"What Do Animals Mean to You?": Naming and Relating to Nonhuman Animals

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ABSTRACT This article presents an analysis of data from over 200 accounts of, and responses to questions about, how animals feature in people's lives. The accounts were generated by a Mass Observation Project (MOP) directive on "Animals and Humans." The MOP, based at a UK university, sends out two or three directives a year, asking correspondents to write in response to a series of questions and prompts. The "Animals and humans" directive began with the question, "What do animals mean to you?" followed by a range of prompts about respondents' experiences of animals. The paper is specifically concerned with issues of how language both reflects and contributes to typologies of living creatures. It presents a qualitative analysis of some of the themes that emerged from responses to the directive, as well as a more quantitative analysis of the words chosen by respondents to denote different kinds of animals. Using these different methodological approaches, it focuses on how moral ambiguity is expressed and the ways in which categories and meanings shift depending on linguistic context. These methods complement each other, with the computer-assisted linguistic analysis providing a different and more quantitative method of revealing aspects of people's values, attitudes, and assumptions as they report on the role of animals in their lives. Overall, the paper shows how a corpus linguistic analysis can demonstrate the permeability of categories and boundaries, and the moral ambiguity toward animals that is revealed in the way language is used.

Keywords: attitudes, language, naming animals, social history

This article presents responses to a Mass Observation Project (MOP) directive on "Animals and Humans," drawing on data from over 200 accounts of, and responses to questions about, how animals feature in people's lives. The paper begins with a review of some core themes in how language itself both reflects and contributes to typologies of living creatures, after which we explain how the Mass Observation data were collected and explore specific themes

which the "Animals and Humans" directive brought into focus. A brief summary of some of the qualitative findings provides the context for a more quantitative analysis of the words chosen by respondents to denote different kinds of animals. The aim is to illustrate how this method, known as corpus linguistics, can provide additional insights into people's values, attitudes, and assumptions as they report on the role of animals in their lives. While various aspects of the findings from this study are reported elsewhere (Charles in press), the particular questions addressed here are:

1. What kinds of animal are referred to across the responses and in what proportions?

2. Which nouns do these writers use to denote both specific and generic animal kinds, and what criteria underpin the categories they use?

3. Which naming terms connote evaluative or attitudinal stances toward which kinds of animal?

Labeling Living Creatures

That the labels used to denote entities in the world are indicative of our perceptions of them—and of our stance toward them—has been well established by work in a range of disciplines, including, among others, sociology, linguistics, philosophy, discourse analysis, and media studies. There is now an extensive literature on the ways in which people who belong to particular social categories are named, and their attributes and actions denoted in positive or negative ways, and on how labeling patterns and their connotations serve to influence perceptions—of women, migrants or the disabled, for example (Gabrielatos and Baker 2008; Aaron 2010; Caldas-Coulthard and Moon 2010). Such studies build on the understanding, supported by the principle of linguistic relativity associated with Whorf (Carroll 1956), that the language resources available to speakers may condition their conceptualizations of their experience. In relation to nonhuman entities, linguistic anthropology, ethnobiology, and eco-linguistics have all highlighted similarities and contrasts in the ways that language varieties name components of the natural world, including animals, and have engaged with the issue of whether animals named differently in different languages and discourses are perceived differently by the speakers of those languages (e.g., Fill and Mühlhäusler 2001; Stibbe 2005, 2012; Döring, Penz and Trampe 2008; Russell 2010; Smith 2012).

Cross-linguistic research has established that "all human groups respond to the diversity of … animals in their habitats by grouping them into labeled or named categories of greater and lesser inclusiveness" (Brown 1984, p. 1). A significant number of studies have found high levels of consistency in the kinds of categories used by widely diverse populations (e.g., Berlin 1973; Atran and Medin 2010), and have established considerable continuity between "folk" and "scientific" taxonomies. While there is variation in the number of life-form taxa named in different languages, "it is widely accepted that people the world over distinguish large, general classes of creatures coinciding with English vernacular 'bird', 'snake', and the like, which further reveal some coincidence with scientific taxa, such as classes, orders, and sub-orders" (Forth 2012, p. 23). Indeed, in relation to the detail and sophistication of such taxonomies, the contrast between scientific and traditional, rural "folk" naming systems is sometimes smaller than that between either of these and the labeling practices of city dwellers (Atran, Medin and Ross 2004).

Contrastive studies such as those by Atran and his colleagues, as well as detailed anthropological case studies, have revealed the interconnections between people's direct

experience of animals and the linguistic resources available for naming them. Lee (1992) gives the example of an Aboriginal language whose noun gender system includes a category for "edible" entities, claiming that "[t]he close relationship between the people and their environment and the delicate adjustment of their lives to that environment has come to be encoded into the grammar of their language" (p. 36). Hunn (1982, p. 831) provides an example of the way Lepidoptera (butterflies and moths) are classified among Tzeltal Indians. While the adults of these species are not afforded the kind of classificatory detail associated with the "compulsion for intellectual order … of the civilized [sic] butterfly fancier, their larvae (caterpillars, cutworms, etc.) are carefully sorted into 16 terminal folk taxa in Tzeltal," the reason for this being that, unlike their adult counterparts, "[s]ome lepidopterous larvae are edible, others attack crops, and others acquire painful defensive ornamentation" (ibid.). Examples of similar kinds of evidence—of naming systems which both reflect and facilitate human practice—are provided by Dransart (2002) in relation to alpacas and llamas in different Peruvian herding communities, and by Kockelman (2011) about chickens in rural Guatemala. In English, too, those animals which are a culturally acceptable source of meat are labeled with specific words: one linguistic outcome of the Norman invasion was the development of two words for such animals, where previously a single term had served to denote both the animal and the meat derived from it; subsequently, the English word (calf, pig, cow, deer) came to denote the living animal, and the French word its meat (veal, pork, beef, venison) (Clark 1993).

When communicating in the vocabulary of any language, including English, not only are there clusters of attributes already encoded in the lexicon of that particular language, but speakers are also obliged to deploy the extant grammatical patterns which both constrain and enable ways of talking about entities, including animals. One dimension of these patterns is the division of nouns into "count" and "mass" types: that is, the distinction between individual entities (that can be "counted") and "stuff" (experienced as "mass"). Wisniewski, Lamb and Middleton (2003) propose a two-way influence: "conceptualisation can affect the choice of syntax or syntax can affect the type of conceptualisation"; thus "[t]he act of a speaker referring to an aspect of reality with count or mass syntax may lead the listener to construe that reality as individuated or non-individuated, respectively" (p. 588). An illustration of the options in English, provided by Ostler and Atkins (1992, p. 77), is "Mary had a little lamb" (where *lamb* is a count noun, an individual creature), versus "He won't touch lamb any more" (where *lamb* is a mass noun, a commodity). The idea that the mass noun pattern in English encourages its speakers to construe animals as commodities for human consumption is quite well established (e.g., Lee 1992); Stibbe (2006) draws attention to constructions such as "fish harvest" and "fish supplies," while Fill (2001, p. 65) identifies an additional set of language features which may discourage speakers from reflecting on the ecological implications of accepted practices, including not only "uncountable nouns for energy, air, water … suggesting unlimited resources", but also possessives for animals (e.g., "my dog") and euphemisms for processes such as "meat production."

The data produced for the project discussed here present an opportunity to explore how some contemporary speakers of English, with diverse biographies but sharing the experience of formal education to at least secondary school level, and exposure (to some degree) to media information about animals, make use of the linguistic resources available as they encode their responses to the wide range of prompts in the directive about the role of animals in their lives.

Methods

Data Source

The Mass Observation Project (MOP) is based at the University of Sussex, UK, and draws up two or three "directives" a year. The term "directive" is a legacy of the early years of Mass Observation; it was introduced in 1937 and described "the instructions to the writers who had volunteered to help Mass Observation" (Sheridan, Street and Bloome 2000, p. 75). Directives are not questionnaires or interview schedules but they use a series of open-ended questions and prompts to direct correspondents to reflect on, and write about, a particular topic. Each directive is sent to a panel of over 500 correspondents who respond by writing as much or as little as they wish on the topic. The panel has never been representative of the overall UK population although, since 1994, attempts have been made to recruit from under-represented groups (Sheridan, Street and Bloome 2000, p. 59). There continue, however, to be more contributions from women, older people, and those living in the south of England. Currently, the panel consists of over 500 correspondents; in September 2009 "the MO panel increased from 462 to 588. Of these 61% are female and 39% are male" (Mass Observation 2009). Despite the lack of representativeness, "these writers identify as ordinary people who are leaving a written record on issues of the day for future (and contemporary) historians" (Kramer 2011, p. 432; see also Goot 2008) and are encouraged to write about their subjective experiences and to provide "descriptively rich material which can offer insights into everyday life" (Mass Observation online). Panelists are volunteers who undertake to write in response to the directives sent out by the Mass Observation Project on a regular basis; they are not remunerated.

Researchers are able to collaborate with the Mass Observation Project by commissioning directives, which is what co-author Nickie Charles did. This directive was distributed to correspondents in August 2009 and was called, simply "Animals and Humans." It asked correspondents to focus on the part played by animals in their lives, beginning with the question, "What do animals mean to you?" which was to be answered with a list of 10 words or phrases. It then asked them to write about the part played in their lives by animals in childhood and now, whether they shared their home with animals and their daily routines, and whether they worked with animals. The directive went on to ask whether animals contributed to the correspondent's well-being, whether they had experienced the death of a companion animal, whether they ate meat or wore clothing made from animal products, and how their use of animal products related to the way they felt about animals. It then asked for correspondents' views on animal welfare, whether they supported any animal charities, and what their views were on people who left bequests to these. Their views were also sought on sport involving animals and media representations of animals.

Respondents

Two hundred and forty-nine written responses were received. Respondents to this directive were 63% women and 37% men, 46% were over 60 years (46% of women and 48% of men) and 19% of women and 20% of men were under 40 years. The first part of our analysis explores all 249 responses (main set), while the second part focuses on the 103 which were submitted electronically (subset), as these are more readily analyzable with the software described below. A comparison of the socio-demographic characteristics of the two sets of responsescomprising our data is shown in Table 1.

The sex distribution of the two sets is almost identical (62.6% women in the main set compared with 62.1% in the subset) but the subset is skewed to younger respondents: in the

Table 1. Sex and age (by decade of birth) breakdown of the main set and the subset of respondents.

	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	Information Missing	Total
Main Set											
Male	2	14	12	15	5	24	11	6	1	0	90
Female	0	16	29	27	28	27	18	9	1	1	156
Missing	–	–	–	–	–	–	–	–	–	3	3
Total	2	30	41	42	33	51	29	15	2	4	249
	Total born before 1950: 115 (46%)					Total born after 1960: 97 (39%)					
SubSet											
Male	0	1	6	5	3	13	7	2	0	0	37
Female	0	0	5	11	12	20	10	4	1	1	64
Missing	–	–	–	–	–	–	–	–	–	2	2
Total	0	1	11	16	15	33	17	6	1	3	103
	Total born before 1950: 28 (27%)					Total born after 1960: 57 (55%)					

main set, 46% of correspondents are 60 years or over, compared with 27% in the subset. This, we assume, relates to the less widespread use of computer technology amongst older people. It may also be that these younger people represent the "post-domestic" era of human–animal relations (Bulliet 2005) to an even greater extent than the set as a whole, but this is not something that we can confirm from our analysis.

Results

The responses, which are completely anonymous, varied in length: some were less than a page and some were many pages long. Many had the quality of diary entries and could be quite intimate and revealing. Correspondents were encouraged to tell stories, and many thought deeply about the questions in the animal–human directive. Also notable was the intensity of the emotions written about, and the way many of the correspondents told their life stories through their accounts of the animals they had been involved with since childhood. Many respondents wrote at length about sharing their homes with animals (as children and as adults) but hardly any wrote about working with animals.

The responses to the set of questions about animal welfare, charities, sport, and media representations revealed a wide range of moral and ethical positions on animals and normative views on how humans should relate to animals, as did responses to the questions on how correspondents related to wild animals and whether they would consider any animals to be vermin.

The directive asked correspondents to think about different categories of animals which are often kept separate—pets and food animals, for instance—and this juxtaposition produced many very reflective responses. For example, having already written about how they related to animals, whether they lived with them, the grief they felt at the death of a companion animal, their love for animals generally and in particular, people then had to think about eating animals. One man decided, after writing at length about his relationships to animals, and reaching the end of the directive, that henceforth he would be vegetarian and, in time vegan, because to take any other position was unethical (MO-035[1]). Others claimed that it was "natural" for humans to eat meat and therefore morally acceptable.

Responses revealed the importance of categories and boundaries in maintaining a particular moral universe and, for some of the respondents, unsettled these categories and boundaries by juxtaposing ways of relating to animals that are not usually thought of together. They also reflected the moral ambivalence toward animals which is characteristic of Western societies (Serpell 1996).

Following this brief summary of the qualitative findings, the next part of the paper takes a more quantitative approach to explore some specific examples of the language used by correspondents in their responses to this directive. For this we draw on the 103 written responses which were available electronically.

Further Analyses: Analytical Method

The method used in this part of the analysis involved some software designed to facilitate the identification of linguistic patterns in digitally stored collections of text. The program is *WordSmith Tools* (Scott 2008), and it was used to identify frequencies of words and recurrent patterns around the nouns for animals as they occur in context in different responses submitted. In analyzing the responses, those portions of the texts which might have skewed the results were excluded—that is, any sections where the respondents included the prompts from the directive as headings within their own text. In addition, the section in which they responded to the request to "jot down ten separate words or phrases which describe what animals mean to you" was analyzed separately from the discursive responses to the remaining prompts.

Global Statistics

First, some global statistics are given on all sections of all responses, with the equivalent figures in brackets for the data submitted to analysis, after the exclusion of portions of text referred to above:
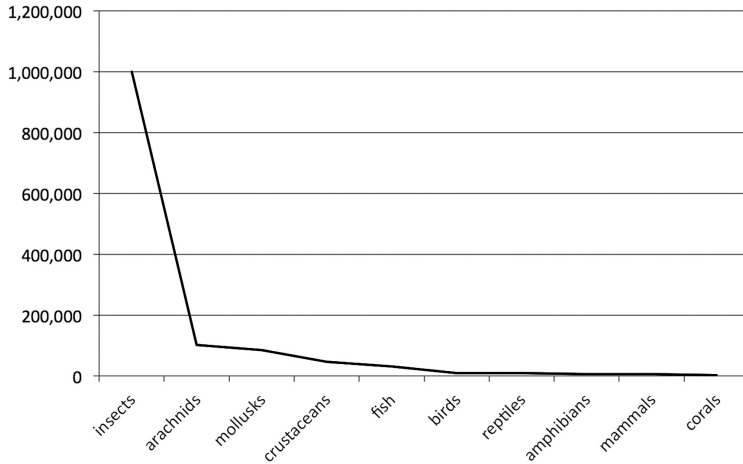
- Number of files submitted in digital format and used in this analysis: 103 (103).

- Total number of "tokens" (i.e., separate words, including duplicates) in the corpus: 181,901 (171,684).

- Number of "types" (i.e., different words used) in the corpus: 9,999 (9,855).

- Average length of each file: 1,766 (1,177) words (shortest: 193 (173) words; longest: 6,680 (6,529) words).

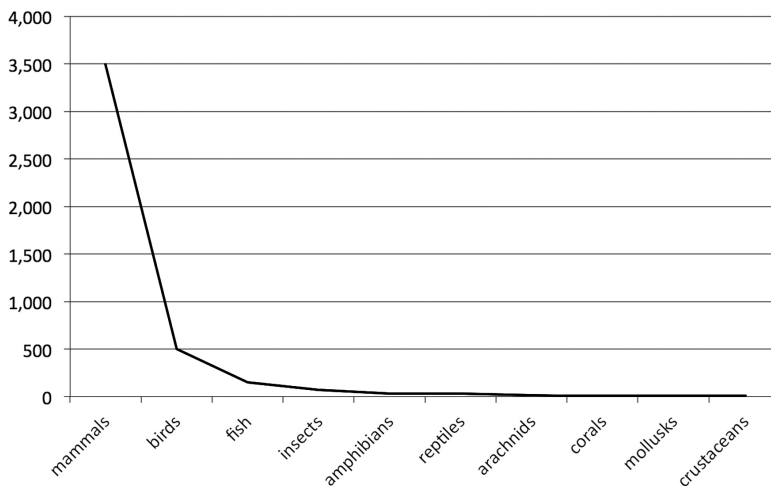### Naming Terms for Categories—Biological Typologies

The next stage of the analysis was to identify which naming terms for animals were used across the whole corpus, as this gives an indication of the kinds of creatures which respondents report as featuring in their lives. To contextualize this subset of animals in light of the totality of nonhuman creatures with which we share the planet, Figure 1 provides a statistical picture of the main classes of animals found on earth.

This is a very broad summary—the boundaries of species may be contested, many species no doubt remain unclassified, and so on; nevertheless, the diagram is indicative of a scientific perspective on the proportions of the roughly 1.7 million species of animals in the world classified to date. It reminds us that insects are much more numerous than birds or mammals, yet these kinds of creatures may not, for many people, be connoted by the term "animal" (see below).

Of course the respondents were explicitly requested to think about animals *in their own lives*, not to display knowledge from a more dispassionate perspective. One way—and of

Figure 1. Number of species identified on Earth, by class (data from http://www.currentresults.com/Environment-Facts/Plants-Animals/number-species.php. Accessed June 27, 2012).

Figure 2. Words for types of animal in the MO corpus: frequency by class.

course not the only way—of shedding light on how animals do feature in these lives is to quantify the kinds of words denoting animals that are found in the responses. The procedure for identifying which naming terms were used was as follows. The software generated a complete word list (excluding the potentially misleading sections, as explained above), and each item which denoted an animal (e.g., "Labrador"), a type of animal (e.g., "dog," "bird"), or a product derived from an animal (e.g., "leather") was extracted and the number of occurrences noted. Account was taken of both singular and plural forms of these words (e.g., "dog" occurred 695 times, "dogs" 392, "alligator" twice, and "alligators" once). All such words that occurred 10 times or more in either singular or plural form, or both, were then classified into broad taxonomic categories. This raised some problems of interpretation, as discussed below, but the broad distribution of types of animal named in the corpus is illustrated by Figure 2. This graphic

Table 2. Numbers of uses of words (minimum number = 10) denoting animals in the category "Insect" in the Mass Observation corpus.

Word	Number of Occurrences	Number of Texts in Which Word Used
Bees(s)	12	11
Butterfly(ies)	17	14
Flea(s)	12	9
Insects	29	21
Total	70	55*

*This does not imply that 55 different panelists used these words, as the same panelists may have included several of them in their responses.

representation does not, of course, imply that respondents imagine that species exist in these proportions; rather, it helps to illustrate the relative salience of species they select to report on as featuring—or not—in their experience.

To clarify how the figures on which this chart is based were derived, Table 2 contains as an example the frequency data for the category "Insects" (including only those which featured 10 times or more in singular and/or plural form). As can be seen, several types of insect are mentioned by respondents, but the most frequent single naming expression in this category is the generic word "insect(s)." By contrast, the general category words "mammals" and "mammal" occur only two and three times, mentioned in only two and three texts, respectively. On the other hand, the list of words for individual kinds of mammals that occur 10 times or more is by far the longest, at 53, with the most frequently used words, namely "dog," "dogs," "cat," and "cats," totaling 2,121 occurrences.

There are several possible explanations for the fact that respondents reported relatively rarely on insects in these texts. One reason may be that the directive made no explicit mention of this sub-group of nonhuman species. Another may be that contact with insects is a negligible aspect of their experience. A third possibility is that aspects of the language itself influence the way people think about the entities denoted by the terms available, and that the concept which English speakers hold of the word "animal" includes the sub-category of "insects" only in some contexts. If labeling terms for animals relate to mental representations, and, as cognitive linguists suggest, these representations are emergent products of both beliefs about the status of species within the animal kingdom, and knowledge derived from experience (e.g., Taylor 2003), then for many speakers "animal" does not function as a superordinate of "insect." This is supported by a discussion in Cruse (1986), which presents both "animal" and "insect" on the same level, as hyponyms of "creature." As Ungerer and Schmid (2006, p. 86) observe, ordinary language users are rarely "as consistent in their use of superordinates as scientists are." These authors contrast the strict scientific definition of "mammal" with the choice of "animal" as superordinate for "cat" or "dog," and note that, "for many language users, BIRD and FISH are not subordinated to ANIMAL," going so far as to conclude that "there is no satisfactory superordinate for MAMMAL, BIRD, FISH, REPTILE and INSECT, or, to put it differently, that English does not have a comprehensive labeled category that can be used for 'animals' as opposed to plants." In our data, as well as the very broad terms "animal" and "animals," which occur in total 573 and 1,256 times, respectively, the generic terms "creature" and "creatures" are also used (24 and 50 times, respectively).

Table 3. Concordance lines for "vermin" with CONSIDER in the context. Respondents' identifiers shown in brackets.

1. **Considering** animals as **vermin**; I would place rats, grey squirrels and the town/feral pigeon in this category. (MO-005)

2. I would **consider** some animals as **vermin**, particularly rats, mice, cockroaches. (MO-090)

3. it encourages rats, which I **consider** to be **vermin**, as are pigeons. (MO-072)

4. I **consider** rats to be **vermin** as I hate everything about them! (MO-017)

5. I **consider** rats to be **vermin**, especially when we found they were resident in this house. (MO-093)

6. I **consider** rats and mice **vermin**, but have no problems with mini-beasts apart from cockroaches. (MO-066)

7. I **consider** wild rats to be **vermin**, though tame rats are quite lovely. (MO-009)

8. I do not **consider** them [wild animals] to be **vermin**, except London pigeons. (MO-082)

9. Unlike many people I don't **consider** squirrels to be **vermin**, likewise the pigeons that come into the garden. (MO-071)

10. Rats are **considered vermin** but I think they are just highly evolved and very successful. (MO-096)

11. I know squirrels are **considered vermin**, but they aren't causing us any trouble. (MO-047)

12. I don't **consider** most animals to be **vermin** as they are all just trying to survive. (MO-046)

13. I do not **consider** any animal as **vermin** apart from the occasional homo-sapiens! (MO-037)

14. There is not an animal I **consider** to be **vermin**. (MO-030)

15. I don't **consider** animals as **vermin** they are just competing for food and space. (MO-050)

16. I don't **consider** any animals to be **vermin** – I think the idea of "vermin" is a symptom of our arrogance. (MO-101)

Indeed, the process of compiling a list of words denoting animals is less straightforward than it might seem. As has already been reported, people may refer to specific types of animal more readily than they do broad categories—or vice versa. (Thus, the word "amphibians" occurs only once in the corpus, whereas "frog" and "frogs" occur 30 times.)

Naming Terms for Categories—Cultural Typologies

As explained above, the directive included some prompts that specifically encouraged reflection on categories and labels, such as "What is it that distinguishes a pet from other animals?" and, most explicitly, "Do you consider any animals to be vermin?" There is a "priming" effect from this wording, as a number of respondents recycled it in their text: there are 14 instances of the string "to be vermin," nine of which include CONSIDER[2] in the expression. Table 3 shows concordance lines of all the occurrences of "vermin" where CONSIDER also occurs in the immediate context. ("Concordance lines" are generated by the software to display the search word in its textual context; they are reproduced with original punctuation, spelling, capitalization etc., except for highlighting the items under discussion in **bold**.)

Evident in the table are several stances toward this category; some writers were willing to accept it and to specify which kinds of creature it denotes (1–7); some recognized that the category is meaningful, but preferred not to apply it, either widely or at all (8–11); and some rejected the label outright (12–16). Other uses of "vermin" conform to a similar pattern, from acceptance, through ambivalence to rejection, exemplified by the extracts below:

And yes I do think that rats and mice are vermin. (MO-094)

RATS are vermin for us. (MO-091)

I regard "vermin" as a "context-dependent" term. (MO-069)

> The classification of particular animals as vermin is a matter of attitude really. (MO-011)

> I hate using the term "vermin." I suppose rats have to seen [sic] this way because they have to be kept under control. (MO-006)

> No, no animals are vermin and no plants are weeds. Those are just labels we put on them. (MO-085)

Many respondents elaborated on the criteria they were using to determine which creatures belonged to the category of "vermin," and there seemed to be three main approaches. Some justifications were rational, linking the classification with health and disease, or with the destruction of things of value to people (crops, other animals); others were emotional, and included expressions such as "I hate everything about them [rats]" (MO-017), "I really dislike [pigeons and herring gulls]" (MO-048), "unpleasant and slimy" [slugs] (M)-086); sometimes, though rarely, attribution of morality was involved: "I always understood that foxes and badgers are both vermin … They more often than not destroy & kill without eating—so frankly the same as man hunting foxes" (MO-003). In the expressions chosen to convey these various stances are claims about both ontology and terminology. While some respondents, as illustrated above, explicitly alluded to the label as problematic, others used the construction X+BE+vermin, sometimes with hedging expressions ("I think," "for us"):

> I think rats **are** vermin and squirrels and actually pigeons too. (MO-042)

> The mice in the piano **are** vermin. (MO-054)

> no animals **are** vermin. (MO-085)

Respondents sometimes engaged with the issue of labeling quite explicitly as they responded to other prompts in the directive as well. Some respondents, for example, explicitly circumscribed their interpretation of "animal," including the clarificatory string "I mean":

> Animals don't play a part in my day to day life. By this **I mean**, I don't have a pet of my own. MO-011)

In other words, this respondent interprets the way in which an animal would potentially "play a part in his day to day life" as in the role of pet.

> My relationship with animals is better than it is with humans. I say animals, **I suppose I mean** cats really. (MO-019)

Similarly, for this respondent, "animals" is almost synonymous with "cats."

In some responses, the reflection prompted by the directive is evident in writers' uncertainty about what should "count" as belonging to a category. One respondent recounted how she would have to leave her dogs when she moves house, and continued:

> Other than that [i.e., the dogs] and the mice living in the piano which I am trying to trap, animals are constantly darting across the road here- chickens, pigs, goats. But I am not sure they **count**. (MO-054)

Other examples of "count" used in this way include:

N	L5	L4	L3	L2	L1	Centre	R1	R2	R3	R4
1	I	I	THE	HAVE	A	PETS	AND	I	I	A
2	THE	THE	TO	OF	AS	PET	IS	A	A	AND
3	A	A	I	THE	THE		I	THE	ANIMAL	I
4	TO	TO	NOT	THAT	THEIR		ARE	MY	THE	TO
5	AND	WE	WE	AS	HAD		AS	AN	AND	THE
6	WE	AND	HAVE	HAD	ANY		BUT	THEY	ANIMALS	OF
7	IN	OF	OF	WITH	OF		IN	OTHER	OF	IS
8	OF	IS	A	A	FAMILY		FROM	THAT	AS	THAT
9	MY	HAVE	NEVER	HAVING	HAVE		THE	TO	WAS	HAVE
10	FOR	ARE	AND	TO	OUR		OR	ANY	TO	WAS
11	WAS	MY	T	NOT	MY		AT	AND	MY	IN
12	NOT	THAT	WERE	ANIMALS	WITH		OF	OUR	THAT	WHICH
13	HAVE	ANIMAL	THAT	FOR	OTHER		WE	NOT	NOT	ANIMAL
14	THAT	T	OTHER	PEOPLE	TO		WHEN	IN	HAVE	NOT
15	AS	IN	AS	AND	HAVING		A	AS	PART	WE
16	PEOPLE	AS	DOG	ABOUT	THAT		SHOP	HAVE	WE	WITH
17	HAD	DID	HAD	ALWAYS	NO		HAS	WE	T	IT
18	YOU	NOT	IS	THINK	ANOTHER		WAS	ARE	IS	WHEN
19	DOG	IT	MY	WE	S		TO	WAS	THEM	BUT
20	CHILD	WAS	WOULD DISTINGUISHES	ALL	YOUR		ANIMAL	ANIMALS	WOULD	BE
21	FROM	DO	ANIMALS	ALL	ABOUT		ESPECIALLY	OF	OTHER	ARE
22	T	CAN	WITH	MY	FIRST		THAT	HAD	US	DOG
23	IT	THEY	WHAT	NO	CHILDHOOD		CAT	FOR	BE	T
24			THEY	FROM	BETWEEN		DOG	WOULD	HAD	OR
25			OR	DOGS			WERE	CAN	CHILD	MY
26			UP				MY	BE	DOGS	
27			ALL				FOR	IT	FROM	
28							BECAUSE	T	THEY	
29							HAVE	PART	FAMILY	
30							CATS			
31							THEY			

Figure 3. Screen shot of collocates (i.e., words adjacent to the words "pet" and "pets"), in the corpus, organized in terms of frequency within each column (i.e., the top word in each column is the word most frequently found in that position).

> I don't know if you **count** teddy bears as animals, but "Teddy" was my first word, and I always loved my stuffed animals from a very early age. (MO-017)

> I have never taken part in any animal-related sports (unless you **count** horse-riding). (MO-101)

> we have a pet tortoise, but this lives in the garden, and no animals actually live in the house (unless you **count** the spiders, flies and other insects that find their way in). (MO-078)

> We never had any pets at home if you don't **count** rabbits during the war years, but they were for eating. (MO-088)

These last two extracts raise questions about the boundaries of cultural categories: can a creature live outside the house and still be a "pet"? Do small creatures, which do live in the home, qualify as "pets" if they are subsequently eaten? As noted above, respondents were asked to explain how they defined "pets" as a sub-category of animal, and the software used for this part of the analysis highlighted some patterns in how the responses were framed, as well as how "pet(s)" were written about throughout the responses. Six texts recycled the phrase "distinguishes a pet," and 14 included the categorical "pet is an animal … ." Using the "patterns" feature of the software, it is possible to see which words feature most frequently to either side of the node words "pet" and "pets," and Figure 3 shows what these are.

It is evident from this that "pet" is used as a modifier to classify types of animal (e.g., before "cat" and "dog"), and also that pets are represented as possessions: another word modified by

"pet" is "shop," and the possessives "my" and "our" also feature. It would be consistent with the encoding of this relationship between pet animals and people for a prominent verb associated with "pet(s)" to be OWN, but in fact there are few occurrences of OWN occurring (as a verb) within seven words either side of "pet" or "pets." By contrast, a verb that does collocate frequently with "pet(s)" is HAVE. Again, there is a range of attitudes represented here, from enthusiastic participation in the practice of pet keeping, through indifference, to outright rejection, as the following examples illustrate:

> I have always **had pets** in my home and I always will. (MO-021)

> I have always been grateful that I was allowed to **have a pet** as a child because it enriched my life. (MO-022)

> We **have a pet** cat, and that's about it. (MO-069)

> If I was on my own I might consider **having a pet**, maybe to provide company but it is only a maybe. (MO-039)

> I still **have no pets** nor any desire to get one. (MO-020)

> The reason I **have no pets** is that I prefer animals to be wild. (MO-066)

From the full set of concordances of pet(s), an even wider range of attitudes can be observed, as respondents were invited to reflect on cultural differences on this topic. The potential for contrasts in how people understand humans' relationships with "pet" animals is particularly evident in instances of the phrase "their pets," where the writers reflect less on their own situation than on the perspectives of others. Table 4 shows concordance lines for this phrase, several of which express criticisms of others' attitudes or behavior.

To summarize, this section has reported on some recurrent linguistic patterns which illustrate perceptions and attitudes toward two culturally defined sub-categories of animal—"vermin" and "pets." It has been demonstrated that the data here is heterogeneous, with many respondents making explicit the ambiguities in terminology and alternative ways of expressing their experience and opinions. In this way, this analysis contrasts with the anthropological research which tends to emphasize consistent patterns in the linking of language and experience. However, the writers are necessarily constrained, as are all language users, by the terms available, so that, even when they distance themselves from certain labels, these still act to denote and connote aspects of the ways we talk—and think—about animals.

One of the respondents declined to produce the requested short list of words or phrases about "what animals mean" in their lives:

> I cannot answer this part of the question in the way requested, as animals do not "mean" anything to me, they are just there, co-habiting our earth, either in the wild, or as pets, or domesticated as farm animals to supply us with sustenance. (MO-078)

This extract highlights the ambiguity of the word "mean," the denotative sense of labeling being less salient in this context than the connotative sense that extends to values and emotions. It also neatly summarizes the "cultural" taxonomy explored in this paper, within which animals are classified by their roles in relation to human purposes: (i) "in the wild";

Table 4. Concordance lines for "their pets." Respondents' identifiers shown in brackets.

I don't know whether there are any significant differences in the way other cultures or nations treat **their pet** animals (always assuming that they keep 'pets' in the first place). (MO-069)

It is always said that the British are more sentimental about **their pets** than other nationalities but I am not sure this is necessarily true. (MO-087)

I feel that it is mainly in the western world that people are daft about **their pets**. The Chinese tend to regard anything that moves as something to eat. (MO-088)

when people hear of your own pet they often relate well, describing **their pets** and agreeing or commiserating about them. (MO-085)

it may give you an idea of how ridiculously fond some people get of **their pets**! (MO-075)

Dog lovers clearly get great pleasure from **their pets**. (MO-077)

My involvement was more with the clients and I experienced and shared their feelings about **their pets**. (MO-099)

I realised how much more other people do care about **their pets**, and how others do see them as being their family, or even a child substitute. (MO-099)

people abroad sometimes seem more reticent to take **their pets** to a vet. (MO-101)

it is regrettable that some (women especially) seem to make a bigger fuss of **their pets** than they do over other human beings. (MO-093)

lonely English women can get decidedly potty about **their pets**. (MO-093)

Canada are keen on **their pets**. (MO-097)

The English (I do not feel qualified to speak for any other folk as I am English) are very fond of **their pets** and are sentimental about them. (MO-074)

It is said that the English like **their pets** more than humans and I think urban dwellers humanise animals. (MO-050)

[I] love to talk to people who are out walking their pets near my home. I find that nowadays people are not able to give as much time to **their pets**. (MO-052)

They report that neighbours sometimes go on holiday without making arrangements for the care of **their pets**. (MO-048)

For some people **their pets** are their only friends. (MO-014)

I have been surprised sometimes to listen to people talking to **their pets** and behaving towards them as if they were relating to a small child. (MO-038)

In many cases humans cannot exist without **their pets**. (MO-066)

People do talk to **their pets** – I know I do – . (MO-074)

I am concerned about cat and dog owners that allow **their pets** to kill and disturb nesting birds. (MO-066)

It is possible to develop the closest of relationships with a dog possible between a human and **their pets**. (MO-060)

This charity helps people who cannot look after **their pets**. (MO-062)

(ii) "as pets"; (iii) in the lengthy final expression, "domesticated" (i.e., adapted by humans), "as farm animals" (i.e., managed by humans), "to supply us with sustenance" (i.e.,consumed by humans).

As was mentioned above, the wordlist comprising words denoting animals contains labels of various kinds. Although there is an extensive list of words for objectively distinguishable animal kinds ("budgie(s)," "elephant(s)," "goldfish," "tortoise(s)"), there are also terms that denote human perspectives toward various kinds of creature, of which "pet" and "vermin" are examples. Similar category terms include "pest(s)" (10), "livestock" (13, in 7 responses) and "wildlife" (76). "Wildlife" is frequently used as a modifier, before "programmes" (14) and "reserve(s)" (9), for example. It also occurs in phrases such as "documentaries/films about wildlife," and seems to feature as an experience to be observed and/or learned from, either at first hand or vicariously through television, as well as an issue for which people should take responsibility. Some examples are included as follows.

Information:

> I **watch documentaries about** other countries, **wildlife** and exploration which often include information about animals. (MO-038)

> I **love TV programmes or films about** animals, things like BBC's Springwatch, or overseas **wildlife**, or anything with David Attenborough. I like to **know about** conservation. (MO-046)

Entertainment and enjoyment:

> The only other relevance that animals have is the **enjoyment** I get from **watching wildlife**. (MO-071)

> We are members of the National Trust. This is because **we enjoy wildlife**, and wanted to be able to access our local nature reserve during normal opening hours. (MO-084)

Care and conservation:

> Also **for the sake of the wildlife** in the gardens who get some respite [from the cat when it's confined]. (MO-075)

> I think conservation groups do a brilliant job at **preserving the habitat of native wildlife**. (MO-002)

Unlike "vermin" and "pet," respondents were not prompted to reflect on the category label, "wildlife," and few did so; although there are different views about "wildlife programmes," the concept of "wildlife" does not seem to be problematic in itself for these writers.

Individuals and Composites

The final approach to analysis of naming terms explores the issue of count and mass nouns in these data. "Vermin" and "wildlife" are both examples of words which, while mass in form (neither can be pluralized), still imply plurality, whereas when animals are converted to food the naming terms are often unequivocally mass nouns, as was noted above. Two ambiguous examples cited earlier are "lamb" and "fish": both can be pluralized, but only in context is it possible to infer whether the singular use is as a mass or count term. In this corpus, "lamb" occurs 16 times, once in the phrase "lamb's wool" and in two references to a single animal ("I had the thrill of bottle-feeding an orphaned lamb" (MO-015); "I still enjoy seeing each lamb jump for joy" (MO-085)). In all other cases, "lamb" denotes the consumable commodity of the animal's flesh, and thus forms a set with "meat" (260 occurrences), "pork" (9), "veal" (14), "bacon" (10), and "beef" (13). "Chicken" (46), "poultry" (8), and "fish" (105) all need to be read in context to determine whether the term denotes one or more live, individual creatures or the product(s) derived from them.

In order to explore this issue a little further, comparisons were made of the occurrences of the singular and plural forms denoting different kinds of animal (again focusing on those items that occurred 10 times or more). As before, it is recognized that raw and even relative frequencies are only a rough guide to salience, and when the words are reviewed in context different meanings of the same word become more apparent. The most obvious contrast between singular and plural forms of nouns for animals is that the former denote individuals and the latter groups of creatures. Frequency counts in these data broadly confirm our
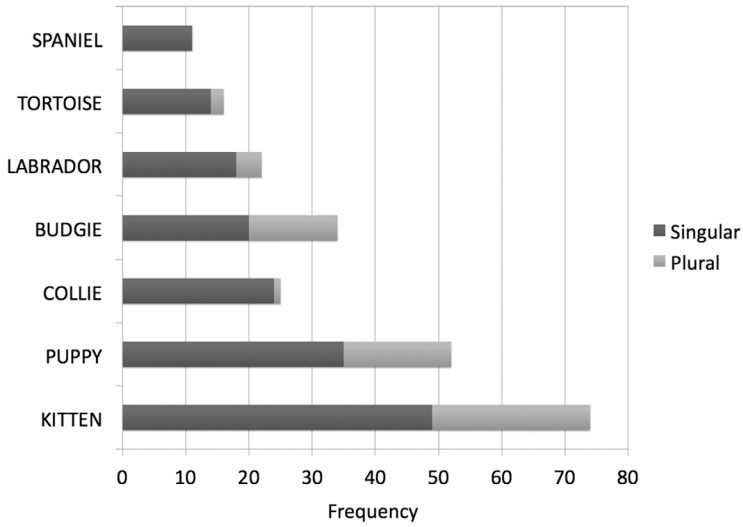
Figure 4. Some nouns for animals occurring more frequently in the singular.
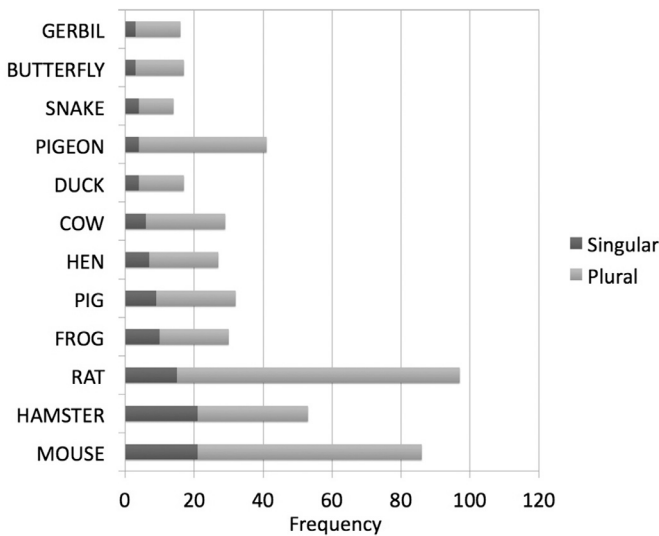

Figure 5. Some nouns for animals occurring more frequently in the plural.

intuitions that some kinds of creature are experienced and referred to more readily in the plural than separately. Some illustrative examples are shown in Figures 4 and 5.

Unsurprisingly, those animals referred to in the singular tend to belong to categories which can count as "pets," while those named in plural form coincide with types that may be categorized as "vermin" and "livestock." There are some exceptions, however. "Gerbils" and "hamsters" are found in the second group, and from the context it becomes apparent that respondents tended to refer to these creatures as pets from their childhood, remembered as a group.

> my childhood pets … I was very young. I was very upset when the gerbils, rabbit and cats died. I don't have any pets at the moment. (MO-002)

Table 5. Concordance for all occurrences of "deer" in the corpus. Respondents' identifiers shown in brackets.

1. A very close encounter with **a beautiful deer**. (MO-062)
2. I loved it (Bambi) but like everyone found the death of **the mother deer** very upsetting. (MO-077)
3. We sometimes used to see foxes, and once **a tiny deer** came into the garden and hid underneath a bush. (MO-101)
4. I do not believe that a fish is in the same category as a fox or *a* **deer** by way of intelligence or sensitivity. (MO-065)
5. I love seeing **deer** there & rabbits running around in the fields. (MO-048)
6. chickens, pigs, lambs and **deer** have 'personality' too. (MO-011)
7. we're fortunate in that we have close encounters with **deer**, sheep, squirrels, and other animals. (MO-084)
8. I think hunting foxes, **deer**, or anything else, is cruel. (MO-022)
9. We … are quite concerned about **deer** getting killed on roads and what can be done. (MO-053)
10. Even **the deer** in the Park are only half wild. (MO-085)
11. I fail to understand how intelligent humans can indulge in fox and **deer hunting** or hare coursing. (MO-065)
12. During the autumn the local **deer park** is filled with the echoing and urgent sounds of the rut. (MO-085)

> I had quite a few different types of animals when I was a child; cats, guinea pigs, rabbits, hamsters, gerbils and goldfish. (MO-023)

There are three occurrences of "gerbil" in the singular, two from the response of a young female (aged 16 years in 2009), who reported that "our gerbil died yesterday" (MO-102), and this same respondent, who is at the time she writes the owner of a hamster, supplied three of the occurrences of "hamster" in the singular, this word following a similar pattern in general to "gerbil."

As would be anticipated, the naming of animals beyond generic words for species and cultural category ("wild," "pet," "sustenance" (MO-078)), applies principally to pets, and some respondents included the practice of naming animals in their definition of the category "pet":

> The difference between pet and any other animal is that a pet has a name (or several) and is truly a member of the family. (MO-075)

> A pet is reared as a pet. It's named, and a special bond is created. (MO-084)

Specific names feature throughout the responses (Clover, Chilli, Rosie, Snoopy, Poppy, Charlie, Minnie, Chummy etc.), and clearly these animals are conceptualized as individuals. There is, however, another way in which the singular form of nouns for animals is used, which is not quite the same as the mass noun concept. It is illustrated by the concordance pattern for "deer," shown in Table 5.

"Deer" belongs to that subset of nouns whose plurals are not marked with an -s suffix. Lee (1992, p. 31) points out that this is not an arbitrary set, but is used for "animals (or fish) that have a special importance in our cultural history in that they all belong to the category 'game'." The uses displayed here illustrate a range of patterns. Lines 1–3 denote a specific creature (albeit a fictional one in 2). Like Line 1, Line 4 includes the indefinite article, but used here in its generic sense (equivalent to "any deer"). In Lines 5–10 "deer" is plural, some references (6, 8, 9) being to the creatures in general, and in some (5, 7, 10) the writer is apparently recalling

particular animals encountered. Lines 11 and 12 use the noun in yet another way, as modifiers of another noun—"hunting" (11) and "park" (12).

A final illustration of the way the grammar of English nouns may be involved in expressions of perceptions about animals is provided by the word "fox" in this corpus. This creature has the following characteristics which make it an unlikely candidate for mention in the singular: it is not likely to feature in the "pet" category; it is explicitly included in the "vermin" category for many respondents; its flesh is not eaten by humans (so we would not expect "fox" to occur in a mass noun set with "lamb" or "salmon"). However, of the 115 occurrences of "fox" in this corpus (after removing four misleading mentions, such as "fox terrier" and "Brer Fox"), 48 are plural and 67 singular. The majority (36) of the latter occur in the string "fox hunting." This use of animal names as modifiers is found in a set of constructions such as "hare coursing," "salmon fishing," "pig farming," and so on, and is another illustration of how attitudes to animals and people's relationships with them are encoded in the language.

Conclusion

In this article, we have attempted to illustrate the methodological advantages of combining interpretive analysis of a set of written texts with computer-assisted analysis of linguistic patterns in the subset that were provided in electronic form. We acknowledge that our data set is limited by the self-selecting nature of the respondents to the Mass Observation Project's call for contributions, but we also believe that our study illustrates some issues, both methodological and substantive, that invite further investigation. We highlight in particular two related aspects of our analysis of responses to the Mass Observation directive on "Animals and Humans."

Firstly, our data contribute to a growing literature on the uncertainty and instability of contemporary perceptions of, and attitudes toward, animals. Because respondents were obliged by the structuring of the directive to consider the many different ways in which they and others relate to animals, a number of contrasts emerged. In a seminal essay over 30 years ago, Berger (2009/1980) reflected on the impact of industrialization on human–animal relations, contrasting the integral relationships people in the past had with animals with their marginalization in contemporary society, except in their relatively new roles as pets and inhabitants of zoos. Although not universally accepted, aspects of this analysis are consistent with a subsequently well-documented ambivalence on the part of people in contemporary western societies toward non-human species, and a recognition that both category boundaries and appropriate responses are far from settled (e.g., Dolins 1999; Te Velde, Aarts and Van Woerkum 2002; Bulliet 2005; Podberscek, Paul and Serpell 2005). In our data, not only did writers report different responses to different kinds of animal, but different responses were sometimes reported to the same species. (e.g., MO-009 wrote, "I consider wild rats to be vermin, though tame rats are quite lovely.")

Secondly, we have sought to demonstrate how these substantive topics, necessarily expressed through language, can be brought into sharper focus by using the analytical techniques of corpus linguistics. We are not suggesting that such an analysis is exhaustive, but we have provided an indication of the way close attention to recurring words and phrases can help to shed light on the routine ways in which animal–human relationships are expressed. This approach is quantitative, in that it identifies frequencies, but it also facilitates close examination of specific passages where frequent expressions are found, thus complementing the thematic analysis of the individual texts. In combination, these methods can make an important contribution to our understanding of how language constrains meaning—including the various ways in which people respond to the question "What do animals mean to you?"

Notes

1. Respondents are identified by code numbers.
2. Words in small capitals are lemmas—the base form of a word which may occur in other forms; here CONSIDER includes "considers," "considering" etc.

References

Aaron, J. E. 2010. An awkward companion: Disability and the semantic landscape of English *lame*. *Journal of English Linguistics* 38(1): 25–55.

Atran, S. and Medin, D. 2010. *The Native Mind and the Cultural Construction of Nature*. Cambridge, MA: MIT Press.

Atran, S., Medin, D. and Ross, N. 2004. Evolution and devolution of knowledge: A tale of two biologies. *Journal of the Royal Anthropological Institute* 10: 395–420.

Berger, J. 2009 [first published 1980]. *Why Look at Animals?* London: Penguin.

Berlin, B. 1973. Folk systematics in relation to biological classification and nomenclature. *Annual Review of Ecology and Systematics* 4: 259–271.

Brown, C. H. 1984. *Language and Living Things: Uniformities in Folk Classification and Naming.* New Brunswick, NJ: Rutgers University Press.

Bulliet, R. W. 2005. *Hunters, Herders, and Hamburgers: The Past and Future of Human–Animal Relationships.* New York: Columbia University Press.

Caldas-Coulthard, C. and Moon, R. 2010. "Curvy, hunky, kinky": Using corpora as tools for critical analysis. *Discourse & Society* 21: 99–133.

Carroll, J. B. ed. 1956. *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf.* Cambridge, MA: Technology Press of Massachusetts Institute of Technology.

Charles, N. in press. "Animals just love you as you are": Experiencing kinship across the species barrier. *Sociology*.

Clark, E. V. 1993. *The Lexicon in Acquisition.* Cambridge: Cambridge University Press.

Cruse, D. A. 1986. *Lexical Semantics.* Cambridge: Cambridge University Press.

Dolins, F. L. ed. 1999. *Attitudes to Animals: Views in Animal Welfare.* Cambridge: Cambridge University Press.

Döring, M., Penz, H. and Trampe, W. 2008. *Language, Signs and Nature: Ecolinguistic Dimensions of Environmental Discourse.* Túbingen: Stauffenberg Verlag.

Dransart, P. 2002. *Earth, Water, Fleece, and Fabric: An Ethnography and Archaeology of Andean Camelid Herding.* London and New York: Psychology Press.

Fill, A. 2001. Language and ecology: Ecolinguistic perspectives for 2000 and beyond. *AILA Review* 14: 60–75.

Fill, A. and Mühlhäusler, P. 2001. *The Ecolinguistics Reader: Language, Ecology and Environment.* London: Continuum.

Forth, G. 2012. When is a fish not a fish? Questions raised by a Nage life-form category. *Ethnobiology Letters* 3: 23–30.

Gabrielatos, C. and Baker, P. 2008. Fleeing, sneaking, flooding: A corpus analysis of discursive constructions of refugees and asylum seekers in the UK press, 1996–2005. *Journal of English Linguistics* 36(5): 5–38.

Goot, M. 2008. Mass observation and modern public opinion research. In *The Sage Handbook of Public Opinion Research*, 93–103, ed. W. Donsbach. London & New York: Sage.

Hunn, E. 1982. The utilitarian factor in folk biological classification. *American Anthropologist* 84: 830–847.

Kockelman, P. 2011. A Mayan ontology of poultry: Selfhood, affect, animals, and ethnography. *Language in Society* 40: 427–454.

Kramer, A.-M. 2011. Mediatizing memory: History, affect and identity in "Who Do You Think You Are?" *European Journal of Cultural Studies* 14: 428–445.

Lee, D. 1992. *Competing Discourses: Perspective and Ideology in Language*. London: Longman.

Mass Observation (online). Writing for Us. http://www.massobs.org.uk/becoming_an_observer.htm. Accessed November 3, 2012.

Mass Observation. 2009. The Mass Observation Archive Annual Report, Number 31. http://www.charity commission.gov.uk/Accounts/Ends18%5C0000270218_ac_20090930_e_c.pdf. Accessed June 16, 2012.

Ostler, N. and Atkins, B. 1992. Predictable meaning shift: Some linguistic properties of lexical implication rules. In *Lexical Semantics and Knowledge Representation*, 87–100, ed. J. Pustejovsky and S. Bergler. Berlin/Heidelberg: Springer.

Podberscek, A. L., Paul, E. S. and Serpell, J. A. eds. 2005. *Companion Animals & Us: Exploring the Relationships between People and Pets*. Cambridge: Cambridge University Press.

Russell, N. 2010. Navigating the human–animal boundary. *Reviews in Anthropology* 39: 3–24.

Scott, M. 2008. *WordSmith Tools* (v. 5). Liverpool: Lexical Analysis Software.

Serpell, J. 1996. *In the Company of Animals*. Cambridge: Cambridge University Press.

Sheridan, D., Street, B. and Bloome, D. 2000. *Writing Ourselves: Mass-Observation and Literacy Practices*. Cresskill, NJ: Hampton Press, Inc.

Smith, B. 2012. Language and the frontiers of the human: Aymara animal-oriented interjections and the mediation of mind. *American Ethnologist* 39: 313–324.

Stibbe, A. 2005. Counter-discourses and the relationship between humans and other animals. *Anthrozoös* 18(1): 3–17.

Stibbe, A. 2006. Deep ecology and language: The curtailed journey of the Atlantic salmon. *Society & Animals* 14: 61–77.

Stibbe, A. 2012. *Animals Erased: Discourse, Ecology, and Reconnection with the Natural World*. Middletown, CT: Wesleyan University Press.

Taylor, J. R. 2003. *Linguistic Categorization*. Oxford: Oxford University Press.

Te Velde, H., Aarts, N. and Van Woerkum, C. 2002. Dealing with ambivalence: Farmers' and consumers' perceptions of animal welfare in livestock breeding. *Journal of Agricultural and Environmental Ethics* 15(2): 203–219.

Ungerer, F. and Schmid, H.-J. 2006. *An Introduction to Cognitive Linguistics*. London: Pearson Education.

Wisniewski, E., Lamb, C. and Middleton, E. 2003. On the conceptual basis for the count and mass noun distinction. *Language and Cognitive Processes* 18: 583–624.