

## Traditional Petism: The Influence of Pet Owner Identity, Pet Type, and Pet Traits on the Moral Status of Pets

**Authors:** Xu Kepeng, Ou Qianqian, Xue Hong, Luo Dongli, Zhang Shuyue, Xu Yan, Zhang Shuyue, Xu Yan

**Date:** 2023-05-04T00:00:00+00:00

### Abstract

The relationship between pets and humans is growing increasingly intimate, and the moral status of pets is undergoing subtle changes. Through a preliminary study, this paper classifies pets into traditional pets and non-traditional pets, and through Studies 1-3, explores the influence of pet owner identity, pet type, and pet traits on pet moral status and the underlying mechanisms. The results reveal: (1) Traditional pets possess higher moral status than non-traditional pets, a difference mediated by agency, sentience, and harmfulness; (2) Compared to non-traditional pet owners, traditional pet owners perceive higher moral status in traditional pets; no significant difference exists between the two groups in perceived moral status of non-traditional pets; (3) Animal empathy mediates the relationship between traditional pet owners' pet attachment and the moral status of traditional pets. These findings indicate that moral status differences exist within the category of pets, manifesting as traditional pet-ism, wherein the emotional bond between pet owners and pets plays a crucial facilitating role.

### Full Text

## Traditional Pettism: The Influence of Pet Ownership Status, Pet Type, and Pet Properties on Pet Moral Standing

**XU Kepeng**<sup>1, 2, 3, 4</sup>, **OU Qianqian**<sup>5</sup>, **XUE Hong**<sup>1, 2, 3, 4</sup>, **LUO Dongli**<sup>1, 3</sup>, **ZHANG Shuyue**<sup>1, 2, 3, 4</sup>, **XU Yan**<sup>6</sup>

<sup>1</sup>Department of Psychology, Faculty of Education, Guangxi Normal University, Guilin 541004, China

<sup>2</sup>Guangxi Key Laboratory of Cognitive Neuroscience and Applied Psychology, Guilin 541004, China

<sup>3</sup>Guangxi Key Research Base for Humanities and Social Sciences—Guangxi Ethnic Education Development Research Center, Guilin 541004, China

<sup>4</sup>Institute of Chinese National Community, Guangxi Normal University, Guilin 541004, China

<sup>5</sup>School of Psychology, Shenzhen University, Shenzhen 518060, China

<sup>6</sup>Beijing Key Laboratory of Applied Experimental Psychology, National Demonstration Center for Experimental Psychology Education (Beijing Normal University), Faculty of Psychology, Beijing Normal University, Beijing 100875, China

## Abstract

The relationship between humans and pets is becoming increasingly close, and the moral standing of pets is undergoing subtle changes. Through a pre-study, we categorized pets into traditional and non-traditional pets, and through Studies 1–3, we explored the influence and mechanisms of pet ownership status, pet type, and pet properties on pet moral standing. The results revealed: (1) Traditional pets have higher moral standing than non-traditional pets, a difference mediated by agency, experience, and harmfulness; (2) Traditional pet owners perceive higher moral standing in traditional pets compared to non-traditional pet owners, while no significant difference exists between the two groups in their perception of non-traditional pet moral standing; (3) Empathy for animals mediates the relationship between traditional pet owners' pet attachment and traditional pet moral standing. These results indicate that hierarchical differences in moral standing exist within pets, manifesting as traditional pettism, with emotional bonds between owners and pets playing a crucial facilitative role.

**Keywords:** moral standing, pet owners, pets, pet attachment, empathy

The relationship between pets and humans is growing increasingly intimate. By 2024, China is projected to have 248 million pet cats and dogs (Pan et al., 2022). Pets not only provide warm companionship but also confer mental health benefits (Grajfoner et al., 2021), such as reducing negative emotions (Janssens et al., 2021) and enhancing subjective well-being (Xin et al., 2021). Although not explicitly stated, when people think of pets, dogs or cats—traditional pets—come to mind first. Traditional pets are animals intentionally kept for companionship and play (Guo, 2010), historically serving “guardian” roles in households but gradually transitioning to “family members” that provide emotional companionship (Luo et al., 2021), reaching widespread popularity (Reaser et al., 2008). In recent years, keeping non-traditional pets such as lizards, snakes, and mini-pigs has become a new trend. Non-traditional pets represent a group distinct from conventional pet categories, winning favor through their novelty, unusual appearance, and unique functions—characterized as “new, strange, and special” (Yang, 2016)—yet they have not achieved widespread popularity among the general public (Reaser et al., 2008). Building on previous definitions and our pre-study results, we define traditional pets in this research as companions that are widely popular, while non-traditional pets are defined as unique and novel pets that differ from traditional perceptions. Both types satisfy owners' emotional and social needs, gradually becoming spiritual anchors for pet owners.

### 1.1 Perception of Pet Moral Standing

Entities with moral standing are those capable of being morally harmed and worthy of moral consideration (Schönfeld, 1992; Singer, 1979). From this perspective, both humans and animals possess moral standing. However, people do not treat all species equally. For instance, pets rank higher than other animals in the animal moral hierarchy—a tendency termed pet speciesism (Caviola & Capraro, 2020). Pet speciesism may manifest more specifically, with some pets ranking higher than others within the pet category. When deciding which animals to protect and cherish, people consider animals' trait attributes, which form the basis for differential treatment (Piazza et al., 2014). Pet type leads to differences in these trait attributes, which ultimately influence perceived moral standing of traditional versus non-traditional pets. Previous research has focused on trait factors underlying animal moral standing. First is agency (i.e., higher intelligence and human-like rationality); animals with higher agency are accorded higher moral standing (Carruthers, 1992; Kant, 1981; Steinbock, 1978). Compared to pigs, dogs are perceived as having greater intellectual capacity, leading children to view dogs' lives as equivalent to human lives rather than pigs' lives (Wilks et al., 2020). Second is experience (i.e., the capacity to suffer or experience pleasure); animals with higher experience are considered to have higher moral standing (Bentham, 1996; Korsgaard, 1996; Schönfeld, 1992; Singer, 1979). For example, dog owners may believe their pets possess emotional capacities such as understanding and empathy similar to partners or confidants, making them willing to disclose personal feelings to their dogs (Evans-Wilday et al., 2018), while rodents and reptiles are considered less likely to have emotions (Wilkins et al., 2015). Animals with higher mental capacities (including agency and experience) are deemed more worthy of moral consideration and negatively correlate with violence against animals (Potocka, 2021). Additionally, Piazza et al. (2014) identified harmfulness as a third independent factor predicting animal moral standing; just as those who harm others are less worthy of moral consideration, the same logic applies to animals. Unlike traditional pets that provide physical and mental benefits to owners (Grajfoner et al., 2021), non-traditional pets are generally undomesticated, more likely to harm other species and transmit zoonotic diseases, and pose risks of ecosystem destruction if released into non-native habitats (Schuppli et al., 2014). Some venomous non-traditional pets can even harm or endanger their owners' lives (Ng et al., 2018). In summary, traditional pets may be perceived as having higher moral standing than non-traditional pets due to their higher experience and agency and lower harmfulness. Therefore, **H1: Traditional pets have higher moral standing than non-traditional pets, with this difference mediated by agency, experience, and harmfulness.**

## 1.2 Influence of Pet Ownership Status on Pet Moral Standing Perception

Beyond pet properties, researchers have found that groups with more pet exposure show greater sensitivity and protective attitudes toward animal moral standing (Zen et al., 2009), with more pet exposure predicting stronger identification with and protection of animal moral standing (Heiss & Hormes, 2018; Rothgerber & Mican, 2014). This suggests that pet ownership status may influence how people cognitively evaluate pet moral standing. Our research also found that pet owners perceive pets as higher in the moral hierarchy than non-pet owners, exhibiting pettism (Xu et al., 2022). This may be because pet owners consider their pets unique sources of socio-emotional support, equally important as family, friends, and significant others (Meehan et al., 2017). Tzivian et al. (2014) further found that pet owners whose pets were euthanized experienced grief similar to that following the death of a close relative or friend. This indicates that pet owners view pets as significant others and develop intimate attachment relationships with them (Guo et al., 2021; Liu-Pham et al., 2022).

Pet attachment refers to the close and enduring emotional bond between pets and humans (Johnson et al., 1992). During natural disasters, some pet owners report they would return to evacuated disaster sites to rescue their pets, driven by pet attachment (Every et al., 2016). Although pet abuse and abandonment exist (Araujo et al., 2021), for most pet owners, their pets are unique and irreplaceable.

While these studies have deeply explored human-pet relationships, perceptions of these relationships (Bouma et al., 2021) and levels of emotional attachment vary among owners (le Roux & Wright, 2020). Most bird owners (34.2%) choose to keep birds because they “fell in love with the pet,” while reptile owners (47.1%) keep pets more because they “think it’s cool or special” (Klaphake & Smith, 2002). Different keeping motivations between traditional and non-traditional pet owners lead to diverse human-pet relationships and emotional dependencies (Shukhova & Macmillan, 2020), with traditional pet owners showing higher pet emotional attachment than non-traditional pet owners. Different levels of emotional valuing of pets represent different value orientations toward pets, further leading to different understandings of pets’ meaning and status (Blouin, 2015). Therefore, traditional pet owners may perceive their pets’ moral standing as higher than other pets, whereas non-traditional pet owners may not share this perception. Close relationships with pets lead to more positive attitudes toward other animals—the “pets as ambassadors” theory (Serpell & Paul, 1994). Many studies support this argument; for instance, individuals’ intimate relationships with pets predict prosocial behavioral intentions toward animals (Auger & Amiot, 2019), and emotional dependence on pets makes people’s moral judgments and decisions about animals, particularly other pets, more positive (Possidónio et al., 2021). In summary, traditional pet owners have deeper emotional connections with their pets than non-traditional pet owners, and these

human-pet emotional bonds may influence individuals' moral cognition of other pets.

**H2: Pet ownership status moderates the effect of pet type on pet moral standing perception. Specifically, traditional pet owners perceive higher moral standing in traditional pets than in non-traditional pets, while non-traditional pet owners perceive similar moral standing in both traditional and non-traditional pets.**

### **1.3 Predictive Effect of Pet Attachment on Traditional Pet Moral Standing**

Pet attachment positively correlates with moral concern for animals and lower speciesism, and positively predicts pet care, leading to more positive moral judgments of other pets (Possidónio et al., 2021). Therefore, traditional pet owners' attachment may trigger differences in moral standing judgments of traditional pets, with stronger pet attachment leading traditional pet owners to perceive higher traditional pet moral standing. Previous research indicates that the number of pets kept during childhood positively correlates with adult rejection of animal products, a relationship mediated by pro-animal attitudes (Heiss & Hormes, 2018). Meanwhile, childhood pet attachment leads to meat avoidance in adulthood, with empathy for animals playing a mediating role (Rothgerber & Mican, 2014). Empathy refers to individuals' ability to understand others' feelings and needs from their perspective, generating consistent emotional responses and experiences, including cognitive aspects (e.g., recognizing and understanding others' mental states) and affective aspects (e.g., experiencing and sympathizing with others' emotions) (Ghasemi & Kyle, 2021). Pet contact predicts more positive animal moral attitudes through cultivating intimate relationships with pets, including lower speciesism, higher perceived animal warmth, animal evaluation, animal moral concern, and animal prosocial behavioral intentions (Auger & Amiot, 2019). As Hawkins and Williams (2016) noted, pet attachment promotes moral concern for animals, so stronger pet attachment may lead to stronger empathy for animals. Empathy correlates with moral concern for animal welfare and rights (Ruckert & Arnold, 2018), and high empathy for animals reduces individuals' capacity for moral disengagement, leading to lower meat consumption (Camilleri et al., 2020). Empathy for animals leads people to believe animals deserve moral consideration (Ghasemi & Kyle, 2021; Gruen, 2007). Thus, the degree of empathy for animals can trigger differences in perceived traditional pet moral standing. Therefore, we propose **H3: Traditional pet owners' pet attachment positively predicts traditional pet moral standing, with empathy playing a mediating role.**

In summary, this study aims to explore the influence of pet ownership status, pet type, and pet properties on pet moral standing based on contemporary Chinese social reality. The pre-study establishes definitions of traditional and non-traditional pets in the current cultural context. Study 1 examines the effects of pet ownership status, pet type, and pet properties on pet moral standing

(testing H1 and H2). Study 2 replicates the influence of pet ownership status and pet type on pet moral standing while controlling for potential confounding factors (basic moral orientation) (re-testing H2). Study 3 explores the mechanism by which traditional pet owners' pet attachment influences traditional pet moral standing through empathy for animals (testing H3).

## Pre-Study

Classifications of traditional and non-traditional pets vary by culture, era, and personal preference. To better ground our definitions in contemporary culture, we conducted a pre-study.

### 2.1.1 Participants

We recruited participants online through Qualtrics, yielding a total sample of  $N = 29$  (pet owners: 9, non-pet owners: 20; males: 9, females: 20). Participants ranged in age from 20 to 27 years ( $M_{age} = 23.31$ ,  $SD_{age} = 1.73$ ).

### 2.1.2 Research Design

We searched mainstream social media platforms for “pet” entries, compiled a list of all animals currently kept as pets, and categorized them into a pet list. At the questionnaire's beginning, we referenced previous definitions of traditional and non-traditional pets without mentioning specific pet types, aiming to allow participants to form concepts of pet classification without guidance. Based on participants' written trait words for non-traditional pets, we conceptualized definitions of traditional and non-traditional pets for this study.

### 2.1.3 Materials and Procedure

After answering basic demographic questions, participants selected from the pet list which they considered traditional pets, then wrote trait words they associated with non-traditional pets.

## 2.2 Results

We used hierarchical clustering in SPSS with the furthest neighbor method to determine pet classification. Results indicated that dogs, cats, birds, fish, turtles, and rabbits formed one cluster, while remaining pets formed another (see [Figure 1: see original paper] and [Figure 2: see original paper]). Therefore, in this study, dogs, cats, birds, fish, turtles, and rabbits were defined as traditional pets. For non-traditional pets, the most frequently occurring trait words were “unique,” “novel,” and “new.” Additionally, terms like “pursuit of specialness” appeared. Combining the most frequent trait words with Chinese and foreign researchers' classifications and definitions (Bush et al., 2014; Guo, 2010; Luo et al., 2021; Rachel et al., 2017; Reaser et al., 2008; Yang, 2016), we ultimately defined traditional pets in this study as “widely popular pets that serve as

human companions” and non-traditional pets as “unique, novel pets that differ from traditional perceptions.”

## Study 1

### 3.1.1 Participants

Using G\*Power 3.1 (Faul et al., 2009) for a priori analysis with effect size  $f = 0.25$ , significance level  $\alpha = 0.05$ , statistical power = 0.8, and correlation among repeated measures = 0.5, the required total sample size was 120. We used snowball sampling via Qualtrics on Baidu Post Bar to recruit participants online. Based on pre-study pet categories and participants’ responses to “What pet do you keep?”, we selected traditional and non-traditional pet owners, excluding those whose family members owned pets. We then screened non-pet owners using two questions: “Do you like keeping pets?” and “Do you want to keep pets?” to exclude those with pet-keeping tendencies. The final sample comprised  $N = 146$  (traditional pet owners: 41, non-traditional pet owners: 53, non-pet owners: 52; males: 69, females: 77), aged 18–38 years ( $M_{age} = 21.75$ ,  $SD_{age} = 3.94$ ).

### 3.1.2 Research Design

We employed a 2 (pet type: traditional vs. non-traditional)  $\times$  3 (pet ownership status: traditional pet owner vs. non-traditional pet owner vs. non-pet owner) mixed factorial design, with pet ownership status as a between-subjects factor and pet type as a within-subjects factor. The dependent variable was moral standing ratings, with agency, experience, and harmfulness ratings as mediating variables.

### 3.1.3 Materials and Procedure

After completing basic demographic information, participants rated moral standing questions on a 1–5 Likert scale (1 = not at all, 5 = very much), with all items randomized. They then rated pet properties on a 1–4 Likert scale (1 = strongly disagree, 4 = strongly agree), including agency (intelligent, smart, mature, creative, curious), experience (patient, capable of experiencing pain, capable of experiencing pleasure, emotionally vulnerable, sensitive), and harmfulness (aggressive, mean, hostile, peaceful [reverse-scored], gentle [reverse-scored]). Moral standing, agency, experience, and harmfulness items were adapted from Piazza et al. (2014).

### 3.2.1 Common Method Bias Test

All data were collected via self-report, which may introduce common method bias. Although we controlled for this during administration, we further employed Harman’s single-factor test for statistical control. Results extracted 10 factors with eigenvalues greater than 1, with the first factor explaining 28.45%

of variance, below the 40% critical threshold, indicating no serious common method bias.

### 3.2.2 ANOVA Results

ANOVA on moral standing revealed a significant main effect of pet type, with traditional pets ( $M = 4.14$ ,  $SD = 0.73$ ) receiving higher moral standing ratings than non-traditional pets ( $M = 4.00$ ,  $SD = 0.77$ ),  $F(1, 143) = 16.95$ ,  $p < 0.001$ ,  $\eta^2 = 0.11$ , 95% CI [0.03, 0.21]. The main effect of pet ownership status was also significant,  $F(2, 143) = 3.62$ ,  $p = 0.029$ ,  $\eta^2 = 0.05$ , 95% CI [0.00, 0.12]. Post-hoc tests showed that traditional pet owners perceived higher pet moral standing than non-pet owners ( $p = 0.008$ ), while no significant differences emerged between non-traditional pet owners and either traditional pet owners or non-pet owners ( $ps > 0.123$ ). The pet type  $\times$  pet ownership status interaction was significant,  $F(2, 143) = 6.46$ ,  $p = 0.002$ ,  $\eta^2 = 0.08$ , 95% CI [0.01, 0.17]. Simple effects analysis indicated that for traditional pets, traditional pet owners perceived higher moral standing than non-traditional pet owners ( $p = 0.016$ ) and non-pet owners ( $p = 0.009$ ),  $F(2, 143) = 4.17$ ,  $p = 0.017$ ,  $\eta^2 = 0.06$ , 95% CI [0.00, 0.13], with no difference between non-traditional pet owners and non-pet owners ( $p = 0.810$ ). For non-traditional pets, both traditional ( $p = 0.014$ ) and non-traditional ( $p = 0.043$ ) pet owners perceived higher moral standing than non-pet owners,  $F(2, 143) = 3.60$ ,  $p = 0.030$ ,  $\eta^2 = 0.05$ , 95% CI [0.00, 0.12], with no difference between traditional and non-traditional pet owners ( $p = 0.558$ ) (see ).

To further clarify differences in perceived pet moral standing among traditional pet owners, non-traditional pet owners, and non-pet owners, we conducted  $t$ -tests. Results showed that traditional pets were perceived as having higher moral standing than non-traditional pets by traditional pet owners,  $t(40) = 3.08$ ,  $p = 0.004$ ,  $d = 0.48$ , 95% CI [0.16, 0.80]. No significant difference emerged between traditional and non-traditional pets for non-traditional pet owners,  $t(52) = -0.53$ ,  $p = 0.601$ ,  $d = -0.07$ , 95% CI [-0.34, 0.20]. Traditional pets were perceived as having higher moral standing than non-traditional pets by pet owners overall,  $t(51) = 4.32$ ,  $p < 0.001$ ,  $d = 0.60$ , 95% CI [0.30, 0.89].

### 3.2.3 Correlation Analysis

Correlation analysis results (see ) showed that pet type correlated significantly negatively with agency and experience, and significantly positively with harmfulness. Agency and experience correlated significantly positively with moral standing, while harmfulness correlated significantly negatively with moral standing.

### 3.2.4 Mediation of Pet Type and Moral Standing by Agency, Experience, and Harmfulness

Mediation analysis revealed that pet type significantly negatively predicted agency; agency significantly positively predicted moral standing, with the bootstrap 95% CI for the indirect effect not containing zero  $[-0.23, -0.05]$ . Pet type significantly negatively predicted experience; experience significantly positively predicted moral standing, with the bootstrap 95% CI not containing zero  $[-0.08, -0.00]$ . Pet type significantly positively predicted harmfulness; harmfulness significantly negatively predicted moral standing, with the bootstrap 95% CI not containing zero  $[-0.10, -0.02]$  (see ), indicating significant mediation. The mediation path diagram is shown in [Figure 3: see original paper]. Thus, agency, experience, and harmfulness mediate the relationship between pet type and moral standing.

[Figure 3: see original paper]

### 3.3 Summary

Study 1 verified H1 and H2. Traditional pets have higher moral standing than non-traditional pets, with agency, experience, and harmfulness mediating this difference. Pet ownership status also influences perceptions, with pet owners perceiving higher pet moral standing than non-pet owners. When further subdividing pet owners, we found that traditional pet owners showed a preference for traditional pets, perceiving higher moral standing in traditional pets compared to non-traditional pet owners; no preference for non-traditional pets was observed in non-traditional pet owners.

Additionally, according to Ethics Position Theory, people have different orientations toward behaviors that cause harm or conflict with universally accepted moral standards. Idealism emphasizes principle-based decision-making, while relativism emphasizes skepticism toward established moral codes. More idealistic pet owners may make decisions based on their emotions toward pets, with stronger human-pet emotions leading to higher perceived pet moral standing; more relativistic pet owners may weigh pros and cons, with stronger human-pet emotions not necessarily leading to higher perceived pet moral standing. To further demonstrate result robustness, Study 2 included basic moral orientation as a covariate to re-verify the influence of pet ownership status and pet type on pet moral standing.

## Study 2

### 4.1.1 Participants

Using G\*Power 3.1 (Faul et al., 2009) for a priori analysis with effect size  $f = 0.25$ ,  $\alpha = 0.05$ , power = 0.8, and correlation among repeated measures = 0.5, the required sample size was 98. We used snowball sampling via Qualtrics on Baidu Post Bar to recruit participants online. Based on pre-study pet categories and

participants' responses to "What pet do you keep?", we selected traditional and non-traditional pet owners. The final sample comprised  $N = 148$  (traditional pet owners: 72, non-traditional pet owners: 76; males: 74, females: 74), aged 17–46 years ( $M_{age} = 25.28$ ,  $SD_{age} = 6.01$ ).

#### 4.1.2 Research Design

We employed a 2 (pet type: traditional vs. non-traditional)  $\times$  2 (pet ownership status: traditional pet owner vs. non-traditional pet owner) mixed factorial design, with pet ownership status as a between-subjects factor, pet type as a within-subjects factor, ethical position as a covariate, and moral standing ratings as the dependent variable.

#### 4.1.3 Materials and Procedure

After completing basic demographic information, participants completed the Ethics Position Questionnaire (EPQ-5) (O'Boyle & Forsyth, 2021), which measures basic moral orientation. The questionnaire lists a series of moral beliefs with 10 items rated from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater idealism or relativism. Moral standing questions were identical to Study 1, with all items randomized.

#### 4.2.1 Common Method Bias Test

All data were collected via self-report, which may introduce common method bias. Although we controlled for this during administration, we further employed Harman's single-factor test for statistical control. Results extracted 7 factors with eigenvalues greater than 1, with the first factor explaining 24.76% of variance, below the 40% critical threshold, indicating no serious common method bias.

#### 4.2.2 ANCOVA Results

ANCOVA on moral standing revealed a significant main effect of pet type, with traditional pets ( $M = 4.42$ ,  $SD = 0.66$ ) receiving higher ratings than non-traditional pets ( $M = 4.29$ ,  $SD = 0.69$ ),  $F(1, 144) = 4.34$ ,  $p = 0.039$ ,  $\eta^2 = 0.03$ , 95% CI [0.00, 0.10]. The pet type  $\times$  pet ownership status interaction was significant,  $F(1, 144) = 5.83$ ,  $p = 0.017$ ,  $\eta^2 = 0.04$ , 95% CI [0.00, 0.12]. Simple effects analysis showed that for traditional pets, traditional pet owners perceived higher moral standing than non-traditional pet owners,  $F(1, 144) = 4.68$ ,  $p = 0.032$ ,  $\eta^2 = 0.03$ , 95% CI [0.00, 0.10]. For non-traditional pets, no difference emerged between traditional and non-traditional pet owners,  $F(1, 144) = 0.03$ ,  $p = 0.864$ ,  $\eta^2 = 0.00$ , 95% CI [0.00, 0.01]. The main effect of pet ownership status was not significant,  $F(1, 144) = 1.45$ ,  $p = 0.231$ ,  $\eta^2 = 0.01$ , 95% CI [0.00, 0.06].

To further clarify differences in perceived pet moral standing between traditional and non-traditional pet owners, we conducted t-tests. Results showed that traditional pets were perceived as having higher moral standing than non-traditional pets by traditional pet owners,  $t(71) = 3.94$ ,  $p < 0.001$ ,  $d = 0.47$ , 95% CI [0.22, 0.71]. No significant difference emerged between traditional and non-traditional pets for non-traditional pet owners,  $t(75) = 0.45$ ,  $p = 0.652$ ,  $d = 0.05$ , 95% CI [-0.17, 0.28].

### 4.3 Summary

Studies 1 and 2 jointly verified H2. Compared to non-traditional pet owners, traditional pet owners showed a preference for traditional pets, perceiving higher moral standing in traditional pets; this preference was not observed in non-traditional pet owners. We propose that pet owners' emotional attitudes toward their own pets can extend to their pet's category, possibly because these attitudes influence their perception of animals, manifested in empathy for animals, which subsequently affects attitudes toward their pet's category. Study 3 further verified this preferential pathway.

## Study 3

### 5.1.1 Participants

We used snowball sampling via Qualtrics on Baidu Post Bar to recruit participants online. Based on pre-study pet categories and participants' responses to "What pet do you keep?", we selected traditional pet owners. The final sample comprised  $N = 202$  (males: 94, females: 108), aged 17–59 years ( $M_{age} = 27.40$ ,  $SD_{age} = 6.35$ ).

### 5.1.2 Research Design

The independent variable was pet attachment, the mediating variable was empathy for animals, and the dependent variable was traditional pet moral standing.

### 5.1.3 Materials and Procedure

After completing basic demographic information, participants first completed the Empathy for Wildlife scale (EW), adapted from Ghasemi and Kyle (2021). We replaced "wildlife" with "animals" (Empathy for Animal, EA) to measure empathy for animals. The scale contains 10 items rated from strongly disagree (1) to strongly agree (7), with higher scores indicating greater empathy for animals.

Participants then completed the Lexington Attachment to Pets Scale (LAPS) (Johnson et al., 1992) to measure individual attachment to pets. The scale contains 23 items, including two reverse-scored items, using a 4-point scale (1 = strongly disagree, 4 = strongly agree). The questionnaire comprises three dimensions: General Attachment, People Substituting, and Animal Rights/Animal

Welfare, with higher scores indicating stronger pet attachment. Previous research shows that pet owners mostly view pets as significant others (Guo et al., 2021; Liu-Pham et al., 2022), and Study 2's human-pet relationship survey results (see ) showed that most pet-owning participants viewed their pets as family or friends. Therefore, this study used the People Substituting dimension (psLAPS) for measurement. Moral standing questions were identical to Study 1.

### 5.2.1 Common Method Bias Test

All data were collected via self-report, which may introduce common method bias. Although we controlled for this during administration, we further employed Harman's single-factor test for statistical control. Results extracted 8 factors with eigenvalues greater than 1, with the first factor explaining 19.49% of variance, below the 40% critical threshold, indicating no serious common method bias.

### 5.2.2 Regression Analysis

Simple linear regression of pet attachment on traditional pet moral standing using the enter method revealed that pet attachment explained 3.1% of variance in moral standing,  $F(1, 200) = 7.47$ ,  $p = 0.007$ . Pet attachment positively predicted traditional pet moral standing. We therefore included empathy for animals as a mediator to further explore the underlying mechanism.

### 5.2.3 Correlation Analysis

Correlation analysis results (see ) showed that pet attachment correlated significantly positively with empathy for animals and moral standing; empathy for animals correlated significantly positively with moral standing.

### 5.2.4 Mediation of Pet Attachment and Moral Standing by Empathy for Animals

Mediation analysis revealed that pet attachment significantly positively predicted both empathy for animals and traditional pet moral standing; empathy for animals significantly positively predicted moral standing, with the bootstrap 95% CI for the indirect effect not containing zero [0.02, 0.12] (see ), indicating significant mediation. The mediation path diagram is shown in [Figure 4: see original paper]. Therefore, empathy for animals mediates the relationship between traditional pet owners' pet attachment and traditional pet moral standing, accounting for 27.04% of the total effect.

[Figure 4: see original paper]

### 5.3 Summary

Study 3 verified H3. Empathy for animals mediates the relationship between traditional pet owners' pet attachment and traditional pet moral standing. Together with Study 2's results, this indicates that traditional pet owners treat traditional pets as significant others equivalent to family and friends, further revealing that traditional pet owners' attachment relationships with pets benefit not only both parties but also promote perception of traditional pet moral standing.

## General Discussion

This study distinguished traditional from non-traditional pets within contemporary Chinese social and cultural context, systematically examining the influence of pet ownership status and pet type on pet moral standing, and further investigating the roles of pet properties, ethical position, pet attachment, and empathy. We found that traditional pet owners perceive higher moral standing in traditional pets, with empathy for animals mediating the relationship between traditional pet owners' pet attachment and traditional pet moral standing. This demonstrates that traditional pet attachment and empathy enable owners to better perceive and respect traditional pets' moral standing.

### 6.1 Influence of Pet Type and Pet Properties on Pet Moral Standing

People value pets and consider them more worthy than other animals—this is called pet speciesism (Caviola & Capraro, 2020). Our research reveals this tendency has finer distinctions; pet speciesism also exists within pets, manifesting as “traditional pettism,” where people value traditional pets more, placing them above non-traditional pets, especially among traditional pet owners. Consistent with previous research, similarity to humans is a primary predictor of which species people prioritize for protection (Tisdell et al., 2006), as people tend to prefer animals they perceive as closer to humans in mental capacity, favoring mammals over birds. However, we note that traditional pets in this study also include turtles, birds, and fish, suggesting another possibility: traditional pets are more integrated into human life, and through co-evolution and domestication, their communicative and coordinative abilities have been continuously strengthened, establishing stable emotional bonds. In daily interactions where traditional pet owners use traditional pets as confidants, although pets cannot respond verbally, their behaviors and expressions lead owners to feel understood and heard, resulting in traditional pets being perceived as having higher mental capacities. People are reluctant to harm thoughtful animals (Bastian et al., 2012). Meanwhile, traditional pets are mostly selected as companion animals due to their gentleness and controllability through years of domestication, whereas non-traditional pets pose more potential harm to the environment, other pets, and humans (Ng et al., 2018; Schuppli et al., 2014). Apart from harmfulness, for many people, non-traditional pets like lizards, snakes, and frogs are strange-looking creatures with cold appearances that inspire fear, while

traditional pets like dogs and cats win hearts with their cute, gentle images. As Tisdell et al. (2006) noted, attractiveness to humans and inherent affinity affect species' protection levels, thus traditional pets are perceived as having higher moral standing.

## 6.2 Influence of Pet Ownership Status on Pet Moral Standing

Analysis of pet ownership status's influence revealed that pet owners perceive higher pet moral standing than non-pet owners, verifying our hypothesis. Human attitudes and behaviors toward pets are socially learned (Wilks et al., 2020). Pet owners and non-pet owners occupy partially non-overlapping social circles, during which people form personal pet views that are continuously reinforced, partially causing these results. This may also relate to psychological kinship theory (Bailey, 1988), where pet owners cognitively and behaviorally treat pets as family regardless of actual genetic relationships. In this study, most pet owners name their pets, which may represent a social identity (Finch, 2008; Gerhards & Hans, 2009). Pet owners are more likely to view their pets as "individuals" with equal status to humans rather than ordinary "creatures," categorizing them as in-group members and forming a concept of "us." Our research also found that pet owners are more likely than non-pet owners to view their pets as significant others (Xu et al., 2022), thus holding more positive attitudes toward pets. Furthermore, humans and animals belong to different social groups (Amiot & Bastian, 2017), and although intergroup bias exists (Brewer, 1979), it can be reduced through increased intergroup contact (Allport, 1954). Since non-pet owners in this study neither kept pets nor had pet-keeping tendencies, we believe this group is not interested in pets and does not actively seek pet contact. In contrast, pet owners have more opportunities for daily pet contact, and more pet contact predicts stronger identification with and protection of animal moral standing (Heiss & Hormes, 2018; Rothgerber & Mican, 2014). Pet owners and their pets belong to different social groups, and through communication and interaction, pet owners develop positive attitudes that can generalize to out-group members—all pets.

When further subdividing pet owners, we observed this positive attitude more clearly in traditional pet owners, who showed a preference for traditional pets in terms of moral standing, consistent with previous research (Serpell & Paul, 1994). No preference for non-traditional pets was found in non-traditional pet owners, matching our hypothesis. Although group identity can create psychological connections between self and in-group, these connections may have subjective differences; individual group categorization does not equate to including specific in-groups in self-concept (Sani & Bennett, 2009). For those seeking social approval, who want to avoid rejection, demonstrate value, and be liked in interpersonal interactions, they may not fully express their true thoughts (Venaglia & Lemay, 2017). Pet owners may perceive that non-traditional pets are "strange and alternative" to most people, leading traditional pet owners to naturally show preference for traditional pets, while non-traditional pet owners may

conform to popular concepts to avoid social anxiety from negative evaluation (Watson & Friend, 1969), choosing not to show preference for non-traditional pets.

The similar moral standing perceived by non-traditional pet owners for both pet types may result from lacking emotional connection. Self-construal in East Asian cultures tends to be more interdependent (Markus & Kitayama, 1991), significantly affecting consumption decisions and leading to social consumption motivations (Zhu & Lu, 2006). People may keep non-traditional pets as identity symbols to highlight their “unique, niche” status, or to better integrate and have more common topics when friends keep non-traditional pets. Non-traditional pet owners may partially objectify pets (Gruenfeld et al., 2008) as lifeless tools to achieve social goals. Demand for non-traditional pets may also be influenced by social media, where “viral” pet videos and images may drive demand for specific pets (Harrington et al., 2019). This somewhat guided behavior may lead non-traditional pet owners to keep pets without fully understanding them, increasing the likelihood of dissatisfaction. Additionally, this may relate to self-expansion; in the initial stage of relationship formation between non-traditional pet owners and pets, people experience more excitement and high self-expansion (Aron et al., 2001), but as relationship novelty declines over time (Tsapelas et al., 2009), non-traditional pet owners’ satisfaction and self-expansion decrease, emotional connections with pets become flat, and intimate relationships are not formed, naturally resulting in no preference for non-traditional pets. Different keeping motivations lead to diverse human-pet emotional connections (Shukhova & Macmillan, 2020). Unlike traditional pet owners’ emotional attachment to pets, some non-traditional pet owners do not form strong attachment relationships with their pets, thus failing to produce positive moral attitudes toward non-traditional pets.

### **6.3 Influence of Pet Attachment and Empathy for Animals on Traditional Pet Owners’ Perception of Traditional Pet Moral Standing**

Traditional pet owners perceive pet moral standing based on their emotions toward pets; subjective intimacy leads to different cognitive and emotional processes that affect the degree of psychological connection between self and others, thus showing greater respect for animals in the moral hierarchy. Another reason is that traditional pet owners equate pets’ moral standing with humans and have strong bidirectional emotional attachment with pets (Blouin, 2015). Their love for pets is reciprocated in other forms, such as companionship and support. Humans and pets can be attachment objects for each other, allowing both parties to receive nurturing love. This makes modern traditional pet owners view the relationship as meaningful, willingly investing substantial time, money, and effort into pets, and considering the relationship with pets as extremely important in life. According to the symbiosis hypothesis (Peñaherrera-Aguirre et al., 2023), during animal domestication, humans changed animals’ morphology, physiology, behavior, and cognition, followed by long-term dynamic interaction

between humans and pets. The longer traditional pets have been domesticated, the stronger humans' need to maintain this human-pet relationship, while showing stronger empathy and harm avoidance toward domesticated animals, ultimately manifesting as more positive moral attitudes toward traditional pets.

Our research demonstrates that empathy for animals and positive attitudes vary with traditional pet owners' pet attachment levels; traditional pet owners approach traditional pet moral standing issues from an empathic perspective. Empathy is built on shared relationships between individuals; people with empathy for animals believe that animals, like humans, have intrinsic value. Just as humans have the right not to be harmed, animals should not be harmed either. Therefore, empathy for animals guides people to adopt non-harm principles and respect the moral standing of animals with intrinsic value. As human-pet connections deepen, pets' concepts and identities are integrated into traditional pet owners' self-concept, and including others in the self predicts greater empathy and positive attitudes toward them (Aron et al., 1992). Consequently, traditional pet owners' attachment to pets leads to stronger empathy for animals, and among different animal species, those closest to humans are undoubtedly traditional pets. Thus, empathy for animals first affects traditional pet moral standing, promoting protective and respectful attitudes toward traditional pets.

#### 6.4 Significance and Value

First, this study's findings contribute to enriching and refining existing pet classification theories. Many researchers have made different distinctions among animal concepts; for example, Leite et al. (2018) categorized animals into pets, food animals, attractive wildlife, and unattractive wildlife, but conceptual distinctions within pets remain unclear. This study empirically divides pets into traditional and non-traditional categories and investigates different types of human-pet relationships, providing a new perspective for future pet research.

Second, as concepts update, pets are becoming increasingly important family members. Pet owners develop emotional attachments to pets, viewing them as psychological kin—a special kind of human-pet “blood relationship” from an emotional perspective. In previous research, Chinese differential mode of association (chaxu geju) has only been studied in human relationships (Yuan & Guo, 2017), defining the “scope” dimension of moral differential circles, where only human entities can make individuals feel morally obligated (Yu & Xu, 2018). This study's results show that pet owners perceive traditional pets as having higher moral standing and closer relationships with humans than non-traditional pets. Simultaneously, pet attachment and empathy enable traditional pet owners to better perceive and respect traditional pet moral standing. Therefore, Chinese self-differential relationships may also manifest in human-pet relationships. This helps break through traditional differential mode of association, injecting new connotations into Chinese self-differential relationships and proposing new possibilities for defining the “scope” of moral differential circles. Of course, these require more in-depth research for confirmation.

Third, Serpell and Paul (1994) proposed the “pets as ambassadors” theory, suggesting that intimate relationships between pet owners and pets benefit both parties and other animals, leading to more positive attitudes toward other animals. This study verifies and refines the scope of this generalization effect, confirming that traditional pet owners’ attachment relationships can foster positive moral attitudes toward the superordinate category “pets.” However, this generalization effect manifests more in traditional pet moral standing perception, with traditional pet owners perceiving higher moral standing in traditional pets than non-traditional pets. Meanwhile, although non-traditional pet owners show similarly positive moral standing toward both pet types, they lack advantaged moral attitudes toward the non-traditional pets they keep. Synthesizing these aspects, we more clearly recognize that traditional pets are more anthropomorphized than non-traditional pets, possessing higher experience and agency and lower harmfulness, which may promote pet owners’ inclusion of traditional pets in their self-concept, leading traditional pet owners to perceive higher traditional pet moral standing.

Finally, human-pet relationships exhibit not only cultural differences (Gray & Young, 2011) but also temporal changes in pet preferences within the same cultural context (Herzog et al., 2004). In Western culture, pets entered people’s lives early, but in Chinese culture, traditional pets initially served as “guardians.” With changing times, today’s traditional pets primarily fulfill companionship, emotional connection, and communication functions, with most pet owners viewing pets as family members. This reveals changes in family structure in contemporary Chinese society and reflects modern people’s emotional void, especially for those living alone away from home and empty-nest elderly lacking children’s companionship—pets are their emotional outlets. In recent years, some novel pets have gradually entered people’s vision. Unlike traditional pets, these are not suitable for extensive interaction with keepers, thus having less emotional communication, reflecting non-traditional pets’ social function as ornamental objects. The developed human-pet relationship type is more about appreciation than traditional pet attachment emotions. Precisely because of this, attachment to traditional pets leads owners to better understand human emotions toward pets, perceiving and respecting pet moral standing. From pet speciesism to pettism to this study’s traditional pettism, this reflects humans’ moral standing ranking of different animal types. For animals more similar to humans and with closer emotional connections, humans perceive higher moral standing. Once humans establish attachment relationships with such high moral standing animals, this further stimulates higher empathy for animals, ultimately manifesting as respect for pet moral standing. This virtuous emotional cycle benefits greater harmony between humans and nature.

### 6.5 Limitations and Future Directions

This study inevitably has some limitations. First, according to previous research, pets primarily serve as significant others in people’s lives (Liu-Pham et

al., 2022). Therefore, Study 3 used the People Substituting dimension of the pet attachment scale for measurement. Future research could employ other dimensions of the pet attachment scale. Second, to measure human-pet relationships from multiple angles, Study 2 collected information on human-pet intimate contact behaviors. However, this dimension primarily reflects interaction patterns between humans and traditional pets; future research could develop scales more suitable for exploring human-pet relationships with non-traditional pets. Additionally, social media's role in driving demand for non-traditional pets warrants attention: does social media incite and create desire for specific pets, or does it merely respond to and amplify existing desires? Finally, some regions in China have dog meat consumption traditions; what attitudes do pet-keeping populations in these regions hold toward pets? Future research could specifically target these populations.

Based on contemporary Chinese social reality, this study categorizes pets into traditional and non-traditional types, concluding that: (1) Both pet owners and non-pet owners agree that traditional pets have higher moral standing than non-traditional pets; (2) Different pet ownership statuses perceive differences in pet moral standing, manifested as a pet owner bias (pet owners perceive higher pet moral standing than non-pet owners) and a traditional pet owner bias (traditional pet owners perceive higher traditional pet moral standing than non-traditional pet owners); (3) Traditional pet owners' perception of traditional pet moral standing is specific, with pet attachment influencing empathy for animals, enabling traditional pet owners to better perceive and respect traditional pet moral standing.

---

## Appendix 1: Pre-Study Questionnaire

Traditional pets are animals kept for play and companionship, historically serving “guardian” roles in households but gradually transitioning to “family members” that provide emotional companionship. Non-traditional pets are distinct from conventional pet categories, winning many youths' favor through their novelty, unusual appearance, and unique functions—characterized as “new, strange, and special”—and becoming sought-after pets.

**I. Basic Information** 2. Your gender: A. Male B. Female 3. Are you an only child: A. Yes B. No 4. Do you keep pets: A. Yes B. No (skip to end) 5. How many types of pets do you keep: A. One type B. Multiple types (skip to question 7) 6. What pet do you keep: A. Dog B. Cat C. Other (please specify) 7. Among all types of pets you keep, which is your favorite: A. Dog B. Cat C. Other (please specify)

**II. Which of the following pets are traditional pets to you?** A. Dogs (e.g., Golden Retriever, Corgi) B. Cats (e.g., Tabby, British Shorthair) C. Fish (e.g., tropical fish, goldfish) D. Turtles (e.g., red-eared slider, Chinese pond turtle) E. Rodents (e.g., hamsters, fancy rats, chinchillas) F. Birds (e.g., parrots, mynahs) G. Snakes (e.g., corn snake, green snake) H. Insects (e.g., rhinoceros

beetles, ants) I. Lizards (e.g., green iguana, bearded dragon) J. Frogs (e.g., White's tree frog, Pacman frog) K. Rabbits (e.g., Princess rabbit, lop-eared rabbit) L. Foxes (e.g., red fox, arctic fox) M. Crabs (e.g., red-clawed crab, hermit crab) N. Spiders (e.g., jumping spider, Chilean rose tarantula) O. Butterflies (e.g., green-banded peacock, Dharma butterfly) P. Scorpions (e.g., forest scorpion, desert scorpion) Q. Shrimp (e.g., crayfish, red cherry shrimp) R. Sugar gliders T. Mini-pigs U. Call ducks V. Pet sheep W. Ratin chickens X. Crickets (or katydids)

### III. Please use one to three words to describe non-traditional pets.

---

#### Appendix 2: Study 1 Questionnaire

Thank you for participating in this survey. There are no right or wrong answers; please respond based on your first instinct. Your data will be used solely for scientific research and will be kept anonymous and confidential.

**I. Please fill in your basic information by selecting the appropriate option or writing your answer.** 2. Your gender: A. Male B. Female 4. Do you keep pets: A. Yes (skip to question 8) B. No 5. Do any family members keep pets: A. Yes (skip to question 8) B. No 6. Do you like keeping pets: A. Yes B. No 7. Do you want to keep pets: A. Yes (skip to end) B. No (skip to end) 8. What pet do you keep:

**II. Traditional pets are defined as widely popular pets that serve as human companions; non-traditional pets are defined as unique, novel pets that differ from traditional perceptions. Both can satisfy owners' emotional and social needs, gradually becoming spiritual anchors for pet owners.**

Please rate the following items (write your score after each item): 1 = not at all; 2 = a little; 3 = neutral; 4 = somewhat; 5 = very much.

5. If traditional pets (non-traditional pets) were endangered, how important would it be to protect them from extinction?

**III. Traditional pets are defined as widely popular pets that serve as human companions; non-traditional pets are defined as unique, novel pets that differ from traditional perceptions. Both can satisfy owners' emotional and social needs, gradually becoming spiritual anchors for pet owners.**

Please rate the following items (write your score after each item): 1 = strongly disagree; 2 = somewhat disagree; 3 = somewhat agree; 4 = strongly agree.

---

#### Appendix 3: Study 2 Questionnaire

Thank you for participating in this survey. There are no right or wrong answers; please respond based on your first instinct. Your data will be used solely for scientific research and will be kept anonymous and confidential.

**I. Please fill in your basic information by selecting the appropriate option or writing your answer.** 2. Your gender: A. Male B. Female 4. How much do you approve of people treating pets as sons, daughters, younger siblings, or other imaginary intimate partners: A. Strongly approve B. Somewhat approve C. Neutral D. Somewhat disapprove E. Completely disapprove 5. Do you keep pets: A. Yes B. No 6. What pet do you keep: 7. What role is your pet to you: A. Just a pet B. Friend C. Family member 8. Have you named your pet: A. Yes B. No 9. What intimate behaviors have you had with your pet (multiple choices): A. None B. Petting C. Hugging

**II. Please read carefully and indicate your level of agreement: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree.** 1. One should ensure one's actions never intentionally harm others, even to the slightest degree. 2. Causing potential harm to others is always wrong, regardless of benefits gained. 3. One must never cause psychological or physical harm to others. 4. One should not threaten others' dignity and welfare in any way. 5. If an action would harm innocent people, it should not be done. 6. Moral standards vary by situation and society. 7. Moral standards should be considered relatively personal; what one person considers moral may be judged immoral by another. 8. The question "what is moral" has no answer, as morality depends on different people. 9. Moral standards are merely personal laws indicating how individuals should act, not for judging others. 10. Moral considerations in interpersonal relationships are very complex and individuals should be allowed to form their own principles.

**III. Moral Standing (same as Study 1, Section II)**

---

#### Appendix 4: Study 3 Questionnaire

Thank you for participating in this survey. There are no right or wrong answers; please respond based on your first instinct. Your data will be used solely for scientific research and will be kept anonymous and confidential.

**I. Please fill in your basic information by selecting the appropriate option or writing your answer.** 2. Your gender: A. Male B. Female

**II. Please read carefully and indicate your level of agreement: 1 = strongly disagree; 2 = somewhat disagree; 3 = somewhat agree; 4 = strongly agree.** 1. To me, my pet is more important than any of my friends. 2. I trust my pet and often share my secrets with it. 3. I consider my pet my best friend. 4. Usually, how others treat my pet affects my impression of them. 5. I love my pet because he/she is more loyal to me than most people in my life. 6. I love showing others photos of my pet. 7. I love my pet because it never judges me.

**III. Please read carefully and indicate your level of agreement: 1 = strongly disagree; 7 = strongly agree.** 1. I imagine how I would feel if I were those suffering animals. 2. I can easily put myself in the place of animals that are suffering. 3. I try to understand animals' feelings from their perspective. 4. I clearly and vividly imagine in my mind the suffering animals experience in their situation. 5. I become involved in the feelings of suffering animals. 6. I feel as if I were one of the suffering animals. 7. I have tender, concerned feelings for suffering animals. 8. I can feel what animals feel. 9. I can feel the pain animals are experiencing. 10. I feel sympathy for those suffering animals.

**IV. Moral Standing (same as Study 1, Section II)**

*Note: Figure translations are in progress. See original paper for figures.*

*Source: ChinaXiv — Machine translation. Verify with original.*