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## The Difference is in the Details: Attachment and Cross-Species Parenting in the United States and India

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## **The difference is in the details: Attachment and cross-species parenting in the United States and India**

No potential competing interest was reported by the authors.

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### **Abstract**

The purpose of the current research was to explore changes in Indian attitudes and practices with pet dogs and cats and compare them to responses from the United States. Pet parenting, defined as the investment of money, emotion, and time in companion animals, is a form of alloparental care (care given by someone other than the offspring's biological parents). Pet parenting appears to emerge in cultures that 1) demonstrate high rates of urbanization, 2) have declining total fertility rates (TFR, average births per

woman), and 3) support life orientations beyond reproduction (collectively called the Second Demographic Transition [SDT]). A total of 1417 respondents (US,  $n = 991$ ; India,  $n = 426$ ) completed online surveys (one in each country) to compare demographic profiles, attachment as measured by the Lexington Attachment to Pets Scale (LAPS), and companion animal caretaking behaviors in each culture. Mann-Whitney U Tests compared Indian and United States populations on the LAPS and caretaking behaviors (titled CARES in our study). Our findings document the emergence of pet parenting in India with many similarities to the United States. However, cultural variations in how these societies engage with nonhuman animals result in nuanced differences. For example, when reporting terms used to refer to themselves (e.g., Mom/Dad, friend, owner) and their companion animals (e.g., kids, pet, animal), United States respondents were more likely to code switch to less familial terms when speaking to coworkers and strangers. Additionally, Indian respondents reported higher agreement with all three LAPS scales, and they also reported higher frequency of behaviors related to *Affective Responsiveness* and *General Care*. Both cultures reported a moderately high frequency of *Training and Play*, with the United States respondents reporting slightly more training than Indians. These differences suggest that philosophical disparities exist between the United States and India, shaping the practice of pet parenting. We suggest continued, cross-cultural investigation of changing norms surrounding companion animals and the emergence of pet parenting.

*Keywords:* pet parenting, companion animals, cross-cultural research, attachment, caretaking behavior, human-animal interaction

## Introduction

The phrase “pet parenting,” is defined as the investment of time, emotion, and money in the needs of, and relationship with, a companion animal in the home (Volsche, 2018). As a form of alloparenting (care given by those other than the biological parents), pet parents invest in the direct and indirect care of companion animals in ways that mirror human care of biological offspring (see Volsche, 2018a). Research on this emergent practice has increased in the past decade (see Laurent-Simpson, 2017; Stoeckel et al., 2014; Volsche, 2018b; Volsche & Gray, 2016), and demonstrates that it is becoming increasingly common.

Few comparisons between parents and individuals without children exist when discussing the practice of pet parenting. However, it is noted that an increase in affiliative behaviors toward and increased investment in companion animals appears to occur in cultures demonstrating high rates of urbanization and declining total fertility rates (TFR, a measurement of the average number of children a woman will give birth to in her lifetime). For example, the practice of pet parenting has been studied in the United States (Laurent-Simpson, 2017; Volsche, 2018b), Australia (Power, 2008), the United Kingdom (Finka et al., 2019), the Netherlands (Van Herwijnen et al., 2018), and other culturally similar countries where declining fertility is documented (Murray et al., 2018).

Interestingly, much of this work either focuses on the comparative between dogs and children or neglects to ask about the presence of children in the home altogether.

The American Pet Products Association (APPA, 2021) reported increased spending on pets in the United States, with a near tripling of spending since 2000. In 2020, Americans spent \$103.6 billion, with much of that money spent on veterinary care, training and other services, treats, toys, and food on the 69 million dogs and 45.3 million cats currently living in United States homes. This comprises approximately 67% of the population. In India, Business Today (2021) reports that pet keeping is the fastest growing market sector, attributing the arrival of luxury pet hotels, retail outlets, pet boutiques, and groomers to rapid urbanization and couples with disposable income. While pet keeping in India is a relatively new phenomenon, Statista (2021a) reports a steady increase in the number of homes living with dogs (from 4.5% in 2014 to 6% in 2018) and cats (from 0.4% in 2014 to 0.5% in 2018). This increase also sparked a two-fold increase in spending on companion animals.

Lesthaeghe (2014) notes specific societal changes that signal when cultures have entered a Second Demographic Transition (SDT). Relevant to the study of pet parenting are subreplacement fertility levels; an increased focus on “higher order” needs as defined by Maslow (1947); increases in female education and economic autonomy; and most importantly, flexible life-course orientations that promote foci beyond sexual reproduction. Combined, these changes provide a demographic foundation for the phenomenon of investing in companion animals rather than children as described by Volsche (2018b, 2019) and Laurent-Simpson (2017). If this connection is true in other

countries, we would expect to see the practice of pet parenting emerge in cultures experiencing the SDT.

In 2018, the World Bank reported India's TFR at 2.2, a more than 1-point decrease in two decades (3.45 in 1998, World Bank, 2021). Ghosh (2016) connected Kolkata's extremely low TFR (1.2) to the second demographic transition (SDT), and it is well known that India is rapidly urbanizing (as initially observed by Goode, 1970). If pet parenting is a product of urbanization and reduced fertility, we should expect to see the emergence of pet parenting in India, particularly in urban areas with low TFRs, and perhaps even among individuals who do not have children, either by choice or circumstance. Ghosh (2016) also reports some findings peculiar to the population in Kolkata, related to the SDT, where the low fertility rates seemed at odds with a sense of persistence of family and child related value systems. Leading to an assumption that the SDT as described from western populations, may not apply in the same way to the population of India. This suggests that the observation of low fertility rates, although indicative of SDT in western and perhaps even some Indian populations, may result in subtle differences in our data from the two sites.

When exploring pet parenting in India, the issue is further confounded by a lack of attention given to changing sociocultural norms, perhaps due to outdated, reductionist understandings of India's relationships with nonhuman animals. For example, much of the literature on domestic dogs in India focuses on free-ranging dog behavior (e.g., Paul et al., 2014; Sarkar et al., 2019), dogs as an invasive species (Home et al., 2018), and

dogs in disease transmission (e.g., Markandya et al., 2008; Menezes, 2008), priming the scholarly perspective to view Indians as being at odds with domestic dogs. However, in 2019, Volsche and colleagues found that young, college-going students in Bangalore, India, reported having or wanting a dog in the home. This included the use of affiliative terms (family, companion) for their animal wards and a growing interest in rescuing from the local free-ranging populations as opposed to buying a purebred dog. Sinha and Kumar (2004) address the need for methodologies that better appreciate the complexity of Indian culture, in this case demanding a more nuanced understanding of the human-animal bond in India.

In addition to the above mentioned socioanthropological aspects that may contribute to the establishment of pet parenting, there is much literature on the nature and development of the human animal bond and the factors that drive inter-species closeness. According to Wilson's (1984) Biophilia hypothesis, humans have an innate tendency to affiliate with other species due to coevolution (Borgi & Cirulli, 2016). The concept of attachment, originally introduced by Bowlby and Ainsworth (1991) considered the human parent and child relationship as a framework. Later Bartholomew and Horowitz (1991), argued that this theory could be applied to any relationship that fulfills the following four criteria: 1) proximity maintenance (e.g. preferring to be near an attachment figure during times of need or stress); 2) safe heaven (e.g., using the attachment figure as a source of relief and comfort); 3) secure base (e.g., increased sense of security around the attachment figure so as to allow exploration and self-development); and 4) separation distress (e.g., experiencing extreme stress and anxiety in the absence of the attachment figure).

Pet attachment theory draws directly from Bowlby's definition of attachment as "a lasting tie between people such that the individual strives to maintain closeness to the object of attachment and acts to ensure the relationship continues" (Bowlby, 1969, p. 17). Studies suggest that individuals are often found to have favorable attitudes towards animals that are physically, behaviorally, or cognitively like them. Neoteny, the retention of juvenile traits into adulthood, is a common feature across many companion animals (Borgi & Cirulli, 2016) and likely potentiates social engagement and caregiving behaviors, contributing to anthropomorphism. Thus, human-animal attachment has been conceptualized as the emotional bond felt and expressed between a companion animal and their guardian (Budge et al., 1998). This construct emerged based on increasing popularity of companion animals in households and the multidimensional role that they play. Companion animals provide security and meet a person's emotional needs, much like a child or a parent; hence, pet attachment theory encompasses a degree of emotional bond, physical proximity, and caretaking (Quinn, 2005). Likewise, dogs (Solomon et al., 2019) and cats (Vitale, et al., 2019) both display attachment behavior around humans possibly explaining why these species are the most likely to be parented by humans.

The purpose of the current research was to explore changes in urban Indian attitudes and practices with pet dogs and cats and compare them to responses from the United States. Personal observations led us to believe that urban Indians are increasingly invested in the practice of pet parenting, rapidly becoming like their counterparts in the United States. This includes rising rates of attachment and investment in the care of their companion



animals. Our questions were: 1) what are the similarities and differences between the United States and India regarding pet attachment and caregiving behaviors, and 2) how do different cultural norms shape the spaces in which the two populations are different?

## **Methods**

We launched parallel, online surveys using Qualtrics (United States) and Google Forms (India). All respondents confirmed they were at least 18 years of age, living in the respective country in which they were completing the survey, and living with at least one companion animal. Data collection occurred during the summer and fall of 2020.

Recruitment took place via the investigators' social media accounts, using snowball sampling and sharing/retweeting. Posts included the opportunity to complete a survey, identifying the survey as part of a university sponsored research project, and a tagline of "Help us understand owner-pet relationships!" Participants accessed the survey anonymously, indicated informed consent prior to beginning the survey, and received no compensation. The survey was approved by the Institutional Review Board at Boise State University (IRB Protocol # 041-SB19-272) and CHRIST (Deemed to be University).

### *Survey Design*

While it is increasingly common to refer to companion animals with non-ownership language, the word "pet" was used in the survey to refer to companion animals. This is in keeping with the cultural norms of the United States when designing the initial survey, to

elicit the most “natural” responses from our respondents. It was determined that, for the public, “companion animal” would have required more explanation in the survey than “pet.” However, we acknowledge this continues to be an academic discourse worthy of sharing with and educating the guardians moving forward. Likewise, we realize this may pose a limitation for cross-cultural comparisons. Additionally, the survey was available in English only, as we determined that most Indians living in urban centers and using social media speak English as a first or second language (87.6% of urban Indians; Statista, 2021b). This made for more convenience in analysis and distribution.

The survey consisted of demographic questions (e.g., age group, gender, relationship status, education), including questions about companion animals in the home currently and in the past. Some of these questions specifically asked about language guardians use when referring to their companion animal (e.g., “When talking to close friends and relatives about your relationship with your pet(s), how do you most frequently refer to yourself?”). Responses to these questions included “owner,” “parent (Mom/Dad),” “guardian,” “friend,” and “caretaker” for the human side of the relationship and “animal (dog/cat),” “pet,” “kids/children,” “girls/boys,” “friend,” “roommate,” and “family member” for the animal side of the relationship. The choice of “other (please explain)” was also given for additional, personalized feedback when respondents felt it was appropriate. Additional questions probed the presence of children in the home, species and number of companion animals, and general husbandry and care (e.g., sleeping location, feeding).

To measure respondents' attachment to their companion animals, we used the Lexington Attachment to Pet Scale (LAPS, Johnson et al., 1992). This is one of the most used and frequently validated instruments for measuring human to companion animal attachment, including cross-cultural and translational validation (see González Ramírez et al., 2014 for an example). As such, it seemed most appropriate for a cultural comparative such as ours. The LAPS consists of 23 items that can be broken down into three subscales (*General Attachment*, *People Substituting*, and *Animal Welfare/Rights*). *General Attachment* measures affective tie respondents feel toward their pet and includes statements such as "My pet means more to me than *any* of my friends." *People Substituting* indicates the centrality of a pet within respondents' lives, measured by statements such as "I often talk to other people about my pet." *Animal Welfare/Rights* measures the extent to which a pet is incorporated into the household, including statements such as "Pets deserve as much respect as humans do." We used a 4-point, forced choice Likert scale ranging from "1 = strongly agree" to "4 = strongly disagree."

We created a series of 5-point, Likert-scale statements about the frequency of care behaviors (herein referred to as CARES). The CARES was designed loosely around the concepts of human parenting, with direct (e.g., bathing, grooming, feeding) and indirect care (e.g., providing social guidance and financial support) (see Hrdy, 2009; Kleiman & Malcolm, 1981) and initially contained 25 items, reduced to 23 items after analysis. The goal was to measure behaviors that mirror human parenting practices, but in a companion animal-specific way. Statements included "I am the person who feeds my pet;" "I engage in rough and tumble play with my pet;" and "If my pet needs to go to the veterinarian, I

am the person who takes them.” Some of these statements also probe the level to which guardians negotiate their relationships with companion animals (e.g., “I allow my pet to make decisions when on walks or playing”) and how much they consider their companion animals in financial decision making (e.g., “I consider my pet when paying bills/making a budget”). Options ranged from “1 = never” to “5 = always.” Table 3 contains a full list of the final items in the CARES.

Finally, two open-ended questions gave respondents the opportunity to provide additional information about their relationships with companion animals in the home and shared caretaking duties. These included “If you are living with someone else and share pet care duties, please provide a brief description of how duties are divided” and “Is there anything else about your relationship with your pet(s) you feel we should know?” In the United States survey, respondents were also provided the option to submit their email address for potential contact in a future, interview-based project.

### *Analysis*

Upon completion of data curation, both surveys were exported to Microsoft Excel for cleaning and coding, then imported to SPSS V26. In addition to descriptive statistics of the demographic questions, principal components analyses were completed on the CARES items, and Mann-Whitney tests were used to compare the United States and India samples on the LAPS and CARES.

## Results

### *Participants*

A total of 1417 respondents completed the survey (U.S.,  $n = 991$ ; India,  $n = 426$ ). As is common in human-animal interaction research, the sample is sex biased toward females (see Herzog, 2007 for a discussion). Overall, 1148 females, 265 males, and 4 other/no answer respondents completed the survey, though it is worth noting that the proportion of males from India (29.6% of total India sample) was higher than the U.S. proportion of males (14.0%). This distribution does not change much when considering gender identity rather than biological sex (cis-male,  $n = 258$ , 18.2%; cis-female,  $n = 1067$ , 75.3%), though we did have respondents identify as trans-male (FtM, 0.4%), trans-female (MtF, 0.1%), queer (0.8%), non-binary (1.0%), and other (0.4%), while a full 3.9% of the sample opted not to answer this question. Likewise, most of the sample identified as heterosexual ( $n = 1190$ , 84.0%). Overall, the Indian sample was younger ( $\chi^2 = 198.487$ ,  $df = 5$ ,  $\phi = 0.374$ ,  $p = 0.001$ ), more educated ( $\chi^2 = 122.498$ ,  $df = 6$ ,  $\phi = 0.294$ ,  $p = 0.001$ ), and more likely to be single or in a newer relationship ( $\chi^2 = 112.949$ ,  $df = 7$ ,  $\phi = 0.282$ ,  $p = 0.001$ ). Interestingly, the distribution of those who have or want children and those who do not is not significantly different.

Educational attainment was adjusted for similarity in degree rather than years in school. This was done to account for differences in compulsory education norms between the two countries. Despite this, most of our respondents in both countries had completed some

form of higher education including bachelor's degrees (39.0% - U.S.,  $n = 392$ ; India,  $n = 161$ ), master's degrees (30.8% - U.S.,  $n = 267$ ; India,  $n = 169$ ), and doctoral or professional degrees (13.5% - U.S.,  $n = 106$ ; India,  $n = 85$ ).

Some key, demographic differences between the two samples begin to emerge when viewing relationship status and the presence/role of children in one's life. Most of the U.S. sample reported being "married/in a domestic partnership for more than one year" ( $n = 551$ , 55.6%) while much less of the India sample reported the same ( $n = 131$ , 30.8%). This is reflected in the proportion of each sample who were reportedly "single, but not looking" (U.S.,  $n = 131$ , 13.2%; India,  $n = 118$ , 27.7%). The two samples were roughly equal across other relationship categories.

Respondents were asked to report on their relationships with children, including the presence of children (biological, foster, or stepchildren), intentions of future parenthood (e.g., "I want children, but do not have them at this time" vs. "I do not want children, now or in the future"), and potential roles as alloparents including teaching or helping care for siblings' children. Ultimately, these responses were reduced to three categories depending on the clarity of having or wanting children ("have/want children"); not having or wanting children or identifying as "childfree" ("no children/childfree"); or ambiguity about having or wanting children, but currently engaging in caretaking through career or extended family ("alloparents"). Most of our sample (62.5%) have/want children, with slightly more U.S. respondents ( $n = 663$ , 66.9%) aligning with this choice than India respondents ( $n = 223$ , 52.3%). Nearly identical proportions of U.S. and India

respondents reported being childfree or otherwise not wanting children (U.S.,  $n = 279$ , 28.2%; India,  $n = 110$ , 25.8%), while more India respondents identified as alloparents ( $n = 50$ , 11.7%) than U.S. respondents ( $n = 39$ , 3.9%). See Table 1 for a full report of sample demographics.

\*\* Insert table 1 about here \*\*

### *Relationships with Companion Animals*

Most of our sample was raised with dogs in the home ( $n = 1104$ , 78.1%), though this was slightly more common among U.S. respondents (83.8%) compared to India respondents (64.8%). This changes dramatically when considering the presence of cats. While 59.40% of the U.S. sample were raised with cats, only 24.9% of the India respondents had cats in the home while growing up. These comparisons continue to hold when asking about the presence of dogs and cats in respondents' homes, now, with 84.3% of the total sample living with dogs and only 36.3% of the total sample living with cats (U.S., 40.4%; India, 26.8%).

Questions probing the guardian's language used when discussing their relationships with companion animals were compared using a chi-squared test of independence. When talking to close friends and relatives, most of our sample ( $n = 884$ , 62.4%) reported using "parent (Mom/Dad)" with U.S. respondents ( $n = 638$ , 64.4%) reporting slightly higher than India respondents ( $n = 246$ , 57.7%). Interestingly, when not using "parent," U.S.

respondents were more likely to use “owner” ( $n = 241, 24.3\%$ ) while India respondents were more likely to use “friend” ( $n = 53, 12.4\%$ ). When asking about words used to refer to companion animals, U.S. respondents mostly used “animal (dog/cat)” ( $n = 263, 26.5\%$ ) or “kids/children” ( $n = 221, 22.3\%$ ). India respondents reported using “kids/children” ( $n = 144, 33.8\%$ ) or “family member” ( $n = 143, 33.6\%$ ) the most.

When asking about the same language use with coworkers or strangers, there were minimal changes in the India responses. However, U.S. respondents displayed a stronger code switch, being more likely to use “owner” ( $n = 519, 52.4\%$ ), “animal (dog/cat)” ( $n = 405, 40.9\%$ ), and “pet” ( $n = 219, 22.1\%$ ) when referring to their companion animals in these less intimate social situations. See Table 2 for a full list of responses to these questions by country.

\*\* insert table 2 about here \*\*

#### LAPS

We coded the LAPS according to Johnson and colleagues (1992) scales, including the reverse coding of the statements “I think my pet is just a pet” and “I am not very attached to my pet.” Three scales are prescribed by the authors. Our sample achieved acceptable to good Cronbach’s scores (*General Attachment*, U.S.  $\alpha = 0.837$ , India  $\alpha = 0.868$ ; *People Substituting*, U.S.  $\alpha = 0.783$ , India  $\alpha = 0.762$ ; *Animal Rights/Animal Welfare*, U.S.  $\alpha = 0.763$ , India  $\alpha = 0.766$ ).



Because of the unequal distribution of our sample, we used non-parametric tests to compare the U.S. and India on the LAPS. India respondents were significantly more likely to agree with items on the scales *Animal Rights/Animal Welfare* ( $U = 128,883.00$ ,  $p = 0.001$ ,  $d = 0.633$ ) and *General Attachment* ( $U = 189,268.5$ ,  $p = 0.015$ ,  $d = 0.129$ ). India respondents were also significantly more likely to agree with items related to *People Substituting* ( $U = 164,204.50$ ,  $p = 0.001$ ,  $d = 0.321$ ). Overall, Indians are more attached to their companion animals (lower scores reflecting more attachment). The full results of the Mann-Whitney comparison on the LAPS are found in Table 3.

\*\* insert table 3 about here \*\*

### CARES

We completed a principal components analysis on the 25 questions regarding direct and indirect care and negotiation of relationships (CARES) using the Varimax with Kaiser Normalization rotation method. Two items failed to load and were removed from analysis (“I take my pet to a groomer” and “I feed my pet ‘people’ food”). Rotation converged in four iterations and resulted in three scales with acceptable to good Cronbach’s scores. We labeled these *Affective Responsiveness* (U.S.  $\alpha = 0.811$ , India  $\alpha = 0.840$ ), *Training and Play* (U.S.  $\alpha = 0.782$ , India  $\alpha = 0.778$ ), and *General Care* (U.S.  $\alpha = 0.709$ , India  $\alpha = 0.756$ ). Three statements are reverse coded to *General Care* and include “Someone else feeds my pet,” “Someone else walks/exercises my pet,” and “Someone else plays with my pet.” In addition, two statements loaded on more than one scale. These are “I take my

pet to a groomer” and “I feed my pet ‘people’ food.” A complete list of the scales, items, and loadings is included in Table 4.

\*\* insert table 4 about here \*\*

We completed a Mann-Whitney U Test to investigate differences between the U.S. and India on the CARES scales. Higher scores reflect more frequent engagement in behaviors related to each scale. There was no statistically significant difference on *Training and Play* ( $U = 178115, p = 0.096$ ). United States respondents were more likely to be the one in their home providing *General Care* such as feeding or exercising their companion ( $U = 140986, p = 0.001, d = 0.409$ ), and Indian respondents were more likely to report *Affective Responsiveness* ( $U = 139431, p = 0.001, d = 0.423$ ), including prioritizing their companions in decision-making and displays of affection like cuddling. The full results of the Mann-Whitney comparison on the CARES are found in Table 5.

\*\* insert table 5 about here \*\*

## Discussion

Companion animal related spending increased rapidly in the United States (American Pet Products Association [APPA], 2021) and India (TechSciResearch.com, 2020) and is expected to continue, possibly doubling in the next decade. Combined with our results, it is clear that India is experiencing the emergence of “pet parenting.” This is in alignment

with our argument that pet parenting emerges in cultures experiencing the Second Demographic Transition (SDT), marked by high rates of urbanization, declining fertility rates, and flexible life-course orientations. Murray et al. (2018) reported that decreased fertility is often connected to improved educational attainment for women – also notable in our sample for both nations. Additionally, approximately one-quarter of both samples (U.S., 28.2%; India, 25.8%) identified as childfree or not wanting children. This suggests an increase in homes without children positively correlates with the presence of pet parenting. Accordingly, our study supports these economic and fertility changes as possible precursors to the emergence of pet parenting in a society.

It is also noteworthy that our sample of the Indian population is young, urban, and highly educated. While there are statistically significant differences with the U.S. population, the effect size on these differences is weak. This suggests that pet parenting is new to India and most common among young, educated individuals living in urban centers. It would be interesting to repeat this work in a decade to see if pet parenting is a passing trend or becomes established as an alternative life choice to parenthood as it has in the United States (Volsche, 2018a; 2018b). Given the higher prevalence of single respondents in India, it is also possible that companion animals are alleviating loneliness and stress until individuals become married and have children. However, for the 25.8% of Indians who identified as childfree or not wanting children, this is unlikely to change.

Our study also emphasizes the influence of local norms in shaping how pet parenting is practiced in each culture. When speaking to family and friends, United States respondents

reported using the term “parent (mom/dad)” slightly more often than Indians, but not significantly so. Comparatively, respondents from India were more likely to use kinship terms (“kids/children,” 33.8%; “family member,” 33.6%) when referring to their companions, compared to the United States sample (“kids/children,” 22.3%; “family member,” 15.3%). Relatedly, Americans were more likely to code switch when referring to companion animals with strangers and coworkers (“pet,” 22.1%; “animal (dog/cat),” 40.9%). In contrast, Indians remain relatively consistent in the language used to refer to themselves and their companion animals, regardless of the situation (see Table 2).

Most conceptualizations of human-animal bonding are based on Bowlby’s theory of attachment between a child and primary caregiver (Bowlby, 1978; Zappanick, 2008). Bartholomew and Horowitz (1991) argue that attachment theory can be applied to any pairing of individuals who display a predefined collection of behaviors and has since been explored in companion animals. As such, the Lexington Attachment to Pets Scale (LAPS, Johnson et al., 1992) spurred a field of human-animal attachment research. Yet, in scientific research, much of the literature on human-animal relationships is engaged from an anthropocentric lens, diminishing the value of anthropomorphism as a tool. Pet parenting, in contrast, is highly dependent on one’s awareness of the animal’s cognitive and emotional abilities, respecting the needs of the individual animal regardless of the species-specific differences.

Chadda and Sinha Deb (2013) argued collectivist norms drive the promotion of social cohesion and interdependence in India. Coupled with more open norms regarding

anthropomorphism, this may result in less stigma when embracing a nonhuman other in one's home. Contrarily, stemming from both religious and scientific paradigms, a push against anthropomorphism dating to the rise of behaviorism persists in the United States. However, despite being defined as an individualistic culture, Bursztyrn and Jensen (2017) suggest economic and social behavior in the United States continues to be responsive to social pressure. This would account for the more frequent code switching from "parent" to "owner" in less intimate spaces.

The relevance of anthropocentric norms is further demonstrated by the significant differences between the cultures on the LAPS. Overall, Indians appear to be more attached to their pets. This may further reflect their efforts to alleviate loneliness as multigeneration households decline in the face of urbanization. The differences captured by the CARES (Companion Animal RElationships Scale) further support this finding. While there was no statistically significant difference on questions pertaining to *Training and Play*, Indian respondents engaged less frequently in *General Care* behaviors such as walking their pets and more frequently engaged in *Affective Responsiveness* such as cuddling or considering their pets preferences during interactions. Perhaps, single Indians are receiving some affective benefits of their own from engaging in the relationship and care of their companion animals. Future research should also consider if and how this is reflective of parenting norms in each culture. For example, are there differences in how Indian and American parents relate emotionally or behaviorally with their children for which pet parenting may mirror?

It is possible there is a purely philosophical difference stemming from the historical particulars of each country. Servais (2018) argues for a pragmatic anthropomorphism-in-situation, stating that western attempts to be “detached spectators” in science leads to reduced attention to the communication of other animals. Relatedly, Grier (2015) argues that a Victorian ethic in America shaped human-animal relationships as governed by stewardship rather than attachment and negotiation. This contrasts with India’s vast classical literature that deeply humanizes, reveres, and worships a plethora of animals as persons and deities (Baindur, 2015). These are not the talking animals of children’s books or Aesop’s Fables. Rather, their significant roles are often portrayed as powerful beings that maintain their animalistic nature, delivering severe negative consequences for animal mistreatment, while at other times maintaining harmony and reciprocity with the humans. Thus, the notion of humans and animals having a collaborative role in maintaining the environment is strongly endorsed (Baindur, 2015). In contrast to Christianity’s focus on the hierarchy of beings with humans at the top (Grier, 2015), Hinduism highlights a wholistic interconnectedness between all living beings. Perhaps Hinduism’s emphasis on shared social spaces and gratitude for all living creatures helped Indian culture circumvent the detachment mentioned by Servais (2018). In contrast, Americans are still reconciling the scientific discoveries that support the emotional and cognitive abilities of nonhuman animals with the Christian ascription of animals as subservient to humans (Servais, 2018). Although we still need to examine deeply what the cultural drivers may be, our results suggest anthropomorphizing companion animals is more acceptable in India than in the United States. This has clear implications for the ways in which pet parenting is practiced and communicated in each culture.

## **Limitations and Future Research**

Regardless of the country, our sample is biased toward educated, heterosexual women. Herzog (2007) found this is common in human-animal research, and we acknowledge it impacts the generalizability of our findings. Likewise, it is possible that at least some of the 27.7% of Indian respondents who identified as “single, not looking” chose the option because they are awaiting family arrangements for their marriage, and perhaps, companion animals in their home serve as a placeholder until a human family is formed. However, neither of these limitations negates the findings that India is, in fact, experiencing the emergence of pet parenting.

We do acknowledge potential confounding variables in the way the LAPS and CARES data were collected. We did not anticipate the large number of individuals who would have more than one companion animal. As such, we did not direct respondents as to which animal they should consider when answering these scales. It is our experience that respondents often answer attachment related questions with their most closely bonded companion in mind, but due to the way questions were presented, we cannot be sure of this. Additionally, due to development errors, our Likert-scale for the LAPS ranged from “1 = strongly agree” to “4 = strongly disagree.” This is the opposite of the original LAPS, potentially making the scale less intuitive to respondents.

Relatedly, the statements in the CARES may be viewed as biased toward dogs. Most of the respondents lived with dogs, while some lived with cats and/or both. We did run a Kruskal Wallance test on three groups (dogs, cats, both) to determine whether this impacted the results. While there were differences, they were not statistically significant. Future research may want to further investigate whether the CARES is valid for cats. That said, it is possible that this is not a strong confound given that an increasing number of pet parents are leash and harness training their cats to explore the outdoors together.

We also acknowledge that the word “pet” may be problematic in cross-cultural work. This is particularly so when comparing countries with such strong differences in perceptions of companion animals. However, the use of this term is standardized in many validated surveys, such as the LAPS. Accordingly, it is often the least problematic of terms, at least until global norms embrace the use of companion animal, nonhuman animal, or other phrases that incorporate the sentience and autonomy of other species.

Finally, while we explore the possibility of religious influences on acceptable levels of anthropomorphism between these cultures, we did not collect religious affiliation in the demographic portion of the survey. This is certainly a valuable area ripe for investigation, as it is extremely likely that religion, politics, and other factors impact our perceptions of companion animals.

Further research should continue to seek cross-cultural understanding of pet parenting. A deeper understanding of this family structure could inform policy and economic



decisions. For example, “Business Insider” (Dodgson, 2019) reported an increase in companies offering “pawternity” leave for new pet parents. By better appreciating the needs of these individuals, companies may come to offer subsidized pet insurance and other support for people who choose to include nonhuman animals in their homes along with, or instead of, children.

## **Conclusion**

Our study is the first to demonstrate that India is experiencing an emergence of pet parenting – one which is broadly like the United States. Likewise, we provide further support to the hypothesis that pet parenting is emerging in societies that experience the Second Demographic Transition marked by subreplacement fertility levels; an increased focus on “higher order” needs: increases in female education and economic autonomy; and most importantly, flexible life-course orientations. Despite finding similarities between India and the United States, the differences are in the details and nuanced negotiation of the relationships between humans and companion animals. Cultural norms surrounding nonhuman animals and anthropomorphism appear to also play a role in how pet parenting is explored by individuals.

In any case, it appears that pet parenting is becoming a new, parallel norm to raising children in a growing number of cultures. While there are likely individuals sharing their homes with both children and pets, our study adds to the literature to support that a

growing population is opting to raise companion animals instead. There may be many reasons for this choice, but that is a topic for another study.

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### **Conflicts of Interest**

The authors declare there are no conflicts of interest.

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