When care is defined by science: Exploring veterinary medicine through a more-than-human geography of empathy

Megan Martha Donald

Veterinary medicine is the profession that is widely perceived as being at the forefront of animal care in the United Kingdom (UK). It is a form of care that is multi-spatial and multi-species: veterinary surgeons are involved in broad debates about animal welfare while also intimately caring for our pet companions. In order to regulate the profession, the Royal College of Veterinary Surgeons provides the Code of Professional Conduct (CPC) as the principal ethical framework that must be adhered to by all UK veterinary surgeons. The main aim of the CPC claims to ensure that the animal is, first and foremost, the primary consideration in veterinary medicine. By exploring the CPC in relation with animal geographies, emotional geographies and science and technology studies, this paper shows how the CPC remains anthropocentric and focused on a rational scientism that limits affective attunement with non-human animals and distrusts the role of emotion and affect in veterinary medicine. These ethical-spatial implications are then shown to extend beyond the CPC and into the conceptual terrain of ethics teaching in undergraduate veterinary education. As a way through this ethical tangle, a more-than-human geography of empathy is proposed. This notion takes the site of empathy as its geographical focus and suggests that a more critical, situated and holistic understanding of empathy might allow for a more thorough consideration of the tensions between human and animal and science and emotion in veterinary medicine and human geography more widely.

KEYWORDS
animal geography, empathy, more-than-human geography, science and technology studies, United Kingdom, veterinary medicine

1 INTRODUCTION

Veterinary medicine is a profession of many-layered responsibilities. Veterinary surgeons (vets) are, after all, those who provide medical care for our beloved pet companions, help protect economic assets through the care of production animals and play a crucial role in ensuring public health through their links with human medicine and health policy. The negotiation of responsibilities lies at the heart of many caring roles, meaning that care can be many things, to many beings, in many different places (Cox, 2010).

What marks out the occupational responsibilities of the vet for geographical consideration is the profession's inherently multi-species function. While it may be obvious that vets provide medical assistance to animals as a distinct category of...
being, the contract of care in fact extends beyond this two-way relationship to involve a wide range of stakeholders, including family, clients and disciplinary bodies (Magalhães-Sant’Ana et al., 2014). Spatially, a vet’s jurisdiction can involve clients’ homes, laboratories, operating theatres and courts of law. What connects these scales of care, and forms the primary point of concern, is the non-human animal.

To ensure animal care is well regulated in the United Kingdom (UK), and guard against animal unruliness, the Royal College of Veterinary Surgeons (RCVS) provides the Code of Professional Conduct (CPC) for veterinary surgeons, a benchmark statement formally framing social interactions between caring humans and cared-for animals. Not only do animals become the object of legal regulation through the CPC, but I suggest the spatially complex emotional capacities of human and animal stakeholders can be overlooked through its enforcement.

In this paper, I use the CPC as the empirical starting point to reveal the human-centred, scientific approaches underlying veterinary ethics and related teaching of ethics. The central purpose is to demonstrate how the CPC potentially leads to a less emotionally engaged form of animal care ethics through tensions between a codified formative scientism and narrow conceptualisations of non-human animals. To chart a route through these issues, I offer the idea of a more-than-human geography of empathy, as a means to produce more just and contingent alternatives to formal ethical protocols. This proposition has implications not only for the role of emotion and affect in veterinary medicine, but vitally brings non-human animals into situated debates about their wellbeing. Overall, this paper aims to provide the theoretical groundwork for a more-than-human analysis of formal veterinary ethics as they appear in the CPC – the primary legal device for the control of the profession.

Focusing on the CPC as a framing discourse requires understanding that the complex relations between the code-as-theory and code-in-practice are multi-linear – it is not to say of course that everyday veterinary practice is obliquely ruled by the CPC. The CPC remains the central focus of this paper, however, because it also needs to be stated that the code as a form of legal guidance not only shapes and steers practice but is also performative in itself. This specifically necessitates the sustained discursive analysis of the CPC within this paper, which in turn sets up the opportunities for work to be done in understanding how the CPC might be adapted, re-worked or resisted in practice.

The paper begins by discussing the conceptual nexus that underpins my exploration of the CPC and ethics teaching for vets. By combining animal geographies, emotional geographies and science and technology studies (STS) to form the concept of more-than-human empathy, the paper is well placed to critically draw forth and unpick the links between science, animality and care (both medical and non-medical) that are imbued in the CPC. The paper’s central section is a sustained engagement with the CPC, focusing on three key elements: defining responsibilities for animal care; encouraging veterinary professionalism; and communication and consent. Discussion then turns to how the scientism and human–animal relations contained in the CPC surface in the teaching of ethics in veterinary education, and the implications for veterinary–animal futures. The paper concludes by suggesting that a more-than-human geography of empathy might offer some ways through the knotty ethics of veterinary medicine and care by advocating site-based multi-species affective attunement and an acceptance of ethical-spatial contingency.

2 | FROM A GOVERNING BIOETHICS TO MORE-THAN-HUMAN EMPATHY

Following seminal works by Wolch and Emel (1995) and Philo and Wilbert (2000), the status of “the animal” in geographical thought has been reconfigured. Animals are now taken seriously, and animal geography is recognised as an established sub-discipline. In a series of summative reviews of the field, Buller (2015, 2016) identifies three defining features for a version of geography giving greater space to animals: an appreciation of animals’ agency and their wilfulness to resist human structures; an understanding that human–animal relations are co-constitutive; and an awareness that these issues are politically radical in the way power is granted to those often considered inhuman. It is no longer enough simply to “put the animal back in.” A critical animal geography, as imagined by Collard and Gillespie (2015), must address preconceived anthropocentrism and intersectional injustice, and consider the ethical potentialities of a more-than-human world. As opposed to an animal geography that simply focuses on “animals” as the subject, “more-than-human” geography is concerned with the multiplicity of agentic actors in space and place, and aims to be more critical of the ontological divisions between “human” and “animal.”

In order to establish the more-than-human relations that this paper aligns with, it is necessary to consider how trans-species communication occurs when there is no shared spoken language. This non-verbalisation has meant that animal communication has been assumed by the natural sciences, where behaviour is seen as a code to crack by “mechanical and observational methods” (Buller, 2015, p. 375). However, to say that animals cannot get their intentions across has been a claim allowing humans to speak for non-human animals and justifying the exclusion of animal experience.
Ways into the unspoken relations between humans and non-human animals have been made possible through emotional and affective geographies (Jones, 2013; Lorimer, 2010). Beyond illustrating how emotion and affect are formative in geographical experience, emotional and affective geography has been central in raising the political importance of that which is considered outside the confines of the rational and the represented (Bondi et al., 2005). For ethno-ethnologists like Despret (2004), this appreciation of affect is central to research on multi-species relations as human–animal communication is claimed to occur through porous bodies via our shared capacities for emotion and affect. Geographically speaking, this requires new engagements with multi-species “polymorphous relations” (Krupar, 2012, p. 311) and so this paper extends the more-than-human into the new occupational setting of veterinary medicine and specifically, it’s formal ethical code.

The control that science holds over animal care and ethics is pervasive. Despite the multidisciplinarity of contemporary bioethical debate, the topic continues to be characterised by a rationalist approach, explaining animal experience away as systematic behaviour. The scientific method at the heart of animal welfare science and the ability to prove things as fact through experimentation is what lends credibility and legitimacy. It is through this framework that the scientist explores human–animal relations and gains the power “to ground social order objectively, literally” (Haraway, 1997, p. 24). While there might still be space to discuss animal welfare, it tends to occur within the pre-existing framework that assumes humans are able to order non-human animal lives.

From the perspective of animal welfare science, animal welfare is generally improved by devising standard welfare protocols which, when universally applied, intend to reduce the suffering of animals. Davies’ (2012) work on the geographies of animal science and care shows up the shortcomings of these universal “tick-box ethics,” demonstrating that the ethical protocol of reducing and replacing the use of experimental mice did not fulfil its aim of reducing animal suffering: “The consequence in the particular case is that science can never proceed as if the ontological, epistemic, and ethical issues have been settled prior to the point of experimentation” (Davies, 2012, p. 632). As Enticott (2012) contends, ethical theory and practice are indeed in constant tension: veterinary protocols work best when they are necessarily negotiated in practice and can never be rolled out to the same effect in every site.

The CPC is thus not configured here as a scientific instruction manual for veterinary medicine, but is understood as a framing discourse in the profession – it never wholly determines the fleshy, affective realities of veterinary practice.

How then can researchers move away from care as narrowly procedural towards care as a site of ethical engagement with the more-than-human? Greenhough and Roe (2010, 2011) address the question through the notion of “somatic sensibilities,” understood here as a form of interspecies response-ability brought about through the shared experience of living in a vulnerable body. Their intention is not to erase difference between humans and animals, but open up a way of investigating where and how different bodies come together to create the more-than-human. This alternative reformulation of formal ethical codes is a political project involving, variously: challenging the processes by which humans order species and define levels of suffering; greater human attunement to the emotional sensibilities of non-human animals; taking seriously non-human animals’ ability to contest their position; and by more generally investigating scientific practices. By looking at the emergent geographies of animals-in-the-making, we are better able to grasp the tensions between science and emotion, and human and animal, in order to see how ethics are made in situ – in the lecture theatre, anatomy lab or farm, for example. These issues have been raised by the engagements of Bellingan et al. (2016) with “cultures of care” in multidisciplinary animal welfare. Cultures of care here refer to how animal care regulation should incorporate a notion of care that is netted human and animal, in order to see how ethics are made in situ

We welcome this growing attentiveness to the liveliness of guidelines and handbooks, cultures of care, and licensing practices, which are as central to the imaginative politics of animal research and use as trans-species relations. (Davies et al., 2018, p. 13)

Herein lie the beginnings of a more-than-human geography of empathy, building on Greenhough and Roe’s (2011) “somatic sensibilities” and informed by Davies’ (2012) ethical-scientific enquiries. This work pioneered an affectively attuned approach to care in the environment of animal experimentation and so more-than-human empathy takes up their approach in order to reanimate the commonly human-centred notion of empathy used in veterinary medicine. Empathy more generally is a sensibility popularly understood as the ability to “put oneself in another’s shoes” and most importantly, is increasingly and uncritically called upon in human and animal medicine as a way of creating emotionally resonant care. The expression of empathy can be read as an effort to disable unequal power relations between “expert doctor” and disempowered patient. There are, however, multiple issues in the way empathy is uncritically called on to answer difficult questions
in care. By constructing empathy as a skill, it becomes a technique more closely associated with detached concern and cognitive ability, as opposed to feeling with another and sharing vulnerabilities (Halpern, 2003). The additional risk, as Garden (2007) notes, is that by “putting oneself in another’s shoes,” it is possible for empathy to be understood as self-projection. Similarly, it is important to acknowledge Lauren Berlant’s critique of the empathy as “constituting a liberal fantasy of knowing the Other without actually understanding histories of structural oppression and violence” (Hammond & Kimm, 2014, p. 9). Within human geography, the related terms of care and responsibility have received careful consideration from a variety of stances in contrast with empathy. This is perhaps a result of the lack of clarity in the meaning of empathy and fears that apolitical sentimentalism might erase crucial notions of difference across space. A more-than-human geography of empathy would first acknowledge that empathic relations are imbued with power and are closely associated with pre-existing anthropocentric notions of injustice.

More-than-human empathy, as I have framed it, thus far aims to create a more inclusive, affective and political understanding of empathy in human geography and in veterinary medicine. This more-than-human empathy is inherently relational, meaning the non-human animal is already involved in conversations about their care. There are therefore opportunities to move beyond the biomedical model of animal care and imagine a veterinary medicine more accountable to non-human animals.

3 | THE RCVS CODE OF PROFESSIONAL CONDUCT: DEFINING AND CONSTRAINING THE SPATIALITIES OF ANIMAL CARE

When a vet graduates and wishes to practice veterinary medicine in the UK, they must register with the RCVS, the statutory regulator governing the profession. Its role is to define the responsibilities of veterinary surgeons in line with the Veterinary Surgeons Act of 1966, ensure high standards of education, and regulate professional conduct of vets and veterinary nurses (RCVS, 2016). It also serves clients directly as it is through the CPC and the RCVS that clients can hold their vets accountable. The RCVS thus has the ability to formally discipline vets and vet nurses on this basis, which can lead to individuals being “struck off” the RCVS register and unable to practise. With these aspects combined, the RCVS aims to improve animal welfare and the contribution of vets to society. The RCVS provides the CPC as the document that must be adhered to when practising veterinary medicine and is what should be referred to when a vet faces an ethical dilemma. A deep analysis of the CPC is thus important because it is the means through which the RCVS exerts its regulatory power over formal veterinary ethics in the UK.

As Rollin (2006) recounts, modern veterinary medicine grew up in the fierce positivism of the mid-20th century and so codes of conduct were originally focused on creating value-free science and “intraprofessional etiquette” (Rollin, 2006, p. 39). In a review of European veterinary codes of conduct, Magalhães-Sant’Ana et al. (2014) notes how the current RCVS CPC better encompasses animal issues, evidenced in its supporting guidance on euthanasia and tail docking. Despite the inclusion of formal animal law in this CPC and views that professional guidance is increasingly zoo-centric, it is important to explore how the RCVS CPC can be seen to constrain the spatialities of animal care and ethics while promoting newly detached forms of professionalism.

All practising vets in the UK must adhere to the following declaration:

I PROMISE AND SOLEMNLY DECLARE that I will pursue the work of my profession with integrity and accept my responsibilities to the public, my clients, the profession and the Royal College of Veterinary Surgeons, and that, ABOVE ALL, my constant endeavour will be to ensure the health and welfare of animals committed to my care. [p. 12]

From the outset, non-human animals are foregrounded in the CPC as the foremost object of care for veterinary surgeons. While the vet is an advocate for non-human animals, they are also tasked with upholding the honesty of the profession and remaining answerable to the public and their clients, under the rubric that with power comes responsibility.

The CPC later notes that these responsibilities “may conflict with each other” [p. 13], but states again that it is the animal that is to come first in any ethical dilemma. The statement that professional responsibilities “conflict,” however, reveals the scientific epistemic framing within the code. Responsibilities here, in contrast to Davies (2012), are pre-configured, separate from one another and from the vet who is seemingly able to stand back and equally measure one responsibility against the other. The separation of these set responsibilities results in a spatial ethics that suggests these actors float in
detached planes, not caring for one another except within these formal responsibilities. This ethical–spatial division is strengthened in a later section of the CPC:

6.1 Veterinary surgeons must seek to ensure the protection of public health and animal health and welfare, and must consider the impact of their actions on the environment. [p. 18]

The ethical dichotomy employed here operates on a greater scale, through a formulation of the nature–culture divide whereby the human veterinary expert is envisaged as an actant upon the rest of the “environment.” Bodies – vets and non-human animals and vets and environment – are bordered into their own spaces with one impacting the other without recognition of mutability or relations of power. The importance of appreciating mutability within the framing of biosecurity has already been discussed by Hinchcliffe et al. (2013, p. 535), who explain the fallibility of the border: “In the first place, borders are always also contact points; they join worlds together and act as conduits as well as barriers.”

These two examples of the CPC work together to suggest an implicit geography of care that holds implications for stakeholders in the veterinary ethical contract. They demonstrate the notion of pre-existing scales of care and a hierarchical approach to vet–non-human animal relations in which the vet emerges as expert over the distinct categories of environment and animal health and welfare. The declaration intimates a distinctly human–animal dichotomy through the way non-human animals are put first, making it harder to critically engage with the multi-species potential within veterinary responsibility. The non-human animal is spoken for, but this written contract does not leave enough space for the complexity of affective communications between vets and non-human animals. Instead of being a lively thing that plays a role in fluid empathic relations, the non-human animal becomes a default ethical position. I suggest that to challenge this flattening of animality, it is crucial to see the vet–animal relationship through the lens of a site-based, more-than-human empathy, so that one is better able to envisage how ethics are worked out in place and between beings that act in response to another's feeling. This analysis then, precedes a mandate to consider how the code is enacted in practice.

Beyond declaring the specific responsibilities of vets, the CPC goes some way to defining what veterinary professionalism is and how it should be enacted by vets. The term “professionalism” has already been under scrutiny in veterinary medicine, most notably by Mossop (2012), who considers the different interpretations of the term and their usefulness in veterinary education.

While Mossop (2012) confronts professionalism in a practical way, re-imagining the term through the lens of more-than-human geography and STS questions professionalism more critically. Notions of veterinary professionalism are first imbued in the “principles of practice”:

1. Professional competence
2. Honesty and integrity
3. Independence and impartiality
4. Client confidentiality and trust
5. Professional accountability

The RCVS Code of Professional Conduct and supporting guidance should be considered in the context of the five principles of practice. [p. 14]

Upholding “professional competence” and “honesty and integrity” means that a vet must be confident in their work and ethical decisions, and aim to fulfil the prescribed competences set out by the profession. As discussed widely within STS by, for example, Latour (1987) and Law and Mol (2001), knowledge and competence is not “discovered,” created in a sealed laboratory and then rolled out through education, but is formed through site-specific practices in which the individual is always enrolled into knowledge production. By stating the importance of competence and honesty, these principles imply that the inherent complicity of individuals in veterinary knowledge production would create biased information. This is emphasised through the principles of “independence and impartiality,” which more explicitly suggest that a vet must be able to see their work in objective terms, as something existing apart from the self.

These are understandable principles that facilitate the transparency needed in a just veterinary medicine made up of self-aware practitioners. Exploring professionalism through this praxis is in no way to advocate dishonesty or to suggest that vets need not improve their skills, but is to draw attention to how this form of veterinary professionalism is informed by a scientific objectivism that leaves little space for the uncertain moments and multiple realities which so characterise medical knowledge (Law & Mol, 2001). If a vet is always in the midst of animal care and if ethical decision making is re-framed as being less fixed, then it is not possible for the vet to claim outright impartiality. The notion of being always partially
something else other than a “vet” or an “animal” or a “client” gives space for an emotional geography of veterinary medicine and can necessarily bring ideas from STS and more-than-human geography closer together.

The principle of ensuring confidentiality and trust of clients is of course vital, but this point about professional communication is noticeable through the way these principles are not inclusive of non-human animals, the supposed first point of care. This is seen more clearly in the CPC chapter on consent:

2.4 Veterinary surgeons must communicate effectively with clients, including in written and spoken English, and ensure informed consent is obtained before treatments or procedures are carried out. [p. 15]

Communication in the CPC is reserved for those capable of verbal discussion, whether with clients or other veterinary professionals. In this case, it is less that animal experience is explained away by scientific methods, as stated by Buller (2015), but that the framework of communication itself does not include the agency of non-human animals. This is particularly pertinent as it is the non-human animals that undergo procedures. While Collard and Gillespie (2015) argue that animals are unable to give informed consent due to a lack of shared spoken language, this paper suggests this debate around non-human consent can be broadened through an exploration of the practices of more-than-human empathy that occur beyond representation, through shared affective capacities and haptic communication.

Despret (2004) discusses the opportunities within these intricate and unspoken intensities that can make up human–non-human animal communication and multi-species scientific knowledge:

If we follow carefully how some of these scientists create access to the creatures they study, the way they are moved by their subjects of interest, the way they give them a chance to be interesting and to articulate other things, we notice that the signs that define subject and object, what talks and what is talked about, subjectivity and objectivity, are redistributed in a new manner. (2004, p. 128)

By being there then, the non-human animal is always a part of the communication and decisions around consent have the potential to be co-constitutive. Non-human animals are often perceived as being unable to explain their suffering, but when the affective relations between animal and human bodies are valued as communication, animals are no longer just the object of care.

4 | ETHICAL EDUCATION: RATIONALISING ETHICS AND MEASURING EMPATHY

Given that the RCVS CPC is the primary ethical guideline in the UK, it is necessary to investigate how the epistemic framing of it finds its way into the different aspects of the veterinary profession. The teaching of ethics as a distinct topic in UK schools of veterinary medicine has followed the development of the contemporary RCVS CPC, along with input from animal welfare science and law (Magalhães-Sant’Ana, 2014). This historical lack of formal engagement with ethics has led to a sense that there is a lot of catching-up to do with the subject.

The ethics first encountered in the CPC runs through veterinary ethical education via Rollin’ (2006) explanation of animal rights, and extends into the pedagogy of ethical education. Batchelor (2013) provides a review of veterinary education and discusses the wider aims of ethical training in veterinary medicine. Ethics education is considered important because it aims to allow vet students to better understand their role as medical professionals and teaches students how to cognise their emotions to avoid making irrational decisions. As a guiding framework, the “cognitive development approach” is most commonly used to structure ethics teaching and “based on scientific theories, aims to develop reasoning both logical and ethical” (Batchelor, 2013, p. 30).

Developed by Kohlberg (1958) there are multiple stages to cognitive moral development, where “principles of justice are considered the highest concept of morality” (Batchelor, 2013, p. 34). It is the latter stage, which focuses on “universal ethical principles centred on the notion of justice” (Batchelor, 2013, p. 10), that should be sought in veterinary professionals.

Veterinary ethical decision making here is framed as something that can and should be thought through, making it a practice of the mind to assess and then control what one may feel. It does therefore highlight that emotions are considered to play a part in veterinary medicine. However, while ethical teaching recognises this, emotions are posited as something
that might cloud clinical reasoning. Ethical education thus still relies on measurement of ethical and empathetic capabilities, often through tests based on a scoring system, despite “evidence of the difficulty of accurately measuring ethical sensitivity in practice” (Batchelor, 2013, p. 42). In this sense, a vet can demonstrate too little, too much or just the right amount of emotion to be considered a caring vet. Logic, reason and universal ethics are understandable essentials to veterinary medicine, but the profession – as a multi-species form of care – encompasses more than these values. I suggest then that the process of quantifying emotion in veterinary medicine removes some of the value of the more-than-representational aspects of the practice. This paper thus poses the following future research questions: How are the emotions of non-human animals accounted for if emotion continues to be linked to cognitive moral development? What becomes of the affective resonances which linger beyond cognised emotion? And what might happen when vets fall into the uncertainty of more-than-human empathy?

5 | CONCLUSION

The aim of this paper has been to provide a thorough, more-than-human geographical analysis of formal veterinary ethics in the UK, while making tentative steps towards a less anthropocentric notion of empathy. Specifically, I have demonstrated how the CPC that guides the profession does not make space for the less easily represented aspects of veterinary care: the emotional and affective geographies of the profession are written out through a measured language of scientific objectivity and rationalism. This framing of animal care runs through veterinary ethical education and so the ethics of the CPC impact veterinary medicine at a wider scale than perhaps imagined.

By taking an animal-centred approach, I have demonstrated the existence of a continued ontological separation of humans and non-human animals through the defence of verbal communication and anthropocentric concepts of responsibility, consent and universal rights. Non-human animals are framed as objects of medical intervention and are formally excluded from conversation about their (well)being. Additionally, the formative involvement of emotion and affect in veterinary practice is rendered less important through the rationalisation of ethical decision making.

It remains the case that vets and their animal patients do indeed have bodies that combine in webs of relations, transcending species divides and complicating what it means to be rational. Veterinary medicine is a sensitive and emotional profession in practice, and so the secondary purpose of this paper is to make it clear that there is much more to science and ethics than the principles of justice, or the advancement of knowledge or the curing of disease. Moving from a human-centred notion of responsibility to a more-than-human geography of empathy – which focuses on sharing suffering as opposed to ontological superiority – will enrich animal-focused veterinary medicine. This idea aims to enrich the veterinary profession, which has, of course, already been at the forefront of animal welfare debates and is keen to address contemporary issues within this topic (BVA, 2016). Multidisciplinary research around cultures of care as is seen in animal experimentation (Bellinger et al., 2016; Davies et al., 2018) would similarly progress these debates. For veterinary medicine and animal welfare, this offers the chance not to fear what cannot be measured and to recognise that feeling with others can lead to a situated animal care that better involves non-human animal experience.

Having pulled apart the ideologies that exist in UK veterinary ethics, this paper has set up some vital aims for future, distinctly practical research. What might be the wider geographical possibilities of more-than-human empathy and how can it be enriched beyond the banal notion of “putting oneself in another’s shoes”? What might this further offer non-human animals? Most importantly though, how is the CPC re-worked in practice? These are research questions that I believe are best approached through attuned, ethnographic methodologies in veterinary contexts, as seen in the work of sociologist Clinton Sanders (1999). Vet schools, hospitals, farms and laboratories should become the homes of geographers too.

Veterinary medicine – and more-than-human geography – can perhaps be made more open and empathetic by further engaging with the hopeful aims of this paper: to see science and care as a set of tensions that should enable accountable care for non-human animals and humans alike. This involves above all attention to situated ethics, provocation of the existing structures of care and the willingness to move imaginatively into uncertain relations.

ACKNOWLEDGEMENTS

I would like to thank Hayden Lorimer and Ian Shaw for their support, patience and critical guidance. I also extend thanks to the editor and two anonymous reviewers for their comments. This research is funded by the Economic and Social Research Council, grant number (ES/J500136/1).
ENDNOTES

1 This is my own acronym used for clarity within this paper and is not formally used by the RCVS.

2 From 2016 until March 2017, 13 vets and two veterinary nurses were subject to disciplinary hearings (RCVS, 2017).

ORCID

Megan Martha Donald http://orcid.org/0000-0002-2909-4923

REFERENCES

Batchelor, C. (2013). ‘Ethical development in veterinary undergraduates: Investigating the value of a novel reflective exercise’ (Doctoral dissertation), Institute of Biodiversity, Animal Health and Comparative Medicine College of Medical, Veterinary and Life Sciences, University of Glasgow.

Bellingan, L. C., Davi Berdoy, M., Buller, H., Cassaday, H. J., Davies, K., Diefenbacher, D., Druglitrø, T., Escobar, M. P., Friese, C., Herrmann, K., Hinterberger, A., Jarrett, W. J., Jayne, K., Johnson, A. M., … Wolfensohn, S. (2016). Developing a collaborative agenda for humanities and social scientific research on laboratory animal science and welfare. *PLoS ONE, 11*, 1–12. https://doi.org/10.1371/journal.pone.0158791

Bondi, L., Davidson, J., & Smith, M. (2015). Introduction. In L. Bondi, J. Davidson, & M. Smith (Eds.), *Emotional geographies* (pp. 1–17). Aldershot, UK: Ashgate.

British Veterinary Association (BVA) (2016). *Vets speaking up for animal welfare: BVA animal welfare strategy*. Retrieved from https://www.bva.co.uk/uploadedFiles/Content/News_campaigns_and_policies/Policies/Ethics_and_welfare/BVA-animal-welfare-strategy-feb-2016.pdf

Buller, H. (2015). Animal geographies II: Methods. *Progress in Human Geography, 39*, 374–384. https://doi.org/10.1177/0309132514527401

Buller, H. (2016). Animal geographies III: Ethics. *Progress in Human Geography, 40*, 422–430. https://doi.org/10.1177/0309132515580489

Collard, R. C., & Gillespie, K. (2015). Introduction. In R. C. Collard, & K. Gillespie (Eds.), *Critical animal geographies* (pp. 1–17). London, UK: Routledge.

Cox, R. (2010). Some problems and possibilities of caring. *Ethics, Place and Environment, 13*, 113–130. https://doi.org/10.1080/136008791003778800

Davies, G. (2012). Caring for the multiple and multitude: Assembling animal welfare and enabling ethical critique. *Environment and Planning D, 30*, 623–638. https://doi.org/10.1068/d3211

Davies, G., Greenhough, B., Hobson-West, P., & Kirk, R. (2018). Science, culture, and care in laboratory animal research. *Science Technology and Human Values, 43*, 603–621. https://doi.org/10.1177/0162243917757034

Despret, V. (2004). The body we care for: Figures of anthropo-zoo-genesis. *Body and Society, 10*, 111–134. https://doi.org/10.1177/1357034x04042938

Enticott, G. (2012). The local universality of veterinary expertise and the geography of animal disease. *Transactions of the Institute of British Geographers, 31*, 75–88. https://doi.org/10.1111/j.1475-5661.2011.00452.x

Garden, R. (2007). The problems of empathy: Medicine and the humanities. *New Literary History, 38*, 551–567. https://doi.org/10.1353/mlh.2007.0037

Greenhough, B., & Roe, E. (2010). From ethical principles to response-able practice. *Environment and Planning D, 28*, 43–45. https://doi.org/10.1068/d2706wse

Greenhough, B., & Roe, E. (2011). Ethics, space and somatic sensibilities: Comparing relationships between scientific researchers and their human and animal experimental subjects. *Environment and Planning D, 29*, 47–66. https://doi.org/10.1068/d17109

Halpern, J. (2003). What is clinical empathy? *Journal of Healthcare Information Management, 18*, 670–674. https://doi.org/10.1046/j.1525-1497.2003.21017.x

Hammond, M., & Kimm, S. (2014). Introduction. In M. Hammond, & S. Kimm (Eds.), *Rethinking empathy through literature* (pp. 1–21). New York, NY: Routledge.

Haraway, D. (Ed.) (1997). *Modest_Witness@Second_Millenium.FemaleMan®_Meets_OncoMouse™*. London, UK: Routledge.

Hinchliffe, S., Allen, J., Lavau, S., Bingham, N., & Carter, S. (2013). Biosecurity and the topologies of infected life: From borderlines to borderlands. *Transactions of the Institute of British Geographers, 38*, 531–543. https://doi.org/10.1111/j.1475-5661.2012.00538.x

Jones, O. (2013). “Who milks the cows at Maesgwyn?” The animality of UK rural landscapes in affective registers. *Landscape Research, 38*, 421–442. https://doi.org/10.1080/03085246.2013.784246

Kohlberg, L. (1958). *The development of modes of thinking and choices in years 10 to 16* (Unpublished doctoral dissertation). Chicago, IL: University of Chicago.

Krupar, S. (2012). Transnatural ethics: Revisiting the nuclear cleanup of Rocky Flats, CO, through the queer ecology of nuclia waste. *Cultural Geographies, 19*, 303–327. https://doi.org/10.1177/1474474011433756

Latour, B. (Ed.) (1987). *Science in action*. Milton Keynes, UK: Open University Press.

Law, J., & Mol, A. (2001). Situating technoscience: An inquiry into spatialities. *Environment and Planning D, 19*, 609–621. https://doi.org/10.1068/d243t
Lorimer, H. (2010). Forces of nature, forms of life: Calibrating ethology and phenomenology. In B. Anderson, & P. Harrison (Eds.), Taking place: Non-representational theories and geography (pp. 55–78). London, UK: Ashgate.

Magalhães-Sant’Ana, M. (2014). Ethics teaching in European veterinary schools: A qualitative case study. Veterinary Record, 175, 592–597. https://doi.org/10.1136/vr.102553

Magalhães-Sant’Ana, M., Lassen, J., Millar, K., Sandoe, P., & Olsson, A. (2014). Examining why ethics is taught to veterinary students: A qualitative study of veterinary educators perspectives. Journal of Veterinary Medical Education, 41, 350–357. https://doi.org/10.3138/jvme.1113-149r

Mossop, L. (2012). Is it time to define veterinary professionalism? Journal of Veterinary Medical Education, 39, 93–100. https://doi.org/10.3138/jvme.0411.041r

Philo, C., & Wilbert, C. (2000). Animal spaces, beastly places: New geographies of human-animal relations. London, UK: Routledge.

Rollin, B. (2006). An introduction to veterinary medical ethics: Theory and cases. Oxford, UK: Blackwell Publishing.

Royal College of Veterinary Surgeons (RCVS) (2016). Code of professional conduct for veterinary surgeons. Retrieved from http://www.rcvs.org.uk/advice-and-guidance/code-of-professional-conduct-for-veterinary-surgeons/

Sanders, C. (1999). Understanding dogs. Philadelphia, PA: Temple University Press.

Wolch, J., & Emel, J. (1995). Bringing the animals back in. Environment and Planning D: Society and Space, 13, 632–636.

**How to cite this article:** Donald MM. When care is defined by science: Exploring veterinary medicine through a more-than-human geography of empathy. *Area*. 2019;51:470–478. [https://doi.org/10.1111/area.12485](https://doi.org/10.1111/area.12485)