# Pets, touch, and COVID-19: health benefits from non-human touch through times of stress

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## Abstract

During times of social isolation, such as the global COVID-19 pandemic, the social distancing mantras that have been integral to COVID-19 responses position close human-to-human contact, including physical touch, as life threatening. Touch is commonly an overlooked sense, yet studies have shown that touch deprivation reduces survival rates of pre-term babies and contributes to stunted mental and emotional development in institutionalized orphaned humans. For people who experience less social contact, touch deprivation may impact on quality of life. This article explores the notion that human to non-human contact, such as that between animal guardians and their pets, may assist in promoting health and wellbeing when human contact is limited. Use is made of a qualitative research project interviewing people on the role of their pets in creating health. 90% of participants (n = 29/32) identified touch as core to this intersection. Inductive touch themes identified include comfort, relaxation and reciprocity, pointing to the impacts but also the mechanisms by which cross-species touch can create human wellbeing – a relational resource that may counter COVID-19 touch deprivation engendered by prohibition of human-human contact. With over half of the world's population having pets, these relationships may be one of our greatest health-promoting resources at this time.

## JEL Classification: H51; I1; I3

## **Keywords**

touch — pets — companion animals — COVID-19 — health

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# Background

Public health responses seeking to manage the COVID-19 pandemic have imposed isolation and demonized human-tohuman contact in entire societies almost instantly (Pascoe et al. 2020; Wilder-Smith & Freedman 2020). Social distancing, or more specifically physical distancing, has effectively removed human-to-human touch from many people's lives (Pascoe et al. 2020). However, public health initiatives demanding that people stay home unless engaging in or providing essential activities or services have increased the amount of time spent with non-human family members. Indeed, there has been a global emptying of animal shelters as people have chosen to adopt cats and dogs during lockdowns at unforeseen rates (Frost 2020; Pesce 2020; Thomas 2020). Breeders have also been inundated, with demand for new puppies quadrupling some waiting lists (Pesce 2020; Thomas 2020). This paper considers the role of touch in human lives; the evidence that touch is beneficial to human wellbeing, including slices of qualitative data from our research with pet owners illustrating how contact with non-human others impacts human lives; and concludes with implications for policy makers within the unprecedented times of COVID-19.

# Pets

Pets were big economic news prior to COVID-19. Globally, the amount of money being spent on the animals who share our domestic lives and spaces has been increasing steadily. It has been anticipated that the worldwide spend on pets could be over USD 269.9 billion by 2025 (Globenewswire, 2019). This reflects year-on-year increases in the amounts pet owners are spending on obtaining and maintaining their pets. For example, spending in Australia has risen from AUD 8 billion in 2013 (Animal Medicines Australia (AMA), 2013) to AUD 13 billion within six years (AMA, 2019). In the USA this increase is mirrored, with spending increasing from USD 55.72 billion (Transparency Market Research, 2020) to USD 95.7 billion (American Pet Products Association (APPA) 2020). From premiumization of food (Phillips-Donaldson, 2019) to increasing spending on vet care, doggy daycare and specialist training and nutrition (AMA, 2019), the amount spent on individual animals seems to be increasing (AMA, 2019). Pets are also increasingly and overtly seen as family members (McConnell, Lloyd & Humphrey, 2019) though the economic manner in which this plays out in individual households varies. For example, Schwarz, Troyer and Walker (2007) identified that different household shapes spend money differently on pets. There is also some evidence that pets are becoming coconsumers (Kylkilahti et al., 2016), with some people making economic choices, such as where and how to holiday, based on having pets (Blichfeldt & Sakacova, 2018).

The rush to adopt pets during COVID-19 lockdowns (Morrow, 2020; Shine, 2020) suggests that there may even be an unanticipated increase (i.e. ahead of aforementioned global projections) in the numbers and amount being spent on pets at this time. It is unclear, however, how long this phenomenon of empty shelters, and increased pet numbers will last, and animal welfare services are concerned that the lockdown rush may be matched by a wave of pets being relinquished as people return to work (Webb, 2020).

It has been estimated that over half of the global population share their lives with one or more pets (GfK, 2016). Millions of dogs, cats, fish, birds, reptiles and other species share our domestic spaces and lives (GfK, 2016; AMA, 2019). Pet owners are reportedly happier, healthier and even more likely to live longer (Mubanga et al., 2017). Owning a pet has been observed to reduce blood pressure, loneliness, anxiety, fearfulness and generally to contribute to improved wellbeing (Brooks et al, 2018; Hajek & König, 2019). Pets are emerging as particularly important in the health of some of the most vulnerable populations, such as people with chronic mental health conditions (Brooks et.al., 2018) or physical ill-health (Brooks et.al., 2013). There is also evidence of their health-creating benefits for older people (Gee & Mueller, 2019), children with major illness (Einberg et.al., 2016), and their health-creating impact can "ripple" through communities (Wood et al., 2007; Wood et al. 2017). In summary, pets seem to be particularly important when people are socially isolated or excluded, providing comfort, companionship, and a sense of self-worth. These human-animal relationships can soften the harsh edges of life, feeding resilience. In view of the research that increasingly reveals the impacts on life expectancy of loneliness and isolation (Holt-Lunstad et al., 2010), and our own reporting on how relationships with pets can protect some people from suicide (Young et al, 2020), pets are already emerging as not only being life enhancing, but at times life saving.

However, to date, little data exists regarding specific benefits that physical contact, touch, with pets may bring – a gap that in the COVID-19 era of "human: human touch = danger" is of particular merit.

## Touch

Skin is our largest organ, facilitating the sense we call touch. Avoiding physical contact and prescribing isolation are not unknown practices, often in response to serious medical conditions (Vottero & Rittenmeyer, 2012). Yet, touch is integral to human relating and relationships; from close intimate touch with those we love, to handshakes and air-kisses as formal greetings between strangers.

Touch is an understudied sense (Fulkerson, 2013), however, the evidence that exists indicates that touch is crucial for growth, development and health in humans and other mam-

mals (Barnett, 2005; Feldman, Rosenthanl & Eidelman, 2014; Field, 2014). Much of the research has focused on the importance of touch in infant development, particularly preterm babies where findings have shown that human touch improves both short- and long-term health outcomes (Barnett, 2005; Field, 1998). In fact, early work in the 1970s showed that pre-term babies who were held and cuddled, as opposed to just watered, fed and kept warm, had an increased survival rate of almost 50% (Field, 1998). Human beings are able to tell if touch is positive or negative (Hertenstein et al., 2009). Biochemically, positive touch helps in the release of positive hormones including dopamine, serotonin and oxytocin, all of which have a role to play in human mood and sense of wellbeing. Conversely, touch reduces the levels of cortisol in the body – cortisol being a key (negative feeling inducing) stress response within the body (Pascoe et al., 2020). Across various age groups, touch can decrease stress, anxiety and pain (Olson & Sneed, 1995; Field, 1998), and it is suggested that touch may be of particular importance for older people as other senses decline (Field, 2014). With public health measures of social distancing in response to COVID-19 positioning human-to-human touch as life threatening, this leads to questions of whether non-human touch could offer benefits similar to those noted above.

There is a lack of research exploring the nature of touch with pets on human lives and wellness. Here, we briefly present our qualitative research describing and thematically analyzing the impact of cross-species touch in the lives of 32 'older' people with their pets -a topic focus that has become dramatically and unexpectedly relevant in 2020. The findings emerged from a qualitative study exploring how older people identify and articulate the impact of their pets on their health. While our study focused on an older cohort, at this time when entire populations are being mandated to social distance and stay home (Wilder-Smith & Freedman, 2020), lifestyle differences between old and young are significantly reduced. Hence the ways in which pets may mitigate isolation and touch deprivation are more equitably spread across the population. Although, as explored in the discussion following, there are still relatively unique characteristics of some older lives (e.g. living in care accommodation) that policy makers need to address.

## **Our research**

Qualitative semi-structured interviews were undertaken with 32 pet owners aged 59 to 83 years; with a mean age 70 years. Participants were recruited via public calls on radio and snowball sampling, with purposeful sampling employed later into the recruitment process to ensure that both human and animal diversity was encompassed. Interviewees' pets reflected the patterns of pet ownership globally and in Australia (AMA, 2016; GfK, 2016) of dogs, cats, birds and reptiles (including one crocodile). The research was approved by the university human ethics committee and interviews lasted half to one hour with participants choosing the name they wanted used.

From a total of 32 interviewees, over 90% (29 people) spoke of touch in relation to their pets, mostly unprompted. This was across gender (19 females and 10 males) and the age range of the cohort. Two main themes relating to cross-species touch were identified: wellbeing and reciprocity; with three subthemes: comfort, relaxation and familiarity. Figure 1 provides a visual summary of the theming and sub theming process and analysis. Appendix A provides rich qualitative data from our interviewees. Below is a synopsis of the themes and their links to COVID-19. Our participants offer insights into the ways in which touch with other, intimately known, members of another species can foster wellbeing in the human members of these dyads. Understandings that in the COVID-19 era of limited physical contact are particularly resonant.

Figure 1. Theming process and analysis

# Wellbeing – comfort and relaxation

Participants frequently described touch-based interactions with their pets as being comforting or relaxing in a way that contributed to their overall wellbeing. For our participants, 'comfort' is the sense of being somehow cared for by another being. At times this reference was tied to a specific traumatic event, such as the death of a human family member or pet. For example, Anita noted how on the day that she had to put one of her pets down, her dog appeared both to provide and seek comfort, touching her, allowing Anita to cuddle her and staying physically close. For Jen, the trauma was a fall. While she was lying on the ground, her dog came and lay with her until she was able to get herself up.

Comfort as relief from mental or physical illness was another common topic among participants. Many referenced a seemingly innate ability of pets to just "know" when their human counterparts weren't feeling well, providing comfort via cuddles or pats, or even just sitting on them. Helen even alluded to the ability of her pets to reduce her chronic pain.

In addition to reporting on the comforting qualities physical interaction with pets can have, many participants noted the relaxing or calming effect these contacts provided. Dawn reported being able to "feel" herself relax while patting an animal; a kind of self-awareness of bodily relaxation. A key point made by several participants was that to create a relaxing touch experience, the animal needed to be the "right kind" of animal. Participants noted that this related to both individual personalities within a species, as well as traits between species. Many participants believed cats to be inherently more relaxing than dogs, with others stating that patting dogs can be relaxing (as long as they are the "right kind of dog"). Looking beyond our typical furry pets, Helen compared cats to fish and birds, believing cats to be particularly soothing, and conversely that the inability to cuddle a fish or bird reduces their capacity to relax. Touch with a companion animal can be relaxing, but it is not just about any animal. Species makes a difference for some people, and it can be that an individual animal particularly engenders such feelings. This leads into the next theme identified in our data as "Reciprocity".

# Reciprocity

While the previous theme focused on human wellbeing, core to the concept of touch was a notion of reciprocity. That is, animals may request or encourage their human to touch them, and they show signs of pleasure from this tactile interaction. Participants frequently reported perceiving their pets as 'demanding' touch-based interaction. They also described the perceived reciprocity of their pet, and the pet's enjoyment or dislike of touch-based interaction and how that then fed into their human experience. For our participants, the giving and receiving of touch and the visible joy that another being displays in response to their owner's touch was inherent to the pleasure of touch. A cross-species reciprocity and mutuality.

For Jill and Helen, this expression of mutuality is a "look" their pets give them, that says "I love you". In comparison, Jan's birds express their delight through "happy" sounds and by nibbling on his ear, and Jen's frilled-neck lizard closes his eyes contentedly. Others described mutuality as more forceful displays for attention, such as in Jan's case where her cat would jump onto her husband, tightly wrapping his paws around the husband's neck for a cuddle.

Echoing previous comments about what kinds of animals can bring comfort, people noted differences between animals that could be touched and would reciprocate touch. Harry the Sheep would run to greet Di when she got home but wasn't an animal she could pick up and cuddle. Although there may be a general perception that cats are not as engaged with humans as dogs, Frances identified her cats as more affectionate than her dogs, head-butting her for attention.

Again, people also noted individual personality differences within species. Helen discussed her cats and how reciprocal cross-species interest in touch can engender a stronger sense of connection with an individual animal, building greater rapport than a pet who does not wish to be as affectionate. This perceived animal enjoyment of human touch is often interpreted as love by their human owners and meshes them into the human networks of relationships. Pets become "family", which our participants described as their "pack". Through touch, animals become part of our pack (family); and perhaps we become part of theirs.

There was a small sub-theme of reciprocity that we termed "familiarity". Emotive response to touch from another species is not confined to what could be seen as mutual touch, but still centers around the notion of reciprocity and particularly animals choosing to engage with their humans. For Tom, who had large aviaries of native Australian birds, having an untamed creature (Tom refused to call his birds "pets") choosing to touch him was awe-inspiring and produced an enormous level of positive emotion for Tom. He repeated his phrase "they give me joy" multiple times throughout the interview. In a similar, though perhaps less emotive tone Bob reported somewhat proudly on how one of his many aviary birds would touch him, hopping onto his shoulder. For Bob and Tom, the choice made by an animal to physically engage with them was hugely pleasurable. Touch itself does not need to be reciprocal

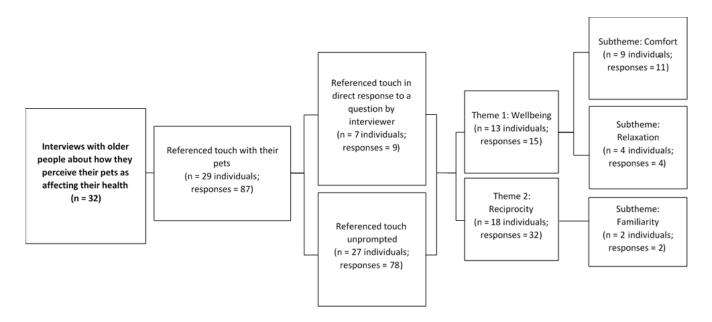


Figure 1. Theming process and analysis

to engender human pleasure – animals choosing to engage with us is a source of wonder, or as Tom insisted "joy".

# Discussion

For our participants, human-animal touch generated positive feelings of comfort, relaxation and a sense of cross-species reciprocity. Benefits that are not one way as animal responses to touch and initiation of touch indicate animals also positively benefitting. In our analysis to-date, touch is one of the most pervasive of themes we have identified. Touch emerges as integral to understandings of the concept of a pet for most participants, and meshes with that of reciprocity – the giving, receiving and mutual enjoyment of touch as presented here. This begins to give insights into the psycho-social mechanisms by which pets can impact on human wellbeing.

Understandings of reciprocated cross-species touch links to understandings of individual animal sentience. That is, animals, like people, are living, breathing others, with individual interests, styles and preferences. The looseness of describing what animal group or which individual animal "works" to create human wellbeing in this intimate touching way perhaps reflects the disjuncture between what have been largely academic understandings of individual animal sentience (Nottle & Young, 2019). While culturally animals are still generally seen as "not human" and somehow more homogenous than the human species, in fact our participants' discourses reveal the nature of individual personality, likes, dislikes and preferences of animals. Whilst species characteristics may have influence, presuming species homogeneity e.g. all dogs like to be walked (Nottle & Young, 2019) is erroneous. Discovering the uniqueness of the animals that share our domestic lives is part of the richness that makes having pets important for wellbeing. The fact that a diversity of species was identified

(cats, dogs, birds even reptiles) as engaging in these reciprocal touching engagements means that in principle a pet could be any species that displays interest in relating to and specifically engaging in reciprocated touch. Good news for allergy sufferers.

Reciprocity is core to understandings of human friendship (Barclay, 2013). Akin to human friendship, pet-human relationships are freely chosen by humans. The "right kind" of pet seems to be an animal that, like "true friends" (Ohtsubo et al., 2014) in human-human relationships, shows us attention (Dunbar & Shultz, 2010) and provides us with timely emotional support (Ohtsubo et al., 2014). These characteristics of friendship are also noted in the discourses of our participants across species, and regarding human-animal touch.

The importance of touch for older people has not been well-investigated. Previously, the two dominant assemblages of touch that relate to ageing were sexualized and clinical (Field, 2014; Olson & Sneed, 1995). Cases of sexual assault in aged care facilities internationally exemplify this assemblage of touch and connect directly to the other commonly understood assemblage regarding touch and aging (Field, 2014). Clinical touch is frequently invasive and highly personal. In order to manage the risk of such touch transforming into sexualized touch, precautions that include both physical (e.g. gloves, gowns) and emotional barriers (e.g. dispassion) are often engaged (Olson & Sneed, 1995). Our participants, however, identified a third model of touch; that of companionable, caring, and comforting touch - the kind of touch that comes from lovers, close friends and companions. The hug to say "hello my special friend", squashed up into a too-small sofa with friends for a pizza-and-movies night in; companionable passing touches of couples. This is the space where our participants' human-animal touching engagements exists. Touch that

is life-enhancing. In the era of COVID-19, the mantra of "social distancing" – prescribing a society wide sub-assemblage of the clinical, risk-infused understanding of touch – cuddly, comforting touch with pets may be the only companionable touch possible for many.

Our research provides some preliminary but positive responses to the concerns raised by Van Bavel et al. (2020) regarding the negative impacts of social isolation and needs for intimate relationships in the time of COVID-19 - in particular, concerns regarding social isolation and intimacy. We concur that the experiences of COVID, including sudden lockdowns and broad societal upheaval, job losses and sudden impoverishment can all be seen as traumatic experiences for people. Trauma characteristically exacerbates existing negative human experiences such as pain (Nicol et al., 2016; McBeth et al., 2007), hence suggestions that pets may be able to help to ease bodily and psychic ills is important. Concerns have been expressed that people with chronic health conditions (including mental health) may have these conditions exacerbated during COVID-19 as they avoid health services and/or have their conditions intensify due to stress (Torjesen, 2020; Webster, 2020). However, the presence of pets may be a moderating factor that needs to be recognized and (foreshadowing a policy suggestion) signals that ensuring that people are able to adequately care for their pets merits public funding and support.

As Van Bavel et al. (2020) note, social distancing as a policy clashes with human beings' innate needs to connect with others. Social connectedness assists people to cope with stressful times, yet COVID-19 threats and interventions to keep people mortally safe require physical isolation. While emotional and social engagement may still be possible and can be facilitated through the wonders of the internet and online engagements, for many individuals physical contact with other humans is crucial to connectedness (V, 2020). Our research participants point to the manner in which pets may be bridging the physical intimacy and connection gap for many people at this time. The shelter-clearing masses may not have articulated this action as being about substituting humanhuman contact during COVID, but the research on touch, human bio-physiology and the descriptions of our participants suggest that they may well be interpreting the concept of "pet" as touch-related too. That they, like the multitudes of humans before them, are enacting some primeval urge to find comfort, relaxation and pleasure though human-animal friendships and engagements (Serpell, 2006). During COVID-19, pets offer cross-species contact alternatives that our participants show can occur across a diverse array of species, not just mammals, but in our cohort birds and reptiles too. This indicates that for people with allergies or unusual species interests, the potential for these pets to also be helpful in reducing touch deprivation stress in the COVID-19 era is possible.

# **Policy implications**

Our explorations have implications for policy makers – specifically in the COVID-19 era, but also to enhance opportunities for continued human to non-human touch beyond the current pandemic.

#### Pets and Healthcare

Facilitating pet connections, be this visits, sleep overs, or even pet support programs for patients in health care settings such as hospitals, hospices, and aged care, is indicated. Recognizing and incorporating the benefits of close human-animal relationships in these settings has implications for both clinical care outcomes and quality of life experiences. Clinical health care responses are enhanced when the emotional needs of patients are responded to (Burres et al., 2016; Chen et al., 2015). Systematic inclusion of animal-assisted support projects in acute and high-level care is still a novelty, rather than a recognized and embedded wellbeing facilitator in acute and high-level care settings (Machova et al., 2019; Freedman, Parmova & Senior, 2020). Yet the role of touch in facilitating their wellbeing and mental health in our participants is clear. Developing managed systems that position emotional connections (including pet contact) as part of good clinical health care responses, both now and into the future, are well indicated for improving quality of life outcomes for patients, and the staff caring for them (Uglow, 2019).

#### Pets in Aged Care

Developing systems that facilitate pets in aged settings specifically is needed. A recent systematic review focusing on the role of pets in the lives of older people mirrored many of the same positive health findings as in other vulnerable groups (Gee & Mueller, 2019). However, pet ownership is more likely to decline with age. For example, while over 60% of Australian households have a pet, barely 40% of those over seventy do (AMA, 2019). While some of this difference is due to positive choices regarding convenience and competing demands (Chur-Hansen, Winefield & Beckwith, 2008) other research has revealed that some older people relinquish pet keeping quite early on in ageing (Bridgman, 2014) for fear of what will happen to an animal should something happen to them. And they are right. Retirement villages and residential aged facilities rarely accommodate people's pets. Only one article exploring the impacts of older people being able to have a personal pet when living in an aged care home has been identified (Freedman, Parmova & Senior, 2020) reflecting that this is a rare occurrence and that residential aged care is yet to recognize human-animal relationships as integral to many people's lives. Visiting animals may be healthful, happy entertainment for some people, but they are not pets. Pets are unique reciprocal relationships that occur across species boundaries. Had more pets been living with their owners in aged care when COVID-19 restrictions were applied, a healthcreating resource for their owners and other residents would have been in-situ.

### Pets in Society – including protecting pets

Increasingly, research is demonstrating that loneliness has significant impacts on mental health (Beutel et al., 2017) including mortality (Stickey & Koyanagi., 2016). The risk of loneliness and poor mental health from the isolation, quarantine and social distancing measures imposed as part of the worldwide community containment response to COVID-19 were reported on rapidly (Sharma, Maheshwari & Bronsther, 2020; Wilder-Smith & Freedman, 2020). For those already experiencing loneliness, the isolating measures during COVID-19 had a disproportional impact (Armitage & Nellus, 2020). Public policies that reduce or remove restrictions on pet ownership in various forms of accommodation would enable more people who benefit from pet companionship to do so. This includes renters (McKee, 2019) and older people who are often denied pet ownership by a range of retirement accommodation. Systemic policy thinking is required in this regard. Hence policies to support pet owners' use of public transport in tandem with accommodation policy changes are important so that car-less owners are able to take their pets to services such as vets, dog parks, and just to visit friends. These policies also need to include considerations of animal needs and other (non-pet-loving) humans so that the best interests of all species are kept in view.

Some authors (Van Bavel et al., 2020) have discussed the negative impact of COVID-19 on intimate relationships. Exacerbations and increases in the rates of family and domestic violence have already been noted during COVID-19 (Bradbury-Jones & Isham, 2020), and there is a dark side to the topic of pets in this regard as well, with indicators of pet abuse and abandonment increases due to COVID-19 being flagged by some researchers (Fraser, Riggs & Taylor, 2020). It is important to note this bidirectionality, as policies that encourage and enable pet ownership at this time need to also increase vigilance to animal companions. While there is evidence emerging that pets have been a major support to many owners during COVID-19 (the internet is full of happy, homeworking pet owners posting their pet work colleague photos online) looking to the future there is a need to investigate the potentially dark side of cross-species relationships in the pandemic to identify the kinds of risks that pets may face at these times, and to include pet protection measures in future pandemic plans.

#### Pets and Income Support

Finally, pet support should be considered as part of income support systems. The role pets play in keeping people healthy is emerging evermore strongly. In Australia, the introduction of funds to support wildlife rescue and care post the 2019/20 bushfire season (Elsworthy, Rubbo & Wellauer, 2020), and in COVID-19 to support zoos, wildlife parks (Macmillan, 2020) and some animal rescues has occurred without comment. This suggests public, animal-inclusive responses are becoming normalised (May et al., 2009). That is, funding to support animal welfare and care has become incorporated into public

perceptions of expected government support.

This leads to two recommendations – firstly, encouragement of human-wild animal engagements during COVID. Enabling wildlife parks and zoos to reopen as rapidly and as safely as possible, and supporting their role in caring for the animals housed there through public funds maintains a healthcreating human-animal resource for many people. Whale and bird watching (Curtin, 2009), dolphin encounters (Yerbury & Boyd, 2018), and zoo tourism (Frost, 2010; Roe, McConney, & Mansfield, 2014) have all been shown to have positive emotional impacts on human beings. Indicating that the public funding of animals noted above has implications for not only animals but also human wellbeing.

Secondly, Donaldson and Kymlicka (2011) have argued for animal citizenship especially for the animals that we choose to incorporate into our human societies. Having no choice in living with us, but providing humans with companionship, joy and reciprocal love, the interests and rights of these animals should be enshrined and incorporated into citizenship frameworks that their human companions live within – including the right to have their needs met through our collective commonwealth.

# Conclusion

COVID-19 has dramatically altered our interactions with other humans, yet one of the most abiding and globalized of human behaviors – sharing our lives with non-human others – continues at this time. Now is the time to grasp the value of cross-species relationships we call pets and develop policies that recognize and include them in the fabric of law and policies that frame the societies we share with them.

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