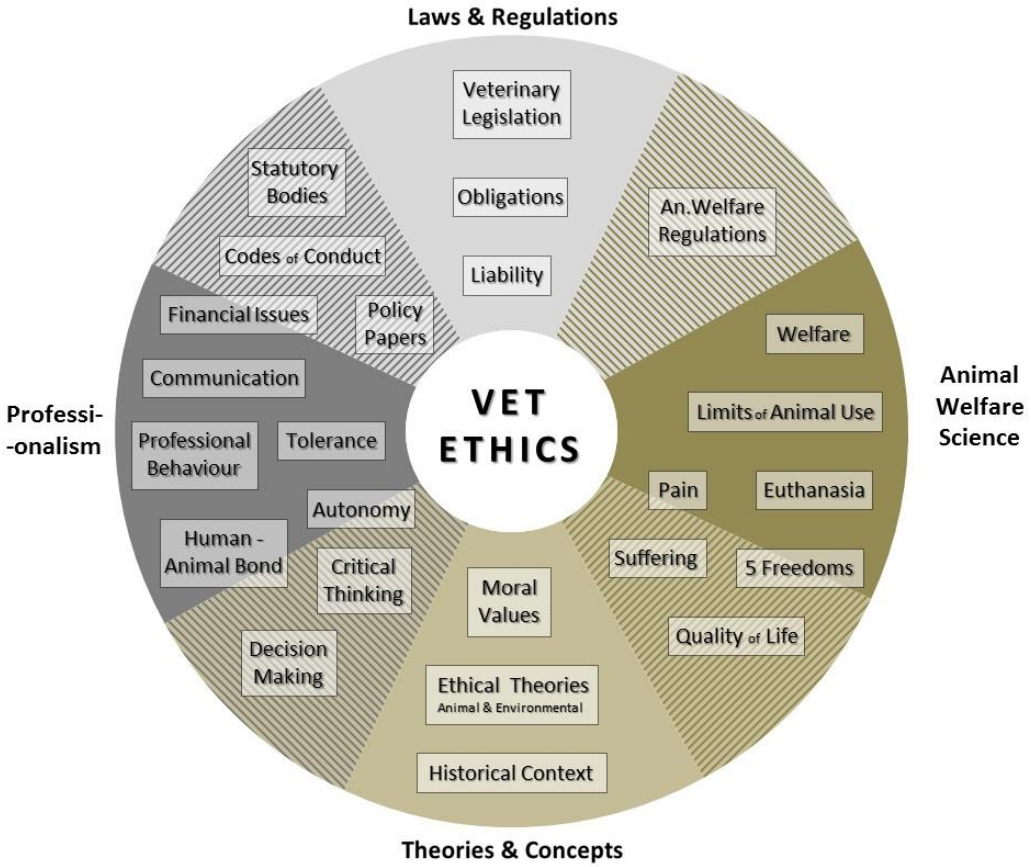


Figure 12 – The four-part conceptual model of veterinary ethics teaching. The model includes the overlapping between some of the concepts (striped areas), as well as the most prominent topics identified at the three veterinary schools (boxes).

7.3.2 Focus groups with students

The following results describe the approaches used by students as they attempt to resolve the ethical-clinical dilemma which has been previously described in the Methods section (chapter 4.2.5). The empirical work presented here draws on the assumption that

exploring the ethical competences that students use will reveal some interesting aspects of the teaching in ethics at each school.

Copenhagen

In Copenhagen, when faced with the ethical-clinical case, students established their priorities right away and they were all willing to share their personal decisions. Generally, their first priority was in dealing with the suffering of the case animal, i.e. the cat (whether to treat or to euthanize it). They would then talk with the other vet in order to understand what could have happened. They were also concerned with how to deal with the owner.

> Cs-1: I would start by treating the cat [*some laugh*[69]] so it wouldn't be in pain anymore and then I would contact the other vet.
>
> M: Anyone else?
>
> Cs-2: Yes, I would also contact the other vet to hear what he/she had done to the poor cat. I would not jump on the road that the owner has made about how irresponsible the other vet is and how bad job he/she has done because there can be so much more to it. We don't have to backstab each other, we are so few. So I would also make the cat feel better – maybe euthanize it – and then take a good long discussion with my colleague and then return to the owner.
>
> Cs-3: I think I would too treat the cat and I would tell the owner that he/she should be aware of that there is always a risk for complications in operation even is just a neutering. And I too would talk to the vet just to know if there has been any complications before or during the surgery because that could explain a lot of these symptoms.

Treating the cat is justified for alleviating its suffering. Both Cs-2 and Cs-3 express tolerance towards the accusations from the owner and to the possible misconduct from the other vet. Students were considering several elements in their arguments: alleviating animal suffering, gathering more information that could explain what had happened, professional etiquette towards the colleague and communication with the owner. In the following example, students are balancing the responsibilities towards the cat (including the limits for treatment) with the responsibilities towards the owner (including accountability):

> M: So, what's on your mind when you deal with this case?
>
> Cs-3; Cs-4: Treat the cat.
>
> M: And what else?
>
> Cs-2: Take care of the owner.
>
> M: Ok, but how to balance that?

[69] Although the reasons for the laughter (which arose after the need to treat the cat was first mentioned) were not explored, it could be interpreted as a general reaction to an, apparently, obvious conclusion.

Cs-3: I could actually send the owner home. Because…

Cs-1: Yes, or in the waiting room.

Cs-3: Or in the waiting room because you have to treat this cat and I think an angry owner would create more problems and be disturbing so you couldn't be able to focus on the patient. And tell the owner that if this gets worse maybe we have to euthanize the cat, so she has to be aware of that.

Cs-4: Would you really go that far before you've actually looked at the cat?

Cs-3: No, no but with this I already know that the cat already has these conditions and she has to be aware of that.

Eventually, attention was given to the financial aspects of the case. Students agreed that they had to make sure from the beginning that the cost of treatment could be covered by the client and also ensuring that the client was in fact willing to pay for it:

Cs-2: (…) When cats are going to the emergency room there is someone paying and it's the owner. You have to talk to the owner while you are examining the cat: are you willing to pay because this cat is really, really sick. I can't tell you if he's going to survive or not. Are you willing to pay for trying this emergency treatment, that is quite expensive, at seven in the evening on a Sunday? You're going to pay a lot of money for this. Because if you start all this treatment and the owner says: "Oh, no, no. I didn't ask for this!"

Cs-4: Yes, you're right. I didn't think about that at all.

Cs-7: Giving this point of view I have to agree. You have to make sure that the client is financially capable of this.

Cs-2: And wants to spend it.

Students in Copenhagen were aware, from the beginning, of the need to contact the colleague in order to clarify the clinical history of the animal, and they did not want to report the other veterinarian. At the end of the time dedicated to discuss the ethical-clinical dilemma some remarks were made by the moderator regarding the possible presentation of charges; students, however, showed difficulties in dealing with the legal and disciplinary aspects of the case and in relating those to the Danish Veterinary Association:

M: So, would you call the colleague?

Several: Yes.

Cs-2: But also in Denmark we have an institution taking care of complaining about veterinarians. So, I as a vet, I wouldn't go in and say, yes, this is the right thing to do, this is the bad job they have done. I would make them take care of it.

M: Who?

Cs-2: We have a place where you can complain.

M: Do you know the name of that place?

Several: Ohhh… [brief dialogue in Danish]

Cs-2: Veterinarian… Health… Council thing…

Several: Yes.

Cs-2: They are going to take care of the charges and the vets don't have to back stab each other without knowing the history.

National Codes of Professional Conduct (CPC) were not mentioned by the Copenhagen students. Although the students might have been introduced to the Ethics Codex sometime in their education (cf. C1, Annexe 6), they had not read it, and it appeared to be of no help for them when attempting to solve the ethical-clinical case:

M: To finish, were you ever introduced to the ethics codex (*Etisk kodeks*)?

Cs-1: Codex?

Cs-3: Hum, hum. [*nodding negatively*]

Cs-5: No.

Cs-4: Is that like the oath of being a vet or something?

M: It has something to do with that. It is issued by the Danish Veterinary Association. It's about the principles, the guidance of the veterinary profession. Were you introduced to it?

Cs-2: Maybe… but any of us remember now.

Cs-5: I think… I remember now a slide [*all laugh*]

M: And was that in the course of ethics or in any other subject?

Cs-3: That was in ethics.

M: So in this situation, the ethics codex wouldn´t be of any help to you to solve the case?

Cs-6: Well, maybe latter but not now.

Lisbon

In Lisbon the discussion started with whether this was a case of malpractice and if 'you', as the vet in the case, should report your colleague. Students discussed in depth the deontological implications of the case. They seemed to agree that if the other vet was considered responsible for the cat's condition, then some measures should be taken. They disagreed, however, in what measures to take, including if they should follow the owner's suggestion to press charges against the vet colleague. The following segment illustrates this dilemma and how it developed:

Ls-2: Basically, the animal is very ill and seems to be negligence of the vet.

(…)

Ls-1: The question lies in determining what led this to happen; if it was caused by a mistake from the other vet or not.

Ls-4: No, no. That is not the issue. The issue is: what are you going to tell the owner? I can look at the animal and think to myself that it was clearly a medical error. Because the main question is: what do I say to the owner?

Ls-1: You are going to say whether or not the owner should press charges.

Ls-4: Exactly.

Ls-1: If you think it was not a mistake from the other vet, you are going to advise him not to press charges. If you feel that this is a result of poor clinical practice, perhaps you'll consider that this person should sue the vet.

Ls-4: That's the main issue! Are you, as a vet, going to tell the owner to press charges against another veterinarian?

Ls-1: You're not telling him, you're advising him.

Ls-5: ... errors can always happen but there are many incompetent people who have no knowledge and do awful things. And it ends badly. And if these people are out there and we - everyone – do not point the finger and make a complaint to the OMV, they will continue to work and do harm.

Ls-6: And tarnish our name.

Ls-5: But it may also be a mistake. We are all humans and we all make mistakes.

Ls-7: I think that it's not for us to tell the owner whether to prosecute or not. Above all we must take this animal, try to understand what happened, and eventually prepare a report on it. If we conclude that the most likely cause is a surgical mistake, we just have to mention it in the report. Thereafter is for the owner to decide what to do.

Some students were willing to make a complaint against the vet colleague in order to defend the image of the veterinary profession and the veterinary professional body (the OMV) was identified as the recipient of that complaint. Others were in favour of more conciliatory measures. It was only later into the discussion (after two and a half minutes of a discussion that had already involved seven participants) that the suffering of the animal and the need of proper treatment were mentioned (by an eighth participant). The observation of this student, however, was challenged by a ninth participating student as missing the point of the discussion:

Ls-8: Firstly, the animal is clearly suffering. Our first objective is, before we deal with all that, to end suffering.

Ls-9: That is not the issue.

M: Wait a minute. This is very relevant.

Ls-9: But is that the issue, here?

Ls-8: First we have to - I'm not saying to treat - but at least to ease the pain, even euthanasia. Secondly, we must not forget that - okay, it's a routine operation - mistakes happen in all operations. What we have to say is that every surgery is a case of its own. It could have happened and we can not say the fault was his.

The discussion diverted again into more professional issues and no additional reference was made to treating the cat. Instead, students were very concerned about balancing their responsibilities towards the profession (warning the colleague about the intentions of the client) and towards the client (asking the owner to go back to the other vet and ask

for an explanation). They also considered that the other vet was liable for his own actions and even considered that he could lose his professional license. They eventually turned to the Code of Professional Conduct and tried to apply it:

> Ls-1: We (first year's) barely know the Deontological Code. We do not know to what extent the veterinarian can encourage the owner to claim against another vet.
>
> Several: You cannot.
>
> Ls-4: Because it's a conflict of interest.
>
> Ls-2: That is not his role.
>
> Ls-9: But the OMV asks you to submit allegations of malpractice.
>
> Ls-2: Asks, but you are not required.
>
> Ls-10: I think this is the point where you should ask and not oblige. We all agree that the vet has a moral role to tell the colleague that he did wrong but he must also have an understanding of what he did wrong. The vet colleague has to be accountable before the owners, "Look, I messed up, bring your pet back, and I pay all of the treatment until the animal gets better."

By the end of the discussion, students have generally agreed that it is their responsibility to inform the statutory body (OMV) about a suspicion of malpractice but also that the client should be encouraged not to do so:

> Ls-4: And in the event that he [the other vet] does not take responsibility for that, what we can do is – for what I remember from the Deontological Code – to make some sort of malpractice complaint to the OMV. But we should never advise the owner to [present charges himself].
>
> Ls-9: Of course not. I am speaking between the vet and the OMV.
>
> Ls-4: But that's the issue! What should the vet do? He is not going to advise the client to make a complaint against the other vet.

At the end of the time dedicated to discuss the ethical-clinical case the moderator made some remarks about the animal by saying that only one person mentioned that the vet should start by treating the cat. The others vigorously disagreed and they all confirmed that they would start the case by treating the cat but that they did not feel the need to mention it:

> Ls-4: No, No. We agreed that the first thing was to treat the cat.
>
> Ls-6: The first thing everyone would do is to stabilize the cat.
>
> Ls-2: Everyone agrees with that for sure! But treating the cat is something so intuitive - it is obvious that we would treat the animal! – that we have focused a lot on the rest because the rest is of concern to us. Because the cat is just to treat and that's it. To treat, or to choose for the best strategy, and that is all.
>
> Ls-10: Of course.

At a later stage in the discussion students returned to the ethical clinical case and a connection was made between the decision-making process and the teaching of professional ethics. In this respect, one student seemed to valorise the teaching in ethics while the others were being dismissive about its utility:

> Ls-9: Professional ethics starts right here when we decided that we would treat the cat before dealing with the owner. Because we have set our priority: the welfare of the animal. And that is part of our ethics. We could have stayed there listening to the client complaining. I hope no one would...
>
> Ls-6: But did you need the unit of ethics for ... that?
>
> Ls-1: (Laughter)
>
> Ls-9: No, no, now we're not talking about units...
>
> Ls-2: Honestly, I didn't make use of anything we learned in Professional Ethics. Nothing.

Nottingham

In Nottingham students immediately mentioned several ethical issues within the case (suffering of the cat, communication with the owner, and responsibilities towards the other vet) and started to combine them in their arguments while looking for an agreement:

> Ns-3: Don't blame anyone ´till you know what happened.
>
> Ns-4: Exactly. You don't know in what state the animal starts off with.
>
> Ns-6: After that, talk about stabilizing it?
>
> Ns-3: Yes I was gonna say that…
>
> Ns-4: Yes, the animal first.
>
> Ns-3: Yes, your first priority should be to save the life of the animal and treat the pain.
>
> Ns-1: So if she was neutered elsewhere why would she come to you?
>
> Ns-4: Presumably because she is not happy with the treatment they…
>
> Ns-2: Is it likely that neutering is responsible for this?
>
> Ns-7: Could be. It depends on what they did.
>
> Ns-4: Yeah. And also we only know it is an acute abdominal pain, and don't know anything about where we can localize it to and I think it is possibly very easy to jump to conclusions but we shouldn't.

Students used dialogue to enhance reflection. As we can see in the segment above, in a matter of a few seconds, six out of seven participants had actively contributed to the discussion. Students were expressing their ideas clearly and very much in line with each other. Within two minutes, they had already outlined a series of procedural rules: to start by treating the cat, the need not to jump into conclusions, to get in contact with the other

vet letting him know what is happening before addressing the owner and getting a detailed history of the clinical case.

> Ns-1: We have got the priority, haven't we? Keep out his pain, stabilize it – I don't know as much as you do that - but then, be respectful to other practices, find out the history, find out what happened and don't jump to conclusions.

In their arguments, students made mention to several traits of character such as transparency (N-2: '*Be open about everything that you're doing'*), trustworthiness (N-4: '*try to stick to what you are saying'*), honesty (N-7: '*Don't lie. It would be the worst situation'*), respect (N4: '*Don't tell the owner: "Oh, yes, it was definitively the surgery"*') and cooperation (N-7: '*get the owner to focus on the animal as opposed to focus on that problem'*). In addition, students refer to the need of communicating effectively with the client and the colleague as a way to live up to their professional conduct:

> Ns-4: I think it's important as well that the client knows that you are contacting the other vet so he doesn't accuse you of collaborating to hide something. You need to have a complete history of the animal so that you can make the best clinical decisions for the animal from that point onwards.
>
> Ns-2: I think that even if she hadn't talked about pressing charges I still would be contacting the other practice anyway.
>
> Ns-7: To try to know what went wrong.

The students also drew from the Code of Professional Conduct (also referred as the 10 Guiding Principles). They were uncertain as to whether it is their responsibility to inform the RCVS but they seem to reach a similar conclusion to the Lisbon students: that they should not jump to conclusion by supporting the client in the decision to press charges against the colleague on the ground of defending the integrity of the veterinary profession.

> Ns-1: I don't know but would you have to communicate that practice [to the RCVS]?
>
> Ns-6: Surely they would be coming up against them [colleagues] pretty bad like they wouldn't be abiding by our guiding principles if they did that because then they wouldn't be considering animal welfare as paramount. They wouldn't be considering their responsibilities to the client and they wouldn't be considering their responsibilities to the profession.
>
> Ns-2: I think that the medical records of the animals, they belong to the practice.
>
> Ns-4: There's no obligation to give another practice a case history but I think what you are saying is that you struggle justifying not doing it and the 10 guiding principles. The other thing is, in the 10 guiding principles there is something to do with always upholding the integrity of the profession which would include saying to this lady that the other vet has done a really rubbish job. That's covered by that.
>
> Ns-1: Not bringing each other down.
>
> Ns-4: Yes. You must support other people in the profession as part of our code of conduct.

7.4 Discussion

This chapter presents a four-part conceptual model for mapping the content of veterinary ethics teaching and applies it to three European veterinary schools. The use of a qualitative case-study approach, which combined interviews and documentation with focus group sessions, allowed an in-depth investigation of the teaching contents while enabling data triangulation in order to maximize validity. It also enabled the identification of, not only the formal curriculum but also the informal and sometimes hidden elements of the teaching that are not explicitly set out in the study programmes. This discussion is divided in two sections: firstly, I explore the construction of a four-part conceptual model on the teaching of veterinary ethics and secondly, I elaborate on the differences found between the three schools and the significance of these findings.

7.4.1 The four-part conceptual model of veterinary ethics teaching

Building on the results from the web-mapping (Magalhães-Sant'Ana *et al.* 2010; chapter 5), the case analysis of interviews with educators and study programmes reinforced the perception that ethics teaching can be approached by means of four grounding concepts. These are Animal Welfare Science (formerly Animal Welfare), Laws/Regulations (formerly Animal Law), Theories/Concepts (formerly History of Veterinary Medicine), and Professionalism. These concepts were often found in combination with each other and a visual conceptual model was developed that helps identifying these areas of overlap (Figure 12). For example, codes of conduct could be seen equally as normative documents (part of Laws/Regulations) or as professional guidelines (part of Professionalism).

This four-part conceptual model of veterinary ethics is consistent with the views found in other studies that: a) strongly suggest that veterinary ethics should be taught as part of the animal welfare curriculum (Friend 1990; de Boo and Knight 2005; Main *et al.* 2005; Main 2010; Morton *et al.* 2013); b) defend a teaching approach for animal bioethics that is grounded on ethical theories and ethical decision-making (Hanlon *et al.* 2007; Sandøe & Christiansen 2008); c) establish a close connection between ethical reasoning and the curriculum of veterinary professionalism (Mossop & Cobb 2013); and d) support a pedagogic approach to the legal curriculum in veterinary education that incorporates ethical issues (Babcock & Hambrick 2006, Whittaker 2014).

This visual representation of the conceptual model (Figure 12), in addition to illustrating the relationship between the four concepts, also discloses the most prominent topics

found within the data collected from the three case studies. The positioning of the topics within the conceptual model could be challenged, something that is inescapable when designing a diagram which is both compact and intuitive. Euthanasia, for example, is not only an animal welfare issue (Yeates 2010, Yeates & Main 2011) and the emotional and other human-based dimensions around the euthanasia of animals were also identified in the present study. However, the crucial ethical challenge in euthanizing an animal has to do with the moral significance of the animal's quality of life and of animal suffering. And that is usually a welfare issue. For descriptive purposes, euthanasia was put in the 'Animal Welfare Science' piece of the model.

The analysis of the interview data that related to the reasons why ethics is taught (presented in Chapter 6) resulted in ten learning objectives (Obj.) for the teaching of veterinary ethics that can be included within four main themes: (1) awareness raising, (2) imparting new knowledge, (3) skills development or (4) development of personal and professional qualities (cf. Table 4). Important linkages can be seen between these objectives and themes and the four part conceptual model that sets out the topics that are included in the teaching of veterinary ethics.

Learning Objectives 1 and 2 are expressed through the *awareness* of topics such as **animal suffering** and **pain**, **limits for animal use**, **euthanasia**, **quality of life** (Obj. 1); and **ethical theories** and **moral values** (Obj. 2). These are found within the concepts of Animal Welfare Science and Theories/Concepts. Learning Objectives 3 and 4 are expressed through the *knowledge* of **statutory bodies**, **policy papers**, **codes of conduct**, **veterinary legislation** and **animal welfare regulations**. These are found mainly within the concept of Laws/Regulations. Learning objectives 5, 6 and 7 are expressed through the *development of ethical skills* such as **critical thinking**, **communication**, **decision-making**, **tolerance** and **moral autonomy**. These are taught within the concepts of Professionalism and Theories/Concepts. Finally, learning objectives 8, 9 and 10 are expressed through the *development* of **professional behaviours** (within the concept of Professionalism) which, in turn, rely on other topics such as moral values (Obj. 8), animal welfare (Obj. 9) and codes of conduct (Obj. 10).

7.4.2 The conceptualization of ethics teaching at the study sites

General differences were identified in the topics that educators at each of the schools include within the veterinary ethics curriculum and these differences are especially emphasised when looking at the central topics at each school. As often found in

qualitative research, the distinctions made between core and associated topics were more the product of conceptual generalisations than of numerical generalisations (Fitzpatrick & Boulton 1994). The way in which the teaching of ethics was found to be conceptualized at each school is represented in the following diagrams (Figure 13).

The conceptualization of ethics teaching appeared to vary greatly between the study cases. In schools that seem to have a more descriptive approach to ethics that emphasises the recognition of moral values (Copenhagen), the use of ethical theories is central for students' understanding of different moral values (pluralism) and supporting decision-making. In the case where a more normative teaching of ethics is applied which is based on the introduction of codes of conduct (Lisbon), the focus on professional and legal obligations frames students' understanding of what is the correct professional behaviour. While promoting good professional behaviour - grounded on codes of conduct and ethical theories - is a concern in Nottingham, reflective as well as communication skills are also core components of the teaching in ethics.

The range of teaching approaches found at the three schools – which, in turn, had been selected for their diversity (cf. section 4.2.2) – may suggest that similar arguments could be found at other European veterinary schools. The results may also suggest that the approach chosen to teach ethics will ultimately impact the kind of veterinary professional formed in each school. This perception is reinforced by the results from the focus group session held at each school since different sets of ethical competences – that seem to reflect the teaching of ethics that students received – have been used by students to resolve a clinical case with moral implications. However, caution must be applied, as students' answers may be the result of many influences in addition to ethics teaching.

In Copenhagen students have appeared to readily identify an ethical dilemma between treating the cat and attending to the owner. They are tolerant toward the owner and the colleague and concerned about the suffering of the animal. This performance could be an indication that formal teaching of ethics supports the development of students' ethical sensitivity, as suggested by the literature (Clakeburn 2002). They also agree on their priorities (to treat the cat) and discuss some of the moral issues involved. However, in the study case, students appear to be unsure of the disciplinary implications of the case (and of the role of the DVA), nor were they aware of the specifics of the Ethics Codex. This is in line with what the educators expressed as a lesser concern – the teaching of professional conduct and behaviour – and with the fact that educators did not appear to be supportive of an approach that guides students towards a prescriptive standard of what a vet should 'do' in certain circumstances.

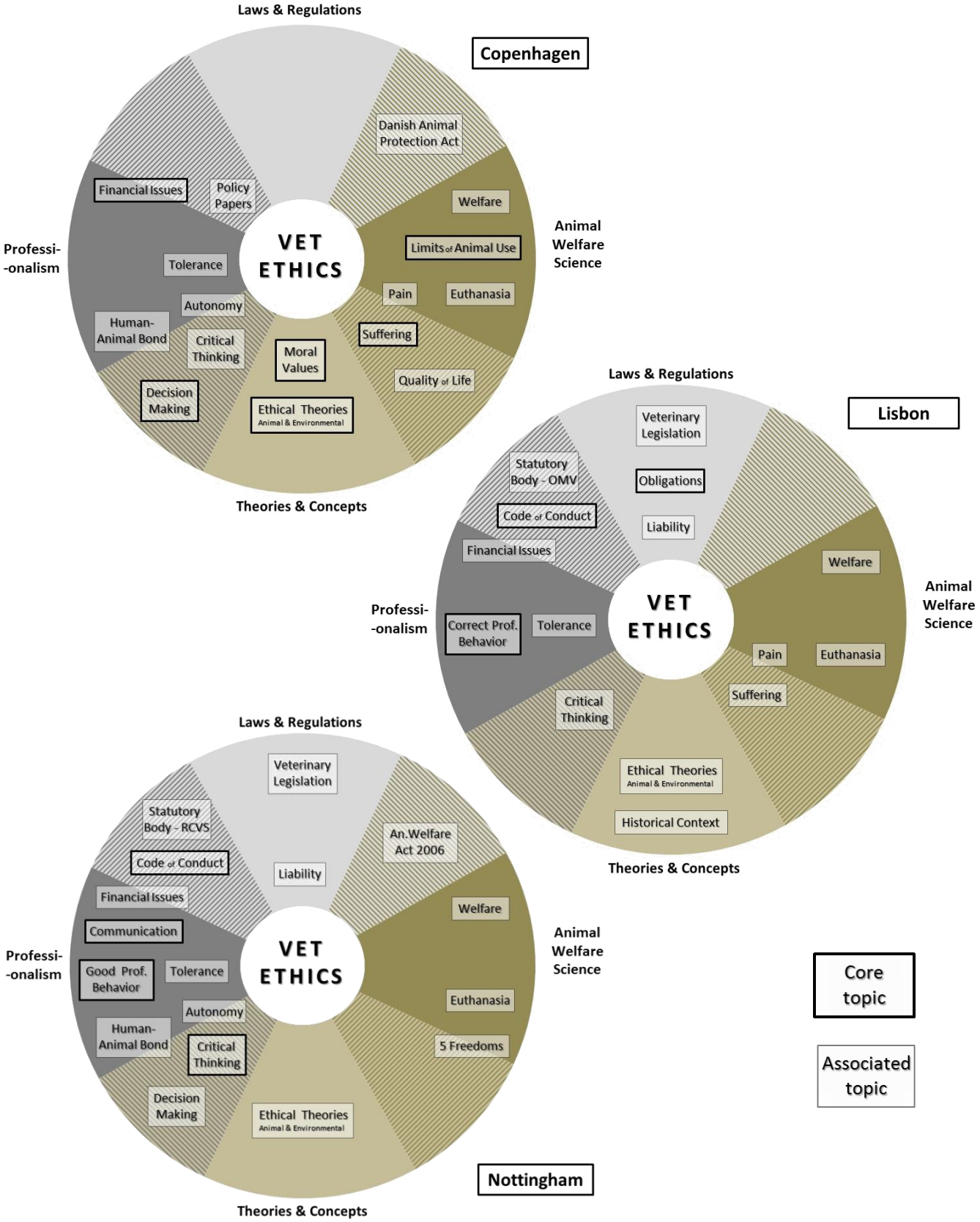


Figure 13 – The conceptual model of ethics teaching applied to each of the case studies: Copenhagen, Lisbon and Nottingham. The topics were divided into two qualitative categories: core topics (bolded boxes) and associated topics. A topic was considered core when it was seen to be an essential element of the teaching because it was mentioned consistently by several respondents and/or because it was explicitly described as such when interviewees explained the teaching process.

In Lisbon, students were mostly concerned with the legal and disciplinary aspects of the case – and particularly of what measures to take concerning the colleague – and little attention was given to animal welfare as a moral issue. More significantly, students did not seem to identify a dilemma between defending the welfare of the cat and attending to the interests of the owner. Students also relied on the Deontological Code for help in finding the right professional conduct. These results may indicate that the education in ethics that students receive in Lisbon makes them more reflective towards their responsibilities toward colleagues and the profession than to the ethical implications of poor animal welfare. Others have suggested that the teaching of ethics in Portuguese veterinary schools is centred in veterinary deontology (Pinto 2005; Magalhães-Sant'Ana 2008) and much less so in animal bioethics (Stilwell 2002). Teaching of animal bioethics does occur in the programme in Lisbon but the translation of this teaching through students' ethical competences is less evident. It seems possible that these results are due to the pedagogic methods used to teach ethics (cf. section 8.4.2). The one-hour lecture format used to teach ethics is probably more adequate to impart professional standards which, according to Table 4 (and Figure 4), seem to convey lower level cognitive competences – namely ethical *knowledge* (Obj. 3) and *comprehension* (Obj. 10) – than topics of animal bioethics, which seem to convey ethical skills involving *synthesis* (Obj. 5).

In Nottingham, students readily identified the ethical dilemmas and the moral issues involved while effectively reaching an agreement based on good professional conduct; they also discussed the disciplinary implications of the case and expressed concern with how to communicate with the client and the colleague. Students also apply virtues to the case. These can be seen as desirable professional attitudes that are part of what is to be a good veterinarian and that can help students reaching better decisions. These results can be at least partially explained in light of two central features of Nottingham course: the PBL teaching environment and the use of reflective portfolios. It has been shown that 20 or more hours of small group discussion of ethical cases has a positive effect in students' moral reasoning abilities (Self *et al.* 1998) while the use of portfolios in veterinary education is thought to encourage the development of students' reflective skills (Mossop & Senior 2008).

The results presented in this chapter should be seen in light of wider professional and cultural contexts since many factors can contribute to these findings. In the cases where the majority of the teaching in ethics is addressed in one specific unit (Copenhagen and Lisbon) the identification of what is part of ethics or not is mostly limited by the scope of the unit; for example, the fact that a rule-based approach to ethics is almost absent in

Copenhagen does not mean that veterinary laws and regulations are not taught at all; it simply means that the use of rules was not identified within the context of ethics teaching. The opposite may be seen to happen in Nottingham; as there are multiple modules (and tasks) in which the teaching of ethics is embedded, some degree of overlapping can exist between what is, in fact, ethics and what is part of the teaching of other 'non-technical skills', such as effective communication.

At least some of the differences that have been identified also seem to represent possible different cultures within the schools toward the veterinary profession. This can be seen in the role of the veterinary statutory bodies within each country. While in Portugal and the UK the license to practice is conceded by the OMV and the RCVS respectively, in Denmark professional licenses are issued directly by the Ministry of Food and Agriculture and not by the DVA. As might be expected, reference to the DVA is almost absent from the teaching in Copenhagen. On the same token, in some countries codes of conduct may play a bigger role in the guidance of the veterinary profession while in others they may be less influential. In both Lisbon and Nottingham, CPC were seen to be important features of the teaching in ethics, particularly in Lisbon where the Veterinary Deontological Code has a major role in framing the teaching of ethics and a considerable amount of time is dedicated to its analysis and discussion. In fact, the Deontological Code has been shown to be the single most important ethics resource used by Portuguese veterinary faculties (Magalhães-Sant'Ana 2008; Magalhães-Sant'Ana *et al.* 2009). Not surprisingly, the results from this study suggest that Lisbon students are concerned with professional norms and that CPC play an important role in framing their decisions. In Copenhagen, on the other hand, CPC seem to play a very limited role when informing decision-making. More work could and should be carried out on the role of CPC in the teaching of veterinary ethics across countries in Europe since this is important to inform curriculum development and learning requirements in terms of veterinary ethics education.

The way the veterinary curriculum is organized at each school can have a substantial influence on the results presented in this chapter. Many of the issues that emerged from this study depend on the pedagogic strategies that are used, and namely of how the identified topics are delivered and assessed. The next chapter describes, analyses and explores the curriculum of ethics at the study schools.

8 INVESTIGATING HOW TO TEACH AND ASSESS VETERINARY ETHICS

8.1 Introduction

Decisions about *what* to teach in any curriculum are intimately connected to decisions about *how* to teach. According to Leinster (2005), the issues involved in planning an undergraduate curriculum include *content* (what are the learning outcomes?), *delivery* (which educational methods to use?), *assessment* (how to test students' learning?), *structure* (how will the teaching be scheduled?), *resources* (staff and equipment), and *evaluation* (has the course been effective in delivering the learning outcomes?). These issues are applicable for many subjects not specific to ethics but the challenges they pose seem to be greater in ethics than in many other subjects (Gjerris 2006).

Lectures and practical sessions are amongst the most used methods to teach medical ethics (Claudol *et al.* 2007) and veterinary ethics (Magalhães-Sant'Ana *et al*. 2010). While effective lecturing intimately depends on the knowledge that educators have of the subject matters (in order to properly instruct students), practical case discussions are more dependent on the abilities of the educators to facilitate the sessions, triggering questions and promoting the development of insights from all the students involved. The emergence of reflective portfolios and other self-directed approaches to ethics (such as critical reading, creative writing, role-playing, and the use of e-learning tools) have the potential to contribute substantially to increase students' learning experience (Mossop & Senior 2008; Atkinson 2008; Hanlon *et al.* 2007; Schillo 1999). As in other fields of veterinary education, the challenges of teaching ethics are also reflected in its assessment, specifically what should be measured and how (Fuentealba 2011).

The purpose of this chapter is to describe, analyse and reflect on the curriculum of ethics (its planning and development) in the study cases. It starts with a brief retrospective overview of how the teaching of ethics emerged and evolved up until curricular year 2010-2011 (section 8.3). A detailed description of the curricula of ethics at each site is presented (section 8.4), including educational methods, assessment methods and any additional teaching of ethics-related subjects. This is followed by a characterization of the educators and their role in the teaching of ethics (section 8.4). The description of the teaching staff, and namely their educational background, is only broadly described in order to ensure anonymity. Research findings concerning the placement of ethics within the curriculum are presented in section 8.6 and the assessment is further described in terms the examined competences (section 8.7). Finally, section 8.8 brings together the findings that address the challenges of teaching and assessing ethics. In the final section

(8.9), the main findings of *how* to teach and assess ethics to veterinary students drawing on the study case data, their meaning and repercussions, are discussed.

8.2 Analysis

In order to get a thorough description of the courses in ethics, both in terms of pedagogic strategies and assessment methods, several approaches were used. The analysis of the curricula in ethics (ch. 8.3) started with the examination of the syllabi contents, including additional documents provided by educators at each school (cf. Annexe 5). Research themes emerged from the analysis of these documents that were then coded. The themes were compared against the findings from the interviews with educators while looking for further emergent themes. These themes were iteratively revisited while looking for meaningful patterns and counterexamples. In the case of the chapter dealing with the challenges in the teaching and assessment of ethics (ch. 8.8), both interviews and focus groups were used as a starting point. The remaining of the issues discussed in this chapter started with the inductive content analysis of the interviews with educators. In the case of the retrospective outlook (ch. 8.3), educators' accounts were confronted against the accessible facts, in order to confirm names and dates that might need clarification.

8.3 Retrospective outlook at the teaching of ethics at the study cases

In **Copenhagen**, the formal teaching of ethics started in 2001, following an agreement in the previous year between the Minister for Education and the Rectors of Danish Universities that all university programmes should include an introductory subject in philosophy. A subject was to be specifically built for each degree course with the purpose of helping the students to view their study field from a broader perspective (Dich *et al.* 2005). It was the initiative of the Faculty of Life Sciences (formerly The Royal Veterinary and Agricultural University) to include ethics as a major component of the course in philosophy of science.

> We took the option to include ethics in Philosophy of Science because ethics is also about looking into a matter from different viewpoints and different perspectives (C4).

Since it was created the course has been subject to several changes to accommodate the needs of the students as well as legal requirements. At the time of the reform of the veterinary curriculum, which took place in September 2005 (Jensen 2006), the ethics course was required to incorporate additional teaching in animal production, which became a prominent feature of the course. The decision to include ethics in the first year

of the veterinary curriculum was taken in large measure due to bureaucratic constraints (C4), as it was recently decided (curricular year 2008/2009) that Philosophy of Science should be in the same module as Zoology, in what was referred to by one participant as *a stupid structure* (C3).

> And at that time, and still is, it was first year students. That was the only possibility. You know, there are so many subject matters. It is very squeezed into their education so there was no room to include this course at any other time. (C4)

In **Lisbon** the origins of the formal teaching in ethics can be traced back to the subject of *Sociology, History of Veterinary Medicine and Deontology*. This unit replaced the former subject of *Rural Sociology* in 1983 and introduced some teaching of professional norms and regulations. In 1994, the subject was already dedicating six lectures to the analysis of the recently approved Portuguese Veterinary Deontological Code[70], following the establishment of the Portuguese Veterinary Order (OMV) in 1991. In 2002, a single lecture focusing on some basic concepts of bioethics was added to the programme and in 2005 it had increased to 6 lectures. This also meant that the teaching of Sociology was progressively being replaced until it eventually disappeared in 2005. This was the year when a major restructuring of the veterinary curriculum took place and the unit of *Sociology, History of Veterinary Medicine and Deontology* was replaced by *Deontology and Bioethics*, which runs to the present day.

The **Nottingham** School of Veterinary Medicine and Science is the first new veterinary school in the UK for more than 50 years. The school received its first undergraduate veterinary students in 2006 - the first cohort of students graduated in 2011 - and as may be expected with a new degree course, the content of a number of modules, including the veterinary ethics component, has been under constant review. Contrary to most European veterinary schools, the inclusion of ethics was part of the planning for the original 2006 curriculum. Within the context of the non-technical skills component, ethics was very clearly identified by different stakeholders as an area that had been missing in veterinary training (N3).

> we had to use a top-down approach and look at the day one competences and the EAEVE requirements but we also did a lot of work surveying veterinarians back in practice and some of the specialists groups (small animal, equine, cattle) and we asked them what do you think veterinary students should be taught at the moment. And very

[70] Código Deontológico Médico-Veterinário (cf. footnote 66). An earlier version of the Code was available and discussed for at least two decades before it was officially approved in 1994 (João Afonso, personal communication).

> strongly what emerged at that moment was lots of stuff around professional skills (…) communication skills, clinical reasoning, business management skills and ethics. (N3)

However, the integrated structure of the Nottingham curriculum posed potential challenges to the teaching of ethics, as practical scenarios arise very early in their formative life and so students need to develop ethical abilities, amongst other things, from day one (N3). In addition, the new veterinary curriculum has been evolving and changing in order to accommodate improvements which can also involve changes in the delivery and assessment of ethics-related topics.

The following descriptions of the veterinary ethics component of each course applies to the curricular year 2010-2011 and, as with other learning subjects, it has been suffering changes and adaptations since then.

8.4 Description of the ethics curricula at the study cases

An important part of the analysis of teaching approaches is to describe the curriculum of ethics at each case veterinary school. The details of the courses were determined through documentary analysis, educators' interviews and further supported by focus groups with students. The data from these are described and analysed below. In Copenhagen, the unit of ethics runs in the first year, with a few additional lectures integrated into clinical teaching later in the veterinary degree course. In Lisbon, ethics is also in the first year but it is divided in two distinct sessions: *Veterinary Deontology* and *Bioethics*. In Nottingham, the teaching is integrated both horizontally and vertically, meaning that ethics topics can be found in several modules across the five years of veterinary training.

Graduate curricula are dynamic and might change from year to year, therefore it is not the intention of the work presented here to make an up-to-date description of each course but instead to give a rigorous account of as they were in 2010-2011 as well as to provide some insight into how ethics was included within the overall curriculum. Due to the volume of information analysed, additional descriptive information (syllabus contents) can be found as annexes (Annexe 5).

8.4.1 Copenhagen

Ethics is a significant part of the introductory course in veterinary science. This course is held in the first year of the curricular programme and combines Philosophy of Science (foremost veterinary ethics) together with Zoology. This corresponds to the core formal teaching in ethics although the person responsible (a trained philosopher) is also in

charge of additional lectures during the veterinary degree course. The ethics course runs for nine weeks, including the assessment. The workload is the equivalent to one day a week, corresponding to four ECTS. The aim of the first year course is to support the students in their abilities to recognise and analyse ethical problems and dilemmas related to their profession. A main focus in the course is animal ethics. Different animal ethics perspectives are taught together with topical 'real-life' veterinary issues and problems. The course is organized as a mixture of lectures, excursions and group-based exercises, which will be further explored below.

Lectures: The lectures are mostly arranged as 'double-lectures' including a guest lecturer with a relevant veterinary background and a lecturer with a background in philosophy or ethics. The presented themes can include some of the following: animal ethics theories, introduction to animal welfare, farm animal production, transport and slaughter, treatment and prevention of diseases, control of zoonoses, wildlife management, experimental animal use, limits for treatment in companion animals and the veterinarian-client relationship. The guest lecturer introduces his/her research or insight in the field of study and some current dilemmas in his/her field. The ethics teacher elaborates on the dilemma from a more explicitly ethical/philosophical angle, and will typically, as a part of the lecture, connect the dilemmas to different animal ethical perspectives.

> we very much agreed that we have to start off with dilemmas and problems that people will face in their everyday situations rather than just a load of theoretical framework on top of them. So basically doing a brainstorm of all these issues that you can encounter and say, Ok, so this is going to be our start of the course and trying to take these as cases to develop discussions from. (C5)

There are usually eight lecture sessions (Dich *et al.* 2005) but the number of can vary from seven to ten depending on the scheduling of the teaching. Lectures usually run for two hours but some (such as the sessions on companion animals and animal experiments) rely on triple-lecturers and may last for up to 4 hours. Students[71] are invited to ask questions and participate in the debate. One particular resource used is the textbook *Ethics of Animal Use* (Sandøe & Christiansen 2008) complemented by the internet based learning tool 'Animal Ethics Dilemma' (Hanlon *et al.* 2007).

The objectives of the lectures are several: a) to confer first year students with specific knowledge about relevant and challenging issues of the veterinary profession; b) to

[71] Hypothetically there can be up to 180 students in a lecture but because attendance to lectures is not mandatory it can fall short that number.

introduce them to some prominent ethical theories and principles; c) to help students recognise ethical issues and dilemmas; and d) to present them with possible approaches to help them deal with those dilemmas.

Finally drawing on some of students' comments, the teaching of ethics started as being described as '*not very interesting*' (Cs-7) or '*put in the background*' (Cs-4). Later, someone mentioned that the diversity of guest lecturers from various backgrounds was an asset for the ethics course (Cs-3), including a '*vivid panel discussion between animal rights activists and contractarianists*' (Cs-4), and everyone agreed upon that fact that those discussions helped them realize the different views that were being discussed within society.

Small Group Teaching: Exercises (four sessions; two hours-long) are held with three groups of 60 students with one lecturer each. The tutors involved are specifically responsible for the teaching of Ethics and Philosophy of Science. Each group is further divided in ten smaller groups of six students each. During the exercises, students reflect on staged ethical dilemmas or work through 'real-life' veterinary cases. The constructed dilemmas and the 'real-life' situations are presented via different platforms (described cases, films, veterinary magazines). After dealing with the case within the small groups, each group summarises orally to the rest of the class what has been discussed between them. Finally the teacher will pick up the overall conclusions of the discussions and locate them in a broader ethical perspective and hereby connect the exercises to the lectures. A working document sets out how a case is dealt in the small group teaching:

> An example of a 'real world' case taken up at the veterinary course is breeding of the so-called Belgian Blue cattle. After watching a film telling about Belgian Blue and showing different veterinarians talking about their view of Belgian Blue cattle production, the students discuss different questions (e.g.: What could be the argument for breeding of Belgian Blue by planned Caesarean is ethical justifiable? What is the argument for the opposite?).

The aim of the exercises is to give students the opportunity to analyse ethical dilemmas and discuss them with their student colleagues and the teacher. The dialogue about the ethical issues raised is seen to make the students reflect on their own values and attitudes, understand and respect the opinion of others, in addition to promoting their working skills. This is described by one educator in the following way:

> And students - especially the younger, these are first year students – they want knowledge presented in tiny bits that they can swallow without having to chew. So when you give them exercises they have to work, they have to be frustrated, they have to think,

they have to make mistakes and some of them are sort of: “Oh this is too hard work”. But I think that’s when they learn something. (C2)

Excursions: More recently (in 2010) an excursion was included in the programme of ethics. Students are divided into 4 groups of approximately 45 students each. They are accompanied by a lecturer in a one day visit to an animal production/transformation plant (e.g. conventional pig farm, organic pig farm, conventional dairy farm, slaughterhouse, mink fur farm) with each group visiting a different place. Students are given beforehand some basic information about the place to visit (e.g. functioning of the system, welfare regulations). On site they are separated into smaller groups (variable in size) and each of these small groups has to answer a specific set of questions. These usually involve how is the system is organized, what are the animal welfare issues in a particular part of the system, and what could be the ethical implications. This means that each small group is responsible for looking at different aspects of that same production system. These different insights are brought together in a later session and orally presented for the overall class.

The main objective of the excursions is to provide students with a common background of first-hand experience with animal production. Other objectives are the opportunity for students to meet actual producers at their work place, to have them share comparable personal experiences in animal production and to develop their competences (knowledge and skills) in farm animal welfare ethics.

Students widely agreed on the benefits of having excursions. They acknowledged the importance of the excursions in providing students with different backgrounds with an opportunity to ‘*go out and see production animals*’ (Cs-3), which will, eventually, inform ethical debates in the future (Cs-7). In this respect, someone suggested that excursions are not actually about ethics but about ‘*enlightenment*’ (Cs-3). As a matter of example, Cs-7 admits that ‘*a lot of prejudices I had regarding mink farm[ing] were swept away’* and Cs-4 confessed how (s)he was ‘*blown away’* and ‘*amazed’* with conventional pig farming.

Assessment: Assessment has also changed along the years. Previously (before group assessment was prohibited in Denmark in 2006[72]) students had to perform a group report prior to the individual exam. At some point they also had oral examinations where students were asked to frame an argument from the point of view of a given ethical perspective. These oral exams were eventually abandoned because of practical reasons

[72] “In 2006 the [Danish] Ministry of Science, Technology and Innovation and the Ministry of Education, banned group-based exams. The consolidated act (LBEK 280 of 21/03/2006) came into force from the 1st of April 2006” (Kolmos & Holgaard 2007, p.4).

(i.e. they were time consuming). Today, assessment includes a written individual exam (two hours long), which is qualitatively assessed (pass/fail). Students are presented with a case in animal ethics[73], usually from opposing standpoints. They have to describe the case, explain what the competing arguments are about and then explore the ethical issues surrounding the case from at least three different ethical perspectives.

Additional Teaching in Ethics: In the third year of the veterinary course additional teaching of ethics-related subject was also identified through the small animal clinical teaching. It is a one day session on the Human-Animal Bond delivered by a veterinarian with background in animal welfare and ethics and a veterinary clinician. The objectives are to make students '*have an understanding that animals may play different roles in humans' lives and, again, meet clients with respect'* (C5).

8.4.2 Lisbon

In Lisbon, ethics is formally taught as the subject unit *Deontology and Bioethics*, held at the first semester of the curriculum (2 ECTS). The general aim, as described in the syllabus, is to analyse and clarify ethical and legal positions concerning relevant issues to the veterinary profession. However, the objectives of the formal teaching in ethics are twofold and described separately.

The programme is delivered using one-hour lectures (total of 13 lecture-hours/per year) and divided into two modules: *Veterinary Deontology* (six sessions) and *Bioethics* (six sessions). The two modules are taught separately with no relevant connection between them and students' attendance is voluntary. One additional lecture introducing rudiments of *History of Veterinary Medicine* is also part of the teaching. The final session is used for assessment purposes. Each module is delivered by a different teacher (they are both veterinarians). A brief description of each module follows:

Veterinary Deontology focuses on the analysis of the Portuguese Veterinary Deontological Code (Code of Conduct). Each lesson is dedicated to one particular aspect of the code (e.g. duties of the veterinarian towards the community, colleagues, and clients; professional contracts; fees; advertising; prescription and responsible use of medicines) and students are expected to read the corresponding articles beforehand. The Statutes of the OMV are also part of the required reading. After a brief introduction

[73] Cases are chosen by relevance. At the time of my research the exam was about the ongoing social debate concerning housing of dairy cows during the summer time (indoors vs. outdoors) in Denmark.

by the lecturer, students[74] are invited to comment on practical examples of professional misconduct. These are usually based on 'real-life' scenarios taken from the previous decisions from the OMV disciplinary board but no reference is given to the actual cases or to the people involved. Students are expected to contribute to the discussion and their involvement is formatively assessed. The objectives of these sessions are to make students aware of a) the professional challenges they might encounter in the future, b) the right way to deal with those challenges, and c) the sanctions they might face if they fail to obey to the code of conduct.

The module of *Bioethics* deals with the broader ethical issues of animal use. It begins by introducing some basic ethical definitions, concepts and theories. From then on lectures are used to explore practical bioethical cases, selected from a wide range of topics: animal experimentation, biotechnologies, wild animals in zoos and circus, bullfighting, animal agriculture (intensive and organic farming), farm animal welfare ethics, euthanasia, and other ethical issues inherent to clinical practice. Students are divided into small groups (of three or four students) and instructed to look at the case from the perspective of the stakeholders involved. They are then invited to share their point of view with colleagues in order to discuss different perspectives and opinions. The stated objectives included: a) enlighten the students for the ethical dilemmas they may face; b) make them reflect upon complex scenarios, c) respect the opinion of their peers, and d) acknowledge the existence of alternative arguments and solutions. Suggested reading usually involves a mixture of textbooks (e.g. Rollin 1999) and journal articles.

From the students' point of view, the teaching of *Deontology* was described as '*null'* (Ls-4), '*boring*' (Ls-1) or just a matter of '*common sense*' (Ls-2) and the attendance low. *Deontology* was considered relevant mostly as a way to force students to read (Ls-8) and analyse (Ls-2) the Code of Conduct. *Bioethics* was described as '*useful for stimulating our interest and curiosity to understand the cases'* (Ls-5) and '*important'* (Ls-1) '*to learn how to act in a given situation'* (Ls-6), and '*to build the vet that we will turn out to be'* (Ls-2). One student, however, challenged this view because the class format was inadequate for the discussion of cases:

> I was sitting there and the teacher started to make some questions for us to give our opinion and the class burst in discussion and we could not hear anything and there were people standing and having an argument. (Ls-3)

[74] Hypothetically there can be up to 120 students in a lecture but because attendance to lectures is not mandatory it usually falls well short that number (students made reference to no more than 40, and often much less).

Assessment: Both modules are assessed at the same time via a written exam composed of MCQ's concerning the Deontological Code (as part of *Veterinary Deontology*), and MCQ's about ethical theories followed by one short essay (as part of *Bioethics*). The short essay (two to four pages) can involve a specific case chosen from the topics previously discussed in the lectures (e.g. bears held captive for their bile, euthanasia of stray dogs, xenotransplantation). The exam is graded quantitatively (1-20). The assessment methods have changed along the years. In *Veterinary Deontology* students could opt to take part of a debate session with the module convener, in addition to the final exam. This was later abandoned because it was time consuming. *Bioethics* used to be assessed by a long individual written essay, on a topic at choice, which was abandoned partly because it was time consuming to assess but mostly because students often resorted to plagiarism.

Additional Teaching in Ethics: The third semester of the veterinary course also contains some additional and informal teaching of animal welfare ethics within the subject of *Animal Behaviour and Welfare*. The emphasis of this particular unit is on the behaviour of the main domestic species, and also on welfare science and law, and there is also some room for the moral implications of animal welfare. This is done informally, with the teacher (a practicing veterinarian) providing the students with a strong personal perspective on the subjects which are being discussed (cf. section 9.3.2).

8.4.3 Nottingham

The Nottingham School uses an integrative approach to teaching, both horizontally and vertically. Rather than delivering a single module the teaching of veterinary ethics is embedded within several modules throughout the five year course. Some key components are formally delivered within a number of prominent modules (PPS1, PPS2, AHW2[75], Ethics Day in the fifth year) while others were seen to be taught informally (PPS3, PPS4, CRS).

The objectives of the teaching in ethics are to equip students a) to deal with the ethical issues and dilemmas that they will meet in practice, b) to see their role as good veterinarians within a profession of high standards, and c) to meet the legal and RCVS licensed standards of the veterinary profession. A pluralistic approach to ethics teaching is applied throughout the course, where students are encouraged to reflect on different ethical positions and to develop their ethical reflective skills. These objectives run across

[75] Module of Animal Health and Welfare, second year.

the overall curriculum but are especially highlighted by a series of linked lectures and small group sessions that are delivered in the Personal and Professional Skills (PPS) module in the second year of the course.

The following table represents the results from mapping the teaching of ethics in the Nottingham course, including the modules involved, the main learning objectives as well as the assessment method used for the ethics component (Table 5). A more detailed description of each module is included below. The modules contents, as they were available at the school website at the time, are also provided as annexe (cf. Annexe 5.3).

Table 5 – The relevant teaching of ethics in Nottingham (as in 2010-2011).

Year	Module	Inclusion of ethics	Learning objectives (ethics)	Assessment (ethics)
1	Personal and Professional Skills 1(PPS 1)	Formal	Work life balance and the RCVS professional guidelines (Before EMS)	Not formally accessed Formative plenary session (Group Role Play)
2	PPS 2	Formal	Relate ethical theory to veterinary practice	OSPE: To write an ethical-clinical case scenario.
2	Animal Health and Welfare 2	Formal	To link ethics with animal welfare & law	Oral Presentation of a AW practical case
3	PPS 3	Informal	Human-animal bond relationship-centred care	–
3	Veterinary Research Methods	Formal	The use of Animals in Science and the fundamental of Veterinary Ethics.	MCQ and EMQ
4	PPS 4	Informal	Clinical Governance	–
5	Ethics Day	Formal	Relate ethical theory with veterinary practice	–
All	Clinical Relevance Sessions	Informal	Ethical reflection Skills (used in several modules)	–
All	Portfolio	Informal	EMS Reflective practice	Comments from tutor

The teaching of ethics begins in the module of PPS1 in the first year with a problem oriented approach to a series of five scenarios that are relevant to the students' extra-mural studies (Millar *et al.* 2009). The majority of formal teaching is delivered in the

second year. Following some introductory lecture sessions delivered using a team teaching approach (through the interactions of a bioethicist and veterinarian), students work through a series of ethics clinical relevance cases that are discussed in small group PBL sessions. The objective is to link the teaching of ethical frameworks with the examination of practical clinical cases:

> It is fairly pointless to stand in front of them talking at them about ethical theory. They have to actually use it. That's why we developed this PBL method of actually make them use the ethical theories and make them understand why they're important. Because it's quite an abstract concept. (N3)

In order to achieve horizontal integration of the curriculum, these clinical relevance cases are intentionally related to the subject teaching that run parallel during the year (Millar *et al.* 2009), which is organized in body systems (such as urinary, gastro-intestinal, etc.). For example, during the reproduction and breeding module, the case relates to the ethics of Belgian Blue breeding.

The early lecture sessions introduce ethical theories and decision-support tools, such as the Ethical Matrix and the 'Animal Ethics Dilemma' website. This is followed by lectures on the RCVS Guide to Professional Conduct, current EU and UK animal law, and legal cases. Special themes are emphasised within the integrated course such as the ethics of: euthanasia; farm animal and companion animal use; animal experimentation; and professionalism. Three educators, two veterinarians and a bioethicist, are responsible for delivering and integrating these elements within the curriculum. In order to expose the students to different views, a number of guest lecturers, both veterinarians and animal ethicists, are invited to run targeted ethics sessions.

In subsequent years, students are presented to clinical relevance sessions as part of other modules (such as Musculoskeletal System or Public Health). Despite the fact that these sessions are scientifically oriented, students are expected to raise and discuss any ethical implications of the cases.

The portfolio is an e-based record of students' learning activities throughout each year, where students are required to share with their tutors their clinical experiences but also their anxieties, concerns as well as their learning journey. This e-tool works as a reflective exercise (and thus helps to develop certain ethical skills) but also as a tool for assisting students develop professional attitudes as they work during their placements. The aims and methods of the Nottingham portfolio have been described by Mossop and Senior (2008).

In the same way as in Lisbon, Nottingham students also refer to *common sense* approach (Ns-2, Ns-4) when referring to the RCVS Guide to Professional Conduct (or of its '*basic summary'* (Ns-4), the 10 Guiding Principles). Students also seem to recognise the GPC as a central feature of their teaching experience that links together the several pieces of professional ethics teaching running across the curriculum:

> Ns-6: You've always got it [RCVS - GPC] as a backup and then obviously we've got a portfolio that we have to write every year. In the clinical years you have to link that to RCVS day one competences, which is a set of skills you should have on day one following graduation. And then you also meant to link (…) your experiences at the vet school to these guiding principles, which the RCVS lays out, which already show you have an appreciation of the professional ethics as opposed to being sat down and taught the professional ethics.

Assessment: The assessment will depend on the module where ethics is included. In PPS1 ethics is only formatively assessed as part of group work that focuses on problem-solving and ethical reflection and presented in a plenary session. Students are given a case with professional and ethical implications (e.g. an equine welfare case; a lying breeder case, etc.) which they have to deal with. At the end of the semester each group has to present the case for the rest of the class using an interactive approach (e.g. slideshow, role play, video, etc.). A jury, composed of veterinarians and educators in ethics, further explores the arguments exposed by students and selects the best presentation of all (this group then receives a small prize).

Within the second year, the integrated ethics component is taught across two modules (PPS2 and AHW2) and is assessed through both exam questions within the AHW module and written assessment (ethics clinical relevance essay) in the PPS module. Animal welfare-related assessments also include a short position paper (in the form of letter to a peer-reviewed journal) and an individual presentation of an animal welfare practical case. The ethics clinical relevance essay is, in fact, an OSPE that students have to construct on a topic at their choice using the same structure as the cases they discussed during the small group sessions. The ethical component involves students identifying the ethical issues and stakeholders involved, and apply and discuss ethical theories (some of these theories are set out in the Animal Ethics Dilemma web tool).

> The students have to present us with a scenario. And explain the ethical theories and then explain how the theories apply to the case. And then are marked on the presentation of the dilemma and how well they understand the theories and how well they apply the theories they get marked in things like spelling and grammar and technical terms and the language they use and that sort of thing. (N1)

> So we give them a template (...) and say pick an ethical issue and create a case around that and create both the student (...) and the facilitator side. Within the facilitator's side will be discussions around ethical theories (...) and it tests their understanding of ethical theories very well because they have to prepare some explanatory notes for the facilitators (N3)

The modules PPS3 and PPS4 as well as the Clinical Relevance Sessions and the Portfolio do not have a formal assessment in ethics since any ethics component is seen to be integrated in various sessions. Finally, one interviewee mentioned the fact that the School has been avoiding long written assessment and rather opting for on-line exams and practical exams (N7).

8.5 Characterization of the educators and their role in the teaching of ethics

In Lisbon, the educators identified as being involved in teaching ethics, both formally and informally, were veterinarians. In Copenhagen and Nottingham there was a combination of veterinarians and professionals with mixed educational backgrounds (ethics, sociology, theology, geography, physiology, zoology and biology). Educators recognise that sharing the teaching of ethics with people with different backgrounds and experiences is an asset (C2) and that ethics should be addressed using multidisciplinary teams (C1, N5).

In Copenhagen and Lisbon ethics was not part of the original veterinary curricula (cf. chapter 8.3) and it corresponded only to a small fraction of the overall study programme. In Nottingham, on the other hand, the veterinary curriculum was originally designed to integrate ethics which can be found throughout the course; however, there is no module exclusively dedicated to ethics and therefore it could be difficult to quantify how much of the overall programme is dedicated to ethics. As a result of these circumstances it is expected that the educators who teach ethics at the three schools are also involved in other forms of teaching (and research). This was seen to be the case as most of the interviewees described having responsibilities other than the teaching of ethics to veterinary students. Nonetheless several educators, in Copenhagen and Nottingham, described the teaching of ethics - specifically to veterinary students - as being their main function.

Having formal training in ethics (i.e. a degree in ethics) was not seen to be essential for teaching ethics as most of the interviewees do not have this type of training in the subject. In fact, only one educator had an academic degree in ethics while several others reported having post-graduate qualifications or attended courses in ethics or philosophy

at the post-graduate level, courses which could be described as 'formal training' in ethics. Others made mention of having some 'informal ethics training', mostly through professional qualification such as laboratory animal courses.

In the absence of formal competence in ethics, some educators make reference to having complementary scientific or technical skills which enabled them to engage in the teaching of ethics, while others confessed to having a personal interest in the topic. It is also notable that for some interviewees, their involvement is somewhat accidental, given that they have been asked - and accepted - to teach ethics irrespectively of their previous engagement with the subject.

In terms of the role of educators in a session of ethics, there was widespread agreement that educators are not there to tell students their own views on the subjects nor tell them what is right and wrong. In Lisbon, L2 highlights the fact that the job is to present the facts and not to make personal judgements:

> In addition to providing that information about the [Statutes of OMV], to be a moderator more than anything else (...) It's not up to me to be there to say that this should be this way or that way. It's my role to say, according to the Code [of Conduct], and in these situations that were real and have been judged, the solution was this (...) Thus I try as far as possible not to give my opinion. (L2)

That does not mean, however, that the educator is prevented from expressing, in particular circumstances, what he or she thinks about a topic that is being discussed (e.g. at later stages of the session or if asked directly). This was seen to happen in Copenhagen and Lisbon. In Copenhagen, C6 recognised using his/her own viewpoints as a means to provoke emotional reactions in students '*and maybe 10% will get angry with me because they think I am biased'* (C6). This approach is always followed with a justification for having expressed that particular opinion. Another educator explains how it is possible to have a pluralistic approach to ethics while at the same time voicing personal viewpoints. Using one's own opinion is a way to promote debate by providing students with the opportunity to explore and develop value-based arguments on contentious issues:

> Ethics is first and foremost a value clarification, not rule teaching and I think that's an important part of my understanding of what I do at this faculty that I don't teach anybody what to do and what to think. I have obviously strong opinions about things and I tell the students what my opinions are and I tell them that this is not to make you say what I say at the exam; this is to show you that I am a human being who has values and you can now use me a sort of a wall to throw up your owns ideas and I will bounce it back at you and provoke you and I will be the devil advocate but I don't have any truths for you. (C2)

In Nottingham, on the other hand, educators were never referred to giving their own opinion during an ethics session. In this school every respondent commented that they would not give (or only very rarely give) their own opinion even if they were asked, e.g. when discussing an ethical-clinical case. The way the educators in Nottingham describe their role in ethics teaching is very much coloured by the fact that they are working in a PBL environment, with their role being perceived as that of a facilitator.

In the student focus group sessions the role of the faculty was also discussed and students seemed to acknowledge that educators (and the school, in general) are trying to give them a pluralistic understanding of the values and viewpoints of others with whom a veterinarian is expected to interact:

> Cs-6: I just think from the school side, I guess, they are trying (…) to make people from different backgrounds have some sort of correlating understanding because we are dealing with very different problematics in our future work and will still be able to talk to each other and understand each other thoughts about a given problem.

Students also acknowledged that educators do not try to promote their own viewpoints but that, instead, they try to instil them with the ability to reflect upon ethical issues, as can be seen in the following examples taken from Copenhagen and Lisbon:

> Cs-4: the course is set up so you don't have anything pulled down over your head. It's not like they are telling you: "think this way, think this way". They are just putting it out there for you to think about it and you can agree or disagree. If they are trying to make us all move on the same direction, they are doing a really poor job.
>
> Ls-5: the teacher is not there to lecture but to show us cases and to make us think about them. And never gives answers. Makes us think as people, how we should think later, in the future, when cases arise because we cannot just think in terms of treatment and surgery.

Nottingham students also recognised that in the PPS teaching - and especially the CRS – '*quite often it's not the answer that is important in the learning process, is in getting to the answer where we learn most'* (Ns-4). Students seem to appreciate the fact that sessions are facilitated by vets who are capable of making a link to the challenges dealt with in practice (Ns-2). In addition, students also feel that at the end of the sessions it would be useful to have a qualified opinion on the subjects that were discussed instead of just a neutral facilitator (Ns-3):

> Ns-2: One thing I found really interesting about the ethics is one of the CRS we've had with vets, and we've been talking about the case that had been presented to us. Our facilitator said: but in practice you'll be faced with this dilemma or, particularly with finances, which is a bit that kind of challenge.
>
> Ns-3: (…) I was going to agree with you (Ns-2) that it's frustrating not to get perhaps the more qualified opinion at the end of it [CRS], if you feel like you're deciding along with

people who don't necessarily know any more than you do, and it would be nice to get the opinion of someone who does have more experience.

8.6 When should ethics be incorporated within the curriculum

Educators across the case sites seem to agree with the fact that ethics should not be confined to a particular year of the veterinary course and needs to be incorporated across the curriculum. Arguments were also made that ethics should not only be presented as a block or as a stand-alone subject in order not to get isolated from the other subjects and eventually forgotten about (N2, L2) and in order to be put into context in a relevant and meaningful way (N1, N2, N3).

> [students] want to be spaying bitches they don't want to be talking about dealing with a bereaved client. They don't understand in the early days the importance of these skills. So it's very important that [ethics] is presented in a way that made it real, that was as experiential as possible. (N3)

Several arguments were produced for having ethics teaching at the beginning of the course: a) students can start to think critically before they engage in practical hands-on training with live animals (L3); b) developing ethical reflection is not dependent upon technical knowledge - rather empathy (C1), and feelings about animals (C3) – abilities that novices seem to have – are more important; c) younger students also seem to be more open minded and it is easier to make them think about cases from a different perspective (C2, N2); d) early in the course students are less focused on the clinical aspects of the profession (C5), and ethics teaching is an opportunity for students (in a non-integrated curriculum) to talk about animals and to be presented to different professional areas from the start of their training (C4).

Contrariwise, arguments were made for having ethics teaching closer to the end of the course: a) by that time students already have the knowledge to go into the legal, technical and animal welfare related details of the discussions; b) as they mature, students are better equipped to reflect and critically think (N5, N2); c) they are also given the chance to train their ethical professional skills right before they go into practice (L3) while if they only hear about ethics in their first year, much of that is gone at the end of the course (C2, L3).

A striking feature of the ethics teaching in Nottingham is the way it is fully integrated across the curriculum (cf. Table 5), with both formal and informal teaching components linked with the technical teaching that is running at the same time. Several of the Nottingham educators recognise that ethics is a teaching journey, not a singular

objective that can be achieved in a single session. Ethics was described as '*something that is going to be a lifelong learning experience'* (N3) and as '*something that [students] have to mature into [themselves] and we just have to guide them*' (N7). Ethics is thus embedded in every step of the learning experience and is '*probably an unconscious inclusion. But then that could be said about a lot of how we think about ethics*' (N4).

A relevant finding in Copenhagen is that there seems to be a gap between the formal teaching of applied ethics (in the first year) and teaching of ethics in the clinical years (this includes the formal teaching of the Human-Animal Bond and the informal teaching of clinical ethics). With the exception of some additional lectures given by the educator responsible for the ethics curriculum, there is little connection between the two and people involved in one are not fully aware of what is being done by the others (C2, C3, C4, C5):

> Obviously, there must be ethical discussions when they, for instance, have a course on oncology treatment of cats and dogs. But those are performed by the course teacher which isn't one of us. This is sort of, ethics for them. If students need ethics it will be in the form of their vet teachers and very often they have a very dim idea of what ethics is. (C2)

As a settling measure it was suggested that, although the basic ethical concepts should still be introduced in year one, this ethics training should be built upon in subsequent clinical years with a more practice-oriented approach (C3, C4), using seminars (C6) or small group teaching (C2). In this way, students would be more aware of the different ethical issues they will face after graduation (C1) and develop their own viewpoints (C4). These sessions would involve veterinary practitioners together with philosophers (C1, C2).

> I think there should be a course latter on after they had the first clinical experiences. (…) and I think it is easier when you are in the situation to discuss what is your viewpoint here and how did you act and why did you act like that and what kind of considerations did you take into account. (C4)

In Lisbon, L2 expressed the view that '*ideally, ethics should be taught globally'* throughout the veterinary course. A suggestion was made to split the ethics course in two, as a way of having *Bioethics* in the first year (in order to raise awareness of ethical issues) and *Deontology* in the fifth year (to stimulate more informed discussions) (L2).

Students are also sensitive to the timing in which ethics is taught and arguments were presented in the focus group discussions about when ethics should be incorporated within the curriculum. Students emphasise the importance of ethics when applied to the

teaching of clinical sciences. In this context, ethics works as a decision-making tool that stimulates reflective practice:

> Cs-3: We have a lot of talk about ethics later when is more natural. When we first start in the clinics you have to have contact with the clients and then afterwards you can take the discussion about what I feel she should have done to this animal, should it have been euthanized, or should we actually try to help this very sick animal and I think there is still some big differences in people's ground ethics when you come from a production background or when you come from a small animal background.

Conversely, students challenged the usefulness of having ethics at an early stage in the curriculum because *you get to the 6th year and you can't remember anything you've learned in professional ethics* (Ls-2). Cs-7 further explores this argument by saying:

> … that a lot of the discussions we had they were irrelevant to this part, so early in the course [Year 1]. We had some discussions on this [ethics] like this specific case of how to deal with another vet. A lot of us talked about we have no use for this already now. (Cs-7)

Students reasoned that ethics teaching would benefit from being '*incorporated into the [over]all study'* programme (Cs-6). Cs-4 suggested adding '*just one [ethics] lecture after each subject as needed*,' in order to build a stronger connection with the technical knowledge that is being imparted.

In Lisbon students made a clear differentiation between the two components of the course in ethics (*Deontology* and *Bioethics*) and the debate was frequently hampered by doubts about which one was being discussed. In respect to *Bioethics*, the suggestion was made that it would be more useful later in the curriculum after students have had contact with animals with the purpose of increasing the quality of the arguments used in the discussion of cases (Ls-9). But the opposite suggestion was also made on the grounds that the teaching of *Bioethics* helps developing critical thinking from day one:

> Ls-8 - I think that it makes sense to have Bioethics in the first year even if it's only to develop critical thinking and get a sense of what is to be a vet - many students are only familiar to cats and dogs. And these cases give us a first approach to the vet world.

The integrated nature of the Nottingham course makes it more challenging for students to identify every module where ethics is taught. Nonetheless, students were able to identify and articulate different pieces of teaching in ethics as exemplified in the following dialogue:

> M: So (…) where in the curriculum are you taught ethics?
>
> Ns-1, Ns-3: PPS
>
> Ns-4: Everywhere.
>
> M: Could you be more specific? You have four PPS modules.
>
> Ns-4: We have it every year for 4 years.

M: So would you differentiate between those?

Ns-3: I think we were taught the first year and this year (Y2), but this year in particular we are having to do an ethics based piece of course work.

M: So would that be ethics to you?

Ns-6: Is introduced in Y1, is built upon and explained in Y2, and then in 3Y, 4Y, 5Y you're expected to use what you got taught in previous years. That's how I would try to explain it.

Ns-4: I agree with that.

8.7 Competences assessed when examining students

Three main themes emerged from the interviews with educators concerning the competences that are being assessed in terms of ethics: (1) application of ethical theories, (2) critical thinking skills and (3) decision-making abilities. The learning of ethical theories was referred at several different levels in terms of intended outcomes (C2, C3, C5, N1, N3, N4, N7). For example, C2 explains how students have – by means of a written exam – to *recognise* ethical theories (Knowledge), to *describe* them (Comprehension) and to *apply* them to concrete cases (Application):

> We try to see that [competences] in the exam, when they have to write an essay when they are presented with a case (…) And they have then to describe that case and the ethical issues surrounding it from at least three different ethical perspectives. That's where we can see if they actually understood that there are different theories and perspectives and whether they are able to use them on a case and understand that case and what's at stake (C2)

Ethical theories are tools to support structured ethical reflection. In Denmark, the case presented in the exam on that particular year (2010-2011) was if dairy cows should have access to pasture in the summer months, instead of being enclosed all year round. C3 describes how students were expected to use ethical theories when *analysing* the case (Analysis) by providing a framework with which to examine the arguments that might be involved:

> We had the case presented in two papers: one written by a Danish animal protection organization and the other by the Danish Agricultural Union and then the students were asked to analyse what was the argument around here and how did it relate to the ethical perspectives we have learned at the course. (C3)

In Nottingham, students are assessed on '*whether they understand ethical theory (...) through a piece of course work where we actually get them to create their own CBL case*' (N3) and where students have to apply those theories to different scenarios (N1, N4).

> So we give them a template which is what we use to create the cases and say pick an ethical issue and create a case around that and create both the student side but also create the facilitator side. Within the facilitator's side will be discussions around ethical theories, stimulating questions for the students and it tests their understanding of ethical theories very well because they have to prepare some explanatory notes for the facilitators. The student part will include the video or the power point that helps to kick out the case and it might include one or two questions but actually it's the facilitator's bit that contains the guidance notes around what ethical theory means and making sure they cover it. (N3)

Still, there is the concern that students might apply ethical skills, including the application of ethical theories, without having to genuinely reflect:

> I really don't know if they just automatically take the ethics like some tools and just put it over this case without reflect a lot about what does this really means. (...) I really don't know if you can assess that in that kind of examination we have now. Of course some of them you can see when they write they have very good discussions and arguments and those are the best students. You can see they are thinking about this. And some of them you can see they are just taking these five ethical perspectives from the book (...) And you can see is not very reflective and they will just take it like [X] had said so and [Y] had said so and they will do the same here without thinking about it. (...) (C3)

C5 further explains how the assessment of ethical frameworks is used to measure students' understanding of ethical plurality but he/she also identifies far-reaching learning outcomes that go beyond the knowledge of ethical theories and that are not assessed:

> What I evaluate is that they have an understanding of different ways to approach the discussion from a value perspective (...) in the exam situation they need to understand and explain the different theoretical frameworks. But what I hope that they know two years down the line is [to understand that disagreements may arise from differences in knowledge but also from differences in values and] to be able to identify whether this is a knowledge-based disagreement or a value-based disagreement" (C5)

In addition to ethical theories, educators also mention the role of critical thinking (C4, C5, L3, N5), and decision-making (N4) as intended learning outcomes. This is exemplified by the following quote:

> Overall, I hope they are becoming critical thinkers. My impression is for students with mainly a science background this is sometimes difficult because they are used to having a yes/no answer. I'm trying to encourage them to tolerate other views or at least explore a variety of views and these are skills of debating, tolerance, critical thinking, skills of reflection, so some students seem to find reflection particularly difficult. (N5)

Mention to measuring these outcomes, however, was not as frequent as it might be expected and there is only weak evidence that critical thinking and decision-making are actually being assessed. One reason that can explain this finding is the notion that ethics is a pervasive subject, one which '*you never get the appropriate knowledge'* (N3) and *'that you can [not] grade'* (N7). In this sense, ethical competences are difficult to assess mostly because they are also difficult to teach:

> Who's very good at ethics? Everyone perceives themselves to be very good at ethics. It's all that their standpoints vary widely between someone who perceives, I don't know, experimentation on monkeys to be OK and someone who doesn't. I think it's completely impossible to measure like that (N7).

This chapter has so far explored how the teaching of ethics has been operationalized at the case schools. These pedagogic aspects included a retrospective outlook and a detailed description of the curricula in ethics; the role of educators in the teaching process; the place of ethics within the curriculum; and the assessment of students' competences. The next section introduces some broader aspects that emerged from the empirical data, which reflect the challenges faced in teaching and assessing ethics.

8.8 Challenges in the teaching and assessment of ethics

The challenges in teaching and assessing ethical competences were widely acknowledged. One of the main points identified as challenging in Nottingham was seen to be the teaching of ethical theories. The overall perception from the educators is that students do not seem to like the teaching of ethical theories because they find them confusing and difficult to understand (N3, N7) and they might also get 'turned-off' by the terminology (N2, N3). Besides, several educators in Nottingham were sceptical about the use of ethical theories as an effective way to teach ethics (N2, N3, N5). One of the reasons presented was that vets, '*when they are in practice, they would never use the word utilitarianism, it's just not common day language*' (N3). However it is interesting to note that in Nottingham ethical theories were described by students as being useful to help them dealing with the practical challenges faced in the clinical years:

> Ns-4: I spent a couple of weeks (…) in a vet practice and sometimes looking at things through those ethical viewpoints made me rationalize things, like pregnancy spays, get the bitch on the table and find that she's pregnant and because you've signed that piece of paper saying you are going to do the operation, you do the operation. And initially it would go like: "Oh, that's ridiculous, she can't do that, it's not fair on the puppies" but then when you look at it, yes, that person wants this and you've signed a piece of paper your abided to do that and that is what we call the contractarian ethical view point.

The ambivalence towards the usefulness of teaching ethical theories was not found amongst Danish educators. In contrast, students in Copenhagen were ambivalent towards the use of ethical theories and of how these can be useful in the future. Cs-7 confessed that they '*didn't know what to gain with it [ethics], really. (...) You just needed to know these theories and then you could pass the course*'. Cs-6 contests the fact that some of the time spent in framing the theories could have been used with alternative activities, such as excursions and group discussions, that enable students to express '*real opinions*' and that more closely relate to practice.

In Lisbon, some ethical theories that are relevant to support the arguments used in the discussion of animal ethics dilemmas are introduced in the first *Bioethics* session. However, ethical theories or concepts were never mentioned by Lisbon students in the focus group session.

Educators are aware that ethics has to be made professionally relevant for pedagogic reasons and in order to get students' attention, otherwise students may lose interest if '*there isn't a hands-on clinical thing of being a vet*' (N2). But, at the same time, '*students tend to get a bit carried away with the clinical aspects*' (N2) and a balance must be reached between the two. In addition, ethics needs to be assessed namely because '*it's*

unlikely that people would pay as much attention to things if they didn't know they were being examined' (N2).

The changes produced in the assessment methods were often a motive of discontent and educators have often expressed some scepticism towards the way ethics was being assessed at their faculties. Some educators highlighted the fact that ethical theories are used mostly because that is what they can objectively assess (even if not what ideally should be assessed) (C5, N4, N5).

> Knowledge is hard because skills of debating that is very difficult to assess. Appropriate knowledge more concrete than the ability to critically think? (...) Some knowledge would be the theories. I'm not sure that teaching ethical theory is the best way (N5)

Most of the educators appeared to prefer other options for assessment or would like to see a change so that it includes the measurement of more competences, including the ability to reflect upon own viewpoints and to respect the viewpoints of others:

> I think it's a shame because you miss the dialogue, you miss the students having this discussion with each other and I think that in order to have discussion you have to be very open, you also have to reflect upon your own viewpoint and that will not be included in this written exam and it's really hard to include in the teaching itself but I think that we have really missed something by excluding the project work. Because that was where they really had the chance to work with theories, to work in their case. (C4)

Above all, educators miss the opportunity to have a dialogue with students and providing them with meaningful feedback during the assessment (C3, C4, C5, C6, L3). In this respect, the difficulty in objectively measuring skills of reflection and decision-making was emphasised and written exams were considered insufficient to determine the acquisition of morally relevant competences (C3, C4).

> I don't know if this kind of evaluation really tells us something about if the students take this more ethically or value perspective into themselves. It would be nice if the students would become more ethical after the course, but that's the wrong way to say it… I really don't know if they just automatically take the ethics like some tools and just put it over this case without reflect a lot about what does this really means. (C3)

Educators also mention the limitations of the scope of the assessment especially in defining objective criteria for assessing critical thinking that go beyond measuring ethical theories. C4 explains how '*we don't really evaluate if they respect other viewpoints. We evaluate if they are aware that there are other viewpoints and how the viewpoints look upon that issue'.* L3 further explains:

> It is difficult to evaluate Bioethics in an objective manner. I could ask 'What did Kant say in 1780? or what does Singer say? and so on'. But that doesn't seem to be the objective of

> the unit. [Instead I think it should] be about talking to them and be able to tell 'look, here's a person who thinks in what he says (...), who is able to reflect a little, who listens to others' (L3)

There was also the concern that students' answers may not, in fact, represent their competences because much '*like any subject matter they can pass that coursework without fully understanding it*' (N7). N7 goes on to make the suggestion that, instead of on-line exams, (…) '*an essay would be more appropriate to an area like ethics where [students] have to first of all formulate an opinion but then defend it with reference to ethical theory'.* N6 corroborates this view by saying:

> If I had control over my own teaching I wouldn't use the online exam format. I would go back to short-answer) or a looser format structure of questions, they are harder to examine in a standardized manner but it encourages students to think a little bit more broadly, to integrate a bit more and to allow us to test things that don't fit into the on-line exam format that we use. (N6)

A number of additional limitations were identified with regards to the nature of assessment. Some felt that there is the risk that students confuse objective assessment criteria with personal subjective judgments to the point of accusing the teacher of retribution for not following the teachers' point of view:

> Suppose someone defends vigorously the use of sow crates but that the arguments put forth are not so good and I end up giving a low grade. And that someone comes to say: "no, this is because the teacher doesn't like [my viewpoint]". (L3)

There were also seen to be limitations of resources (in terms of time and staffing) related to assessing a large number of students (L3) and to the effective integration of the assessment of ethical competences with the technical ones:

> And we struggled last year finding people to mark it, because (…) it should be clinical people marking the clinical stuff. And that gets harder and harder as the clinical people move into doing clinical things and being very busy. (N2)

In Copenhagen and Lisbon ethics was not part of the original curricula and its inclusion was seen to generate a tension amongst some faculty members. It was reported that while at times the importance of ethics teaching is acknowledged, that is not always the case and its relevance is often devalued (C3, C5, L3). To some extent, these conflicting understandings of the role of ethics in veterinary education might be related to the affective ethical abilities (emotions) and the feminization of the veterinary profession. By way of example, in Copenhagen, ethics teaching was presented:

> as something for girlies (Laughter), softy girlies and is not very well taken especially by the older generation. This team I had today was zero boys. So the change of the

> veterinary profession to a female profession will probably make it more acceptable that we sit and discuss what we feel about it. (C6)

Additionally, the fact that, in Lisbon, attendance is only voluntary and the sessions are left to the end of the day (L3) together with the fact that, in Copenhagen, ethics is not graded could indicate that ethics education has low priority in both faculties' agendas. As pointed out by L3, '*Colleagues probably don't know who teaches ethics'*.

8.9 Discussion

Issues pertaining to *how* to teach and assess ethics are varied and complex and the challenges they pose include curricular approaches, assessment methods, assessed competences, role of educators and place in the curriculum. These challenges might be greater than in some other subjects, as pointed out in the literature (Gjerris 2006).

The pedagogic strategies to teach ethics can vary greatly and are subject to a number of factors. Often it is not the educator who decides the content of the course or the methods used to teach them (Yeates 2009b). That is usually decided at a management level, and those decisions might include multiple factors other than pedagogic reasons. That seems to be the case in Copenhagen with the grouping of Ethics (Philosophy of Science) with Zoology within the same module (*Veterinary Introduction Course*). In Nottingham a balance is still being sought in order to adapt the educational strategies to the needs of students and the availability of staff. In addition, the way educators in Nottingham speak about the teaching of ethics is inevitably linked to the PBL teaching strategy used in a fully integrated curriculum. The case seems to be more complex in Lisbon, where there is a clear divide between the teaching of professional ethics (*Deontology*) and that of animal bioethics (*Bioethics*). These two components of the same subject unit are taught separately and are set to deliver very different outcomes that often contradict, which may confuse more than help students. Moreover, these two modules seem to represent two fundamentally opposing views of the veterinary profession; one that is rooted in the tradition of obeying professional obligations and another aiming at promoting ethical reasoning (cf. chapter 7).

The way educators speak about their involvement in the teaching of ethics, together with the fact that only one educator (out of 17) has an academic degree in ethics, suggests that other professionals, such as social scientists and animal scientists, can contribute with complementary professional competences to the teaching. In the specific case of veterinarians, they usually have a first-hand experience of practical dilemmas, they are

respected by students who tend to see them as role-models and they can combine the teaching of clinical skills with ethical ones.

In relation to teaching methodologies, the PBL teaching strategy used in Nottingham could be a contributing factor for the high levels of acceptance and interest that ethics seems to have amongst students. In fact, it has been shown that PBL increases students' engagement and motivation (Lane 2008). In the case of Lisbon, the teaching of ethics was seen to rely on lectures which are supported by the discussion of cases. The sessions of *Deontology* seem to elicit poor students' responses. On the other hand, the discussion of cases in the *Bioethics* sessions has been able to attract student's interest and curiosity, despite some criticism about the way they have been conducted. One possible reason for these differences is that the objectives identified in the teaching of *Bioethics* (which seem to promote ethical awareness and skills) are more adequately delivered using a debate format than those of *Deontology*, which rely – to great extent – in ethical knowledge, as previously discussed in chapter 7.

In Copenhagen, students seem to gain interest in ethics as it moves away from the teaching of theories and progresses towards debates and practical exercises. Possibly the most relevant finding in Copenhagen, with respect to methods, is the significant effect that the excursions (or site visits in general) had on students' perceptions of ethics teaching. This is even more remarkable taking in consideration that excursions are not discussed or evaluated in the literature as an effective way of teaching ethics.

The greater responsiveness on the part of students regarding these student-centred teaching methods (such as PBL, case discussions, excursions) may also be related to an increase in their ethical competences as suggested by the literature. Bebeau (2002) reviewed 33 studies examining the effect of professional ethics education on moral development and he concluded that professional education (including veterinary education) is only seen to promote students' moral reasoning in the presence of student-centred approaches to ethics teaching.

The role of tutors in small group teaching was seen to differ between case sites. In Nottingham tutors adopt a more traditional role as facilitators in the small group sessions, who are neutral and impartial and interfere only at a minimum. However, this may be related more with their role as facilitators within the PBL teaching strategy within certain years than with their own believes about ethical thinking. In Copenhagen, at least some of the educators used their own viewpoints as a way of provoking discussion. This role is closest to what Shields *et al.* (2007) call 'discussion leaders'. Educators work not only as facilitators of students' discussions but also as experts who are able to provide high-

quality, “benevolent feedback on those delicate, beginning endeavors” (Thornburg 1992, p.1181). In Copenhagen, educators’ viewpoints were described as having a strong effect on students who can then argue against those opinions and in that way build their moral agency. Building students’ personal moral agency has been considered a key element in the teaching of ethics (Clarkburn 2002; Clarkeburn et al. 2002).

Several students described some aspects of ethics teaching as being uninteresting, obvious, or merely a matter of common sense. This finding seems to corroborate Cantor’s suggestion that “science students tend to be pragmatists who may experience difficulty appreciating the significance of open-ended philosophical problems” (Cantor 2001, p.22). This is an important aspect to consider when designing teaching approaches to veterinary ethics that are able to combine ethical concepts with professional issues (Hanlon *et al.* 2007). In fact, educators have acknowledged the need to make ethics professionally relevant in order to attract students’ attention to the subject.

A wide range of arguments were found showing that ethics should be taught across the board and there is no ideal or best point in veterinary training to teach ethics. Having ethics in the first year is a good approach to introduce students to the realms of ethical reasoning, whereas having them close to graduation helps promoting the discussion of ethical dilemmas in preparation for practice. These arguments are similar to those presented by Thornton *et al.* (2001) to suggest a vertical teaching of ethics with nodes where ethics is taught throughout the veterinary course but mainly emphasised at the beginning, during the middle and closer to graduation. The web-search described in chapter 5 found that, in Europe, veterinary ethics is taught in every curricular year but especially at the beginning and at the end of the veterinary course (Figure 10). An important question to consider is how the integrated inclusion of ethical competences can be operationalized in an increasingly busy veterinary programme.

The results that are presented in this chapter also seem to indicate that educators and students prefer ethics taught using an integrated approach than only as a stand-alone subject. This is in line with the findings in medical ethics teaching. For example, in a survey of 22 (out of 28) UK medical schools, integration was considered by educators in ethics as the most successful feature of the ethics curriculum while the major weakness included a need for greater integration within the medical course (Mattick & Bligh 2006). One of the main advantages of curricular integration is that it allows students to see how issues are presented in their actual context (Cavaleri 2009). In addition, it enables educators to choose which ethical competences should be mainly taught earlier in the course and which are better left towards the end of the course. In terms of professional

ethics teaching, it is claimed that “one time forty hours is much less than four times ten hours of education” (Pompe 2005, p.213).

The teaching of ethics and the development of ethical competences is therefore not just a subject for the undergraduate programme but *a lifelong learning experience* that should involve not only specialised ethics educators but the all faculty. Reiser (1994) proposes that medical faculties should institute periodic ethics rounds bringing together students, residents, professors, and deans to discuss relevant cases in an inclusive environment.

This investigation has identified numerous challenges in terms of the assessment of ethics. What has emerged from the cases is that, for several reasons, some schools have been changing the assessment of ethics in order to make it easier and more expeditious in measuring ethical competences, moving away from essays, reports and oral examinations towards short written exams or MCQ’s. These latter methods, however, are known to be less effective in measuring students understanding and analysis of issues (IME 2013). In Denmark, assessment methods have moved away from group-based project work mostly because of a ministerial imposition (cf. Kolmos & Holgaard 2007). Moreover, the fact that ethics is not graded (there is only a pass-fail ceiling) is apparently a consequence of a requirement that limits the amount of grading that undergraduate students can be subjected to during their entire coursework (C4). This may also reflect the low priority of ethics education amongst the faculty. On the other hand, the change from oral examinations toward written exams is more a consequence of the challenges of assessing large numbers of students (c.180). That was also seen to be the case in Lisbon when debate sessions were suspended (*Deontology*) and written essays were replaced by a shorter exam (*Bioethics*). In Nottingham, it is difficult to see any notable changes since the veterinary course has not been running long enough for such changes to arise.

The ability to recognise and describe ethical theories, and apply them to practical cases was one of the main competences assessed when examining students. However, not all educators agree with the usefulness of assessing ethical theories. It was felt that because of the difficulty in examining the ‘really’ relevant competences, educators ‘need’ to resort to more concrete aspects. In this regard, the application of ethical theories, usually applied to practical cases, is used as a proxy for measuring critical thinking and decision-making. In line with this conclusion, educators widely identify a need to assess the knowledge of ethical theories although this has not been recognised as a reason for teaching ethics. In fact, the list of learning objectives of ethics teaching that emerged from the interviews, and described in chapter 6, does not include knowledge of ethical

theories, although the identification or application of ethical theories may help developing ethical skills (cf. section 6.3.3). Conversely, both decision-making and critical thinking have been identified as learning goals of veterinary ethics (cf. Table 4). The same type of conclusion has been reached by Molewijk and colleagues (2008). In an ethics teaching experiment at a Dutch Psychiatric Hospital, ethical knowledge (including ethical concepts) was not considered the main goal of the teaching and it was only instrumental for the teaching of ethical skills (including reasoning and communication) and ethical attitudes, such as adjourning personal judgements and respecting other viewpoints (Molewijk *et al*. 2008).

Meaningfully, educators in Nottingham do not express the need, found at the other schools, of having direct interaction with students (*via* dialogue) when assessing their competences. It is only possible to speculate about the reasons, but it appears to be significant that the use of reflective portfolios - where each educator works as a tutor for several students - can contribute to fill this aim or need since portfolios are known to give insight into students' reflective skills (Mossop & Senior 2008) as well as attitudes (Davis & Ponnamperuma 2005).

It is also notable that no claims were made about assessing students' professional attitudes. This is in line with the findings in chapter 6, where issues of personal development, such as building moral character, did not emerge as autonomous learning objectives. Rogers and Ballantyne (2010) stated that although ethics should provide a forum for discussing desirable professional behaviours, they should not be assessed because it is possible to be competent and professional without possessing aspirational virtues. Others have argued that a distinction should be made between exercising a profession and having a personal moral life grounded on character traits (Holland 2010).

With regards to how the teaching of veterinary ethics has been operationalized at the study cases, several questions remained unanswered. Curriculum alignment at each school should be further examined since many of the learning objectives identified previously in chapter 6 (cf. Table 4) are not reflected in the assessment. From a pedagogic standpoint, there may be a discrepancy between what educators want students to learn (the learning objectives) and what students actually retain (the learning outcomes). A gap might also exist between what is perceived by the educator as being important in order to make students become autonomous and reflective veterinarians and what students identify as truly relevant. A more in-depth investigation of these issues is needed, which is beyond the scope of this thesis.

SECTION IV

THEORETICAL FRAMEWORK

GENERAL DISCUSSION

9 RULES - VIRTUES - SKILLS: CONSTRUCTING A THEORETICAL FRAMEWORK FOR VETERINARY ETHICS EDUCATION

9.1 Introduction

Several approaches can be used to teach professional ethics, which aim at achieving different educational goals. As explained before (cf. chapter 2.4), the literature in ethics teaching in the life sciences focuses particularly on 'the virtue-skills dichotomy' (Hafferty & Franks 1994; Clarkeburn 2002; Eckles *et al.* 2005; Johnson 2010). In addition to the transmission of desirable values and behaviours and the promotion of ethical skills, Illingworth (2004) identifies a third approach to ethics teaching based on professional rules and codes. As a result, there is little consensus on whether the teaching of professional ethics should promote virtuous behaviours in students (Steutel 1997), provide students with ethical skills (Clarkeburn 2002; Sandøe 2002), make them observe professional norms and regulations (Sinclair 2000), or a combination of these (Illingworth 2004; Ozolins 2005; Gillam 2009).

In the case of veterinary ethics, a number of issues arise that need to be addressed: do these approaches apply to veterinary ethics education? How deep are the differences between them? And how do the corresponding learning objectives (virtues, skills and rules) materialise, and relate with each other, in terms of ethical competences? In a previous work the methodological approaches which could be used to teach veterinary ethics were discussed (Magalhães-Sant'Ana *et al.* 2009). The paper highlighted the possibility of addressing ethics using rule-based, value/virtue-based or skill-based approaches and drawing on three examples, explored how these approaches may be combined. Building on this previous knowledge and following a thorough analysis of the literature and the overall results from the empirical research presented in this thesis I here propose a theoretical framework that can help exploring the underlying aims of ethics education in veterinary medicine. Moreover, this framework will be used to examine the approaches used by Copenhagen, Lisbon and Nottingham as well as contribute to understanding the differences between them.

9.2 Proposing a theoretical framework for veterinary ethics education

The competences that students can acquire as a result of veterinary ethics teaching have been described in chapter 2.7 in terms of knowledge, skills and attitudes. It is of course not expected - and maybe not even desirable - that each veterinary school delivers all those competences to their students. The investigation of the study cases has showed how ethics is operationalized at the three schools, with remarkable differences in terms of learning contents, teaching and assessment methods and intended outcomes. It is suggested that the teaching of ethics that students receive will impact the kind of veterinary professional that schools form. In order to further explore the possible approaches to ethics and how they relate with the intended learning outcomes (articulated in terms of competences) I have devised a theoretical scheme composed of three approaches to veterinary ethics based on professional rules, moral virtues and ethical skills (Figure 14).

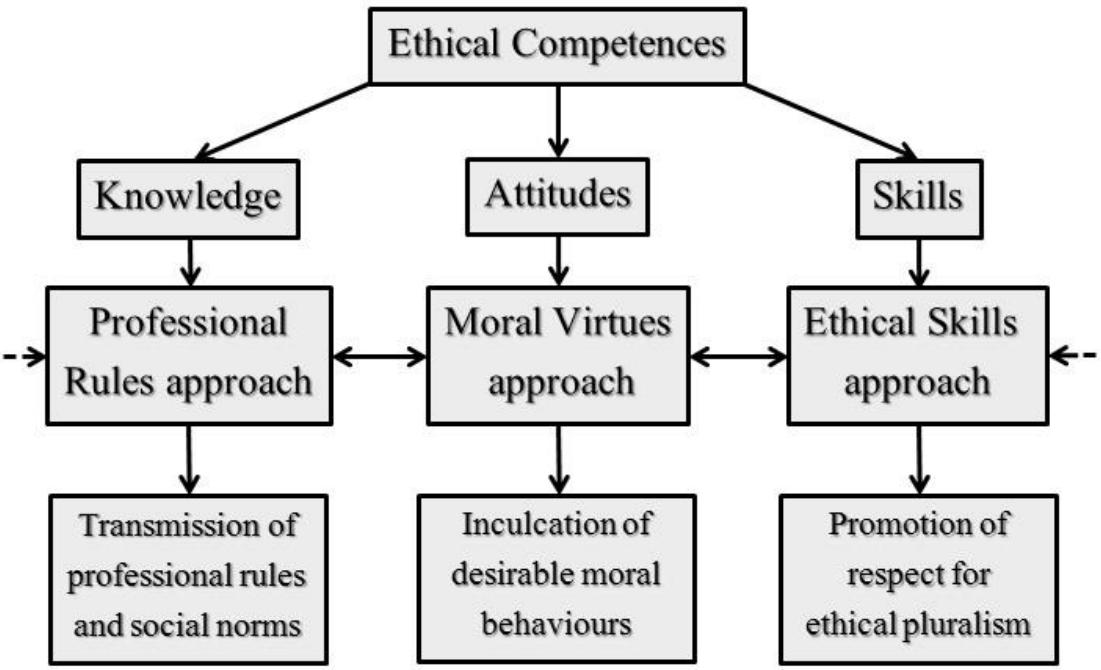


Figure 14 – The Theoretical framework to veterinary ethics teaching: ethical competences (in terms of knowledge, attitudes and skills) and their relation with the Rules, Virtues and Skills approaches to ethics.

When looking back to the core competences - knowledge, skills and attitudes - in veterinary ethics education some patterns emerge between these and the three conceptual approaches (rules, virtues and skills). The rules approach is based on the transmission of professional and social values by means of normative documents and it

depends intimately on the knowledge that students have of those documents. Knowledge is not specific to this approach, nor is the only ability needed, but it is the main competence required to fulfil the objectives of the teaching. The virtues approach involves the inculcation of moral values and virtues that will stimulate students to develop desirable attitudes and behaviours. The main focus of this approach to ethics is to develop attitudinal competences. Finally, the *skills* approach is focused on endorsing the students with the necessary skills to recognise and respect of the plurality of ethical views that make part of contemporary society. A more detailed description of each approach follows:

9.2.1 The Rules approach to veterinary ethics education

The *rules* approach refers to the teaching of veterinary ethics which aims at transmitting professional rules and legal norms (Box 7). A teaching approach based on rules tends to emphasise the duties and obligations of individuals in the realm of professional organizations, and where ethics is a normative instrument used to tell the difference between 'right' and 'wrong' actions.

Box 7 – Rules can include some of the following:
Codes of Professional Conduct
Ethical Guidelines
Statutes of Professional Bodies
Codes of Best Practices
Animal Welfare legislation
Veterinary regulations

In the case of veterinary medicine, professional codes of ethics (e.g. OMV 1998, RCVS 2012) are used to set the boundaries between good practice and professional misconduct. Codes of ethics also serve the purpose to regulate the relations between colleagues, with clients and to some extent with society at large and hence protecting and even promoting the public image of the profession. Veterinary bodies ensure self-regulation of the profession (Hern 2000) by means of statutes; these provide a benchmark by which the professional conduct of its members is measured. Compliance with veterinary regulations, namely animal welfare regulations (e.g. Animal Welfare Act 2006), is also an important element of rule teaching. For this form of teaching approach pedagogic aims not only involve the transmission of professional and social rules that should not be 'trespassed' by veterinary students, but also provides the right tools to solve practical problems. Sinclair (2000) presents a fundamentally rule-based approach to ethics grounded on the guiding role of the RCVS - and that of the Veterinary Surgeons Act (1966) - which is used to help UK veterinarians dealing with ethical dilemmas in practice.

An approach based on rules sees ethics as a set of moral norms which are often expressed through laws, regulations and codes. These norms reflect the principles[76] by which society stands, and hence promoting a sense of community.

> Ethical principles serve as fixed points. They indicate what is right and wrong, appropriate and inappropriate, by reference to universal standards (…) By offering rules of conduct, ethics seek to provide a stable reference point in the welter of change. (Casa *et al.* 2004, p.170-1)

Norms and regulations thus serve as "stable reference points" which enable veterinarians to know what is expected of them. In order to be a good professional it is neither necessary to believe in the rightness of the norms nor to incorporate them; it will suffice to respect the value system of the veterinary profession and comply with it.

From the educational point of view, one may speculate that the rules approach can be readily accepted by science students who are trained in a tradition of objective facts. The rules approach relies on objective standards of practice and normative documents which students can use as guidance and support. There is a clear connection between legal concepts and their ethical repercussions such as informed consent, best practices, standards of care and the legal status of animals (cf. Babcock & Hambrick 2006). This approach also conveys the notion that being a good professional is about doing what is deemed as being right.

Several weaknesses can be identified for the rules approach to ethics teaching. This approach fails to recognise the fact that law and morality are different concepts, and that there is not always a rule that fits every real, morally difficult situation in veterinary medicine, as in any other field of activity:

> Ethics as rules for right behavior are imperfect statements of the aspirations that motivated them. Because no rule is perfect, no ethical guideline can fully serve as the universal fixed point upon which an organization may rely. (Casa *et al.* 2004, p.172)

The rules approach also seems to give little room for ethical reflection and even downplay the role of ethics by giving the impression that professional ethics is a mere addition to the law; and if the law is sufficient, ethics is needless (Brockett *et al.* 1997). Additionally, the teaching of law is often limited to deductive (teacher-centred) methods, which involve the transmission of factual information, although alternative practice-based approaches to veterinary legal education have been proposed (Babcock & Hambrick 2006, Whittaker 2014). Also, veterinary codes of ethics are often strongly

[76] According to Cowley (2005), Bauchamp and Childress' Principlism can be also seen as a form of rule teaching.

anthropocentric, focusing only on the standards that regulate professional practice and separating professional veterinary ethics from animal ethics as a whole (cf. Tannenbaum 1989, pp.6-7). Veterinary professional rules of conduct (including oaths) have also been criticized for being somewhat limited in addressing animal welfare issues (Shurtleff 1983; Tannenbaum 1989, p.70; Bones & Yates 2012). In result, the rules approach may hamper the role of future veterinarians in the promotion of animal welfare.

9.2.2 The Virtues approach to veterinary ethics education

The *virtues* approach refers to teaching focused on the inculcation of moral values in the form of desirable, i.e. virtuous, observable behaviours (Box 8). Approaches which place the emphasis on virtues see professional ethics not as an approach which imparts a set of rules (such as codes of conduct), but as a way of promoting the values and beliefs that justify them.

Box 8 – Virtues can include some of the following:
Fairness, honesty, truthfulness
Courage, perseverance, tenacity
Patience, self-control, temperance
Respect for others, tolerance, open-mindedness
Trustworthiness, integrity, loyalty
Compassion, kindness, generosity

In the virtues approach, ethics is related to the acquisition of clear professional values concerning moral issues. Teachers often work as role models and their pedagogic concern is that students learn fundamental moral principles that they are expected to follow. I here refer to a broad concept of *virtuousness*, which includes education based on desirable models, and it is not necessarily the same as Aristotelian virtue ethics. Although the virtues articulated in Box 8 are Aristotelian virtues, the virtues approach can be approached by relying on philosophical frameworks other than virtue ethics (cf. Holland 2010). It is even possible to envisage that utilitarianism also recommends a life of virtues (Crisp 1992).

The virtue approach intends to develop desirable behaviours in students, with the ultimate purpose that they will practice ethically (Gillam 2009). In addition to new knowledge and skills, physicians need to develop 'character' (Hafferty & Franks 1994), and the 'professional self', i.e. "the internalization of the values and virtues of medicine as a discipline and a calling" (Hafferty 2006, p.2152). Although the teaching of values and virtues may differ, others have understood them as being complementary since it is argued that one cannot transmit values without fostering the corresponding virtues (Steutel 1997). Literature in medical ethics and professionalism is ambivalent toward the use of the term virtues, and moral virtues in particular. Swick (2000) avoids using the

word virtues to designate the “core humanistic values” – previously described in chapter 1.4 – although they can be considered moral virtues. Sulmasy (2000), on the other hand, recognises that:

> It is characteristic of a profession that its members strive after virtue. Plainly put, the medical virtues are the characteristics of the good doctor. They include such things as technical competence, compassion, practical wisdom, integrity, altruism, fidelity, courage, and patience. We all know who the good doctors are. They are the doctors we would want to care for us. They are the ones who could be trusted when no one is looking. (Sulmazy 2000, p.514)

The virtues approach intends that students know not only what is expected of them as professionals but be, in effect, ‘good’ professionals. The virtues of the ‘good’ physician include, at least, *fidelity to trust*, *benevolence*, *compassion*, *intellectual honesty*, *courage* and *truthfulness* (Pellegrino 2002). In the case of the veterinary profession being ‘good’ involves, amongst others, being honest, altruistic, autonomous, empathic, and having good manners (Mossop & Cobb 2013). Eventually, it is intended that veterinary students will develop qualities of character (virtues) and appropriate behavioural dispositions that will make them ‘morally better people’ (Reiss 2005).

There are evolutionary justifications for gender differences in moral virtues (Miller 2007). Virtues of self-efficacy (courage, perseverance, tenacity) are traditionally male attributes while virtues of kindness (compassion, kindness and generosity) are seen as feminine traits of character (Gilligan & Attanucci 1988). From being considered a weakness and even an impediment for clinical deliberation several decades ago, compassion and care are now accepted as the mainstream approach in small animal veterinary practice (Rucker 2002). It seems evident that the feminization of the veterinary profession has had a role in this attitudinal change.

The first difficulty with the virtues approach lies in defining which behaviours should be considered desirable (and who is to define them). Furthermore, the indoctrination of moral values promotes behavioural patterns identical to the transmitted ones and this could impede moral development in students (Clarkeburn 2002). This claim is supported by the works of Donnie Self and his colleagues who argue that the hierarchical and paternalistic pedagogic tradition used in veterinary medical education inhibits students’ moral reasoning development (Self *et al.* 1991, 1996, chapter 1.5). In fact, educators might as easily be transmitting negative (vicious) as well positive (virtuous) behaviours, whether they are conscious of it or not. Also, there is no way to measure the success of virtues inculcation in students and some have questioned whether the virtues aim is a desirable objective in an ethics programme at all (Clarkeburn 2002). Finally, even if it is

argued that developing moral commitment and character are desirable objectives in ethics education, it cannot be accomplished in a single ethics course (Clarkeburn 2002[77]), although it could be seen as the overall aim of professional education (Ozolins 2005).

9.2.3 The Skills approach to veterinary ethics education

Definition - The *skills* approach to ethics teaching is centred on the promotion of individual capacities of moral reasoning in students (Box 9). The skills approach refers to ethics as a means to understand the complexity and ambiguity inherent to human lives and events, rather than internalising codes, principles or virtues. The objectives of ethics teaching are not didactic but to promote students moral responsibility by providing the conceptual tools that allow them to see issues from different perspectives (Miles *et al.* 1989). This ability will ultimately make them respect ethical pluralism. Lecturers work not as experts, but as 'travel guides' (Reiss 2005).

Box 9 – Ethical skills can include some of the following: (adapted from Hollander & Arenberg 2009, pp.12-13)
Recognising and defining ethical issues.
Identifying relevant stakeholders and socio-technical systems.
Collecting relevant data about the stakeholders and systems.
Understanding relevant stakeholder perspectives.
Identifying value conflicts.
Constructing viable alternative courses of action or solutions and identifying constraints.
Assessing alternatives in terms of consequences, public defensibility, institutional barriers, etc.
Engaging in reasoned dialogue or negotiations.
Revising options, plans, or actions.

The *skills* approach is a cognitive approach to ethics (as opposed to affective) and thought to promote moral development, including moral sensitivity, moral judgement and

[77] Clarkeburn has been accused of committing the atomistic fallacy "by claiming that because one ethics course unit does not lead to character and virtue formation, and because a fortiori each and every other course unit that a student studies contains either very little or no references to ethical values, that the overall education that a student receives does not result in character and virtue formation." (Ozolins 2005, p.362)

moral reasoning (Clarkeburn 2002). The skills approach is known to promote students' moral agency and students' autonomy and has been considered by some authors as the only acceptable way to teach ethics (Clarkeburn 2002). It aims at clarifying values as opposed to transmitting knowledge or inculcating attitudes. By developing an ethical discussion of the different possible decisions that are characteristic of a pluralistic society, students become better prepared to cope with professional and social challenges. Eventually, students will be encouraged to adopt a personal ethical viewpoint (Gillam 2009). Illingworth (2004) sustains that teaching ethics via this approach promotes several skills, including analytical, decision-making and communication, as well as intellectual flexibility and independence of mind:

> Modules based on this tradition do not seek to persuade students of the merits of a particular set of moral beliefs, or motivate them to attain predefined standards of behaviour. In this respect they form a marked contrast with modules in which the student's knowledge of ethics is a means to the end of shaping their actions as future professionals. (Illingworth 2004)

The foundation of the skills approach to ethics is pluralism. In this form of teaching, ethical frameworks (such as principles or theories) serve as conceptual tools for clarifying moral values and acknowledging that contentious ethical issues can be approached via different perspectives (Sandoe & Christiansen 2008). In this sense, a good veterinarian is someone who tolerates and respects the views of different stakeholders and is able to formulate informed judgements, without having to impose his or her own views.

The skills approach to ethics poses several challenges: students will only benefit if they are properly initiated in ethical frameworks, which can involve some degree of indoctrination. Some of the moral capacities that are promoted, such as tolerance and open-mindedness, can be regarded as a form of virtues. In this respect, some argue that skills approach is also a virtue approach to ethics teaching (Steutel 1997). It has also been pointed that some forms of ethical pluralism, based on the application of ethical theories to the discussion of cases, can confuse students rather than promoting decision-making skills (Derry & Green 1989). Finally, some have considered that students can apply skills without having to incorporate them and use ethical skills as disposable competences (Hafferty & Franks 1994). Consequently, students might be copying what they are taught or applying what they are told to without genuine reflection and ethical reasoning.

9.3 The theoretical framework applied to the study cases

These reflections lead us to explore how the three approaches to ethics – rules, virtues and skills – are present and relate with each other within our case studies. The suggested framework of ethics teaching was used as a deductive *a priori* coding source. The codes were then compared against the findings from the educators' interviews and students' focus groups while looking for emergent themes. In general terms, the three conceptual approaches - rules, virtues and skills - could be found at the three institutions. However, the weight given to each approach varied greatly.

9.3.1 Copenhagen

In **Copenhagen** the emphasis was put on the **skills** approach to ethics. The ethics course was designed to provide students with the ability to appraise the values underlying the decisions that they should make in their future life as veterinarians. This implies awareness of their own values as well of the values of others. Ethics is also seen as a way to look at issues from a broader perspective (social, philosophical, scientific, and religious), presenting students with the complexity of the subjects they will face as vets and providing them with a common background and understanding on the issues involved in different uses of animals. Especially relevant to the development of those skills is the role of ethical theories (cf. Figure 13). These are taught pluralistically and they are not meant to make students adopt a specific ethical stance or to convince them that a preferred position exists. On the contrary, it was mentioned that the most important ability that students should gain from the teaching of ethics is to establish their own moral views. Still, one educator expressed the concern that students might '*automatically take ethics like some tools and just put it over this case without reflect a lot about what does this really means.*' (C3)

The relevance of CPC was dismissed by one of the educators in Copenhagen because the teaching of professionalism was seen to collide with the view that teaching professional ethics is about giving the students the skills to solve practical challenges by themselves:

> I think the problem is if you sort of say: "Ok, Professional conduct is to do this, this and this. And this is ethically right". Then you're just teaching them like you had the bible because how do you know that those are the only values that are right? That's

> fundamentalism. And I think that's wrong when you do ethics. I think ethics should always be about make people reflect themselves. (C2)

However, the **rules** approach was rejected not because the teaching of rules does not have a place in veterinary education but because it was not considered to be within the realm of ethics.

> Ethics is not giving people a book of rules. That's law. (…) Our job is not to tell them what is right and wrong but to help them figure it out what they think is right and wrong. And so obviously they have to go and compare with what is the regulation and it could be that they don't agree with the regulation then they have to figure it out what to do but that 's not our business, as we have such a short course. We just have to help them reflect on the values they have. (C2)

Correspondingly, Danish students seem to make an analogous reflection in the following dialogue when, in the context of animal production, they explore the relation between the teaching of ethics and that of rules:

> Cs-3: I think it's my production animal background but in production animals there is no ethics; there is just rules for everything; how you have to treat the animals; how much space you have to do. You don't have to think about ethics because there are already rules for everything.
>
> Cs-5: But you have to think of ethics every time even when you're dealing with production animals. It's about the animal, it is not about the rules. I know it is, but it shouldn't be.
>
> Cs-3: But it is a rule thing.

Although the inclusion of a defined set of values for professional identity has not been identified in Copenhagen, **virtues** can represent a small fraction of the teaching in ethics when educators act as implicit mentors. This effect is more prominent in the case of veterinary educators because students can see them as desirable role models. Affective abilities are sometimes implicitly included in the teaching. One veterinarian in particular explained how (s)he aims at inspiring students with the teaching of ethics:

> I hope that some of them will be *inspired* and *brave* enough not to get blinded by all the information they get. To remember what they came for. Because I also ask them to raise their hands: "How many of you have picked this [course] because you want to gain a good salary and have a good life?" Only a few… And a lot of them want to make a difference. They want to do something good for the animals and they tend to forget that during the curriculum because there are so many things they have to learn and they forget what they came for. (C6) [emphasis mine]

9.3.2 Lisbon

In Lisbon, the two sections of the course in ethics reflect dissimilar educational aims. On the one hand, *Veterinary Deontology* is focused on the transmission of written information (knowledge) that will regulate their future practice as vets, and that will be used to set the boundaries between admissible and inadmissible behaviours. On the other hand, *Bioethics* is based on the promotion of ethical skills.

The Lisbon course has an established tradition of including **professional rules** as a pillar to the teaching in ethics (cf. section 8.4.2). The aim of teaching *Veterinary Deontology* was described as for students meet the standards of the veterinary profession. This is done by exploring the Deontological Code and the Statutes of OMV in lecture sessions. This regulatory view of ethics enables to draw a clear and distinctive line between right and wrong actions.

In terms of **moral virtues**, one prominent aim of *Veterinary Deontology* is to promote professional attitudes in students in order to recognise the societal role of the veterinary profession. An alternative approach to ethics was also identified in the informal curriculum domain, based on the inculcation of moral attitudes. L1 claimed that (s)he couldn't refrain from giving his(her) own opinion when discussing animal welfare ethics with students and admitted, when speaking about bullfighting, to consciously model students' viewpoint:

> I'm not a deceiver. I try to sell my product, you know? And my product is to dislike [bullfighting]. Whether we like it or not, as much as I try to keep away and say that I will not try to change their way of thinking, I always end up trying. Because I believe in the underlying reason: preserving the welfare of the animal. (L1)

This kind of role model behaviour was also found when dealing with professional behaviour and etiquette. It reflected a personal moral view of things and did not seem to express any official view from the part of the faculty. The same educator told the story of how (s)he tried to instil proper behaviour into students by being an example:

> At the teaching hospital, three years ago, a dog had vomited or urinated on the floor and I picked up the mop and started cleaning. A girl student was seated on the bench – although I keep telling them how rude that is - and she just stood there staring and said: "Professor, there is staff for that". So I told her: "When you have your own private practice, then we'll see who has the staff". (L1)

The teaching of *Bioethics* – which runs separately from the teaching of *Veterinary Deontology* – provides students with the **ethical skills** to help them deal with the challenges that they will meet in practice. The objectives of these sessions have been

described in section 8.4.2. From the students' point of view, they also seem to recognise that the teaching of *Bioethics* helps developing their ethical reasoning abilities, as illustrated by the following comment:

> Ls-6: Something happened here that gives us an example of the importance of Bioethics. After having discussed this case about the cat, how many of us wouldn't call the other vet? All of us would! I had not remembered to call the other clinician and maybe if this happened to me, I wouldn't know what to do. And now I know it and that is what Bioethics gives us. By discussing cases, we learn how to act in these situations.

9.3.3 Nottingham

In Nottingham, to what **professional rules** is concerned, ethics education is aimed at equipping students with the standards of the veterinary profession. This implies an awareness of professional norms and codes, and namely the 10 Guiding Principles, the Guide to Professional Conduct, the Day One Competences and the Animal Scientific Procedures Act. But in addition to providing students with the standards, one of the chief objectives of ethics teaching involves developing some kind of **professional value identity** (cf. Figure 13) which includes "maintaining good professional conduct at all times" (N7).

> we (…) hope that we provide an environment where they [students] can mature into responsible professionals that would obtain the good standard of the University, the school and the governing body and meet the 10 Guiding principles that the RCVS sets out for them. (N7)

Members of faculty were deemed having a responsibility to follow the professional and personal development of their students. This is mostly done using a portfolio. The portfolio is an e-based record of students' learning activities throughout the year, where students are given the opportunity to share with their tutors their clinical experiences but also their anxieties and concerns. It works at the same time as a reflective exercise (and thus training certain ethical and clinical skills) but also as a tool for governance over the attitudes of students in placements. In the portfolio:

> (…) you have things shared to you as a tutor where you think that a student hasn't quite done what he should do here. So you could write some comments about: "why you did what you did?" (N3)

Tutoring is especially relevant in preparing students for EMS in ensuring that students recognise their societal role and how their conduct can affect the public perception of veterinarians while promoting adequate professional attitudes and etiquette. By the same

token, there is a concern that students do progress in a certain direction, which seems to be preferable to other ways of thinking or acting, and that students should refrain from habits which are considered unethical, as explained by (N7):

> I think really what we should do is monitor them to make sure they are not regressing as opposed to progressing, that they are not developing opinions or habits or an idea of practice that would be unethical or compromise animal welfare or professional standards. (N7)

The messages imparted include dress codes, professional attitudes and behaviour and basic common courtesies in preparation for their clinical rotations. In point of fact, students in the focus group did not express any concern in being told how to behave or dress. The intended behaviour seems to represent the overall view of the faculty and not the personal vision of the educator. As described in Nottingham' Self Evaluation Report,

> all students offered a place on the course will be required to accept the Veterinary School Code of Practice by signing a Student Entry Agreement; this ensures that that the student is aware of the specific objectives and standards for professional attitudes and behaviour required by the school and the profession. (Self Evaluation Report 2011, p.257).

In addition, students start building a 'professional self' with an oath that they have to sign immediately after registering at the veterinary course:

> *As a veterinary student, I will be an ambassador for the School and uphold the principles of the Royal College of Veterinary Surgeon's Code of Professional Conduct at all times, putting animal welfare to the fore.*

In Nottingham, professional standards are used as benchmarks in guiding students toward a desirable conduct, even if sometimes not formally. The Guide to Professional Conduct, in particular, was used to inspire appropriate behaviours in students, and it was considered more as 'guidance' than as a 'rule book' (N3). This vision was reinforced by the students when they say that the GPC should be used critically and not as a rule of law:

> M: You talked about the 10 Guiding Principles. Was that important to deal with this case?
> Ns-2: I think it's common sense. It would be informed by that but I don't think you would have to look up and "oh, what should I do?"
> M: Was it on your head when you answered?
> Ns-4: I think it's one of those things, certainly for me, that is always at that back of my mind "I shouldn't do this and that" but like Ns-2 says is more common sense than it is looking it up all the time. It's what we believe we should do that's important.
> Ns-2: Rather than what we have been told to do as vets.

The possible effect of the virtues approach to teaching can be illustrated by the following quote from a student, who acknowledges the effect of role model behaviours (in clinical settings) in shaping his/her vision of a good professional:

> Ns-6: Some of the qualities that I've put down like, compassionate, fair and honest, I've got them from vets with I've been working and is just my interpretation of how they deal with the animals and the lengths they've gone to that sets me: right, if I want to be this type, in this profession, this is the type of person who I think is good vet, who I need to make sure.

The teaching in ethics was also said to promote practical moral abilities or **skills** that will help students dealing with the ethical challenges they will meet in practice. These include reasoning, communication and decision-making skills such as: identify ethical conflicts and respond appropriately; cope with stress; application of moral theories; decision-making and critical thinking; recognise the opinion of others as well as their own, and communicate effectively.

9.4 Discussion

In this chapter three possible educational approaches to ethics education in veterinary medicine have been considered. These are based on three concepts: professional rules, moral virtues and ethical skills, which also reflect different approaches to ethics education. I do not wish to imply that these approaches are different in the sense of being incompatible or opposite to each other (although they can) but rather because they represent distinctive paradigms in the goals of the teaching of ethics. As illustrated by the study cases, it is even possible to devise a teaching that includes several or all of these approaches.

As previously mentioned, the theoretical construction of ethics education around the three approaches – rules, virtues and skills – was the result of both investigation of the literature and empirical analysis. Although the medical literature focuses on the "virtue-skills dichotomy", ethics-as-rules may also play an important part in the teaching of medical ethics. In a questionnaire sent out to 28 medical schools in the UK in 2004 (response rate 79%), educators were asked what the main aims of ethics teaching were. Sixteen schools referred "to instilling ethical behaviour in medical students for their future roles as medical professionals", eleven referred "to educating students with regard to their legal responsibilities", and eleven referred "to providing a conceptual or theoretical understanding of ethics" (Mattick & Bligh 2006). There is a clear parallel between these results and the virtues, rules and skills approaches (respectively) to ethics teaching.

These findings further support the proposed framework and suggest that it may also apply to human medical ethics.

Moreover, Mattick and Bligh (2006) further stress that most schools (15/16) identified a close relationship between learning ethics and law, whereas the relationship between ethics and humanities was considered poor or absent (10/17). Our mapping of the teaching of veterinary ethics in Europe using web resources, and described in chapter 5, had already revealed a predominance of legislative aspects in approaching ethics. The web search had identified a frequent combination of ethics with Animal Law (including codes of conduct and professional legislation, welfare law, and forensic medicine) and it became evident that ethics-as-rules was very much an entity of its own. In addition, consistently with the findings from Stilwell (2002) and the assumptions from Pinto (2005), the author – who also lectures professional ethics to veterinary students since 2007 (University Vasco da Gama, Coimbra) – has pointed out, that the curricula in ethics at Portuguese veterinary schools are focused on legal issues and deontological rules and pay little attention to ethical theory and moral decision-making (Magalhães-Sant'Ana 2008). There are reasons to believe that the rule-based teaching of ethics is dominant in some European veterinary schools, especially those countries with approaches to ethics centred in the teaching of 'veterinary deontology' (cf. chapter 5).

Teaching ethics implies imparting moral values to students and the three approaches present some similarities and also differences in this respect. The rules approach differs from the remaining two in the fact that it promotes societal moral values over personal ones. Rules express the social consensus of what is considered ethically acceptable from the unacceptable (and hence legally condemnable). That consensus can be at the level of the profession (expressed in terms of compliance to codes of conduct and veterinary regulations), or at a broader societal level (regional, national or European law). In the rules approach, students are presented with the regulatory framework with which they are expected to comply and that is what will make them ethically sound professionals. Students are not necessarily expected to internalize the values that justify those rules.

On the other hand, both virtues and skills approaches aim to promote an autonomous understanding of the personal values (more than societal values) which one chooses to adopt. However, they do differ in the way to achieve it. The virtues approach is based upon students internalizing what is considered by educators (or by the school, or even by the profession) as desirable or appropriate (Van Luijk *et al.* 2010). This is usually achieved by role-modelling and guidance (Martin *et al.* 2002). The skills approach does not attempt to transmit a predefined list of values but instead works by making students

aware of the different set of values at stake (Clarkeburn 2002). This also suggests that the virtues approach is more dogmatic or prescriptive as opposed to the pluralistic view of ethical skills.

Rules and virtues are both *normative* approaches to ethics. Educators convey a set of standards of action to their students: in the form of regulatory documents in the former and of traits of character in the latter. The skills approach is mostly *descriptive* because it describes different ethical theories and principles – their strengths and weaknesses - but does not attempt to evaluate them. The three approaches devised by Illingworth (2004), and described in chapter 2.4, partially overlap with ours. Illingworth's pragmatic approach is similar to the rules approach. The embedded approach has strong similarities with the virtues approach to ethics and the theoretical approach closely relates to the skills approach. It is interesting to notice the emphasis put by Illingworth on the understanding of ethical theories (and of knowledge in general) in the development of ethical skills.

The in-depth examination of the three veterinary ethics courses, in light of the approaches outlined above, indicates that each draws on elements of several teaching approaches although there appears to be notable difference in the emphasis. While the course in Lisbon is constructed around a rules approach (Deontological Conduct and Statutes of OMV), the use of bioethical case studies gives an opportunity for students to develop ethical skills. The observation of implicit ethics teaching through value inculcation is also noteworthy.

In Nottingham, a skills-based approach is emphasised, and students disclose a wide range of ethical skills. Probably due to the integrated nature of the ethics teaching these skills are broadly connected to discussions of rules and virtues. Students not only have to *know* a set of regulatory documents, but they are also expected to *behave* accordingly. The rite reported in Nottingham of having students taking the veterinary oath at the start of their education is a form of 'white coat' ceremony in which incoming students are implicitly introduced to the attitudinal expectations of the school and the veterinary profession more generally. The use of 'white coat' ceremonies in the teaching of medical professionalism has also been described in the literature (Swick *et al.* 1999; Cohn & Lie 2002; Rhodes 2001).

In Copenhagen the acquisition of skills per se is a paramount objective. The role of ethical theories in promoting ethical skills (Illingworth's theoretical approach (2004)) was mainly found here. Ethical theories are used descriptively in order to promote pluralism and tolerance. In addition, the implicit teaching of attitudes from desirable role models was also identified. Although some rule-teaching was identified (namely, the Danish

Animal Protection Act) the teaching of rules has also been rejected as not being part of ethics at all.

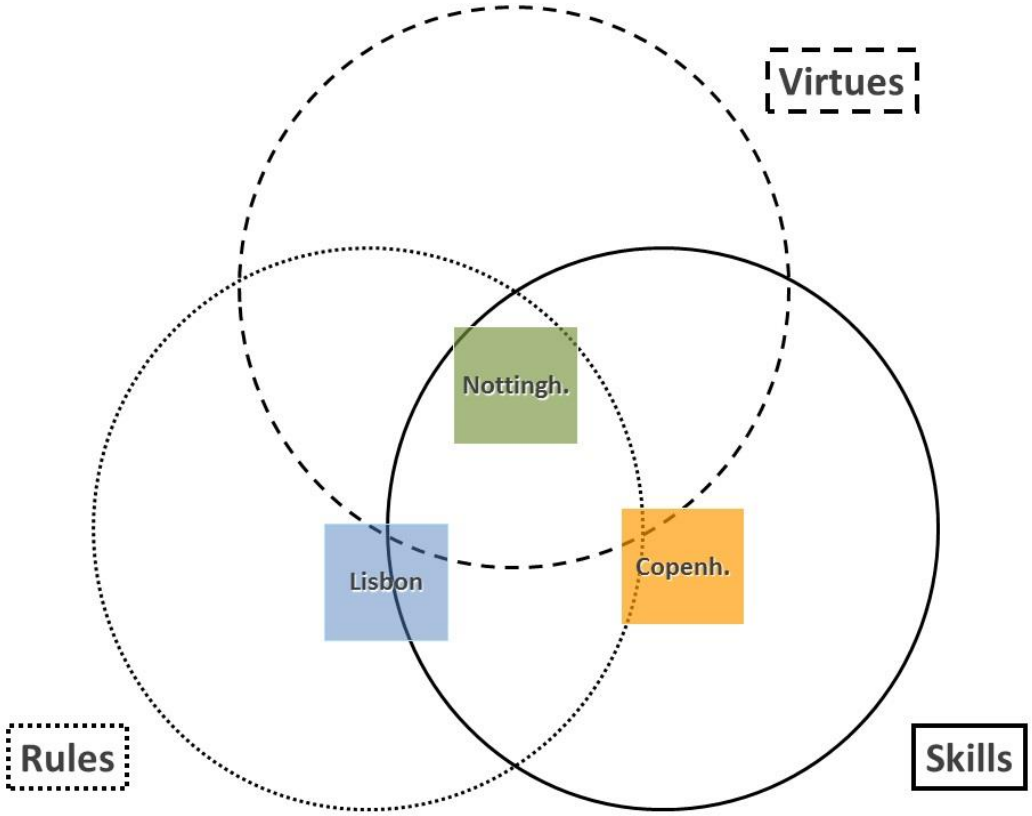


Figure 15 – The theoretical framework of veterinary ethics education and its application to the study cases. The diagram combines the three approaches to ethics (Virtues, Skills and Rules) and places the study cases (Copenhagen, Lisbon and Nottingham) within them.

These findings have been represented using a Venn Diagram (Figure 15). This is intended as an illustrative exercise and not as a definitive description of the respective courses in ethics. The diagram illustrates how Nottingham sits close to the centre of the diagram and offers a teaching of ethics that substantially integrates the three approaches, founded on virtues and incorporating rules and skills in the same measure. The ethics rule-teaching found in Lisbon is to some extent combined with the imparting of skills and, to some extent, virtue teaching. Copenhagen represents a skill-based approach to ethics teaching, whereas rules and virtues represent only a small fraction of their teaching. The diagram also reflects the fact that the teaching of rules, virtues and skills does not need to be exclusive or conflicting. In order to develop ethical *skills*, students need to integrate the *values* at stake, which are often expressed in normative *regulations*.

The diagram reflects the spatial disposition of each school and offers the possibility for other schools to be included in the same exercise. There is, however, no intention to declare that one approach is better than another, neither to imply that the centre of the diagram represents the recommendable approach to ethics. It is possible, however, to explain some of the differences found between the three schools. The way the veterinary course was set out and the methodologies used to teach ethics can, to some extent, explain some of these differences. As discussed before in chapter 7, in Lisbon and Nottingham issues around duties toward these statutory bodies, professional liability and the disciplinary measures are highlighted. These might be related to a stronger identity with the respective professional organizations at these countries than in Denmark. Additionally, some of the teaching that is done in Nottingham under the heading of professionalism and ethics (professional norms and regulations) is found in Copenhagen in a different course, *Veterinary Jurisprudence* (5th year), when students are specifically taught veterinary legislation. In this respect, some differences found between Copenhagen and Nottingham are more the consequence of the overall organization of the veterinary course than the reflex of different understanding of ethics.

Where the views of Copenhagen do seem to disagree with the views of Lisbon and (to some extent) Nottingham is on the role of ethics teaching to veterinary students. While the teaching in Copenhagen is aimed at presenting students with the plurality of moral values in contemporary society, an important part of the teaching in Lisbon aims to provide students with the correct professional view. In other words, Lisbon has a more normative approach to ethics while the teaching in Copenhagen is more descriptive. Nottingham seems to sit in middle, with a teaching in ethics that is as much focused on influencing students' professional identity as it is in promoting a wide range of personal ethical skills.

These different roles of ethics represent the same kind of divide described by Gillam (2009) between the teaching of ethics in the humanities and the teaching of ethics to the professions (cf. chapter 2.3). In the humanities, the teaching of ethics is centred in the transmission of ethical reasoning abilities including analytical and decision-making skills. The concern is more on teaching students how to critically think and less in what they ought to think. In professional ethics, on the other hand, the teaching of ethics aims at "influencing students' thinking and behaviour in their future practice, with the ultimate purpose that they will practice ethically, however this is conceived" (Gillam 2009, p.584).
It is not the purpose of this thesis to side with any of these views. Our aim is to characterize the teaching approaches to ethics at the study cases and not to be judgemental about them. A comparative study of teaching approaches to ethics would

depend on the inclusion of topics that have not been taken into account in this research such as the socio-economical context, wider cultural differences, students' preparedness at the time of teaching, the professional role of the statutory bodies, and the type (and the amount) of national veterinary regulations. Even in the possession of such information that exercise might have been impossible.

10 GENERAL DISCUSSION

10.1 Overview of Results

The aims of this research were to explore the justifications, the contents and, to some extent, the approaches used for teaching ethics in European veterinary undergraduate education. In order to answer these questions a series of approaches were used which included: published positions on the ought of ethics teaching were identified and analysed, reflections from education theory were drawn from, a mapping of teaching approaches published on the internet, empirical studies that set out the views of educators – working in the field – and the perspectives from students at three case study sites. It is intended that the information provided by this thesis contributes in a meaningfully way towards unravelling this emergent research field.

The introduction of this thesis (Section I) draws mostly on the literature on ethics education in the health sciences, in particular human and veterinary medical ethics. Theoretical insights from the educational literature, namely learning theories and curriculum development, were left, to large extent, unexplored. This reflects not only the expertise of the candidate and of his supervisors but also what was achievable to develop and apply within a restricted doctoral programme.

The mapping of teaching approaches presented through internet sources has revealed that veterinary ethics is taught using substantially different approaches, which differ in terms of contents, educational methods, and overall conceptualization. When examining the specific goals of veterinary ethics teaching, the empirical case study research detected ten possible learning objectives in teaching ethics that overall aim to promote ethical awareness, ethical knowledge, ethical kills, as well as individual and professional qualities in students (Table 4). Whereas many of the objectives complement each other, there appeared to be a tension between the view of ethics teaching which intends to promote knowledge of professional rules and a view emphasizing critical reasoning skills.

In terms of the teaching content, a four-part conceptual model has been proposed and this was subsequently used to map the teaching content and how different topics are emphasised in the three European veterinary schools (Figures 12 and 13). This difference in emphasis seems to reflect different aims and drivers in teaching ethics at the three schools studied, although some of the findings may more closely represent the reflections of the views held by the interviewees than a clearly set out formal institutional

position on veterinary ethics education. The way the veterinary curriculum is organized at each school can also have an influence on the results.

Although a connection can be found between the results from the students discussions (focus group sessions) and the conceptualization of ethics at each school, this needs to be presented cautiously. In addition to the fact that only one focus group session was held at each school, the way students resolve the ethical-clinical dilemma may also be affected by a range of other influences such as the teaching approaches embedded across the veterinary education programme in general, personal backgrounds, cohort dynamics and cultural characteristics. Further research is needed to demonstrate how the conceptual model presented here might be applied to map the content of ethics teaching at other European veterinary schools, and explore its ability to access the outcomes of ethics teaching.

The examination of the ethics curricula at the three study cases, has revealed that ethics is approached using a combination of didactic and self-directed teaching methods. The greater responsiveness on the part of students regarding self-directed teaching methods (such as PBL, case discussions and excursions) may also be related to a promotion of their ethical competences. In Copenhagen, students seem to gain interest in ethics as it moves away from the teaching of theories and progresses towards debates, small group discussions and excursions. In Lisbon, the use of discussion of cases within the lecture sessions has enabled to attract students' interest and curiosity. The wide inclusion of ethical topics into small group teaching sessions, together with the use of reflective portfolios, are probably the most prominent features of the teaching in Nottingham. Results also seem to indicate that there is no ideal or best point in veterinary training to teach ethics and that educators and students prefer having ethics taught integrated in the curriculum than only as a stand-alone subject.

The order by which the questions where explored – *why*, *what*, *how* – reflects a structured approach to the topic of teaching ethics: the educational methods used (*how)* are intimately dependent of *what* is being presented, which in turn is a consequence of the reasons behind the teaching (*why*). Motivations to teach precede decisions of what topics to include and which methods to use. As a result, it is not surprising that this investigation has focused mainly on *what* and *why*, while exploring the *how* question in less detail.

Informed by the literature and the results from the empirical work, a theoretical framework was designed, composed of three approaches to veterinary ethics based on professional rules, ethical skills and moral virtues. These approaches reflect possible

educational aims to ethics education that emphasise knowledge, skills and attitudes. The purpose of designing this framework was to bring together three distinctive paradigms in the teaching of ethics that are often seen to conflict. Drawing from the three case studies, it becomes apparent that it is possible to devise teaching strategies that combine several or all of these approaches. It is expected that the proposed framework will inform future curriculum development in ethics across European veterinary schools by clarifying the aims and methods of veterinary ethics education.

10.2 Research Methods

In order to answer the research questions a combination of quantitative – mapping of internet sources – and qualitative research strategies – study documents, interviews with educators and focus groups with students – was used. The use of a case-study exploratory approach enabled the identification of not only the formal curriculum but also the informal and sometimes hidden messages that otherwise might have been lost if using alternative research methods, such as questionnaires. Additionally, the diversity of methodological approaches applied in the study presented here has enabled a form of data triangulation which provided further strength to the results.

The internet search offered some limitations. It could not detect the hidden curriculum, which is an important aspect of the teaching in ethics. The way in which particular schools use and update their websites differs greatly and the quality and quantity of information provided is not always satisfactory, especially in terms of the unit descriptors. Although the majority of the information gathered makes reference to the current academic year (2009-2010), that was not always the case. Alternative research methods could have been used such as questionnaires (email or post) or telephone interviews; however, these approaches would not resolve the issue of identifying the right people to answer them. Additionally, questionnaires are often ignored and telephone interviews would have been immensely time consuming. There was also the risk that the sample would be biased by the more likely response of those who support the teaching of ethics (Willmott *et al.* 2004; Claudot *et al.* 2007). The web search, on the other hand, proved to be an effective method of retrieving the same kind of factual information offered by each faculty (what is actually going on) and without having to rely on personal understandings about the teaching of ethics. The web search provided comprehensive information from almost two thirds of the faculties assessed (cf. Annexe 2). These results seem very satisfactory.

The use of different qualitative analytical approaches is a reflection of the particular challenges associated with each question. In order to answer the *why* question a specific link had to be made between the arguments raised and the teaching of ethics, which involved the use of a hermeneutic tool (Toulmin's model of argumentation). The *what* question involved the iterative exercise of confronting the qualitative data to a previously designed conceptual framework while revisiting the concepts in light of the new inductive data. Finally, the *how* question involved addressing a number of sub-questions that needed a context specific approach.

Although the study schools were purposively selected to represent the Western European diversity in terms of ethics teaching, it is reasonable to suggest that additional approaches to teaching veterinary ethics may exist and future studies on the current subject are therefore recommended. In this regard, it would have been worthwhile to extent the study towards East. However, funding was not available for including a fourth study case, bearing in mind that that this investigation involved two sets of on-site interviews.

The analysis of study programmes was important in formulating research questions and in informing the interviews and focus group sessions. The major limitations in relying on study programmes to have access to the teaching process result from the gaps identified by Harden (2005) between the declared curriculum, the taught curriculum and the learned curriculum (Figure 2). Not all that is explicitly set out in the study contents (the declared curriculum) reflects what is actually taught and the effect of the hidden curriculum. In this regard, study programmes are not more than statements of content that need to be explored using more in-depth approaches.

The use of face-to-face semi-structured interviews was a valuable method for retrieving meaningful information from educators that otherwise might have not been captured using alternative methods such as questionnaires. Educators were willing and able to discuss their approaches to ethics teaching and this appeared to be an important topic across the schools used as case studies. There are several limitations to the interview methodology applied. It is reasonable to suggest that not everyone who teaches ethics-related subjects was interviewed; the effect of the hidden curriculum makes it virtually impossible to detect all the ethics teaching in a veterinary curriculum. In addition, the sample was uneven with only three individuals identified in Lisbon, compared to eight in Nottingham (and six in Copenhagen). Lisbon's small sample size, in particular, could have contributed to limit the breadth of identified themes.

Retrospectively, some questions that were not identified at the beginning but that later proved to be relevant were poorly addressed or remained unanswered. The interviews did not appear to draw out some details on the competences that ethics' educators should possess which would have added to the results of their role in the teaching of ethics (see section 8.5). Also, it would have been interesting to compare the educators' perceptions of the attributes that constitute a good vet with the views of the students on the same issue. Exploring these aspects further may have enriched the investigation.

The session with the students was conducted in order to draw out a discussion relating to the relevance of ethical competences for their preparation as future veterinarians. The sessions were structured around three main exercises: a) defining the concept of a good vet; b) placing ethics within the vet curriculum; c) resolving an ethical-clinical case. Students were willing to participate and often enthusiastic. The first exercise, however, did not generate the diversity of debate among students as expected. Students described their individual visions of a good veterinarian but did not express the need to discuss them. The early dynamics of the students group may have contributed to the lack of debate. The second exercise was seen to promote notable critical analysis by the students of the curricular subjects, which resulted in a variety of interesting suggestions about the approaches to the veterinary curriculum (cf. Annexe 8). Finally, students made use of different lines of argument in order to resolve an ethical-clinical case scenario and the results from this particular exercise were used to explore how the contents of the teaching in ethics may be translated into ethical competences. These results are explored in great detail in chapter 7, bearing in mind that ethical competences are not only the result of a curriculum in veterinary ethics.

Several limitations to the focus group methodology here presented must be considered. Although all efforts were made in having a diverse cohort of students at each school, that was not always the case. In Nottingham, in particular, there were no male students present and final year students were on clinical rotations at the time and hence prevented from participating. Nonetheless, the groups were sufficiently large, diverse and mixed in order to minimize cohort effect. In addition, the overall disproportion between the number of females and males at the focus group sessions can be seen as a reflection of the feminization of the veterinary profession.

With regards to the ethical-clinical case, its clinical aspects might have been a greater challenge to the younger, pre-clinical students (especially in the cases of Copenhagen and Lisbon). However, this also gave the opportunity for students to start discussing the safer and more familiar clinical implications of the case before they actually dealt with the ethical issues. It is my understanding that this feature helped to build confidence,

rapport, and reflection among the group. It was also the role of the facilitator to ensure that the clinical terminology was understood and the case was clear for everyone.

Additional focus group sessions with students would certainly have been beneficial. However, the group dynamic depended on students' oblivion of the real aims of the session (nor could they know about the ethical-clinical case). These conditions could only be guaranteed in the first session held at each school. The fact that students in Nottingham have a teaching that is typically based in PBL sessions can have made them more comfortable in engaging in a discussion with their peers and with the session format more generally. This perception is reinforced by the fact that the session in Nottingham was significantly faster than the remaining two, while generating meaningful data.

Alternative research approaches were also considered. The use of (non-participant) observation could have helped in gaining further insight into the teaching approaches at each school. This alternative would have been, however, very difficult to implement at three institutions with very different approaches to the veterinary curriculum, especially in the case of Nottingham where adequate observation of the teaching in a fully integrated curriculum would have been complex to achieve. Also, in the case of Copenhagen, the language barrier would probably have been unsurpassable.

10.3 Concluding Remarks

Clearly in contemporary society, solely relying on norms and regulations is not an effective method of teaching ethics. Real-life scenarios in veterinary practice often involve people with very different, and sometimes opposing, ethical beliefs. Therefore, training in ethics should equip students with the necessary knowledge and skills to analyse a difficult situation from different ethical perspectives and to take into account the different values involved (such as the autonomy of the client; the welfare of animals; human health related issues). This will help individuals identify and evaluate all available courses of action. Only through an awareness of the diversity of thought and ethical positions can a veterinary surgeon appreciate the expectations of different stakeholders in modern society. Ethical reflection can work as an intellectual tool, helping veterinarians in all areas of activity reaching confident and knowledgeable decisions, which they can reasonably defend. Therefore, it is argued that veterinary ethics teaching should be addressed using a pluralisitic approach.

A well-planed curriculum in ethics should be integrated within the veterinary course, in addition to student-centred, and structured around achievable learning outcomes. In what educational methods is concerned, teaching in ethics based in small groups, while anchored on lectures, will help students to engage in discussions and develop their own informed viewpoints. Training tutors to be ‘discussion leaders’ can enhance the learning experience by guiding students moral reasoning endeavours (actively promoting their sensitivity and judgement), as well as providing solid ground for the lifelong development of motivation and character.

In order to project the teaching experience into the veterinary reality, it is important that not only philosophers but also animal and veterinary scientists are involved in the teaching of veterinary ethics and animal bioethics. In addition to engage in ethical discussions, students should be encouraged to write their insights in reflective portfolios. By creating a *culture of ethics teaching* that goes beyond the borders of a course of ethics and involves the veterinary curriculum can be of benefit not only to students but also to the veterinary faculty as a whole.

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ANNEXES

Annexe 1. Kohlberg's six stages of cognitive moral development

	Level and stage	What is right?	Reason for doing right	Social perspective
LEVEL 1 - Preconventional	Stage 1- Heteronomous Morality	To avoid breaking rules backed by punishment, obedience for its own sake, and avoiding physical damage to persons and property.	Avoidance of punishment, and the superior power of authorities.	*Egocentric point of view.* Doesn't consider the interests of others; doesn't relate two points of view. Actions are considered physically rather than in terms of psychological interests of others.
	Stage 2- Instrumental Purpose, and Exchange	Following rules only when it is to someone's immediate interest; acting to meet one's own interests and needs and letting others do the same. Right is also what is fair, what is an equal exchange.	To serve one's own needs or interests in a world where you have to recognise that other people have their interests, too.	*Concrete individualistic perspective.* Aware that everybody has his own interest to pursue and these conflict, so that right is relative.
LEVEL II - Conventional	Stage 3- Mutual Interpersonal Expectations, Relationships, and Interpersonal Conformity	Living up to what is expected by people close to you or what people generally expect of people in your role as son, brother, friend, etc. Being good is important and means having good motives, showing concern about others. It also means keeping mutual relationships, such as trust, loyalty, respect and gratitude.	The need to be a good person in your own eyes and those of others. Belief in the Golden Rule. Desire to maintain rules and authority which support stereotypical good behavior.	*Perspective of the individual in relationships with other individuals*. Aware of shared feelings, agreements, and expectations which take primacy over individual interests. Relates points of view through the concrete Golden Rule, putting yourself in the other guy's shoes.
	Stage 4 - Social System and Conscience	Fulfilling the actual duties to which you have agreed. Laws are to be upheld except in extreme cases where they conflict with other fixed social duties. Right is also contributing to society, the group, or the institution.	To keep the institution going as a whole, to avoid the breakdown in the system. Laws create cooperative order on a society-wide basis.	*Differentiates societal point of view from interpersonal agreement or motives.* Takes the point of view ofthe system that defines roles and rules.
LEVEL III - Postconventional, Or Principled	Stage 5 - Social Contract and Individual Rights	Being aware that people hold a variety of values and opinions that most values and rules are relative to your group. These relative rules should usually be upheld, however, in the interest of impartiality and because they are the social contract. Some nonrelative values and rights like life, and liberty, however, must be upheld in any society and regardless of majority opinion.	A sense of obligation to law because of one's social contract to make and abide bylaws for the welfare of all and for the protection of all people's rights. A feeling of contractual commitment, freely entered upon, to family, friendship, trust, and work obligations. Concern that laws and duties be based on rational calculation of overall utility, 'the greatest good for the greatest number'.	*Prior-to-society Perspective.* Perspective of a rational individual aware of values and rights prior to social attachments and contracts. Integrates perspectives by formal mechanisms of agreement, contract, objective, and due process. Considers moral and legal points of view; recognises that they sometimes conflict and finds it difficult to integrate them.
	Stage 6 - Universal Ethical Principles	Following self-chosen ethical principles. Particular laws or social agreements are usually valid because they rest on such principles. When laws violate these principles, one acts in accordance with the principle. Principles are universal principles of justice: the equality of human rights.	The belief as a rational person in the validity of universal moral principles, and a sense of personal commitment to them.	*Perspective of a moral point of view from which social arrangements derive.* Perspective is that of any rational individual recognising the nature of morality or the fact that persons are ends in themselves and must be treated as such.

Adapted from Goldman & Arbuthnot 1979, pp. 174-175.

Annexe 2. Internet Search Working Document

The following pages present a *facsimile* version of the working document used to compile, organize and analyse the information retrieved from the internet sources. It includes the 55 veterinary faculties used in the mapping assessment and where relevant and up-to-date information was available (Group A). The schools are organized alphabetically by country and by name of the city. The data provided include: 1) the homepage of the veterinary school (E-LINK) and the languages in which it is available ('*Bi*' means that vernacular language and English are available); 2) the hyperlink to the study programmes or syllabi in veterinary medicine (SYLLABUS) and the languages in which it is available; 3) the hyperlink to the unit descriptors (UNIT DESCRIPTORS), the languages in which it is available, as well as the quality of the information provided (*Summary* – usually restricted to a paragraph or two; *Complete* – when the description is detailed and organized in topics; *Restricted* – when a key pass is need to get access; and *Variable* – when the information available varies greatly from unit to unit). This is followed by 4) the name of the subject units which include ethics-related topics (ETHICS SUBJECTS) and by the hyperlink to its contents (DESCRIPTION). The documents are discriminated by format (HTML, PDF, WORD) and in the case of long PDF documents, the pages corresponding to the teaching of ethics are indicated. The six remaining columns refer to the main features of the ethics-related unit: the semester in which it is taught (SEMESTER); the number of ECTS (when available), the pedagogic method (FORMAT – *Lecture*, *Practicals*, or *Seminar*), the workload, the assessment methods (WE – *Written Exam*; OE – *Oral Exam*; PW – *Project Work*; IC – *Involvement in Classes*), and the type of unit (C – *Compulsory*; E – *Elective*). For the sake of clarity some accessory data are not presented, such as the name and contact information of the people responsible for the course, and the date when the information was accessed.

COUNTRY	FACULTY	E-LINK	Language	Syllabus	Language	Accessibility	Unit Descriptor	Language	Quality of Informatio	ETHICS Subjects	Description Available	Semester	ECTS	Format	Work Load	Assessment	Type
Belgium	Université de Liège Faculté de Médecine Vétérinaire	w.ulg.ac.be/	French	HTML	Bi	3 stp	HTML	Bi	Summary	Deontology in the practice of veterinary medicine	HTML	7	1	Lec	5,5 (T)	WE	C
									Summary	Legal Objectives and Foundations Concerning the Guidanc	HTML	1	1	Lec	2 (10T)	WE	C
									Complete	Law and Veterinary Medicine	HTML	7	1	Lec	(13,5 T)	WE	C
Bosnia	Veterinary Faculty, Sarajevo	vw.vfs.unsa	Serbian	HTML	Serbian	2 stp	PDF	Serbian	Complete	Sociology I & II	PDF	1 & 2	?	ec + Pra	1 (45 + 45	WE or OE	C
										Veterinary Management and Economics	PDF	9	?	ec + Sem	3+1 (60 T	WE + SW	C
										Forensic Veterinary Medicine	PDF	9 & 10	?	+ Prac +	1+1 (15+6	WE + OE	C
Bulgaria	Trakia University, Faculty of Veterinary Medicine	ww.uni-sz.b	Bi	HTML	Eng	1 stp	No	*	*	Forensic Veterinary Medicine and Deontology	*	10	1	*	1	*	C
	University of Forestry, Sofia	/edu.ltu.bg/	Bi	HTML	Bulgarian	5 stp	HTML	Bulgarian	Summary	History of Veterinary Medicine and Deontology	HTML	1	*	Lec	2	*	C
Czchek Republic	Veterinární a Farmaceutická Universita - Brno	www.vfu.cz	Bi	HTML	Eng	4 stp	No	*	*	Ethics and History of Veterinary Medicine	*	1	2	ec + Pra	1+1	WE	C
France	École Nationale Vétérinaire d'Alfort (ENVA)	w.vet-alfor	French	HTML	French	3 stp	PDF	French	Complete	Connaissances professionnelles module Législation	PDF	9	?	CM	22,5 (T)	M, QROC (	C
										Connaissances professionnelles module Management	PDF	11	?	CM + TD	19+8 (T)	M, QROC (	C
Macedónia	Faculty of Veterinary Medicin Skopje	fvm.ukim.e	Bi	Word	Mac	2stp	No	*	*	Judicial Veterinary and Veterinary ethics	*	9	5.5	?	60+15 (T)	?	C
Germany	Veterinärmedizinische Fakultät der Freien Universität Berlin	w.fu-berlin	Bi	PDF	Bi	6 stp	PDF	Bi	Summary	Animal Welfare I	p.ii32	2	1.0	Lec	2h	OE	C
										Animal Welfare II	p.ii48	6	3.0	Sem	2h	OE	C
										Lab Animal Medicine and Disease	p.ii48	6	0.5	Lec	1h	OE	E
										Forensic Veterinary Medicine	p.ii68	9	2.5	Lec	2h	OE	C
	Fachbereich Veterinärmedizin der Universität Giessen	v.uni-giesse	Bi	PDF	German	Dif	PDF	German	Summary	Animal Welfare in the Practical Application	HTML	5 & 7	?	Sem	1,5h	No	E
										Animal Welfare and Ethology	p.37	7	?	?	?	WE	C
Greece	Aristoteles University - Thessaloniki	/www.vet.a	Greek	Word	English	1 stp	Word	English	Complete	Veterinary Deontology and Law	p.108	7	1.5	Lec	12h (t)	?	C
										Bioethics	p.149	7	1.5	Lec	2 (20 t)	PW	E
	University of Thessaly - Faculty of Veterinary Science	ww.vet.uth.	Bi	Access	Bi	2 stp	Access	English	Complete	Introduction to veterinary science	p.2	1	1	Lec	2	WE	C
Hungary	Faculty of Veterinary Science in Budapest HUNGARIAN COURSE	ww.univet.h	Tri	HTML	Magyar	1stp	HTML	Magyar	Summary	Laboratory Science and Bioethics	HTML	5	2	ec + Pra	15 + 8 t	exam	C
										Transplantation potential of stem cells in veterinary scien	HTML	6	2	Lec	14 t	exam	E
										Animal Health Economy, Management and Ethics I and II	HTML	6 & 7	? (0+2)	Lec	25 + 35 t	exam	C
										Forensic Medicine I and II	HTML	9 & 10	? (0+2)	Lec	15+20t	exam	C
										The general welfare and legal aspects	HTML	7	2	Lec	15t	exam	E
										Hunting Law and Ethics	HTML	5	2	Lec	15 T	exam	E
Ireland	University College Dublin Faculty of Veterinary Medicine	www.ucd.ie	Bi	HTML	Eng	6 stp	HTML	English	Complete	Animal Behaviour, Welfare & Companion Animal Care	HTML / PDF	4	edits= EC	rac + Fie	127 (t)	WE	C
Italy	Università di Bologna Facoltà di Medicina Veterinaria	w.vet.unib	Italian	HTML	It	3 stp	HTML	Bi	Variable	Legal Veterinary Medicine, Veterinary Legislation and Ani	HTML	6	2 CFU	Lec	*	WE + OE	C
							HTML	Italian	*	Bioethics	*	4	3 CFU	*	*	*	E
	Università di Camerino - Facoltà di Medicina Veterinaria	ww.unicam.	Italian	HTML	Bi	7 stp	HTML	Bi	Complete	Forensic Medicine	HTML	9	3 CFU	ec + Pra	42 (t)	OE	C
	Università di Messina Facoltà di Medicina Veterinaria	ww.unime.	Italian	PDF	It	7 stp	HTML	Italian	Restricted	Medicina legale veterinaria, legislazione veterinaria, prot	p.3	9 & 10	2 CFU	ec + Pra	+ 12 = 30	*	C
	Università di Milano Facoltà di Medicina Veterinaria	eterinaria.u	Bi	HTML	Bi	1stp	PDF	Bi	Complete	Legal Medicine and Veterinary Legislation	PDF	8	edits= EC	ec + Pra	20+28h (t	WE + OE	C
	Facoltà di Medicina Veterinaria Università degli studi di Padova	eterinaria.u	tetra	PDF	It	3stp	PDF	Italian	Summary	Legislazione Veterinaria, e Deontologia	PDF	8	1 CFU	ec + Pra	12+2 (t)	WE + OE	C
										Medicine Legale e Protezione Animale			2 CFU		24+4 (t)		
	Università di Parma Facoltà di Medicina Veterinaria	ww.unipr.i	Italian	PDF	It	5stp	HTML	Italian	Summary	Medicina legale, legislazione e protezione Animal	HTML	8	2 of 7 CFU	Lec	gale, legi	?	C

COUNTRY	FACULTY	E-LINK	Language	Syllabus	Language	Accessibility	Unit Descriptor	Language	Quality of Informatio	ETHICS Subjects	Description Available	Semester	ECTS	Format	Work Load	Assessment	Type
Italy	Università di Perugia Facoltà di Medicina Veterinaria	.unipg.it/~f	Italian	PDF	It	3stp	PDF	Italian	Summary	Medicina legale veterinaria, legislazione veterinaria, prot	p.28	8	3 CFU	ec + Pra	c (31 t) +	OE + PW	C
	Università di Pisa Facoltà di Medicina Veterinaria	vw.vet.unip	Italian	HTML	It	2stp	HTML	Italian	Summary	Medicina Legale Veterinaria	PDF	10	3 CFU	ec + Pra	9 + 5 (44 t	?	C
	Università di Sassari Facoltà di Medicina Veterinaria	vww.uniss.i	Italian	PDF	It	8stp	PDF	Italian	Summary	Medicina Legale Veterinaria	PDF	7	3 CFU	ec + Pra	2 + 6 (38t	IC	C
	University of Teramo	vww.unite.it	Bi	HTML	It	4stp	HTML	Italian	Summary	Medicina legale veterinaria, legislazione veterinaria, prot	HTML	7 & 8	3 CFU	?	?	?	C
										Theories and Thechniques of Communication of Science	HTML	1 or 2	?	?	?	?	E
										Bioetica	HTML	1 or 2	?	?	?	?	E
	Università di Torino Facoltà di Medicina Veterinaria	v.veter.unit	Italian	PDF	It	3stp	HTML	Italian	Summary	Medicina legale veterinaria	p.48 PDF	9	FU - 2 ECT	ec + Pra	34+14	?	C
										Bioetica	p.51 PDF	10	1CFU	Lec	9	?	E
Latvia	Latvia University of Agriculture Veterinârmedicînas fakultâte	v.llu.lv/?mi	Bi	Excel	Latvian	5stp	Excel	Latvian	Complete	Philosophy	HTML	2	3	ec + Sem	1+1 (32)	WE	C
										Legal Basics	HTML	8	2.25	ec + Sem	+0,5 (24T	WE	E ?
										Veterinary Organization of the Work I	HTML	9	3	ec + Pra	5+2 (t 48	WE	C
										Veterinary Organization of the Work II	HTML	10	3	ec + Sem	1+3 (24 T	WE	C
										Veterinary Organization of the Work III	HTML	11	1.5	Lec	1 (24T)	WE	C
										Judicial Veterinary Medicine	HTML	11	1.5	ec + Pra	1+1 (24t)	WE	C
Netherlands	Universiteit Utrecht Faculty of Veterinary Medicine	ww.vet.uu.	Bi	PDF 1	Dutch	4stp	HTML	Dutch	Summary	Introductory Line Education	HTML	1	7	?	2 (49T)	?	C
									*	Line 4 ethics-law- environmental and clinical Lessons	*	5	*	*	*	*	C
				PDF 2						Line 5-ethics-Law-environmental science	*	6	*	*	*	*	C
									Complete	Animals, I find them to eat	HTML	4	7.5	+ Sem +	?	WE	E
										Veterinary aspects of wildlife management	HTML	4	7.5	+ Sem +	Var.	Var.	E
Norway	Norwegian College of Veterinary Medicine	ww.veths.n	Bi	HTML	Bi	3stp	Word	Norwegian	Complete	Cell Biology Block	p.15	2	?/27	op in Bi	single	-	C
										Animal Welfare, Animal housing and Laboratory Animal Sc	p.30	6	?/5				C
										Small animal medicine and equine medicine	p.45	9	?/16.5				C
										Production animal clinical sciences	p.49	9	?/16.6				C
Poland	Uniwersytet Warmińsko-Mazurski w Olsztynie - Wydzial Medycyny Weterynaryjnej	wm.edu.pl/	Polish	DF /Word	Polish	2 stp	PDF/Word	Polish	Complete	History of veterinary medicine and deontology	p. 60	2	1.5	Lec	15 (t)	WE or OE	C
										Animal Welfare	p.78	8	0.5	Lec	15 (t)	WE or OE	C
										Veterinarians court to the legal protection of animals	p.100	11	2	ec + Pra	30 (t)	WE or OE	C
	SGGW - Warsaw Agricultural University Faculty of Veterinary Medicine	w.pl/info/w	Bi	HTML	Polish	3stp	HTML	Polish	Complete	History of veterinary medicine and deontology (ethics)	HTML	2	3	Lec	30 (t)	WE	C
Portugal	Escola Universitária Vasco da Gama - Coimbra	ww.euvg.ne	Bi	HTML	Portuguese	2stp	HTML	Portuguese	Variable	Medical Deontology	HTML	10	1	Lec	1	PW + IC	C
										History of Veterinary Medicine	HTML	2	1	Lec	1	VE + PW + I	C
	Universidade de Évora	ww.uevora.	Tri	HTML	Tri	4stp	HTML	Portuguese	Summary	Deontology	HTML	8	3	ec + Sem	78 (t)	WE + PW	C
	Universidade Técnica de Lisboa - Faculdade de Medicina Veterinária	www.fmv.u	Bi	HTML	Bi	3stp	PDF	Bi	Complete	Deontology and Bioethics	PDF	1	2	Lec	14	WE	C
	Universidade do Porto - Instituto de Ciências Biomédicas de Abel Salazar	www.up.pt	Bi	HTML	DR	5stp	HTML	Bi	Complete	Ethics and Deontology	HTML	4	1	ec + Sem	15 + 27 (t	PW	C
	Universidade de Trás-os-Montes e Alto Douro - Vila Real	ursos/medve	Bi	HTML	DR	3stp	PDF	English	Complete	Sociol., Hist. Med. Vet. and Deontologic Principles	p.224	10	1	Lec	2	WE + PW	C
Romania	University of Agricultural Sciences and Veterinary Medicine Bucharest	://www.fmv	Bi	PDF	Romanian	2stp	No	*	*	Legislation and ethics	*	11	5	C + Lp ?	4 (56t)	E/5 ?	C

COUNTRY	FACULTY	E-LINK	Language	Syllabus	Language	Accessibility	Unit Descriptor	Language	Quality of Informatio	ETHICS Subjects	Description Available	Semester	ECTS	Format	Work Load	Assessment	Type
Serbia & Montenegro	Veterinarski Fakultet - Beograd	w.vet.bg.ac	Bi	PDF	Bi	3stp	PDF	Serbian	Complete	Ethics and Communication in Veterinary Medicine	p.47	11	1	Lec	1 (15T)	VE + PW + I	C
										Breeding and care for hunting deer	p.62	2	3.5	ec + Pra	+ 30 (45)	E + IC + PV	E
										Veterinary profession and society	*	1	1	Lec	2 (15T)	*	E
	Faculty of Agriculture in Novi Sad	://polj.ns.a	Bi	HTML	Serbian	2stp	HTML	Serbian	Complete	Sociology and Veterinary Medical Ethics	HTML	1	3	ec + Pra	(30+15=	E + PW + I	C
										Judicial veterinary medicine and legislation	HTML	10	3	Lec	4 (60 t)	VE + OE + I	C
Slovenia	University of Ljubljana	ww.vf.uni-lj	Bi	HTML	Slovenian	1stp	HTML	Slovenian	Summary	Administrative and judicial veterinary Supervision	HTML	9 & 10	11.5	ec + Pra	+ 45 (13	*	C
										History of veterinary Medicine and veterinary ethics	*	Var.	3	Lec	31 (t)	*	E
Spain	Universitat Autònoma de Barcelona Facultat de Veterinària	b.es/fac-vet	Tri	Word	Catalan	1stp	HTML	Catalan	Complete	Deontologia i Veterinaria Legal	Word	9	3.5	ec + Pra	+ 4,5 cred	WE + PW	C
										Etologia	Word	2	4	ec + Pra	2,5 cred	WE	C
	Universidad de Cordoba Facultad de Veterinaria	ganiza/cent	Bi	HTML	Spanish	2stp	PDF	Spanish	Complete	Etología y Protección Animal y Etnología	PDF	1	7.6	ec + Pra	20 + 12 t	?	C
										Deontología, medicina legal y legislación veterinaria	PDF	8	5.5	ec + Pra	4 + 1,5	WE + IC	C
										El animal de laboratorio	PDF	10	4.5	ec + Pra	(30+15 t)	WE	E
	Facultad de Veterinaria de Cáceres	eterinaria.u	Sp	HTML	Spanish	404	PDF	Spanish	Complete	Ética, Legislación y Peritación Veterinaria	p.31, 35	3	6	+ Prac +	?	VE + PW + I	C
	Universidad de León - Facultad de Veterinaria	ww.unileon.	Sp	HTML	Spanish	3stp	HTML	Spanish	Complete	Deontologia, Medicina Legal y Legislación Veterinaria	HTML	9	edits (3,5	ec + Pra	1,5 Cred	WE + PW	C
										Ethology, Animal Welfare & Ethnology (Etología, Protecció	HTML	2	6	ec + Pra	+ 3,5 Cre	WE	C
	Universidad de Murcia Facultad de Veterinaria	.um.es/vete	Sp	HTML	Spanish	2stp	PDF	Spanish	Complete	Deontología, Medicina Legal y Leg.Veterinaria	p. 583	9	edits (3,5	ec + Pra	1,5 Cred	VE + PW + I	C
										Cría y Reproducion de Primates no Humanos para Experim	p.735	?	?	ec + Pra	2,5 Credits		E
	Facultad de Veterinaria de Las Palmas de Gran Canaria	www.vet.ul	Sp	HTML	Spanish	1stp	PDF/Word	Spanish	Summary	Veterinaria Legal y Deontología	PDF	9	6	ec + Pra	70 t	VE + PW + I	C
	Universidad Complutense de Madrid, Facultad de Veterinaria	www.ucm.e	Sp	PDF	Spanish	2stp	PDF	Spanish	Complete	Deontología, Medicina Legal y Legislación	PDF	10	edits (3 EC	ec + Pra	30 + 10 (t)	WE + PW	C
	Universidade de Santiago de Compostela - Lic.Veterinaria (LUGO)	veterinaria	Tri	HTML	Galego	4stp	HTML	Tri	Variable	Deontoloxía, Medicina Legal e Lexislación Veterinaria	HTML	9	?	ec + Pra	1 (20 + 1	E + PW + Se	C
	CEU - Universidad Cardinal Herrera, Valencia	dcam.upv.es	Tri	PDF	Spanish	404	HTML	Spanish	Complete	Deontología, Medicina Legal y Leg.Veterinaria	PDF	10	3?	ec + Pra	30 (t)	VE + PW + I	C
	Universidad de Zaragoza Facultad de Veterinaria	es/acad/fac	Sp	PDF	Spanish	4stp	PDF	Spanish	Summary	Deontología, Medicina Legal y Leg.Veterinaria	PDF	10	,5 Credito	ec + Prac			C
										Experimentiación Animal		3	,5 Creditos				E
	University Alfonso X (MADRID) El Sabio	uax.es/indic	Sp	HTML	Bi	3stp	HTML	Spanish	Complete	Deontología, Medicina Legal y Leg.Veterinaria	HTML	9	2	?	4	?	C
Sweden	SLU - University of Agricultural Sciences Faculty of Veterinary Medicine	www.slu.se	Bi	HTML	Swedish	4stp	HTML	Bi	Summary	Animal Welfare, Legislation and Epizootology Module	HTML	5	HEC (5 ECT	+ Prac +	40+30+5	WE + PW	C
Ukraine	Bila Tserkva State Agrarian University	ww.btsau.l	Bi	HTML	Tri	5stp	HTML	Ukranian	Complete	Professional Ethics	HTML	10	?	ec + Pra	sions not	cord (залі	C
										Philosophy	HTML	4	?			Record (залі	C
United Kingdom	University of Bristol	k/Depts/Ve	Eng	HTML	Eng	5stp	Word	English	Complete	Welfare and Ethics	Word	2	*	+ Prac +	?	PW	C
	University of Cambridge Veterinary School	w.vet.cam.a	Eng	HTML	Eng	2stp	HTML	English	Summary	Preparing for the Veterinary Profession A	HTML	1 & 2	*	*	*	Together	C
										Preparing for the Veterinary Profession B	404	2 & 4	*	*	*		C
	University of Liverpool Faculty of Veterinary Science	verpool.ac.u	Eng	HTML	Eng	2stp	HTML	English	Complete	WHOLE ANIMAL DESIGN AND FUNCTION	HTML	2	15 CATS	rac + Fie	+3+8 (41	VE + PW + I	C
	University of Nottingham	ww.nottingh	Eng	HTML	Eng	5stp	HTML	English	Summary	Veterinary Personal and Professional Skills 1	HTML	1 & 2	5	+ Prac +	Sem		C
										Veterinary Personal and Professional Skills 2	HTML	3 & 4	5				C
										Veterinary Personal and Professional Skills 3	HTML	5 & 6	5	Sem			C
										Veterinary Research Methods	HTML	5 & 6	10				C
										Veterinary Personal and Professional Skills 4	HTML	7 & 8	5	+ Prac +	Sem		C

Annexe 3. Interview Guides

The following documents are presented as examples of the interview guides used in the face-to-face interviews with the teachers and in the focus groups with the students. Because the interview guides were tailor-made, slight differences may exist between these and the ones used at each school.

(T = 60 min)

Interview Guide – Educators

1.	**Presentation and Privacy issues** Introducing myself and my research Explain objectives of interview Privacy, anonymity, informed consent **(5 min)**	Vet; PhD student; Title of my thesis; European study relying on case studies "I am conducting research interviews with those involved in teaching ethics... lasting about 1 hour..." "I would like you to talk about your ethics teaching and your overall views on this form of teaching" Privacy: "Data will only be used for research purposes and eventually published in scientific journals" Anonymity: "No reference will be made to your name; however, your position will eventually be used." "No relation will be made between answers and respondents." Informed Consent: Written
2.	**Introductory Questions (5 min)**	How did you get involved in this ethics teaching? Why? What do you teach today?
3.	**Methodology** **(10 min)**	So what is the course about? *Or* Can you tell me about this course you teach? What methods do you use to teach ethics? Why do you use these approaches ? Topics to cover: Semester; work load; format (lecture/group work/seminar); type (compulsory/elective) Keywords to explore: Animal Welfare; Code of Conduct; Animal Law; HVM; Professionalism
4.	**Objectives** **(10 min)**	What are the most important competences students should get from this teaching? Why? When do you consider that students have gained appropriate knowledge? How do students respond to your teaching? Do they ask for your personal opinion? How do you react?
5.	**Assessment** **(5 min)**	So how do you actually do the evaluation? What do you mean to evaluate using that approach? Do you ask the students' for feedback (self-assessment / informal / questionnaires)?
6.	**The context of ethics within the Vet.Curriculum / Profession** **(15 min)**	How is ethics integrated with other units? How are others involved? Is this the 1st time they hear about ethics? Where do you think ethics should be placed within the curriculum: at the beginning or at the end? Why? Or: X Semester. Is that the wright place to be? Why? What happened if you moved it to the beggining/end? In a perfect world, if you could change something in your teaching what would that be? How do you think ethics is being recognised in vet education? What, in your opinion, are the main ethical issues for a practicing vet (in a clinical setting)? Why? If you had to explain to a colleague what ethics means, what would you tell her? Why?
7.	**Interviewee's profile** (if not answered in 2.) **(5 min)**	Finally, may I ask about your background? What is your specialism? What is your training background? Did you have any training / education qualification in ethics? How long have you taught vet students? How long have you taught ethics? Do you teach anything else?
8.	**Debriefing** **(5 min)**	Is there anything you would like to add about this subject? Is there anything else you would like add? Is there any question about my research or about this interview that you would like to ask me?

(T = 100 min)

Interview Guide - Students

TECHNICAL

Discussion of Privacy issues (5 min). Introducing myself and my research Explain the purposes of the meeting Privacy, anonymity, informed consent	Present them with the Information Sheet (in case they haven't read it and ask for queries) Thank you for coming. I am a Portuguese veterinarian and a PHD student working in Vet education I am interested in exploring how veterinary education prepares you for your future life as a vet The recorded tapes will be used for analysis only. Personal data will not be used. Demographic data will not be reported in such a way that your identity can be revealed.

Place of interview:
Date:
Time:
Duration:

Introductions **Personal motivations (10 min)**	Let participants introduce themselves to 'break-ice' and create familiarity. Focus on their personal and professional expectations *What would you like doing after graduation? Was that your main option when you first started as a vet student?* *What made you change your mind?" to later explore differences between participants, if needed.*
The Veterinary profession **(15 min)**	Individually: Write on card the answer to the question: *What is it for you to be a good vet?* Group discussion: *Why is that? What do you mean by that? Do you all agree with this view?*
The Veterinary curriculum **(15 min)**	Collective Exercise: Here is a list of subjects that might be part of vet curricula. How important do you find them, as a vet? I want you to rate them from the most important to the less important one. Please explain your choices and protest if you disagree. Explore differences: *Why is that unit more important?* Explore the discussion around Professional Ethics.
Education **(20 min) Objective:**	Collective exercise: I will present you with a practical case and I want you, as a group, to deal with it. By putting students before an ethical dilemma we can observe their rationale: What issues will they bring? (Codes of conduct? Ethical theories? previous examples from classes?). Return to the list of Subjects: *Which of these were more useful in dealing with this case? Would you change your previous choices?*
Teaching Methods & Assessment **(20 min.)**	What do you think worked well in your ethics teaching? Why? What do you think could be improved in your ethics teaching? Why? **Assessment:** *What kind of examination did you have in ethics? Does is reflect your knowledge in ethics?* **Integration**: *Would do like having more of ethics during the course? Where do you think ethics should be taught?* **Regulations:** *How do they relate to ethics? Do you think they are relevant?* (Guide Professional Conduct; Animal Welfare Act)
Framing **(10 min)**	Collectively: *Finally, I would like you, as a group, to tell me why is ethics relevant to vets* or why *should vets know about ethics?* What kind of issues should vets know? Why? How?
Debriefing **(5 min)**	a. Finish with questions: *Are there any issues related to ethics that we have not asked about*? *b.* Is there anything else that you would like to talk about concerning this meeting? c. Thank participants for co-operating by rewarding them with a small gift.

Annexe 4. Handout for the Selection of students

U.PORTO

IBMC
INSTITUTO DE BIOLOGIA MOLECULAR E CELULAR
INSTITUTE FOR MOLECULAR AND CELL BIOLOGY

INSTITUTO DE CIÊNCIAS BIOMÉDICAS ABEL SALAZAR
UNIVERSIDADE DO PORTO

Instructions for the selection of students

"How and Why to teach ethics to veterinary students in Europe – a comparative study"

As you may remember, the purpose of this research project is to investigate, using a qualitative approach, the aims and methods used in teaching ethics to veterinary undergraduates in several European veterinary faculties and ultimately to address how the goals of teaching should relate to practice.

The next step will involve interviewing students - in the format of a focus group - and have them discussing with each other about their learning experiences. We are grateful for your help and have prepared this document as a guideline for you when you contact and select students for the focus groups.

We would like you to attend to the following selection criteria: the number of students involved should range between eight and ten, representing both genders (genders do not have to be even). Students should also be from a combination of different years although there must be at least one student from the first year and another one from the final year. They should all have had some formal teaching in ethics.

We also have some additional recommendations for the selection procedure: it would be nice if we can get a broad individual diversity between participants. For example, students should have different cultural backgrounds (rural; urban), and diverse professional expectations (e.g. small animal practice, food safety, etc.) which we can explore during the meeting.

Students should be approached in a way that they <u>are not informed about the specific purpose of the interview</u>, which is to talk about ethics. We suggest that you invite students to be part of a research project about veterinary education which involves a group discussion of how the training they had so far prepares them for their future life as veterinarians. Mentioning ethics at this stage will undermine the objectives of the interview.

We have also prepared a participant information sheet (attached) which we kindly request you to hand the students in advance. The interview will be in English, so students should be comfortable with the language. Participation is entirely voluntary and enables participants to withdraw at any moment. Although no financial incentive is provided, participants will be rewarded with a small gift.

Manuel Sant'Ana

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Annexe 5. Descriptors of the courses in veterinary ethics

The following descriptors of the courses in veterinary ethics at the three study cases represent some the material available at the time of the first interviews (curricular year 2010-2011) and some might not be available anymore. In the case of Copenhagen the study programme was not accessible from the school's website and was provided by the teachers; the components of the *Veterinary Introduction Course* that correspond to the teaching of ethics (and philosophy of science in general) are **highlighted**. In Lisbon, the original Portuguese version of the unit *Deontology and Bioethics* was maintained and reinforced by a shorter English version. Both can still be downloaded from the school's website. The course in *Animal Behaviour and Welfare* is not shown since the teaching of ethics is informal (and hence not described in its study programme). In Nottingham, given that there is no independent subject of veterinary ethics, a list of modules that were identified to include ethical contents is offered with some of their main features. This is followed by the description of the explicit learning objectives of the ethics' teaching in PPS1, PPS2 and AHW2 (where formal teaching of ethics was identified). The Portfolio is not represented because it is not a module but a task. The Clinical Relevance Sessions are also absent as they run throughout several modules and vary widely. Some of these contents were retrieved from the school's website and others were given by the teachers. Because the veterinary curriculum has since changed they are no longer available.

Annexe 5.1 Copenhagen

Course number	**300067**		
Title	**Veterinary introduction course**		
Credit hours	***ECTS***		7,5 **(4)**
			Hours
	Lectures		35
	Seminars (theoretical)		18
	Practicals		16
	Non-clinical animal work		0
	Laboratory/desk work		0
	Clinical work		0
	Project-based work (incl. supervision)		32
	Excursions		16
	Other (e.g. supervision)		0
	Examination		4
	Self-study		84
	Total		206
Position in curriculum (quarter/semester as appropriate),	***Program***	***Year***	***Block***
	B.Sc.	1	1
Predominant mode of	Lectures: to present overviews of specific topics; to introduce to theory.		

instruction (didactic, problem-based, clinical rotation, or other with explanation)	Seminars: to activate the students in order to facilitate the learning process. Practicals: to handle dissection tools; to apply an fundamental knowledge on anatomy and dissection Project-based work: to facilitate the learning process through cases chosen by the students; to facilitate the written communication skills. Excursions: to get an insight in different use of animals in "real life"
Brief catalogue-style course description	**The teaching in veterinary philosophy of science and animal ethics will through lectures, seminars, practicals, excursions and problem-based project work assure that the student:** • **Is presented with different roles and assignments which fall within the veterinary profession and learns how to discuss ethical issues associated with these roles and assignments.** • **Gets knowledge about farm animal production in a farm-to-fork perspective.** • **Can identify and analyse welfare issues and ethical issues in the context of different forms of animal use.** • **Gets insight into various societal perspectives on the veterinary profession.** • **Gets a better understanding of the possibilities and limitations of scientific methods and learns how to evaluate the quality of different sources.** The teaching within zoology will initially compare the anatomy for fish, amphibian, reptiles, birds and mammals, and demonstrate how vertebrates from a common "template" have adapted to different life and ecosystems. Focus will be on wildlife as well as livestock and companion animals. The student will acquire a basic knowledge about the zoological systematic system, fundamental morphology and evolution e.g. the link between evolution and anatomy. The course will give an introduction to the general embryology of domestic animals. The student will acquire a knowledge about gamete development, fertilization, cleavages divisions, blastulation, gastrulation and neurulation. Likewise, contemporary methods of assisted reproductive technologies will be introduced. Learning outcomes: Having completed the course, the student should be able to: Knowledge: • **Identify and understand the rationale behind different use of animals (e.g. food production, research, and wildlife management).** • **Identify the different roles and tasks connected to the veterinary profession.** • **Identify ethical and economical issues within animal based food production related to both animal health and welfare and human health.** • **Define and describe different theories about animal welfare and animal ethics relevant to the relationship between humans and animals.** • Identify scientific methods and good scientific practise. • Understand the systematic grouping of production and companion animals and the link to their natural origin. • Be able to describe the morphology and characteristics of the

	different vertebrate classes. • Demonstrate a basic knowledge on the skeletal system and internal organs in different vertebrate groups. • Name a selection of common animals, and identify their characteristics and biotopes. • Demonstrate knowledge about general embryology in the domestic animals. • Demonstrate knowledge about important assisted reproductive technologies applied in domestic animals. Skills: • **Analyse a veterinary issue from the perspective of different ethical theories.** • Evaluate the scientific validity of different sources, search for relevant scientific information and present quotes and list of references correctly. • Clear communication of scientific issues in written form. • Explain how different vertebrate classes from a common "template" have adapted to different forms of life. • Handle dissection tools and use these for dissection of several animal groups. • Determine where a particular animal (e.g. an exotic pet) belongs systematically, and consequently which type of organ system to expect at dissection. • Recognise the different developmental stages of domestic animal embryos, and summarize the processes which determine their morphology. Competences: • **Discuss veterinary issues in an ethical and societal perspective.** • **Cooperate and work in study groups with a problem-oriented project.** • Apply fundamental knowledge on anatomy and dissection to later courses on production and companion/exotic animals. • Communicate scientifically when participating in discussions within zoology. • Apply knowledge on domestic animal embryology as a prerequisite for further studies on reproduction, assisted reproductive technologies and their application in breeding and biomedicine.

Annexe 5.2 Lisbon

Faculdade de Medicina Veterinária - UTL

Mestrado Integrado em Medicina Veterinária, ano lectivo 2010-2011

Departamento de Produção Animal e Segurança Alimentar

DISCIPLINA: Deontologia e Bioética

1. OBJECTIVOS

1.1.Objectivos Gerais

Proporcionar aos estudantes do Mestrado Integrado em Medicina Veterinária formação, e promover as aprendizagens, nos domínios da conduta cívica profissional dos médicos veterinários, consciencializando-os para as responsabilidades sociais, morais e legais que são inerentes ao exercício da profissão.

Desenvolver capacidades de análise e consciência crítica relativamente às grandes questões éticas que se colocam aos médicos veterinários no exercício da sua profissão, nomeadamente: a esfera do acto médico-veterinário; a utilização dos animais para benefício das sociedades humanas; os limites máximos admissíveis de sofrimento infringidos aos animais para benefício do Homem; a utilização dos animais para fins experimentais e de ensino.

1.2. Objectivos Específicos

O aproveitamento na disciplina é aferido através da confirmação de que os estudantes adquiriram conhecimentos robustos nos seguintes domínios:

a) História da Medicina Veterinária: pilar fundador da profissão;
b) Preceitos legais relativos a normas de conduta ética e deontológica exigidas no exercício da profissão de Médico-Veterinária;
c) Regras de relação interpessoal como instrumento de interacção social e sócio-profissional;
d) Relacionamento com outras profissões tendo por base o respeito pelas respectivas normas deontológicas, especialmente em cenário de trabalho multidisciplinar;
e) Comportamento de relação com os animais.

2. PROGRAMA

O ensino é de natureza teórico-prática, com uma forte componente discussão, estando dividido em três partes:

2.1. História

2.1.1. Breve introdução à História da profissão Veterinária, enquanto esteio da actividade: Principais marcos do desenvolvimento da profissão em Portugal e no mundo; Evolução das competências e atribuições específicas do Médico-Veterinário

2.2. Bioética

2.2.1. Introdução à Bioética; princípios e métodos da ética; correntes éticas.

2.2.2. A ética e a ciência.
2.2.3. A ética e os animais.
2.2.4. A ética e o ambiente (incluindo boas práticas de protecção pessoal).
2.2.5. A ética e a biodiversidade.
2.2.6. A ética e a biotecnologia.
2.2.7. Sofrimento animal / dor.
2.2.8. Experimentação animal
2.2.9. Bem-estar animal e produção animal intensiva.
2.2.10. Utilização abusiva de fármacos. Doping.
2.2.11. Eutanásia veterinária.
2.2.12. Controlo de populações animais urbanas e silváticas.
2.2.13. Preservação de raças e espécies animais ameaçadas.
2.2.14. Biotecnologias em animais.
2.2.15. Alimentos geneticamente modificados.
2.2.16. Animais transgénicos.

2.3. Deontologia

2.3.1. Conceito, perspectivas e enquadramento profissionais.
2.3.2. A Ordem dos Médicos Veterinários e seu Estatuto.
2.3.3. Disposições gerais do Código Deontológico Médico-Veterinário.
2.3.4. Deveres do Médico Veterinário:
2.3.4.1. Deveres para com a comunidade.
2.3.4.2. Segredo profissional.
2.3.4.3. Deveres recíprocos dos médicos veterinários.
2.3.4.4. Deveres do médico veterinário para com os utentes dos seus serviços.
2.3.5. Honorários.
2.3.6. Associações profissionais de médicos veterinários.
2.3.7. Contrato de colaboração entre médicos veterinários.
2.3.8. Colaboração entre médicos veterinários e outras profissões.
2.3.9. Vínculo contratual com entidades públicas ou privadas.
2.3.10. Certificação das qualificações profissionais - Princípios de certificação aprovados pela Federação dos Veterinários da Europa.
2.3.11. Inspecção Sanitária
2.3.12. Peritagens
2.3.13. Prescrição e posse de produtos farmacêuticos
2.3.14. Acção disciplinar.

3. AVALIAÇÃO DE CONHECIMENTOS

Os estudantes são submetidos a provas de conhecimento de duas naturezas, devendo, para efeitos de obtenção de aprovação na disciplina, totalizar, cumulativamente, um pontuação superior ou igual a 9,5 valores em cada uma das duas componentes, numa escala de 0 a 20. A nota final é obtida através da seguinte fórmula:

$$NF = \frac{0{,}2\ M + 0{,}8\ EF}{100}$$

Em que:

NF - Nota final obtida na disciplina de Deontologia e Bioética

M - Nota obtida numa "Monografia" a elaborar por grupos de trabalho que poderão integrar no máximo 5 estudantes (escala 0 a 20).

EF - Nota obtida em prova de "Exame final", individual (teste teórico escrito) (escala 0 a 20)

4. BIBLIOGRAFIA:

Para além dos textos de apoio elaborados pelos docentes da disciplina, os estudantes deve ter como referências de estudo as seguintes obras:

Bioética:

- Engelhardt, H. 1996. The foundation of bioethics. New York, Oxford University Press.
- Jecker, Nancy S., Jonsen, A.R., & Pearlman, R.A. 1997**.** Bioethics : an introduction to the history, methods, and practice. Boston, Jones and Bartlett Publishers.
- Maienschein, J. & Ruse M. 1999. Biology and the foundation of ethics. Cambridge, Eng., New York, Cambridge University Press. (Cambridge studies in philosophy and biology)
- Post, S. 1999. Bioethics for students : how do we know what's right? : issues in medicine, animal rights, and the environment. New York, Macmillan

Deontologia:

- Ministério da Agricultura 1991. Estatuto da Ordem dos Médicos Veterinários.
- Ordem dos Médicos Veterinários 1998. Código Deontológico Médico-Veterinário.

DISCIPLINE: Deontology and Bioethics

1. Time allocated (per student):
Lectures: 14 **Practicals:** 0 **Total:** 14

2. Objectives of the discipline:
Develop, analyze and clarify ethical and legal positions concerning questions of great actuality, specially those directly related to professional performance in the area of biomedical sciences in general and veterinary sciences in particular.

3. Programme:
Deontology: Concept, perspectives and professional framing; the Order of Veterinary Surgeons and its statute; the Deontological Code of Veterinary Surgeons. Bioethics: Introduction to Bioethics; ethical principles and methods; ethical lines; ethics and science, animals, environment, biodiversity and biotechnology; ethics and animal experimentation.

4. Bibliography:

Engelhardt, H. (1996). *The foundation of bioethics*. New York, Oxford University Press. 446p.
Jecker, Nancy S., Jonsen, A.R., and Pearlman, R.A. (1997). "Bioethics: an introduction to the history, methods, and practice". Boston, Jones and Bartlett Publishers. 416 p.
Maienschein, J., and Ruse M. (1999). "Biology and the foundation of ethics". Cambridge, Eng., New York, Cambridge University Press. (Cambridge studies in philosophy and biology) 336 p.
Ministério da Agricultura (1991). "Estatuto da Ordem dos Médicos Veterinários" ["Statute of the Order of Veterinary Surgeons"].
Ordem dos Médicos Veterinários (1998). "Código Deontológico Médico-Veterinário" ["Deontological Code of Veterinary Surgeons"].
Post, S. (1999). "Bioethics for students: how do we know what's right? issues in medicine, animal rights, and the environment". New York, Macmillan Reference USA. 4 v.

5. Assessment:
Credits will be given depending on a final written exam and participation in the classes.

Annexe 5.3 Nottingham

Module	Year	Descriptors	Assessment	ECTS
Personal and Professional Skills 1 (PPS 1)	1	Principles of Veterinary Science Methods of learning, studying and assessment Computer literacy Use of learning resources Problem solving skills Professional conduct Communication skills Time & Stress management	100% Communication Project (1000 words)	**5**
PPS 2	2	Methods of learning, studying and assessment Critical appraisal of literature Communication skills Professional conduct Ethical problems and theories	50% Scientific report 50% Ethical reasoning	**5**
PPS 3	3	Plenary and small group sessions, with a range of external lecturers. Key themes are communication and the human animal-bond. Case planning. Euthanasia.	50% Human-Animal Interaction 50% Computer-based exam MCQ-type (30m)	**5**
PPS 4	4	Veterinary working relationships. Role of the RCVS and VDS (Veterinary Defense Society) BVA & its divisions.	50% Business game 50% MCQ and EMQ, practical and problem based questions (30 m)	**5**
Animal Health and Welfare 2	2	Principals of ethic and animal welfare (six lectures). Assessing the welfare of animals in populations (one lecture).	Twenty percent of the module mark is based on a letter to a professional journal and a "conference" presentation on an animal welfare or ethical issue	**?**
Veterinary Research Methods	3	The use of Animals in Science and the fundamental of Veterinary Ethics. The Animals (Scientific Procedures) Act 1986	100% MCQ and EMQ, practical and problem based questions (60 m)	**10**

Learning objectives (PPS1)

At the end of these sessions students should be able to:

EMS-related Aspects:

- Give examples of the type of problems that may arise whilst on EMS placements, discuss how they might approach these issues and list the resources available to assist them

General Aspects:

- Use effective strategies to solve problems within a team and as an individual
- Engage in ethical reflection and apply critical thinking skills to a given situation in order to make informed decisions, as necessary
- Discuss ethical dilemmas and issues that may arise, such as confidentiality issues, animal care responsibilities and aspects of professionalism that relate to the presented problems

Veterinarian Ethics Course (embedded in PPS 2)

1 CORE ELEMENTS AND LEARNING OUTCOMES

Students should:

A) APPLIED ETHICS

- Be aware of the interdisciplinary field of applied ethics and be better able to relate to relevance of the subject

- Understand the different sub-branches of ethics, in particular animal ethics, and terminology used (e.g. personal and professional ethics, norms and values)

B) ETHICAL RESPONSIBILITIES OF VETS

- Be aware of the ethical responsibilities of veterinary surgeons

- (Better) Understand the ethical issues that arise from the different uses of animals and to facilitate the discussion of a number of the prominent ethical dilemmas

C) ETHICAL THEORIES and REASONING

- Understand different ethical theories, such as: Utilitarianism, Deontology and Virtue Theory, and how they inform ethical reasoning

- Understand the notion of the common morality and a principled approach

- Understand the application of Ethical Theories to the human use of animals

D) ETHICAL REFLECTION

- Understand their own ethical positions and be able to relate to those of others (as part of pluralist society)

E) ETHICAL ANALYSIS AND ANIMALS

- Be aware of a number of frameworks that can aid decision-making, such as the Ethical Matrix
- Be aware of the (five) different forms (benefits from) animal-human interactions
- Be aware of the notion of animal-human contracts and appreciate animal rights and animal welfare arguments relating to animal production
- Be aware of ethical positions that relate to actions, e.g. ‘taking a life’ (for meat eating and the use of animal for sport)
- Be aware of the ethical positions that relate to types of activity and species, e.g. animal cloning, dog breeding, etc

Annexe 6. Working document relating ethics teaching with communication based on Toulmin's argumentative model

Why teach ethics? To being able to Communicate effectively with the public and clients – dialogue					
	Statement	Claim	Backing	Warrant	Obs.
C1	I think that both Peter and I are quite interested in this part of how can we help the clients and what are the issues that they see and I think that the big issue here is about being the one to decide when to euthanize and put the animal to death, they feel they are sort of the executor. M: Do you feel that they are afraid of taking the decision? AK: Yes, and they need help. And is an ethical dilemma how much do you help them (the clients). As part of that first course we discuss that as well, the ethical dilemma in relation to euthanasia of how much to help the client and it's where this discussion comes in about if the client asks me: "what would you do if this was your animal?" That's where the ethical dilemma comes in. Should I tell them: "No, it's not my animal, I don't have the emotional bond to this animal that they do." So can I really tell them what I would do if that was my animal? Well, I can't because it's their animal but I can tell them what I would do if it was… I have the emotional bond to my own animal so I know what I would do if it was my animal but I also have to tell them that I'm not them and it's not my animal and I don't have that relation to that animal that they do. But I think it's important to help the client to come to terms to the decision that they have to make.	Students need to have ethical awareness in order to help the client in making the decision of euthanasia (using dialogue)	Because clients are often afraid of making that decision and they might feel guilty.	Since talking with clients using our own views and experiences will help them deciding.	**<u>Recognise ethical issues</u>** **<u>Ethics as skills</u>**
C2	They should gain the ability to realize that their choices and opinions are based on values just as other people's choices and opinions and judgments are based on values. They should be able to understand that these values - you can actually understand something about true ethical theories – and that should make them able when they are to enter ethical debates afterwards or when they are to make choices, to make them able to make more informed choices and to enter debates in a more open mind than just thinking that I'm are right and they're wrong.	Ethics should make students realize that their choices and opinions are based on values	Because that will help students to enter debates in a more open mind (and prevent from being dogmatic)	(Since students need to be aware of their values in order to entering constructive debates)	**<u>Find your own limits</u>** **<u>Respect for others opinion</u>**
C3	But I think one of the main issues is that the vet is aware of her own limits, what will I do and what will I not do. "Will I accept to kill a healthy animal? Will I do a surgery without anesthetic?" That you as a vet find your own limits. What can I accept and what I cannot accept. But that you also can understand that other people – maybe your clients – will have different borders, different limits. Maybe some time I have to do something that as a person I would not do but maybe I have to do it as a professional. And maybe sometimes you have to say to a client: "This is far beyond of what I think you can do with an animal, and you have to find another place". Is to find your own values and your own limits and to accept that other people are thinking differently. I think that's very important for a vet. And also to understand that you, as a vet, will nearly always not only have to deal with	(Ethics should teach Veterinarians that they need) to know their own limits and values when communicating with clients and the public	Because we all have different limits and values Because the client's view will affect the vets actions directly.	Since good communication depends on an awareness of our own - and others - limits and values	**<u>Coping</u>** **<u>Find your own limits</u>**

	animals but also have to deal with other people and the society and what the society is saying by law, but also what the public opinion is thinking about animals and you have an important role in that. That you will have to deal not only with animals.				
C5	But I would say the most important thing is that they have an understanding that animals may play different roles in humans' lives and that, again, meet clients with respect and that even though as a vet, vets are different, and some vets may think that how can you have this animal take such an important place in your life, how can you make those sorts of priorities, and I think as a professional you should - of course you're allowed to have that opinion - but you should meet that person with respect and say OK, so this is their situation and this animal is that important to them, and therefore you should try to accommodate whatever they're asking you to do.	Ethical awareness is important for vets communicating with clients (and respecting their views on animals)	Because animals play important roles in people's lives.	(Since being respectful and sympathetic when communicating with clients is …) Since respectful and sympathetic communication with clients depends on ethical awareness.	Ethics is tacit **<u>Respect for others opinion</u>**
L2	Cá está, o tal bom profissionalismo. Não ser só bom profissional em termos de executar tecnicamente, bem, fazer um bom diagnóstico, mas de saber lidar com a pessoa e com o animal. Depois esta dualidade, também, vai complicar um bocadinho a questão, não é? Mas, portanto, um bom profissional tem que saber ser inteligente, na forma como diz ao utente, até porque os utentes, também, têm direitos, não é? Portanto, o bom profissionalismo passa por isso tudo. Não é só tratar do animal. É tratar o animal, fazer o melhor pelo animal mas, por exemplo, sem entrar em conflito com o dono do animal. Quer dizer, "ai, eu é que sei. Eu é que sou o médico, o veterinário, eu é que sei o que é que é bom p'ró animal e não sei… e, você, agora, aqui não…". Pronto, numa atitude mais educada ou menos educada, não é?	Veterinarians need to address clients politely, and avoiding conflict.	Because communicating effectively with clients is part of being professional	Since professionalism is not only about being technically competent but also about dealing with humans (and animals)	Ethics is tacit
N2	Probably owner ignorance. You know, there's very specific big issues in farming or whatever, but if you're talking about the veterinary profession altogether, owner ignorance. M: In the way that the student has to deal with that ignorance? Yeah. So for example one of the cases that we give them is this, an owner is buying a dog from a puppy farm and not knowing about vaccinations and things, all that sort of thing. So it becomes a welfare issue for the animal but you've got to deal with it and there are different stakeholders involved as well. And sometimes I think even quite… so my husband works as a referral vet so quite often he is seeing cases that have gone on quite a way – he's a dermatologist – and they are in bad shape and quite often it's very hard to, you know owners just don't really necessarily understand the requirement for long-term treatment for something, so that kind of thing.	Students must know how to communicate with owners	Because owners are often ignorant and make wrong decisions.	Hence effective communication will help owners make more wise decisions.	
N3	It's a language that enables you to explain your actions more effectively. It's almost like having a bit of a defense. We talk about students having a toolkit where actually you know what you will do but still you have to be able to explain that to the owner, to your colleague, to your boss, and it's a language, it means you can explain things better and	Ethics it's a language that can help veterinarians communicating more	Because ethics provides a framework of concepts that are useful for veterinarian	Since Veterinarians need to be able to explain their actions effectively.	Second order argument Ethics as tools

	you can give more an in depth description of what you decided to do. You don't have to use the big words. You can just say I have weighed all the pros and cons of this, the costs of this and the benefits of this and we've decided to do this because the benefits outweigh the costs. You don't have to use the big utilitarian word but at the same time in some situations it is useful to have that in your armoury.	effectively.			
N4	These guys get communication all over the place and for me, starting out as a new grad, that was the biggest steep learning curve for me was communicating with people, how do you get what you need from people in order to make a decision about the animal you have in front of you. (…) I do think, by the same token, people's expectations about what the vet can do for them is changing as well. Before they would more like defer to what the vet said, now I think they're more likely to challenge a little bit – why is that and why do you say that and why can't we do this. And maybe that's to do with the internet or with the media or how other things are happening, I don't know.	Students learn how to communicate with people	Because people have expectations about what the vet can do and can challenge the authority of the vet.	Since communication helps the vet to meet people's challenges and expectations.	**Coping**
N6	In general what they are working are things like communication skills, team work, time management, those kind of things. With the ethics sessions, I guess in those sessions we are going to be focused in communication particularly between the veterinarian and the client, occasionally there might be issues posed with another veterinarian stuff, they have to deal with a nurse or a para-professional just to make them think how they would do that. And sometimes there are things put in there to make them think would they be comfortable with doing cesareans on bulldogs that are bred for show purposes. So sometimes there's a more straightforward ethical dilemma put in there but most of the time it's more communication skills we would be looking at.	Students should be taught communication skills	Because veterinarians need to communicate effectively with clients, colleagues and staff	Since…	**Recognise ethical issues** There is no answer to the WHY question
N8	And I think perhaps that in the younger years they are learning what those ethical frameworks are and having to identify issues but then one of the most important things is that they can then realize the different ways that people might come in a situation and how they have different views and different opinions so when they do communication stuff - in the 4th year, maybe - they'll do cases where they have to break difficult news and things like that and I think having had that experience and having different exposures, different ethical frameworks bleed (?) into that a bit because by that point they've realized how to identify all of those things without consciously necessarily thinking that they are thinking about the different ethical frameworks… but they are using that in their communication. (…) I think if we only had taught them the biology and how to do the practical things without giving them the chance to learn the communication skills, the chance to think about all these different situations. That would be a real challenge for a new graduate. They're still quite young to go into practice for the first time.	Veterinary education should provide students with the opportunity to practice their communication skills	Because practicing communication will help students in applying ethical theories	Since knowledge of ethical theories will improve communication	Second order argument Ethical theories **Recognise ethical issues** **Respect for others opinion**

General Observations:

The concept of communicating with clients and others is pervasive in addressing the need to teach ethics. Effective communication can be seen as being included within a number of other ethical skills such as recognising ethical issues, awareness of the personal position on those issues, as well as of the opinion of others (theses codes are often seen in combination).
Two main features were identified:
a) Dealing with owners expectations (N4.a) /anxieties (C1.b; N4.b) / ignorance (N2)
b) Addressing clients with respect (L2; C1.a; C5)
Ethics is described as a language that can be taught (N3) and the knowledge of ethical theories in developing that language was also mentioned (N8).
Different perceptions of how animals should be used are often the cause of intense debate. C2 stresses the fact that ethics helps veterinary students in entering those debates with a broader frame of mind.
Effective communication is particularly highlighted in situations of delivering bad news and euthanasia. C1 expresses the view that demonstrating empathy by using our own views and experiences will help communicate with clients while N2 points to the fact that communicating effectively can help owners make more wise decisions. It could also happen that there is a difference between the veterinarian's personal and professional ethical positions (C3, N4).

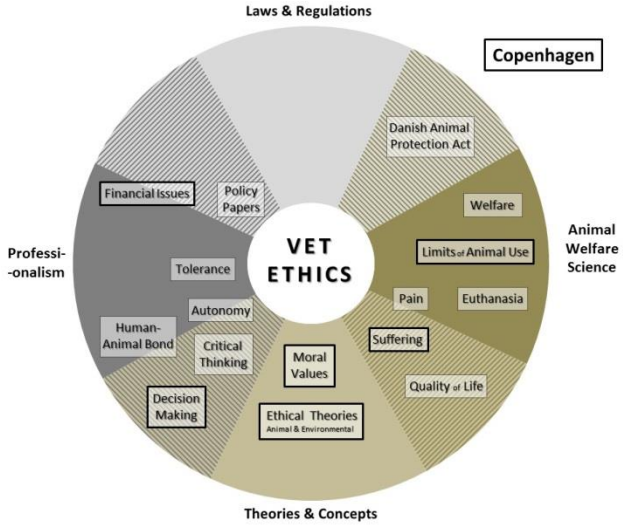
Relation between Schools:

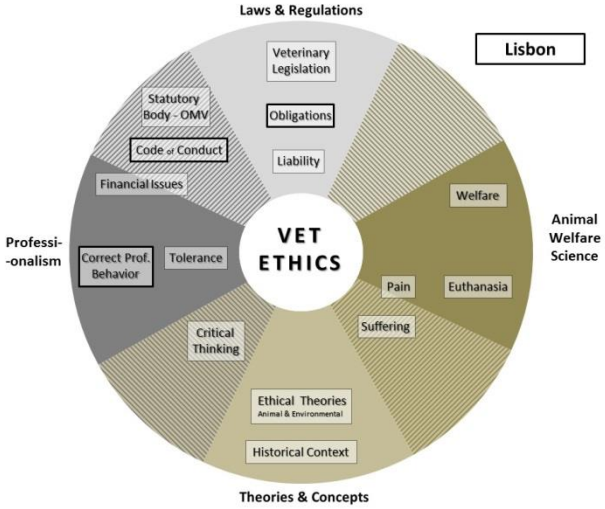
Although issues around communication appear at the three sites, the explicit mention to communication skills was only found in Nottingham. In line with these finding, communication skills are explicitly set out in the Nottingham descriptors of PPS1, PPS2 and PPS3. They are absent in the descriptors of Deontologia e Bioética (Lisbon) and in Copenhagen there is only mention to written communication skills (as part of Project-based work.) One of the Danish interviewees (C2) even confessed that communication skills were not part of their teaching:

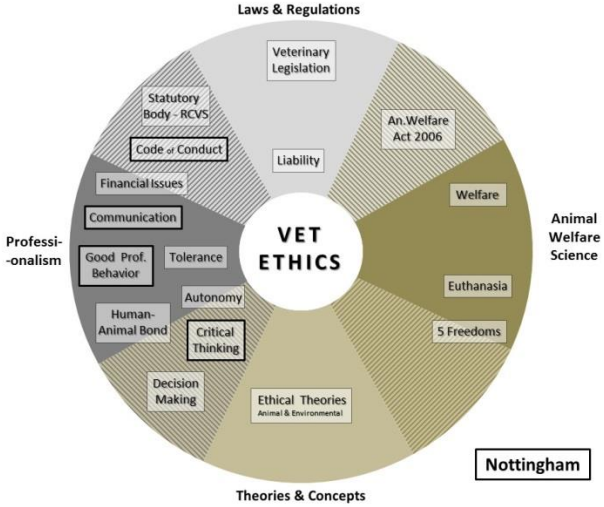
C2: I think that is very good to train them. We don't. I mean, we should give them all training on how to deal with their clients. But I think the problem is: if you say to them that you have to do this, because this is ethically right, this is what we do as veterinarians, this is being a professional veterinarian because they could have other values and have other ways of doing it. And what you should do is to show them what is at stake, what conflicts are there, what values are present in this situation but not tell them that you should use these values then. That is just rule teaching. And who decides what values are right? Obviously some of the teachers would say that if you use these values you will be in accordance with the law. Yes but then we get back to: "Yes, but that is rule teaching". But the point of ethics is for people to question the law: "Ok but is this true, is this right, should we do this?" And help them being able to confront already established values with their own values and I think the problem is if you sort of say: "Ok, Professional conduct is to do this, this and this. And this is ethically right". Then you're just teaching them like you had the bible because how do you know that those are the only values that are right? That's fundamentalism. And I think that's wrong when you do ethics. I think ethics should always be about make people reflect themselves.

Annexe 7. Working document for what to teach in a course of veterinary ethics

Justifications for the topics used within the diagrams (clockwise) **NF** - NOT FOUND **CT** - CENTRAL TOPIC **MEI** – Main Ethical Issue







Concept	Topic	Copenhagen (C)	Lisbon (L)	Nottingham (N)	Obs.
Laws & Regulations	**Veterinary Legislation**	**NF** Do you present them the regulations? No. they are given a book where the regulations are because it is not so important whether they know them or not. (C1) we don't have a lecture or an exercise that will be only about law. When we are discussing ethics we say: "Ok, what is the law saying about this? And what could the argument be for the law, if you connect it into a more ethical discussion?" (C3) We are not teaching them regulations. But in order to understand these production systems they have to know the regulations so they will find out themselves by looking into this book (each group is given a book where the rules and	Para além da Ordem temos os tribunais. Aplica-se o código da Lei Geral. Portanto os alunos também têm que manter essa ideia. E, que se, por hipótese, houvesse uma contradição, ou se, eventualmente, há qualquer coisa na Lei Geral que se sobrepõe ao Código Deontológico, obviamente, o CD tem que ser passado para trás. (L2)	They also have a lecture on animal law, the Animal Welfare Act and the Veterinary Surgeons Act, the Animal Scientific Procedures Act which governs animal experimentation in this country. Do you think that that has something to do with ethics? Yes, because I'm sure that the decisions in finding those laws were based in a sort of ethical code. (N1) See N2 (after the table) they get taught animal law at very different points in the curriculum according to what else they're learning 'cause it's an integrated element of the curriculum. (N3) they get information about the Animal Scientific Procedures Act in a different module. So I think this has changed from last year. I think they get ASPA (the name of the legislation) in PPS2, but I don't' teach it. (N5)	Legislation appears in two ways: 1) teaching actual legislation (L, N) 2) using legislation to discuss ethics (L, maybe N) In L, laws are important for explaining the teaching of ethics. Counter-examples in C. Not used as topic (law is not part of

		regulations are included). It will be self-study. Just to give them an idea of the frames of this production system. But still they can question if these regulations are animal welfare friendly. That issue can still be raised. (C4)		See also N6 –Animal Welfare Regulations	ethics' teaching).
	Obligations	**NF** In the morning we do a decision in a round where we decide: "this cow had these signs and symptoms and we made this diagnosis yesterday. Should we do a surgery on it?" or "This cow that we had surgery yesterday has this post-operative, what should we do? This horse came in with this disease, would you kill it?" Yes and it's integrated in the decision making. Also, not only what you think as a person, but also legal stuff and your obligations as a vet. You have legal obligations and you have some moral obligations. (C6)	**CT** Não me cabe estar ali a dizer assim isto deve ser assim ou isto deve ser assado. Cabe, é dizer, de acordo com o Código, e naquelas situações que foram, inclusivamente, reais e julgadas, a solução foi esta.(L2) Aqueles cortes de orelhas, os cortes das caudas, etc., isso, deontologicamente, é proibido. Pura e simplesmente. Obviamente, que esse tipo de coisas é abordado na Deontologia. (L2) vocês (alunos) têm de ter conhecimento do Código, têm de saber o que é que está correcto de acordo com o Código e o que é que não está. (L2)	**NF**	C6 speaks of obligations but within a context of decision making (not used as a topic)
	Liability	**NF** I understand that the DVA doesn't bear any legal powers towards the vets, is that right? Yes. (C1) Obviously that there are some regulations in Denmark on what veterinarian can do and they learn them - not in our courses but in other courses. That's important because if they break the law they get in trouble. But I think that the point of ethics is not to teach students what to do, the point of ethics is to make people reflect on what they think is right and wrong. So our job is not to tell them what is right and wrong but to help them figure it out what they think is right and wrong (C2) there are those kinds of statements (papers) from the veterinary association, but if you don't follow them I'm not sure that anything really happens (C5)	Para além da Ordem temos os tribunais. Aplica-se o código da Lei Geral (L2) Na deontologia é (…) ter noção de que há sanções, que são de vário grau. E, que estão sujeitos a essas sanções, que essas sanções são aplicadas pela Ordem. (L2) *In Deontology students should have the notion that there are different kinds of sanctions applied by the OMV, and that they are liable to those sanctions. (L2)*	They have a case of a sheep that's had a broken leg and the vet signs a transport order but actually he doesn't know the full details of the case and he ends up being called up in front of a lawyer or a judge because he's done the wrong thing, he's signed the form and saying it's fine to transport it when actually it wasn't, but it's about him to look into it in detail and finding out the specifics about the case before he signs the form. So that's more about conduct in terms of if you sign professionally as a vet you need to be confident that you know what's going on. (N4) N6 (see dialogue at the end of table) Yes, definitely. (Regulations) comes in PPS a lot. They do a lot on legislation and also how they need to act as a vet and what would happen in terms of liability and the way of dealing with colleagues and those things (N8	L2 speaks about sanctions. C1 says students need to know there are rules and sanctions but not that this is (or is to be) taught in ethics. C2 and c5 offer counter-examples.

	Animal Welfare regulations	I give a part on the borders to the treatment of companion animals and I draw in some of the ethics but I also draw in the legal requirements, what is the law that we are based on. We have a very strong law here in Denmark to protect animals. It's called the **Animal Protection Act**. (…) I feel that the law that we have in Denmark – Animal Protection Act - is a very, very good tool. There is some elasticity in the definitions, which is sometimes a problem. Because it depends on your opinion, how do you interpret it. Some people may be very strict and some people may be more lenient. That may be a problem, but other than that… (C1) We have this Animal Welfare regulation in Denmark and we will tell the students that we have it and we will show them the two first paragraphs, this very broad thing about… when you take care of animals, they are not allowed to suffer and to feel pain. That's the introduction to the law. We show them that in the first lesson. And e.g. if we have some discussion about the transportation for pigs to the slaughterhouse. And there are a lot of rules of how to transport animals in Denmark and EU, and then we will go into that part of the regulation. (C3) I will be talking about the pros and cons of different strategies to framing legislation and such, how you control it and that kind of stuff. M: Are we talking more about animal welfare legislation here? Yes, we're only talking about animal welfare legislation here. (C5)	**NF** M: E, então as… e a legislação de bem-estar, também é-lhes ensinada por si? L1: Sim, sim, minimamente, quer dizer não lhes vou falar da legislação, vou lhes dizer onde é que podem encontrar a legislação. Mais tarde, no ano a seguir, por exemplo, eu tenho produção e utilização de cães, aí falo da legislação de como manter os cães, onde é que ela existe. Já se sabe que os miúdos só vão consultar se quiserem que eu não lhes vou estar a fazer perguntas sobre legislação. M: Ok. Mas, então, faço a pergunta de outra forma, existe outras pessoas que ensinam legislação nas suas disciplinas? L1: Não, não. Não, porque a legislação é... Primeiro é uma coisa muito árida. E não vão pôr a falar veterinários, sabem qual é que existe. (L1)	They also have a lecture on animal law, the **Animal Welfare Act** and the Veterinary Surgeons Act, the Animal Scientific Procedures Act … (N1) In the welfare (teaching) there's some elements of law and jurisprudence (N3) The aim was to explicitly link welfare with ethics. So I think they are very linked and all through these modules is discussed but in this course (AHW2) my main argument was if you were interested in welfare for this module you have to think how that relates to ethics. So that was my main aim. We also looked to particular laws related to AW and discussed the ethical principles maybe underlying of these laws, if animal was property or not, that kind of thing. (N5) M: Does animal welfare legislation – animal law – is part of your teaching? N6: Where appropriate. It is certainly part of the curriculum and there would be some classes I teach where we would have to deal with thing like the blood transfusion lectures, there's legislation that governs animal being used as blood donors in the UK, so we have to discuss that as part of that lecture. (N6) What about codes? Welfare codes and Guides of Conduct? That is covered in PPS and AHW. (N6)	C1 moves away from liability towards autonomy. Similarly to as for Veterinary legislation, statements from C are more about the principles the law relies on than actually details of the law itself. L1 is clearly saying s/he is not teaching animal welfare legislation and that nobody else is teaching it either. But it's not clear if she's saying it should not be taught.
Animal Welfare Science	**Welfare**	You can define welfare in different ways. In our course Peter will introduce the students to three perspectives from the philosophical viewpoint. One says that welfare is about having more pleasure and lesser pain. You can still have pain but it is ok if you still have more pleasure than pain. Another definition says that you have to get	Mas vamos à caça, donde atiro num animal matando-o imediatamente, há problemas de bem-estar envolvidos? Não há, meninos. O animal morreu sem dor. Morreu instantaneamente. Do ponto de vista moral podemos pôr em causa. Agora um animal levou um tiro ficou ali a sofrer, aí do ponto de	M: How does animal welfare relates to ethics in your teaching? N3: Yes, there are some crossovers. So e.g. in the AW session in the second year James Yeates comes and talks about animal welfare and ethics so there is some crossover there but as I was saying earlier I think often welfare swallows up ethics and ethics gets forgotten	**In C and N students are introduced to different animal welfare perspectives from the philosophical**

		what you want if you wish something but in that definition it will be very difficult to use in animal life because can you say that? Of course you can make an experiment where you put up different opportunities and the animal can choose but it is always you who put up what he can choose about. The last definition is that it is not to feel pleasure is to do what you were born to. To fulfill your species' potentials. So that would be three different aspects. In some discussions you can figure out that people will talk to but not understand each other because they are talking of animal welfare in different ways. Some will say that welfare is that animals don't have to feel pain. Some will say that welfare is that this animal will have food and good conditions and doesn't have to be outside in bad weather or something like that. We are trying to present these kind of definitions and make students to see how does this relate to my subject. (…) (C3)	vista, do ponto de vista do bem-estar animal está completamente comprometido porque o animal está a sofrer. (L1) quando eu começo a falar de bem-estar começo sempre com esta imagem. Meus senhores, vou-vos dar uma imagem. Isto passou-se na Dinamarca. Uns senhores tinham uns peixinhos a andarem numa misturadora daquelas. Fizeram assim. Digam-me uma coisa o que é que vocês acham? "Que horror, professora!". Eu disse, do ponto de vista do bem-estar? "Professora, é um horror!" Não meus meninos isto na Dinamarca que é um país em que se preserva a situação, foram a tribunal, e foram libertados e considerado que não tinha havido atentado ao bem-estar animal, porquê? Porque morreu imediata-mente. Do ponto de vista ético vocês podem pôr em questão e aí têm toda a razão. Do ponto de vista ético é horrível (L1)	and so we have tried to keep it a little bit separate. There is some crossover and we talk about the five freedoms and we talk about ethics but we try to keep them a little bit separate so they don't dissolve each other. (N3) there are a couple of sessions on welfare and also on ethics as well in that, and they were certainly examined on theories and that sort of thing. (…) the ethics stuff, yeah that's a lecture format. James Yeates comes and I think he does a couple of lectures and I think his third session is more of a discussion. (N4) I'm sure (ethics) crops up on AHW. So, for instance, when they do AHW they probably will have an ethical case to do with welfare, so it's not the same module but it tends to look at topics that are relevant to what they're doing the rest of the time. (N8)	**<u>viewpoint.</u>** **<u>In Lisbon welfare ethics is addressed using examples.</u>**
	Euthanasia	In that course 5th semester (Small Animal General Practice Course) there is a part that talks about ethics. It also talks about euthanasia for example, and C5 is part of that teaching (C1) So ethical issues are discussed not only in limits for advanced treatment but in reality ethics is a part of our daily lives as clinicians. And it can be a healthy animal that comes in for euthanasia because the clients are getting a divorce. (C1) So both in the general practice setting and the tracking part ethical issues emerge, including euthanizing healthy animals, euthanizing kittens … (C1) for me personally, being in small animal practice, one of my biggest problems was to euthanize a healthy animal for no reason, or no other reason than owner convenience. I found that a huge problem (C5 – See also *decision making*) We have the euthanasia dilemma, that you actually are obliged to put down an animal that	A eutanásia acho que é extremamente importante… cada vez estamos a ser mais confrontados com a eutanásia.(L1) A eutanásia faz parte da sua disciplina? Tem uma parte que sou eu na dor e sofrimento. E sabe se existe alguém noutra disciplina que fale da eutanásia? Sei que L3 também fala um bocadinho na ética. (L1) Não começo a defender a eutanásia de cães saudáveis dizendo que é a minha opinião. Isto pode não ser a minha opinião mas há quem pense que a eutanásia pode ser feita pois podemos tal e tal desde que seja feita correctamente. E apresentar-lhes as várias maneiras. (L3) Se bem que em clínica de animais de pecuária, geralmente, também se fala em eutanásia. O abate é o dia a dia, não é?	There's always how far you go in treatment kind of question. If you got a dog with a salmonelosis and the owner doesn't want to put it to sleep … that's a difficult one. (N1) What about these CRS, do they have any ethical component? Some of the cases, although they don't have to apply the ethical theories or anything like that. It might be more like is it better to treat this dog or to euthanize it, and why do you give the answer you do (N1). I see you have euthanasia in the 3rd year. How is it framed? It happens in two ways. They are taught the practicalities around pharmacology about euthanasia, so they will get a lecture from a clinical pharmacologist around how animals die basically and then they get some more softer skills around how to perform it sympathetically and empathetically, how to deliver bad news to clients and those kind of things and then we do quite a bit around dealing with bereaved clients (N3)	Not always euthanasia is mentioned in respect to teaching. But it was mentioned by almost everyone as one of the main ethical issues. Euthanasia appears in two contexts: 1) being asked to / having to euthanize healthy animals 2) euthanize rather than treating - economy vs AW - human-animal bond vs AW

		has certain characteristics. (C6) Cow can have a right-sided displaced abomasum. That's much more severe, we euthanize it. Take it outside and shoot it, it won't pay off to do surgery. M: What seems to be underlying issue, here? How much does it cost. And they can calculate how much does it cost to do the surgery (…) it will take you two years before the cow has earned this investment back and it won't because you will kill it after the end the lactation. (C6)	Agora, eu tenho sempre muito cuidado em dizer que o abate destes animais tem de ser feito com todos os cuidados em termos éticos (L3)	*See N3 – Human-Animal Bond* I think it's hard, sometimes when you think actually that an animal has had enough or the animal is finished with whatever it is you're trying to do and the owner wants to persist with it. (N4) There are a lot of ethical issues. Euthanasia, particularly of healthy animals but also of unhealthy animals (N5)	
	Limits for Animal Use	**CT** But the most important part is for students to figure out what are ethical dilemmas. And an ethical dilemma is limits for treatment of companion animals, it could also be limits for treatment to production animals (C1) More treatments were available but then the question comes up: what is the limit, then? So it's more like what are the limits for treatment? And that's where the ethical issues some come in. (C1) I think one of the main (ethical) issues is that the vet is aware of her own limits, what will I do and what will I not do. "Will I accept to kill a healthy animal? Will I do a surgery without anesthetic?" That you as a vet find your own limits. What can I accept and what I cannot accept. (C3 – MEI) I think that the most important ethical issue they face is where was my limit for the treatment of this animal, how long should we go, how much should it suffer and when should we euthanize. That you have to ask either the vets or the vet students. (C4 – MEI). That means that there are issues in pain which are very difficult to communicate. And then there's the reasonable pain. The OK pain. It's not an animal welfare issue. And I would like to know where that limit is. (C6)	**NF**	**NF**	C1 – Limits for treatment C6 (L3) – Pain Management This topic is related with Decision Making
	Pain	That means that there are issues in pain which are very difficult to communicate. And then	A mais importante (questão ética), neste momento, é realmente, o bem-estar e dentro	**NF**	In L, The teaching of pain

		there's the reasonable pain. The OK pain. It's not an animal welfare issue. And I would like to know where that limit is. You are teaching these things about pain and pain management to veterinary students. How does ethics go into it? I address it very much through dialogue and I make sure that different views are allowed to be brought forward. (C6)	do bem-estar, para poderem englobar, também, os pequenos animais, a dor, o controlo da dor. (L3-MEI) (…) Dá outras aulas? É clínica de espécies pecuárias. E, nessas, nessas aulas, aborda temas éticos? Abordo, obviamente. Essencialmente, ligados à parte da dor, controlo da dor (L3)		management is also found in clinical ethics teaching.
	5 Freedoms	**NF** In your answer to the question of the good life I could see imbedded the 5 Freedoms. Do you use that term? Is not a term that is often used? N6: It's used especially on the higher, last year students. I have the tracking students and I go in depth with the welfare considerations, for example in the equine. (N6)	**NF**	during the welfare teaching they will get stuff about transport law and all those kinds of things and they are taught about the five freedoms, we then revisit these things as we come across different situations, (N3) See also *N3- Welfare* to see how ethics and welfare are related.	In C the 5Freed. are taught in Y5 during large animal tracking (small group teaching) and not to the 180 students
	Suffering	**CT** the law says that an animal should never suffer. But then one vet may think that this animal suffers if I put it through chemotherapy or this animal is suffering because it is a breed that can't breed. So we should euthanize these animals. But different people have different opinions on where that line is and is important to discuss with the students what they think but also to understand that clients are as different as we are as clinicians and the law says that an animal should not suffer and prevent an animal from suffering. You as a vet are the one to decide. (C1) I ask the students: "If I was a horse – I just came from a pain class – and you were offered a hot iron branding or one year in a riding school with three different overweight women who can't ride, every day? What would you pick?" I would take the iron. Sort of to make clear that there are so many perspectives on suffering and on ethics that you shouldn't have double standards. (C6) We had a rodeo that was not allowed two years ago. Because they (the DVA) didn't like the way	Portanto, é isto que eu tento, como eu lhes dou uma aula só de sofrimento, de dor e sofrimento porque é bom que os miúdos tenham noção do que é. (L1)	**NF**	C1 reinforces the view that vet legislation is less of an issue than autonomy.

		the horses were treated and you shouldn't get around caching life calves because it was unnecessary suffering. This is why I always ask (students) what is necessary suffering (C6)			
	Quality-of-Life	Danish clients are very concerned about their animals and the quality of life. So my experience is that is very important to discuss with clients, and therefore also with students, what is the quality of life (C1) I want them to think about what they are doing in order not to exploit the animals further. And that is of course my opinion that the animals are being exploited but I want the students to be holistic. Think about the whole animal. Not only if can you do this surgery, can the cow survive but will it have a good life? (…)We often discuss what a good life is. Is it a good life if you can't do what you are supposed to do as an animal? (C6)	**NF**	**NF**	
Theories & Concepts	**Moral Values**	**CT** Students should gain the ability to realize that their choices & opinions are based on values (C2) And I think it is very important to clarify to them that many of the disagreements we have about animals are based on different values. (C2) I would say that ethics is the attempt to clarify the values that we live our lives by, to make easier for us to talk about the disagreements we have with what is right and wrong in the world (C2) What we hope is for students to see that their subject is not only about how to diagnose and cure animals. There will always be a lot of value questions and ethical aspects. (…) Every people can have values and there will be different values. As a vet you can meet people with different values from your own. (C3) Students had to choose their own case and then to find the facts and afterwards the values as well. (C4)	**NF**	**NF**	

		I hope that students will skip that step and know that people disagree with me, maybe because they don't know the situation but it may also be because they disagree with me because they have different values about the situation. (C5)			
	Ethical Theories	**CT** Students should be able to understand that these values - you can actually understand something about true ethical theories – should make them able to make more informed choices and to enter debates in a more open mind than just thinking that I'm are right and they're wrong. (C2) there is pending legislation in Denmark about whether dairy cows should have the right to come out on grass or if you can actually just keep them in barns for their all life. There's the discussion of what is best from the welfare perspective, from the ethical perspective and so on, and that was the case. And they have then to describe that case and the ethical issues surrounding it from at least three different ethical perspectives. That's where we can see if they actually understood that there are different theories and perspectives and whether they are able to use them on a case and understand that case and what's at stake. (C2) we ask the students if they see connection with the ethical theories or can you see if these different views on welfare for the elephants are connected to our theories. (C3) these are potential arguments that could be raised from these various theories that we introduce to them. (C5)	A primeira aula de Bioética é dar os fundamentos de ética, em termos de argumentação. Como construir um argumento ético. Preparar os alunos com o pouco tempo que há… algumas teorias filosóficas que suportam depois alguns desses argumentos, principalmente ligados à ética animal. (L3)	So we are still trying to get them to do the same things: explain the theories, how the theories apply to the situation but we are not trying to do: "You do this, and then you do that, and then you do that". (N1) we took them through some of the ethical theories and some of the ways of structuring their arguments (N3) We don´t revisit that theory until final year, although ethics is still integrated within the rest of the curriculum, in 3rd and 4th years they will have cases where they do have an ethical element to it. They won't be specifically asked about ethical theory again until final year when we do a tutorial day around which does get to revise ethical theory. (N3) In PPS2 in this big one day of ethics they get at the start – we teach the five ethical theories (…)N3 talks why ethics is important to vets, and then they get introduced to the ethical theories, five ethical theories (N5) I'm not sure that teaching ethical theory is the best way. We could teach principles or we could teach something else. But at the moment they get theories. They need to learn and understand a lot of difficult jargon like utilitarianism, it's a difficult word. (N5) We are trying to assess mainly their understanding of the five ethical theories that we've taught and their ability to apply these crucially to a particular case. (N5) M: Students are being taught to apply these ethical theories and to think by themselves… N6: It was quite interesting cause they are given an examination question on that or a task in PPS where they have to apply the theories. But then we set an ethics question out of context, in a different module or situation, more than half of them completely abandon or didn't mention the theories, didn´t apply them. I guess because it was in a different context they just didn't think about it at all. (N6)	Ethical theories are used at the three schools but mainly at **C (central Topic). In C there is much emphasis on using the theories to understand what ethics is about** In L just mention of teaching them In N there is a tension between a position similar to that in C (theories useful to understand ethics) and the resistance students have to learning this theories (this is very evident in the big chunk of text after the table)

	Historical Context	**NF**	este ano resolveram introduzir na disciplina duas horas sobre História da Medicina Veterinária. Não tem a ver com a Deontologia, tem a ver com a formação e integração no espaço da medicina veterinária. Não é Deontologia, directamente, mas indirectamente, é. (L2)	**NF**	History of Veterinary Medicine is included in descriptors of Deontology and Bioethics
	Decision Making	**CT** See also *C1 – Limits for Animal Use* Some parts of each decision will also be decided by what kind of values they (vets) carry into their work and the relation they have with the owner of the animal. And those parts of the decision are better understood if you understand ethics and understand the values that are present in this situation. (C2) I'd say that ethics is a part of the decision making. So the decisions are not only based on facts but are also based on values. (C4) Probably the most important thing from an ethical perspective is the discussion about decision-making. So when people are facing the issue of euthanasia, and they doubt whether or not they should, or whether they should choose one or the other kind of treatment strategy, and they will say to the veterinarian, what do you think? Because that's typically what people will do. And how do you approach answering that question? Do you try to guide people to find the decision that works best for them? Because it may be difficult for them to make a decision, they may be upset for emotional, financial or practical reasons. Or do you take another approach and say, well if this was me and my animal and my situation, this is what I would do? So these two different strategies, which again we will talk about autonomy and paternalism and say well these are sort of the different kinds of approaches to how you guide people through making a decision in a particular situation. (C5) In the morning we do a decision in a round where we decide: "this cow had these signs and	**NF** Raramente os alunos vão buscar coisas que aprenderam em termos de ética. " ah, não, mas isso será assim bem, não será… como é que se deverá fazer?". Raramente. Isso é tão distante que eles parece-me que, que vai-se esquecendo um pouco. (L3)	One of the cases that we give students is this, an owner is buying a dog from a puppy farm and not knowing about vaccinations and things, all that sort of thing. So it becomes a welfare issue for the animal but you've got to deal with it and there are different stakeholders involved as well. (N2) (In PPS1) We don't call it ethics because I think that puts them off but it's really the first time we ask students to: "well, I'm in this difficult situation so what am I going to do about it? I might have to make a decision that affects animal welfare in some way or something like that. (N3) we (vets) are supposed to make our own decision within the context of our profession, but in my mind that is the right way to be and that is pretty much the way we talk to it to our students. (N3) So what then happens in 3rd and 4th year is that there is no specific ethics teaching but is included in other clinical relevance cases so for example if they are dealing with an orthopedic case of a dog needing a hip replacement then the owner has decided to have the dog put down they will be asked about the ethical implications of this situation and then we ask to discuss how they feel about that. (N3)	L3 offers a counter-argument.

		symptoms and we made this diagnosis yesterday. Should we do a surgery on it?" or "This cow that we had surgery yesterday has this post-operative, what should we do? This horse came in with this disease, would you kill it?" Yes and it's integrated in the decision making. (C6).			
	Critical Thinking	The most important part is for them to figure out what are ethical dilemmas. (C1) The idea is to make them aware of the different ethical issues. Because not all of the students have the experience from the animal production so in order to provide them with the same experience we introduce them to large pig farming and so forth and as they are doing the visit we ask them to look at the ethical issues that this kind of production can rise. (C4) I think I would frame it on a moral base. I would say when you have a dilemma and you can't figure out what's wrong but you fell something is wrong. And when you think about it and reflect about that dilemma and you come up with some possible explanations and rules for this dilemma, then you are doing ethics. (C6)	*And therefore it seems to me [that ethics is important], above all, to open their minds, and I think that they will be facing dilemmas almost constantly. And that it is better they have already thought about the issue, otherwise what happens is that they react very emotionally at the time. And that is not always the best solution.(L3)*	**CT** That's how they are evaluated in the second year and then the rest of the time they get their reflective ability evaluated because they have to produce a portfolio every year and within the portfolio there will always be things around ethics and difficult situations so their ability to reflect more generally, their ability to engage in reflective practice is assessed annually through their portfolio. And they are told whether their reflection is getting to the critical category if you like or if is still very dialogical and basic. (N3) Are then any kind of ethical issues there? They often discuss ethical issues in their portfolio. Yes, all the time. Often if they have seen something in practice that they feel is not right or is a difficult situation they will write some reflective comments, which is part of developing their reflective and ethical reasoning ability. (N3) See *N5 – Tolerance.* They have to do a portfolio as well. Which is part of PPS and they have to write reflective pieces of writing and they often write about EMS and they often write about ethical things in there because it's a big thing for them. (N8)	
<u>Profession-alism</u>	**Professional Behaviour**	**NF** I think the problem is if you sort of say: "Ok, Professional conduct is to do this, this and this. And this is ethically right". Then you're just teaching them like you had the bible because how do you know that those are the only values that are right? That's fundamentalism. And I think that's wrong when you do ethics. I think ethics should always be about make people reflect themselves. (C2)	**CT** Na Deontologia, essencialmente, é ter noção de qual é o comportamento deontologicamente correcto perante as várias situações profissionais com que se podem deparar. (L2) vocês (alunos) têm de ter conhecimento do Código, têm de saber o que é que está correcto de acordo com o Código e o que é que não está. (L2)	**CT** Coming back to the code, how do you perceive that code? Is that a rule book? Is called the Guide to Professional Conduct. A lot of the things in there are common sense and courtesy, rather than legislation. So how can students use that code, if you present them with the code? Yes, a lot of things are things like respecting client's confidentiality, maintaining good relations with your professional colleagues, maintain the reputation of the profession, so a lot of things will apply to our students	L2 and N7a emphasize **<u>correct behaviour</u>** while N3, N5 and N7c emphasize **<u>good behaviour</u>** N7b is not clear. It's a big segment – see below - and seems

				when they get to practice they don´t go telling their friends and family about what they've seen, mentioning names and that sort of thing. (N3) 'Cause they would get that (teaching about virtues) here under professionalism: brainstorm on what is professionalism, what makes a good vet. So I might not say that is virtue ethics, but they're brainstorming and they are putting the students debate what makes a good professional. (N5) In Y3 they have a portfolio and a viva, an oral defense of their portfolio work. There are pieces of work that are assessed and graded. It's more so that we keep track of how students are doing not for marks but for: is their level of professionalism increasing, decreasing? Are they behaving in a professional manner? I think that's something that can be monitored or we can observe informally and via things like work placement feedback that tutors get. And if something serious does arise from those then that's referred to the Fitness to Practice Committee – if it's really serious. (N7a) I think to identify the situation, to respond appropriately and to always have in their mind their professional conduct and how they are perceived. (N7b –see below) I think it's best that (ethics) it's maintained as a separate block, in which we can reinforce the fact that actually what we want them to get from these sessions is understanding of good ethical practice or ethical conduct or ethical theory as opposed to anything else (N7c)	to be about both (correct and good conduct). C2 offers a counterexample
	Human-animal Bond	I think it's important for students in meeting the client where the client is. I want them to understand that empathy (to animals) is a very important thing. I want them to understand that companion animal practice is a relational based practice. Those are things that I emphasize in the lecture. (C1) Part of the small clinical teaching they invite people to come and talk about different bits and pieces and I talk to them about human animal bond. (…) So we may still discuss ethical issues but it will be less emphasis on ethical theories	**NF**	students get some more softer skills around how to perform it (euthanasia?) sympathetically and empathetically, how to deliver bad news to clients and those kind of things and then we do quite a bit around dealing with bereaved clients. It's part of the human-animal bond teaching, yes (N3) Liz and I designed a new session about the HAB, constrained on companion animal bond but also looking more widely. In that I tried to bring in some ethical theory. (N5) I suppose in year three they get more on the animal-human bond. That's true. Things like socialization of	**Should the HAB be in the Animal Welfare part of the diagram (4 o'clock)?**

		and how to handle them, and more emphasis on sociological and psychological kind of aspects (C5)		animals and animal behaviour. So, yes, there is definitively some ethical aspects there. (N7)	
	Autonomy	But different people have different opinions on where that line is and is important to discuss with the students what they think but also to understand that clients are as different as we are as clinicians and the law says that an animal should not suffer and prevent an animal from suffering. You as a vet are the one to decide. (C1) I think ethics should always be about make people reflect themselves. (C2)	**NF**	we (vets) are supposed to make our own decision within the context of our profession, but in my mind that is the right way to be and that is pretty much the way we talk to it to our students. (N3) I think perhaps that in the younger years they are learning what those ethical frameworks are and having to identify issues but then one of the most important things is that they can then realize the different ways that people might come in a situation and how they have different views and different opinions (N8)	
	Tolerance	(Ethics) should (..) make them able to make more informed choices and to enter debates in a more open mind than just thinking that I'm are right and they're wrong. So I think that the most valuable thing we can give them is the ability to know that ethics is something that also involves them because many students have the idea that they have the truth and if somebody says something else they just didn't understand the facts. And I think it is very important to clarify to them that many of the disagreements we have about animals are based on different values. (C2)	Eu não sei se lhes chame competências mas eu acho que o mais importante para eles é de já ter pensado no assunto e, principalmente, pensar que há sempre uma outra maneira de se, eventualmente, resolver o problema. Por isso, o que me preocupa, às vezes, é eles saírem e, eventualmente, irem para um estágio com um colega que lhes diz isto é assim e eles pensam que se ele diz que é assim é porque é assim. Por isso ter sempre uma ideia de que não, que há uma outra forma de se, de se avaliar. Respeitar os argumentos dos vários(?) não ser completamente rígido. (L3)	-- Overall, I hope they are becoming critical thinkers. My impression is for students with mainly a science background this is sometimes difficult because they are used to having a yes/no answer. I'm trying to encourage them to tolerate other views or at least explore a variety of views and these are skills of debating, tolerance, critical thinking, skills of reflection, so some students seem to find reflection particularly difficult. And I guess probably – I don't know if this is possible – personally I want to ensure that they understand that there is a broader issue around animals and society within which the veterinary profession fits and ethics fits. (N5)	
	Communication	**NF** I think that is very good to train them (in communication skills). We don't. I mean, we should give them all training on how to deal with their clients. But I think the problem is:… (C2) We will not work with communication skills and we will not have exercises and we will not give students literature of how to communicate and how to develop yourself. (C3)	**NF**	**CT** Sometimes they get too distracted by the clinical stuff but the idea is to deliver the clinical side. But sometimes people who write these sessions (CRS) put a little bit in the end for students to think about how they would communicate with the owner in this particular case, which is often, you know, has an ethical aspect. (N2) These guys (students) get communication all over the place (N4) when they do communication stuff - in Y4 - they'll do cases where they have to break difficult news and things like that and I think having had that experience and having different exposures, different ethical	**N – Central topic because, in addition to the interviews, it is included in descriptors of the personal and professional skills courses (i.e. PPS1, PPS2 and PPS3)**

				frameworks bleed (?) into that a bit because by that point they've realized how to identify all of those things without consciously necessarily thinking that they are thinking about the different ethical frameworks… but they are using that in their communication. (N8)	**C2 and C3 offer counter-arguments.**
	Financial issues	**CT** An owner comes in with a dog that can't behave rightly and the owner wants to euthanize and the vet says no because you can just take this course, and you could train him and so on, costs 10 000 DKK. And the client says no, just kill him. And this is values. This is not I am right, he's wrong. (C2) Students will meet ethics in a very practical way when they are at the faculty's clinic when they are going to work to the clinic and the vet will have this very practical discussion of how to meet people coming with a dog – in Copenhagen we have some people living in the streets and many of them have dogs and if something happens with the dog at the middle of the night and maybe they could come at this clinic in the faculty and they have no money or maybe they are drunk or on drugs. (C3) And other students they get very upset. Because they think we have this farm system in Denmark and we earn a lot of money and if the farmer is going to earn money he has to have pigs or cows in that way. So they think C6 is very provocative when she says that this is not very good for the cow and I don't like this and I would like so (C3). another thing we talk about, if you have owners coming with an animal and they can't pay, you know you can help them pretty easily – how much volunteer work are you going to offer, or are you going to be a hardcore businessman saying well I'm only going to work if I'm going to get the money for the work that I will do. You know, all these sorts of dilemmas that you will be facing… (C5)	cada vez estamos a ser mais confrontados com a eutanásia. Nós vamos entrar na história da eutanásia, muitas vezes, para nos safar (?) dos cães porque o abandono está a ser brutal. Tá a ser brutal. (L1) O interesse próprio. Cá está, se o colega ao lado faz, nós não vamos fazer. Aquela actividade é na mesma executada, daquela forma, o colega fez o dinheiro, eu não fiz. Na sociedade actual é muito difícil resistir a isso. (L2-MEI) Imagino que, sobretudo, para aqueles novos formandos que a vida seja muito difícil em não se sujeitarem, por exemplo, em termos de remuneração adequada. É muito difícil dizer que um médico veterinário recém-formado tem que ser condignamente remunerado, quando são os próprios recém-formados que se sujeitam a condições que não são condignas porque, caso contrário, não têm onde, onde trabalhar. Portanto, o facto desta questão económica acaba por ser o principal problema (para os vets). (L2-MEI) eu diria que o bem-estar animal é o que, realmente, mais me preocupa a mim. E, também a possibilidade que nós temos, hoje em dia, de controlar a dor. Ou seja, eficientemente, e mesmo em termos económicos, com poucos custos em se controlar bem a dor. Parece-me que é uma preocupação que deve estar no espírito do clínico em si. Do clínico e de inspectores de matadouros, etc. (L3-MEI)	There's always how far you go in treatment kind of question (…) when the owners do not afford treatment. I think probably the financial climate made it more difficult for owners to afford more expensive treatment. (N1- MEI) But certainly I know from talking to colleagues in the moment with the recession and everything like that the biggest stressor for vets is they want to help, they wanna treat animals and people cannot afford to pay. So there's a huge issue around making money and insurance and all sort of things and I think that's a massive stressor for vets out in practice. So I think that is a big ethical dilemma at the moment, is how you cope with the difficulties of having to make enough money to survive but yet still wanting to be out to help animals and help people because they want their animals. (N3 – MEI) There are usually specific (ethical) dilemmas posed in the CRS cases. (…)Or sometimes we deliberately put in issues to do with the cost of treatment, particularly in fourth year we make them actually cost out their treatments and think about how much they are charging and whether their treatment is good value for money for the owner and the animal. So if they are over treating or over testing or thinking about which drugs they are gonna prescribe or whether there's a more appropriate or cheaper option. Particularly in the fourth year cases we make them look at that. (N6)	In C, reference to financial issues was seen as important in the teaching process. In L and N financial issues have arisen mostly when dealing with the most important ethical challenges faced by vets (similarly to the case of euthanasia, financial issues are used as examples). Except N6

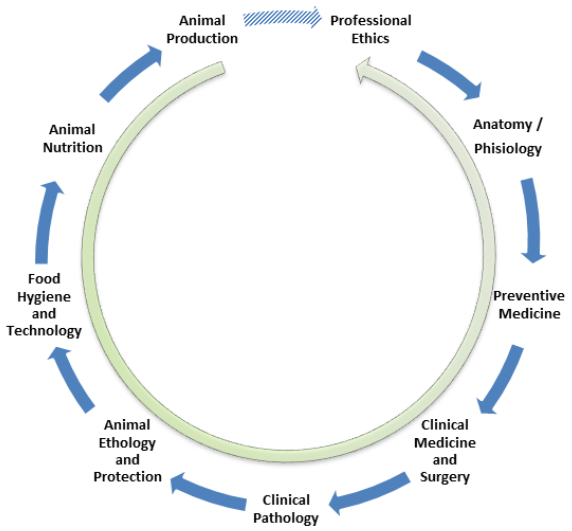
		We often discuss what a good life is. That is a typical one. I ask the students: "This farmer wants us to do surgery on this cow so he can get some money for the meat. Is that a fair treatment for the cow? It has to live for 14 days of postoperative pain and discomfort in order for the farmer to have some money for the meat. Is that ok? (C6) His sow needs a caesarian. It will cost you 1500 DKK it's much cheaper if I kill the sow, you take the piglets out and give the piglets to other sows. The same with the cow. Cow can have a right-sided displaced abomasum. That's much more severe, we euthanize it. Take it outside and shoot it, it won't pay off to do surgery. M: What seems to be underlying issue, here? How much does it cost. And they can calculate how much does it cost to do the surgery. I've done calculations like that, in epidemiologic very well founded studies where you can see the milk loss, payment to the veterinarian, the decreased meat quality and the delayed conception of the next calf it will cost you more than… it will take you two years before the cow has earned this investment back and it won't because you will kill it after the end the lactation. (C6)			
	Codes of Conduct	**NF** Do Danish vets have a Code of Conduct? Yes, they do. They actually have what is called an Ethical Codex. Is that part of your teaching? I mention it to make them aware that this is there. (C1) Do Danish veterinarians have a guide or a code of conduct? Yes. Is it addressed in your discipline? No. (C2) I got the website of the DVA where the Code of Ethics is. Is this part of your teaching? No, actually not. (C3) This written code, is that part of your education?	**CT** O objectivo aqui não é tanto dizer às pessoas, isto está certo, isto está errado, etc. Não é, propriamente, vir ler o Código Deontológico, isso as pessoas sabem ler. (…) Havia duas hipóteses, uma era discutir o Código Deontológico artigo a artigo; outra, era criar exemplos ou pegar em exemplos da vida real que nós ao imaginarmos em que, portanto, discutindo aquela situação em concreto em termos deontológicos como é que aquilo devia ser tratado. Quais as implicações, as sanções, etc., os procedimentos correctos. Ou, então, podemos conjugar estas duas abordagens,	**CT** The Guide for Professional Conduct we use quite extensively throughout the teaching. We introduce it to the students the 1st year when we talk about professionalism and what it means to be a vet in practice. And we do some exercises where we give them an idea of what it contains. (N3) So yes, we do introduce them to the GPC early on, we make them aware of its existence then we revisit it a few times again so to integrate it in various different issues so we go to the GPC to see what it tells you about that. And then the next time they see it is in the 4th year when we talk again about being a professional and the RCVS comes and talks about entry into the RC they give them a physical hard copy of the guidebook and they talk them about the disciplinary process and	Counter-examples in C. Codes of Professional Conduct are included in the descriptors in L.

		No. It is not. (C4) OK. What about the Code of Conduct? Is that addressed in your discipline? We don't really have a Code of Conduct. (C5) The Ethics Codex is very much about that you don't speak badly about your colleague. I was so disappointed when I saw it in the Veterinary Association. This is about the more legal aspects, and how you treat your business in an ethical sound way. Very, very few issues are on the animal welfare in this ethical code. Is this ethics codex something you mention? For the students? No, no. (C6)	não é? Mas sempre na base da discussão. (L2)	all those sorts of things. That's the next time they see it and then they use it again in the final year when they do the Ethics Day when we talk them about dilemmas that they come across and they use the GPC to see if there is anything in there about the situations they've had to deal with. (N3) Students sign a Code of Discipline when they register. That's a general one for the University. The vet school has a more detailed one. They don't explicitly sign it but by sign up as a student, there is also a little box that says "I agree to adhere to this code of discipline and this code of conduct" (N7)	
	Statutory Bodies	**NF**	Eu achava que era importante que um representante da Ordem que viesse dizer aos estudantes "olhem, a Ordem é assim.". Não ser eu, ser alguém de fora. E logo desde, se não do 1º, talvez do 2º, 3ºano convidava alguém para vir no âmbito da Deontologia esclarecer algumas dúvidas. (L2)	And then the next time they see the GPC is in the 4th year when we talk again about being a professional and the RCVS comes and talks about, you know, entry into the RC they give them a physical hard copy of the guidebook and they talk them about the disciplinary process and all those sorts of things. (N3)	
	Policy papers	Another important thing I want students to think about and that I emphasize is that every person is different and is very important to find where your limits are. E.g., the Danish Veterinary Association (DVA) has put up some policies for different things including for treatment of animals with cancer. Those are regulations? No it's not a regulation. It's a policy paper. I helped formulate parts of that. It's a policy paper for the treatment of animals with chronic diseases and in that there is something about cancer, there is something about amputation. So it's a sort of a policy statement paper from the DVA. It's quite helpful. (C1) The DVA also issues these policy papers. Are those important? No, I think that they are more or less ridiculous (C6)	**NF**	**NF**	**<u>Confront C1 with counter argument from C6</u>**

Annexe 8. Spatial arrangement of the vignettes with the curricular subjects - exercise 'ethics within the curriculum' taken from the focus groups with students.

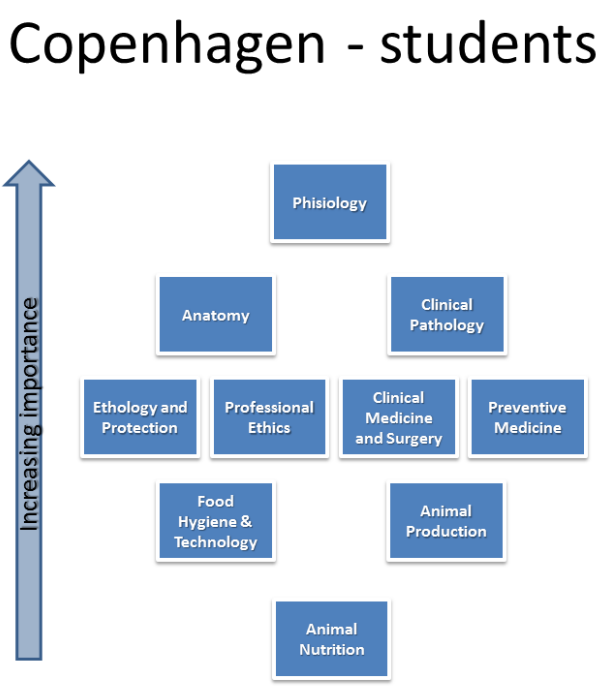
The exercise of having students arranging a group of prominent subjects that make part of every European veterinary curriculum was seen to be successful in promoting a critical analysis of those same subjects and resulted in a variety of ingenious approaches to the curriculum. The analysis of the prioritisation of the subjects (and of how students got there) goes well beyond the objectives of our study. Nonetheless, the diagrams displaying the spatial arrangement of the vignettes are here presented - as well as a brief description of some of the arguments used to get there - as they can prove to be useful for future investigations on these issues.

Coimbra - Pilot Interview



Pilot Interview

To students in Coimbra, Professional Ethics was perceived as the most important subject, and the one that should be considered in advance of the more technical subjects. This was followed by Anatomy and Physiology *ex aequo*. Preventive Medicine preceded the clinical subjects because of its wider scope. Clinical subjects were followed by Ethology & Protection while the subjects related to food production of animal origin were considered to be connected with the economic aspects of the profession and consequently less relevant. The clockwise approach to the veterinary curriculum (dark blue arrows) was described as the approach to veterinary practice that gives priority to the animal. Students also considered the opposite track (long grey arrow; counter clockwise) in which they would be applying a more technical and less compassionate approach to veterinary practice and, in this way, putting the interests of humans first.

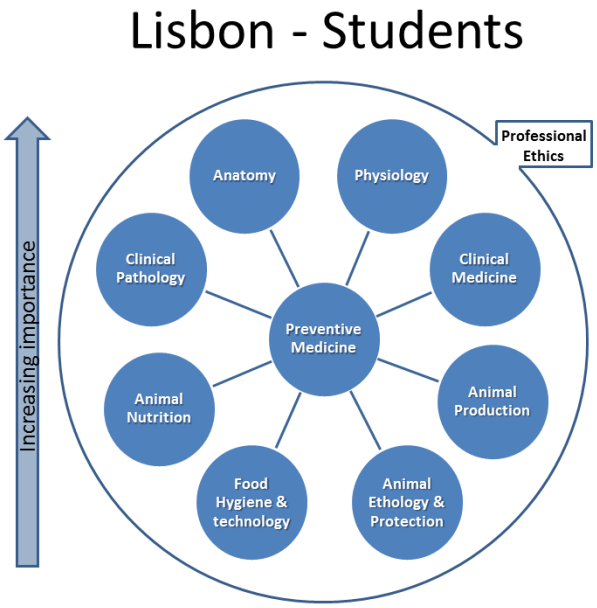


Copenhagen

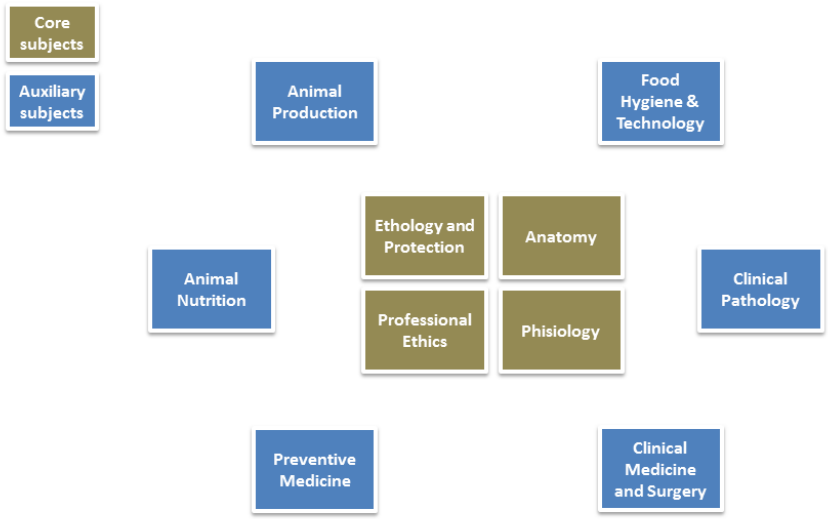
The final arrangement of the subjects at Copenhagen shows how Danish students decided to privilege Physiology over Anatomy (and Clinical Pathology) as the most important discipline in their training as vets, while conferring an intermediate relevance to Professional Ethics, together with Ethology & Protection, Clinical Medicine & Surgery and Preventive Medicine. Professional Ethics was considered as 'basics' and to be 'used every day without thinking about it'. Again, the subjects related to food production of animal origin were relegated to the bottom, and considered as less important.

Lisbon

Preventive Medicine was placed at the centre of the curriculum, influenced by and influencing the remaining subjects (with the exception of Professional Ethics). Subjects were organized radially to Preventive Medicine, from the least important (Food Hygiene and Ethology & Protection), to the most important (again, Anatomy and Physiology). In between, students placed the clinical subjects on top of Animal Nutrition and Production. Similarly to what had happened in Coimbra, students at Lisbon gave great relevance to ethics. In this case, Professional Ethics was considered an aptitude, and not merely a subject, 'hovering upon' the entire curriculum.



Nottingham - students



Nottingham

The exercise in Nottingham resulted in the construction of a central square composed by four core units: Anatomy, Physiology, Ethology & Protection, and Professional Ethics. These subjects were considered as 'the essentials' that make the others work. In particular, understanding of animal welfare and ethics was said to 'make or break a vet'.

The central square was then surrounded by the remaining six subjects 'like a concentric circle', with no particular order between them.

As the exercise unfolded, the facilitator had to make sure that all participants had a common understanding of each of the subjects being presented. In Copenhagen and Lisbon there was a need of the facilitator to further explore the concept of Preventive Medicine. In the case of Ethology and Protection, both concepts needed clarification at the three schools. The term protection, especially, was prone to some confusion. When asked, students did not make an immediate connection between protection and welfare. In fact, it was only in Nottingham that students made use of the word welfare when explaining what protection meant for them. The relative high importance of Anatomy and Physiology was a common trend in every group. With the exception of Copenhagen, students were unable to prioritize between the two.

One additional difficulty that students expressed was in understanding the point of view they should be applying. In the pilot interview a lot of the time was spent on discussing if they should look at the subjects from the point of view of a student or from the point of view of a vet, because these were often seem to differ. We decided to keep this ambiguity because, by itself, it was useful in prompting students to explore their role as professionals.