CULLERS AND GUARDIANS: SUBCULTURES, ATTITUDES AND CULLING KANGAROOS

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Abstract

Traditional approaches to identifying and classifying subcultures (such as class and demographics) are limited in their applicability online. Social media provide an abundant source of insight into subcultures, but the irregular and natural presentation of data often defies systematic analysis and traditional tools. To identify and understand subcultures this study uses *appraisal* method to analyse comments in public Facebook discussions. It focuses on a contentious issue in Australian society, the culling of kangaroos. The findings are consistent with existing theories about wildlife attitudes and subcultures, suggesting credibility in the sample and findings. Two main groups were identified, referred to here as *Cullers*, who favour culling and reflect a more general attitude of human dominance over wildlife, and *Guardians*, who oppose culling and reflect a more general attitude of mutuality in rights and relations for humans and other species. The study supports previous research assertions that attitudes and values are integral to the development of subcultures. The appraisal method provided valuable insight into the complexity of attitudes within the two main groups. The analysis using attitudes helped to reveal economic, environmental, patriotic and rights influences on positions taken by subcultures, and suggests merit in future research using appraisal to identify and account for '*sub-subcultures*'.

Keywords: *Appraisal, kangaroos, coexistence, wildlife attitude, Facebook*

PEMUSNAH DAN PENJAGA: CABANG BUDAYA, SIKAP DAN PEMUSNAHAN KANGAROO

Abstrak

Pendekatan tradisional mengenalpasti dan mengklasifikasikan cabang budaya (seperti kelas dan demografi) adalah terhad dalam aplikasinya secara atas talian. Media sosial menyediakan begitu banyak sumber pemerhatian dalam cabang budaya, namun persembahan data yang tidak teratur dan asli sering menentang analisis sistematik dan peralatan tradisional. Untuk mengenalpasti dan memahami cabang budaya, kajian ini menggunakan metod *penilaian* untuk menganalisis komen dalam perbincangan Facebook awam. Ia terfokus pada isu yang sering menjadi perbalahan dalam masyarakat Australia iaitu penghapusan kangaroo. Dapatan kajian adalah konsisten dalam teori sedia ada mengenai sikap kehidupan liar dan cabang budaya yang menunjukkan krediblibiti dalam sampel dan dapatan kajian. Dua kumpulan utama dikenalpasti, di kenali sebagai pemusnah (cullers), yang cenderung pada pemusnahan dan menunjukkan sikap yang secara am nya dominasi manusia ke atas hidupan liar, dan penjaga (guardians) yang menentang pemusnahan dan menggambarkan sikap kesamaan dalam hak dan perhubungan manusia dan spesis lain. Kajian ini menyokong ketegasan kajian lepas bahawa sikap dan nilai adalah berseoadu kepada pembangunan cabang budaya. Metod penilaian menyediakan pandangan yang berharga dalam sikap yang kompleks antara kedua-dua kumpulan tersebut. Analisis yang menggunakan sikap membantu mendedahkan pengaruh

ekonomi, alam sekitar, patriotik dan hak dalam dalam kedudukan yang diambil oleh cabang budaya, dan mencadangkan merit dalam kajian akan datangdengan menggunakan *penilaian* untuk mengenalpasti dan mengakui *cabang budaya*.

Kata kunci: *Penilaian, kangaroo, kehidupan bersama, sikap hidupan liar, Facebook.*

INTRODUCTION

To the extent that social media are public, they present an abundance of data for formal, informal, amateur and professional research into human cultures and subcultures (Mehmet, 2014). The internet provided unprecedented opportunities for groups to connect and social media has transformed and enriched the ways that groups identify and communicate (Dahl, 2014). Social media communication allows for a mixture of content, spanning organisations' communication composed for strategic purposes, to whimsical user generated material, which expresses attitudes, and shares experiences and ideas (Mehmet, 2014). As material may be more prevalent in brand-specific contexts, scholars argue that natural language associated with user-generated material dominates the expression of attitudes in broader social media exchanges (Murphy et al., 2014; Toepfl & Piwoni, 2015). Scholars argue that there is a real need for frameworks that assess attitude, in order to identify sub-cultural groups (Murphy et al., 2014).

An important feature of social media is that it offers unlimited opportunity for people to express attitudes (Liu, 2012). This represents both an opportunity and a risk for those conducting operations in social media environments (Mehmet & Clarke, 2016). A shift in communication control represents another key factor that also needs to be reconciled (Dahl, 2014). Groups are free to navigate anywhere at any time, unrestricted by geographical spaces, or any other socio-cultural restriction (Mehmet, 2014). This freedom and the ability for users to control their movements in social media presents people with opportunity to find groups with whom they share values and attitudes.

These factors magnify the importance of effectively investigating, understanding and categorising expressions of attitudes (Murphy et al., 2014; Toepfl & Piwoni, 2015) and how those attitudes help form and maintain subcultures. People use attitudes as a frame with which to judge new information and ideas (Anilkumar & Joseph, 2012). Macnamara (2013) says succinctly that social media communicators have skill and technique deficiencies when

it comes to determining deeper understandings of attitudes in social media, and how those attitudes form and shape subculture spaces. Notions of subcultures are contested, class having been considered too simplistic, and underestimating other structural divisions, that potentially include values and attitudes (Cheung & Liu, 2015). Another key point that needs to be raised, is that users of social media can be part of multiple subcultures, in effect aligning themselves with which ever group matches their worldview (Cheung & Liu, 2015).

In this paper, 'subculture' refers to attitudinally aligned groups of people. The paper uses *appraisal*, a function method of attitude classification with social media comments to analyse attitudes, which are then thematised. The focus of the attitudes studied here is the culling of kangaroos. Like monkeys in Malaysia, the kangaroo is often regarded as pest (Boom et al, 2012) and their management is a contentious issue. The next section reviews conceptual frames from academic literature that have been used to describe and explain people's beliefs about wildlife and living with wildlife. These concepts provide a reference for analysing the social media attitudinal data.

RESEARCH BACKGROUND

The Internet can be viewed as an 'emergent social context with its own rules, resources, and risks (Debies-Carl, 2015, p. 24). With its immediacy and connectivity it provides subcultures with opportunities to assemble and strengthen, as well as access to everyone else online, including opponents and those with a different view. This interaction has the potential both to dilute the potency of sub-groups and to increase 'the chances of that social change, albeit a compromised change, will occur by providing a more accessible, public arena for groups to … disseminate their cultural challenge' (Debies-Carl, 2015, p. 24). Social media present often insurmountable challenges to achieving traditional and representative sampling frames, but the non-probability samples they afford can provide access to subpopulations (Murphy et al, 2014) who may or may not have been available to researchers using traditional methods. Murphy et al (2014) said that validating social media would require some interaction with those who post on social media, to 'learn more about their intentions, attitudes, and behaviors when producing content' (p793). This study did not seek to interact with comment posters, but rather to identify and gain insight into subgroups through their attitudes. Hunston (1993) said that the arguments that people offer – including people or choice of sources they offer as

evidence – 'will tell us what classes of people and things are deemed by a particular subculture to be responsible for judgements' (p106). She suggested that the dominant parameters of choice of source of argument 'concern the construction of knowledge and the construction of the community' (Hunston, 1993, p. 111). The aim of this study was not to profile subcultures using artefacts and other binding or relational features. Rather it was to use functional language resources to record and thematise judgements in attitudes expressed in social media concerning culling of kangaroos to identify 'subcultures', and use existing theory and evidence concerning human attitudes to wildlife as indicators of the validity of the social media data. The remainder of this section considers models and theories concerning human attitudes to non-human animals, especially the focus of the study, Australian kangaroos.

Plumwood (2003) said western culture has a deeply-entrenched 'mastery' view over animals, and described a 'human/nature dualism' where humans see themselves as inside culture but outside nature, and conceive 'non-humans as outside ethics and culture' (Plumwood, 2003, p. 3). She states that this dualism has been useful for western culture because it has enabled humans to 'exploit nature with less constraint' (p. 4), but that this has left humans facing challenges to better conceptualise humans as part of an ecology, and animals as deserving of ethical consideration (Plumwood, 2003). According to Plumwood (2003), ontological vegans reject as taboo the instrumental use of animals for food or furs or anything. Ecological animalists believe that humans and animals share a somewhat equal level of being, that we are all more than simply food, but they accept respectful use of animals, including some hunting and eating, while rejecting animal misery and cruelty in all forms (Plumwood, 2003). Manfredo et al. (2009) proposed a framework of categories of attitudes to wildlife that has repeatedly been used in survey and other studies in different countries of the world. They report two fundamentally different human ideologies relating to wildlife - 'dominance' where humans master and prioritise their own needs over wildlife, and 'mutualism', an attitude of greater mutuality in rights and relations for humans and other species.

Extending this point, recent studies of public attitudes to climate change suggest that different attitudes stem not from incomprehension of issues, as has often been claimed, but more from conflicts of interest among sub-cultural world views. People are likely to form

attitudes that are consistent with 'those held by others with whom they share close ties' (Kahan et al., 2012, p. 732). The connection between social groups and attitudes is important for those who seek to influence or understand attitudes because it is likely to mitigate the influence of rational or emotional persuaders that are not consistent with the interests of the social group. Thus it behoves a persuader or policy maker to better understand the interaction of sub-cultures and attitudes.

Important to note, wildlife values tend to be passed on through interest groups and significant childhood influences and experiences in both indigenous and western societies. For Australian Aboriginal people in their own country, the "wild" is actually the "tame and familiar" (Aslin and Bennett, 2000, p. 28). However, most Australians live in urban areas and many grow up with little experience of wildlife. According to Aslin & Bennett (2000) the fragmentation of western sub-cultures by demography, psychography and socio-economics complicates research on wildlife attitudes and values. They point out that European settlers in Australia judged unfamiliar Aboriginal people and indigenous animals as wild, and people and animals from Europe as friendly. However a new and dominant social attitude today refers to introduced species as 'exotic' and unwanted in the wild, and that which properly belongs in Australia as 'native' (Aslin and Bennett, 2000, p.28).

Discursive practices may contribute to cruel treatment and unnecessary killing of certain animals. Boom et al (2012) and Ben-Ami et al. (2014) have argued that labelling the native kangaroo as 'pest' since European settlement in Australia has led to considerable cruelty and mistreatment. Holm (2015) has described a deep and widespread contempt among New Zealanders for the introduced possum that manifests in cruelty and killing. The possum is believed to transmit bovine tuberculosis to cattle and deer. 'Pestilence is in the eye of the beholder. Cross the Tasman Sea, and you'll find possums in their native land, a rare species under national protection' (Gross, 2013). Holm refers to possums as '"anti-animal", animals that need to be destroyed, not protected in order to conserve nature' (Holm, 2015, p. 32). He argues that the contempt felt and acted out by non-indigenous New Zealander conservationists for the relatively environmentally insignificant possum distracts from and masks the reality that human settlement and predation is overwhelmingly the major cause of environmental destruction. Holm (2015) also discusses the concept of 'non-animals' – 'animals that have lost the right to live and thrive normally guaranteed by the logics of

environmentalism and conservationism and can therefore be curtailed, persecuted and even killed without repercussion or guilt' (2015, p. 38-39). Non-animals such as hedgehogs, squirrels and pigeons void their right to protection by being where they should not be. However Holm (2015) argues that hate is more intense and treatment much worse for anti-animals because their 'flourishing is understood in direct opposition to that of a correct and proper environmental arrangement – and is such that the animal needs to be utterly eradicated in order to return to a sense of purity and correctness' (2015, p. 39).

Culture and subculture attitudes to wildlife can be almost completely different. In stark contrast to New Zealand attitudes to possums, Wallach (2015) says that one of the most densely populated countries, India, in the main, values all life, and manages cohabitation with animals with kindness. She refers to an Indian acceptance of periodic inconvenience, or even tragedy, arising from the inevitable conflicts that occur when humans and non-human animals live so closely. When problems occur, she says, Indians typically say 'sometimes it happens'. Although far from perfect, '…India has some of the oldest known conservation and animal rights laws, and proves that it is possible for high human density to coexist with other species' (Wallach, 2015).

In Australia Kangaroos are a protected species, making it necessary to obtain a licence to kill them. Each year licences are approved for the killing of more than 1 million (Boom et al., 2013), and licensed killing constitutes the world's largest commercial kill of wild animals on land (Boronyak-Vasco & Perry, 2015). Mostly killed for their meat and fur, the annual value to Australia has recently been estimated at $88.8 million AUD ($63.1 USD), and 880 full time equivalent jobs (Boronyak-Vasco & Perry, 2015). When communicating about culling the kangaroo industry tend to emphasise the 'harvest' of an abundant resource, the control of pests, and shooter adherence to a strict concerning the requirement to kill instantly with a single shot to the head (Kelly, 2013). Some recent research has called for greater scrutiny of many aspects of the processes that lead to granting licences to cull kangaroos (Boom et al., 2013; Simmons, 2016). Kangaroos are not farmed and killed in sterile farm sheds or conditions, they are shot in the open and wild. Critics of culling processes have stressed cruelty to animals arising from the lack of enforcement and compliance with the provisions of the code in the remote sites where killing tends to take place (Ramp, 2013; Boom et al., 2013).

Research aim and question

The aim of this study is to identify subcultures using attitudes expressed in social media through a semantic lens. The research question is as follows:

What do comments expressed in social media tell us about subculture attitudes to culling of kangaroos?

This paper analyses social media comments to improve understanding of subculture expression of attitudes.

Methodology

Data collection

Researchers from universities, government and industry sectors are increasingly aware of the limits of public opinion research using traditional survey and interview methods (Blumberg and Luke, 2013), and that the explosion in popularity of social media has led to an abundance of publicly available data (Murphy et al, 2014). With appropriate resourcing, traditional questionnaire and experimental designs continue to be cornerstones in social research with sub-groups of the population (Ma'Alip, 2015; Hamid et al, 2016), but many researchers are attracted to learning about the world through social media. Although freely and often immediately available, the data is misshapen, natural and informal, unlike survey data, and presents a challenge to traditional coding techniques. Further, Yusof and Harun (2015) analysed categories of speech acts in Facebook and found that even single status posts were complex, including combinations of multiple categories of speech acts.

The dataset includes a range of attitudes towards kangaroos and culling on three public Facebook case discussions from different sources. Each included substantial levels of engagement from people with different views. Two focused on culling and exporting of Kangaroo meat:

- a post by *Greens MP Lee Rhiannon* (Table 1).
- a wildlife support group, *Voiceless: The animal protection institute* (Table 2).

The third source focused on a plan for culling kangaroos in Canberra, the Australian capital.

- Canberra Times (Table 3).

Case 1 received 1895 comments. Case 2 achieved 68 comments, with Case 3 achieving 36 comments.

The data was collected between March 3rd and April 30th 2015. Each comment was reviewed, classified to determine if it related to our research aim, and then analysed in accordance with appraisal detailed in the following section.

| Table 1: Lee Rhiannon Post | Table 2: Voiceless Post | Table 3: Canberra Times Post |

Appraisal method

Systemic functional linguistics has explored the notion of *mood* since the early 1980s (see Halliday, 1994; Eggins & Slade, 2005) and has developed a stratified approach to determine attitude through appraisal. It extends Halliday's (1978) metafunctional frame to simultaneously explore what is being discussed (experiential meaning), the producers of the text, who is doing the discussing, their role, the role of those central to the text (interpersonal meanings), and the medium used to express themselves (textual meaning).

Appraisal is understood as part of the interpersonal metafunction and attempts to reveal how a text's producers view the world, their feelings towards a particular issue, and

how a maker of a text constructs an ideal audience (Martin & White, 2005). Appraisal, as detailed in Figure 1, is constructed using three key elements, engagement, attitude and graduation. *Engagement* "deals with sourcing attitudes and the play of voices around opinions in discourse" (Martin & White, 2005, p. 35). *Graduation* attempts to grade particular phenomena based on feelings and emotions (Martin & White, 2005). *Attitude* "is concerned with our feelings, including emotional reactions, judgements of behaviour and evaluation of things" (Martin & White, 2005, p. 35). This study is only interested in attitude, which can be further segment into effect, judgement and appreciation.

Affect examines positive and negative stances: do we feel happy or sad, confident or anxious, interested or bored? (Martin & White, 2005, p.42). Affect is particularly interested in emotions, reaction to behaviours, texts and phenomena. *Judgement* deals with attitudes towards behaviour, which we admire or criticise, praise or condemn (Martin & White, 2005, p. 42). Judgement is interested in ethics, evaluating behaviours and focuses on the meanings "construing our attitudes to people and the way they behave – their character" (Martin & White, 2005, p. 52), basically how they measure up. *Appreciation* involves evaluations of semiotic and natural phenomena, according to the ways in which they are valued or not in a given field. (Martin & White, 2005, p. 43). Appreciation is concerned with aesthetics and natural phenomena.
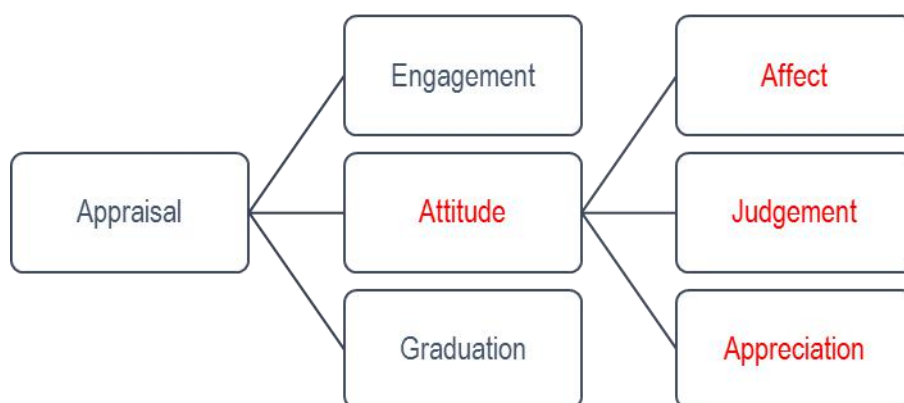
The study is particularly interested in identifying and analysing attitudes among various stakeholders with an interest in kangaroos.

Coding attitude and thematising subculture

The following is an example of the coding of a comment as attitude:

Comment (attitude): 'I **shake my head**, what is **wrong with this world**?'

Affect (emotion reacting to behaviour) and Judgement (ethics; evaluating behaviour)

Analysis: 'I **shake my head** (Affect), what is **wrong with this world**? (Judgement)'

Attitude: They are **lovely animals** to admire when walking to the bus stop.

Appreciation (aesthetics and natural appreciation)

Analysis: '**lovely animals**' (Appreciation)

Attitudes were then grouped into themes, which are discussed below as three main subcultures of attitude concerning the culling of kangaroos.

Research analysis

Even the simplest and most direct expression of attitude could involve a combination of values, influence and context. For example the following quote, "always about the mighty dollar isn't it. Makes me sick." (KS, Voiceless, 2015) suggests general opposition to prioritising profit over sentient life, and human dominance over animals. Attitudes may also be complicated by contradiction and equivocality. Attitudes expressed in a single post frequently included three or more complementary or conflicting influences. For example, a post published on the Canberra Times Facebook page opposes animal cruelty, favours culling and supports science, whilst expressing a deep appreciation for the aesthetics of Kangaroos.

> "*There's a lot of roos out in Umagong District Park which encompasses Ginninderra Creek in fact more than I have ever seen. They are lovely animals to admire when walking to the bus stop. I am against Animal Cruelty and I am a vegetarian but I am a strong supporter of science and if it's going to help the population, so be it.*" (J.P: Canberra Times, 2015)

The identity of the producer of the text was another aspect of context that emerged as an important stimulus for discussion and attitude. Table 4, summarises aspects considered pertinent to the producers of the texts under review.

Table 4: Facebook data sources and text producers

Subject:	Lee Rhiannon	Barnaby Joyce/Barry O'Sullivan	Voiceless	Canberra Times (Kirsten Lawson and Tom Macilory)
Role:	Federal Green Party Senator	Federal National Party Members	A non-profit advocate group in favour of	Media Journalist/reporters

			compassionate treatment of animals	
Position:	In favour of Kangaroo rights (explicitly expressed through opposition to cull/export industry)	Favours culling kangaroos for export (explicit) and land management.	Opposed to culling and exporting of Kangaroos (explicit)	Scientific justification for culling of Kangaroos in the ACT (explicit).
Text:	Facebook post (Image/text)	Voiceless's Facebook post: Originally a parliamentary debate (Language) and Lee Rhiannon Facebook Post	Facebook Post: Image/Text	Canberra Times Facebook page
Values:	Values scientific evidence supporting kangaroo conservation (explicit) Believes in kangaroo rights (implicit)	Values animals as economic resources (explicit).	Believe kangaroos have the right to be treated with respect and compassion (explicit)	Balanced reporting (implicit)

The strength of contextual influences was often evidenced by justification and emotions expressed through language, and arrangement of textual components of Facebook posts.

The next section reports the two main subcultures revealed by appraisal analysis, summarised as *Cullers*, and *Guardians*. It articulates different reasons offered for attitudes held and reports that there are many differences among these two main subcultures.

Cullers

This subculture communicated a variety of justifications for killing kangaroos. They tended to focus on uses of kangaroos and their by-products, or benefits arising from reducing kangaroo numbers, but clearly there were different foci reflecting sub-subcultures. Some said kangaroos are a micro and macro-economic resource to be exploited, a species that is over abundant and unsustainable in present numbers, a pest that needs to be eradicated, and a few focused on fun in killing. Many in favour of culling linked their support for killing to rurality and rural land. There were many claims to the effect that 'city' people had little understanding of the needs of rural people, often expressing anger at city-dwellers without direct reference to kangaroos. Cullers tended not to acknowledge mitigating factors that might raise questions about the decision to kill. They did not refer to kangaroos as sentient, familied, as desiring of their own self-preservation, as having rights to live, or as significant

to Indigenous people (Boom et al, 2012). Nor did they make reference to kangaroos being native (Aslin & Bennett, 2000).

Subcultures can be defined to a large extent by their attitudes, which can be discerned by the justifications and emphasis within their comments. This study found considerable evidence supporting Aslin and Bennet's (2000) reference to a fragmentation and proliferation of subcultures relating to wildlife beliefs. There is a sub-community of people who kill kangaroos, simply for the enjoyment of the killing;

"I don't kill them for profit. I kill them for fun ... there's a difference you know." (R.D: Lee Rhiannon, 2015).
[referring to cull shooters] "*how good of a job would this be*" (M.C: Canberra Times, 2015).

These attitudes evoke Holm's (2015) guiltless killing of animals that unbalance the proper order of the environment (anti-animal). They go beyond killing for economic or convenience reasons to killing for no reason, or perpetrating cruelty for enjoyment. The perception of kangaroos as pest remains strong (Boom et al, 2012), particularly in rural areas and among those speaking on behalf of rural people. Kangaroos were associated with several forms of harm, as causes of car crashes, and destroyers of crops and the natural environment. Many who referred to car crashes argued that human lives are more important than kangaroo lives, while some focused disgust on the cost of fixing cars damaged in collisions with kangaroos. There were more expressions of sympathy for human victims of crashes, but also some for kangaroos as victims, and some for humans who had to witness the suffering of kangaroo victims.

"*Tell that to the families of people killed on our roads by hitting roo's I say cull and eat, they taste good*" (D.T: Lee Rhiannon, 2015).

Culls were sometimes justified as being in the interests of kangaroos themselves. Culling was justified as a way of managing population numbers at levels that meant there would be enough food for all, and as a way of enhancing evolution.

"*...maybe not just kill every roo seen, maybe cull of the older bucks and females that don't have babies in the pouch and the sick looking so that the younger ones can grow and stop being so inbred*" (C.R: Canberra Times, 2015).

All over regional Australia there are road signs warning drivers to watch out for kangaroos on the road. Culling was frequently described as a way to protect kangaroos from suffering in car accidents.

"About time, way better than them being hit by a car causing an accident and then suffer on the side of the road" (N.S.P: Canberra Times, 2015).
"I rather they be culled than keep seeing them killed on the road and left to die slowly in pain" (J.K: Canberra Times, 2015).

Subgroups in favour of culling generally reflect beliefs in human mastery (Plumwood, 2003) and dominance (Manfredo et al., 2009) in relation to kangaroos. Attitudes of dominance were most strident among critics of Lee Rhiannon's call to "stop killing kangaroos for profit", who often argued in favour of culling for various economic reasons.

"*Guess they want us to import pet food from china instead of making it here.*" (K.B: Lee Rhiannon, 2015).

"*What a load of bullshit maybe they should get off their shiny arses and head bush for a look around. We have a natural resource here that is not being used because bone headed politicians would rather import hep A laced berri*es ..." (J.H: Lee Rhiannon, 2015).

"*These Greens will kill Farming and won't stop until they are all starving to death! Please everyone support rural industries'*" (K.C: Lee Rhiannon, 2015).

Some want them killed as pests that damage the profitability of farming, some because they cost drivers money when they collide with vehicles, some because they are a valuable food source for humans and their pets, and some because killing them provides work for those in the kangaroo industry.

Another group were strongly opposed to culls that waste the kangaroo resource. This conditional acceptance of killing is suggestive of ecological animalism (Plumwood, 2003), in expressing opposition to killing where the meat is not eaten, or the hides not used.

"I agree with the cull. There are too many.... What makes me angry is that the meat is wasted. I would never eat kangaroo meat, however many do. Could also be sold as dog food. Its just a waste." (S.E: Canberra Times, 2015).

"I hope that the meat will be butchered for consumption ... and the hide is also used" (J.W: Canberra Times, 2015).

The acceptance of culling and rejection of waste is a combination of values that rejects unnecessary taking of life, and may reflect a very common attitude to non-human animals. Economic justifications were also countered with attitudes of disgust at the notion of economics transcending the rights of animals.

"Barnaby is all about helping farmers make profits – at all cost including animal. This guy has no moral compass." (P.B: Voiceless FB, 2015).

"it's always just about the MONEY" (K.H.P: Voiceless FB, 2015).

These attitudes of disgust come from subcultures that values kangaroos differently. They reject profit as justification for killing. These expressions of disgust were often met with expressions of negative attitudes toward kangaroos and toward the people ('greenies') expressing sympathy for kangaroos. The cullers' comments exhibit a feature typical of many Australian attitudes towards kangaroo, that they ignore sentience and natural belonging to the land (Boom et al., 2012),

Guardians

The subculture labelled *Guardians* frequently positioned themselves as speakers for animals without a voice, and stridently opposed culling and exporting. This group tended to express frustration and exasperation with cullers and values that diminished the lives of wildlife, relative to human interests. Some were general expressions of disappointment with the humans and their attitudes to on-human animals:

"I shake my head, what is wrong with this world?" (D.D: Voiceless, 2015).
"They belong ALIVE here not dead there!!!" (C.K: Voiceless, 2015).

Others referred more specifically and angrily to human values and behaviours, most commonly money and profiting from the death of native animals.

"No animal is safe around mankind! Money is all people care about! These kangaroos will be farmed soon in horrible conditions/" (D.S: Voiceless, 2015).

"Humanity is sacrificed for financial gain." (S.H: Voiceless, 2015).
Different subcultures appropriate different aspects of 'science' to support their position. Opponents of culling questioned the legitimacy of 'scientific' claims made by

proponents of culling. Similar questions were raised about the science of interfering with wildlife in Canada (Dubois and Harshaw, 2013).

"There is NO evidence kangaroo numbers are out of control!!!!!!! Find an alternative to get money – not by using other lives." (G.C: Voiceless, 2015).

For both the *Culler* and *Guardian* subcultures there was also a patriotic dimension to their appeals. *Guardians* expressed an attitude that Australia has a special responsibility for animals native to Australia. There were many comments demanding protection of kangaroos and preservation of their place in the Australian ecosystem. Some also referred to the need to protect koalas, and sarcastically asked if koalas might be next to be culled for food.

"what's next koala burger!" (D.D: Voiceless, 2015).

"This like a bad joke. A new pitiful low. Where is the pride in our native Fauna? Where are the ethics and moral standards? Live Export not cruel enough? Factory Farms not horrific enough? No Moral compass what-so-ever." (T.B: Voiceless, 2015).

In the sample of comments analysed there was one statement expressing a clearly Indigenous Australian point of view (Aslin and Bennett, 2000).

"This new 'country' 'Australia' kills it's natural emblem...strange strange mob – we look after Our Country by hunting & eating them sensibly to sustain & keep all things in harmony – we must have a Wildlife (Kangaroo/native animal) Sanctuary..." (T.G.G: Canberra Times, 2015).

Some subcultures openly prioritised care and compassion for animals. They expressed disapproval of actions that cause harm or death, and their comments generally align with Manfredo et al. (2009) mutualism. Many indicated a general preference for the rights of kangaroos, indicating that culling for human convenience or advantage is immoral. Dubois and Harshaw (2013) said that causes, contexts and alternatives are important when judging the appropriateness of different approaches to wildlife management. In an interview study, the authors might have asked questions about attitudes in different circumstances. For example in the context of these discussions few *Guardians* indicated whether hunting for food or culling would ever be acceptable, so it is not clear whether these subgroups aligned more closely with ontological veganism or ecological animalism (Plumwood, 2003).

Discussion and conclusions

This study provides new insights into subcultures concerned about culling of kangaroos. The findings identified *Cullers* and *Guardians,* who exhibited attitudes reminiscent of Manfredo et al.'s, (2009) 'dominant' and 'mutual' descriptors, but importantly the study reports a large number of sub-subcultures within each of these two main subcultural groups. Plumwood's (2003) human/animal dualists, ecological animalists and ontological vegans provide further, useful distinction, but this project reports a further range of different positions and characteristics within each of the main subcultures.

In the absence of behavioural data, the study focused on attitude as defining characteristic of the subcultural groups. The *Culler* group broadly reflect belief in human mastery (Plumwood, 2003) and dominance over animals (Manfredo et al, 2009). With regard to kangaroos, the comments of the *Cullers* reveal subcultures that emphasise economics and minimisation of inconvenience to humans, as well as the promotion of the good of kangaroo species. There is likely to be overlap among these groups, but the attitudes are indicative of different subcultures. There was a salient subcultural group in favour of culling, but who strongly oppose waste of the meat and kangaroo by-products. This is consistent with Sharp (2013) who found that people were three times as likely to indicate some acceptance of killing kangaroos for commercial harvesting as for killing and leaving the carcass on the ground (Sharp, 2013), and, to an extent, Plumwood's (2003) notion of ecological animalists.

For some subcultures, any respect kangaroos might receive for their nativity is discounted by their abundance. The 'pest' label (Boom et al, 2012) trumps nativity, leading to attitudes suggestive of cruelty or mistreatment. Some *Cullers* also expressed attitudes to kangaroos consistent with Holm's (2015) notion of anti-animals. The findings here indicate that some subcultures take pleasure in killing kangaroos, while others kill without guilt (Holm, 2015). Because of their abundance, Kangaroos were understood to be in opposition to correct and proper environments, and in need of eradication. Native kangaroos, for some, are as undesirable and in need of eradication as imported possums are in New Zealand (Holm, 2015).

In contrast, *Guardians* asserted that Australians should do more to protect the rights of kangaroos as an indigenous species (as opposed to introduced species). Among the *Guardians* opposed to culling there were several identifiable subcultures emphasising

different positions. Some focused on the rights of kangaroos to live in a natural peace, while others focused on their disappointment with humans and authorities who encroach on and violate the natural habitats of kangaroos.

For those interested in broadening the scope of subculture identification and definition, appraisal shows promise as a tool for thematically grouping individuals into groups. Unlike an interview study, asynchronous social media analysis does not generally permit researchers to probe individuals on topics of special interest. But appraisal provides a window into the values of commenters, which often form the foundation for decision-making and behaviour and groups. The salient indicators and the close analysis of natural-language justifications for positions revealed reasoning and associations that allowed grouping to be semantically driven. Yusof and Harun (2015) reported that single status posts included multiple speech acts, this appraisal study did not examine speech acts per se, but it too identified complexity in single comments. Appraisal also revealed the impact of language used in a discussion, which identified the complex nature of attitude and subculture formations. These gave deeper insight into the strength with which an attitude and subgroup were bound. Finally, appraisal helped to identify words, phrases and language structures prominent with groups, and that connected group members.

Appraisal adds insight into complexity and contradictions within the two main groups, revealing various emphasis on economic, environmental, and rights positions, and points to future research using appraisal to identify and explore '*sub-subcultures*'. If explored through intertextuality this would assist in tracking the sources of influence, and provide even greater insight into ideological constructions that influence the formation and reshaping of subculture groups online and offline.

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