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Companion Dogs as Surrogate Family Members and the Compensation Hypothesis

Perros de compañía como miembros sustitutos de la familia y la hipótesis de compensación

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Abstract

The belief that bonding with companion animals seeks to substitute for human relationships has been widely held as common knowledge, receiving partial support even by scientific literature. This study aimed to assess the effect of compensation of lacking human bonds (i.e., partner and children) through bonding with companion dogs. For this, 425 adults living in Buenos Aires, who own a companion dog, filled out a form about Perceived Emotional Closeness and another one about anthropomorphism towards dogs. The fact of having children, regardless of the cohabitation with them and the guardian's marital status, was linked to lower scores of emotional closeness; however, there were no differences in terms of the levels of dog's anthropomorphism between guardians who lived with a couple or not, between those who had children or not, neither between those who lived with their children or not. Thus, dogs seem to have their own particular role within their guardian's close circle of relationships, instead of competing with human family roles. Considering this particular role and the differential aspects of this interspecies relationship can lead to positive consequences for dogs and humans.

Keywords: anthropomorphism, companion animal, dogs, emotional closeness, family.

Resumen

La creencia de que los vínculos con animales de compañía buscan sustituir relaciones humanas ha sido ampliamente extendida en el saber popular, inclusive recibiendo apoyo parcial en la literatura científica. Este estudio buscó evaluar el efecto de compensación de vínculos humanos ausentes (i.e., pareja e hijos) a través de la vinculación con perros de compañía. Para esto, 425 adultos residentes en Buenos Aires, que tenían un perro de compañía, completaron un inventario sobre Cercanía Emocional Percibida y otro sobre antropomorfismo hacia los perros. La tenencia de hijos, con independencia de la cohabitación con ellos y del estado marital del custodio del perro, se asoció con menores puntajes de cercanía emocional; sin embargo, no hubo diferencias respecto de los niveles de antropomorfismo a partir de si los custodios de perros vivían o no en pareja, tenían hijos o no, ni si vivían con sus hijos o no. Así, los perros parecen tener un rol particular en el círculo de relaciones cercanas de sus custodios, en vez de competir con los roles familiares humanos. Considerar este rol particular y los aspectos diferenciales de esta relación interespecies puede tener consecuencias positivas para perros y humanos.

Palabras clave: antropomorfismo, animales de compañía, cercanía emocional, familia, perros.

Introduction

In comparison to other domestic animals, dogs have developed a special relationship with humans and some authors state that dogs can be considered the only species that has established an own niche within the human society (Nagasawa, Mogi, & Kikusui, 2009). As the interactions with dogs occur typically in the human family context, the place of these animals in the familial relationships has received considerable attention in human-animal studies (Sanders, 2003).

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One of the pioneer investigations regarding companion animals in human families was carried out in the USA by Albert and Bulcroft in 1988. The authors found a relationship between the family life cycle stage and the attitudes toward pets, there being a greater attachment with animals among just married couples and empty nesters, as well as among widowers and people who live alone. On the contrary, a particularly low level of attachment was found in families with very young children, as well as families with pre-school and school age children and teenagers. These findings led some authors (e.g., Díaz Videla, 2015; Shir-Vertesh, 2012; Turner, 2005; Walsh, 2009) to highlight a role of compensation for lacking human bonds, mainly kids.

Also in this sense, some authors have supported the idea that human-animal bonds turn out to be more intense and beneficial in those with difficulties in interpersonal relationships or without appropriate human attachment sources (e.g., Harker, Collis, & McNicholas, 2000; Levinson, 1969), and that feelings of loneliness induce people to a greater consideration of companion animals in human terms (Epley, Akalis, Waytz, & Cacioppo, 2008). For example, Bodsworth and Coleman (2001) found a higher level of attachment toward companion dogs in children from single-parent families than in those from two-parent families.

These formulations can be framed in postulations that affirm that human-animal bonds can compensate or substitute for absent or deficient human-human relationships (see Serpell, 1996). As opposed to it, there arises the idea that the bonds established with companion animals do not compete with human relationships, but they supplement them (Amiot & Bastian, 2015).

Cohen (2002) did not find that either having a child, whether it lived with the study participant or not, or living with a couple had any impact on the intensity of the relationship with the pet; neither did the number of people in the household.

The study carried out by McConnell, Brown, Shoda, Stayton and Martin (2011) showed, in principle, that there was no difference in terms of proximity with their main human bonds—evaluated through to the degree of inclusion of their parents, siblings and best friends in the participant's self— between people with and without pets; and further, that the closeness with the companion animal and the social support received by it did not imply social estrangement or lack of human support, but, on the contrary, it related to closeness to and support by other humans.

The investigations by Zilcha-Mano, Mikulincer and Shaver (2011, 2012) also provided evidence about what can be called the complementarity hypothesis (i.e., the idea that human-animal bonds complement rather than compensate the lack of, compete with, or substitute for human-human bonds). These authors found that high scores regarding insecurities toward human attachment were related to higher scores in insecurities in relationships with pets, and not with a higher expectation of the animal pro-

viding satisfaction of security needs not provided by human relationships.

Kanat-Maymon, Antebi and Zilcha-Mano (2016) have found that perceived pet support could significantly predict wellbeing levels, but not the levels of psychological disorder; unlike human support, which was inversely related to the level of psychological disorder. The perceptions of pet and human support were positively associated. The authors concluded that the perceived pet support represented an additional conduit toward wellbeing, although with no relationship with psychological disorders, and that the human-pet relationship proved a potential source of satisfaction of support needs, regardless of human sources.

The McConnell et al. study (2011) showed, as well, that greater closeness with the animal was related to a higher degree of anthropomorphism toward it. This study also showed that the animal anthropomorphism was not related to a lower closeness to or perceived support from family members or human friends.

Anthropomorphism can be defined as the tendency to imbue non-human agents with real or imaginary behaviors with human characteristics, intentions or emotions (Epley, Waytz, & Cacioppo, 2007) and is an almost universal trait among companion animals' owners (Serpell, 2003). Mammalian companion animals have certain behavioral characteristics similar to those of humans, which enable people to interact with them as if they were family members (Archer, 1997).

Even though guardians attribute to their companion animals basic emotions (anger, joy, fear, disgust, sadness), as well as complex ones (shame, jealousy, disappointment, compassion), dogs receive more anthropomorphic attributes than any other species through the high level of mutual understanding and shared emotions with owners (Martens, Enders-Slegers, & Walker, 2016).

Sanders (1993) observed that as guardians thought that their dogs showed characteristics essentially similar to those of humans, they were more likely to actively include them in routine exchanges and special rituals carried out in the household. The former included routines regarding feeding, playing, exercising, etc., and others included rituals such as the celebration of the dog's birthday. For Belk (1996), activities such as bathing the pets, dressing them with human clothes, giving them names, regulate their manners, have them defecate outside the house and make them participate in family rituals can be considered within the frame of anthropomorphism as an attempt to render disorder into appropriate behavior.

Cohen (2002) highlighted that people who consider their dogs as children, would be identifying their pets as family members because of the way they behave at home. For Power (2008), people's descriptions of pets as children would be based on the kind of care these animals require rather than on an owner's intent to confine them to specific roles similar to those of kids.

However, the bond between guardians and companion animals share some similarities with the human parent-child relationship (Borgi & Cirulli, 2016). These similarities have been described in the frame of attachment theory (Bowlby, 1969), receiving additional support by research about implied neuroendocrine correlates (e.g. Nagasawa et al., 2015; see Díaz Videla & López, 2017).

Companion animals such as dogs and cats exhibit both morphological and behavioral childlike traits along their whole life (i.e., neoteny), which have been increased by selective breeding (Archer, 1997). For some authors, one possibility is that pet keeping, what can be understood as *crossed species adoption*, was originated in the paleolithic era as a consequence of an ill-directed parental behavior; this could have been favored by animal childlike traits that activate human response systems linked to provide care and to human capacity of anthropomorphic thinking (Serpell, 2003; Serpell & Paul, 2011).

It is possibly because of this, that folk knowledge has kept a common and spread theory about pet keeping: the belief that they are mere substitutes for what is considered *normal* human relationships (Serpell, 1996).

This study has the intention to assess the possible effect of substitution for or compensation of human bonds through the bonding with companion animals. We took into consideration daily practices of cohabitation and family relationships. Companion animals' anthropomorphism has been studied in scientific literature in two different manners: on one hand, through the attribution of human emotions and motivations (e.g., Epley et al., 2008, McConnell et al., 2011), and on the other hand, through the inclusion of these animals in the human's sphere by means of practices and rituals (e.g., Albert & Bulcroft, 1988; Boya, Dotson, & Hyatt, 2012). We chose the latter manner because of the aim of the investigation, and concurrently incorporated the assessment of the emotional closeness toward the dog.

Research Questions and Hypotheses

We had two main questions and three hypotheses. Firstly, are there differences in perceived emotional closeness to the dog based on marital, parental or cohabitation status of the guardian? Secondly, are there differences in anthropomorphism as a function of the guardians' marital, parental or cohabitation status?

We hypothesized that if there is a substitution or compensation effect of the human bonds with the companion dog, the perceived emotional closeness to this companion dog will be greater in guardians who live in one person household, compared to those in a life cycle stage near parenting (e.g. living with a partner without children) or those who have children that do not live with them (e.g. empty nesters). We also hypothesized that, if there is such an effect, the levels of anthropomorphism would be lower in those people who have a partner and children who live with them in comparison to those who do not have a part-

ner or children, or in case of having them, they do not live together. Finally, we hypothesized that, if there is a substitution effect, the anthropomorphism and perceived emotional closeness levels would get greater in guardians with children as the latter grow older.

Methods

Procedure and Sample

The participants were 425 adults (119 males and 306 females) living in the city of Buenos Aires, owning and cohabiting with a companion dog for at least one year, who were recruited from three parks of the city and three pet-shops. Participants range from 21 to 95 years of age ($M = 42.96$, $SD = 16.08$) and had to declare themselves as totally or partially responsible for the dog. See Table 1 for socio-demographic details. All participants were informed about the object of the investigation, as well as about its anonymous and voluntary nature before filling out the survey. If the guardian had more than one dog, they were encouraged to answer regarding their favorite one. After answering demographic questions about them and their dog, participants completed two scales about their ownership experience and feelings, and other extra items about the subject. The survey collection was performed during the first semester of 2015 and was followed by the quantitative data analysis.

Table 1
Socio-demographic and lifestyle variables of respondents ($n = 425$).

| | Variable | % |
|--------------------------|--|------|
| Sex | Male | 28.0 |
| | Female | 72.0 |
| Marital status | Domestic partner | 48.8 |
| | Not cohabiting couple | 10.8 |
| | Single | 25.9 |
| | Divorced | 8.7 |
| | Widowed | 5.8 |
| Cohabiting with a couple | Yes | 52.7 |
| | No | 47.3 |
| Parenting status | No parents | 56.2 |
| | Parents living with their children | 27.1 |
| | Parents not living with their children | 16.7 |
| Children age | Preschool children (0-5 years old) | 11.0 |
| | School age children (6-12 years old) | 17.0 |
| | Teenage children (12-18 years old) | 8.2 |
| | Young adult children (18-24 years old) | 10.4 |
| | Adult children (> 24 years old) | 53.4 |

| | Variable | % |
|--------------------------|----------|------|
| Number of children | 0 | 72.5 |
| | 1 | 12.7 |
| | 2 | 11.5 |
| | ≥ 3 | 3.3 |
| Number of humans at home | 1 | 19.5 |
| | 2 | 38.1 |
| | 3 | 18.1 |
| | 4 | 16.2 |
| | ≥ 5 | 8.1 |

Materials

- Perceived Emotional Closeness:** Participants completed the 10-item subscale measure of emotional closeness from the Monash Dog-Owner Relationship Scale (MDORS; Dwyer, Bennett, & Coleman, 2006). The subscale consists of items about emotional closeness perception that the owner has toward their dog. Participants responded using a 1-5 Likert-type scale (Scale anchor varies by question). Besides, participants were asked to answer some additional items, extracted from Lexington Attachment to Pets Scale (LAPS; Johnson, Garrity, & Stallones, 1992). In order to count with items that could detect a sufficient range of variability in the answers, we kept the items from MDORS that have both a skew and kurtosis coefficients between ±2, which was established as adequate for this and the other scale (see George & Mallery, 1994). After this analysis, the following items were replaced: “My dog is constantly attentive to me”, “If everyone else left me, my dog would still be there for me”, “My dog provides me with constant companionship” and “How Traumatic do you think it will be for you when your dog dies?” Instead, the following items were added: “I enjoy showing other people pictures of my pet”, “My pet knows when I’m feeling bad”, “I often talk to other people about my pet” and “My pet understands me”. These items were extracted from LAPS (the term pet was replaced by dog). The scale established in this manner showed an adequate reliability (Cronbrach’s $\alpha = 0.77$). Although, at present, there is a Mexican version of this subscale (González-Ramírez, Vanegas-Farfano, & Landero-Hernández, 2017), it was not considered in the present study because its publication date was after our data collection.
- Anthropomorphism:** to assess anthropomorphism behavior and attitudes to companion dogs, we used a scale configured considering the items identified in the investigation carried out by Boya et al. (2012). Thus, the participants completed the original scale comprising seven statements about the degree to which they attribute human characteristics to their dogs, using 1 (*strongly disagree*) to 5 (*strongly agree*) Likert-type scale. The kurtosis and skew analysis allowed us to

keep all the original items. The Cronbrach’s α was 0.87. See Table 2.

Table 2
Items on the Perceived Emotional Closeness and Anthropomorphism scales

| Perceived Emotional Closeness | Anthropomorphism |
|---|---|
| $\alpha = 0.78$ | $\alpha = 0.82$ |
| My dog gives me a reason to get up in the morning | I treat my dog as a person |
| I wish my dog and I never had to be apart | My dog is my best friend |
| How often do you tell your dog things you don’t tell anyone else? | My dog is like a child to me |
| I would like to have my dog near me all the time | If my dog were a person, they would be a lot like me |
| My dog helps me get through tough times | I have the same responsibilities as a parent when it comes to taking care of my dog |
| My dog is there whenever I need to be comforted | I like to spoil my dog |
| I enjoy showing other people pictures of my pet | I like to celebrate my dog’s birthday |
| My pet knows when I’m feeling bad | |
| I often talk to other people about my pet | |
| My pet understands me | |

Analysis

In this project, we conducted correlational analysis using IBM SPSS 20.0 software tool for Windows. Given the fact that the Kolmogorov-Smirnov test showed that both dependent variables (i.e., Perceived Emotional Closeness and Anthropomorphism) were distributed significantly differently from a normal distribution ($ps < .001$), we assessed the associations between them and other scale variables with the non-parametric Spearman’s *Rho*. Despite the non-normality of the dependent variables, because of the big sample size, we used parametrical tests to compare groups. The *t*-student test was used to compare two conditions in relationship with their scores in the independent variables. When the Levene test yielded significant differences between the variances, the Welch correction was employed. The variance analysis was used to compare more than two groups, with exception of those cases in which more than two conditions were compared and the Levene’s test yielded a significant difference between their variances. In this type of cases the Kruskal-Wallis test was

preferred. An α significance level of .05 was established for all tests.

Results

Perceived Emotional Closeness

After identifying the fact that guardians' age was not correlated with Perceived Emotional Closeness scores ($r_s = 0.06$, $p = 0.22$), we went further with the comparisons regarding the human family circle.

Groups of subjects defined according to their marital status were compared using the Kruskal Wallis test; there was no difference among these groups, $X^2(4) = 3.63$, $p = 0.45$.

The comparison between participants that do not live with other people and those who do showed no difference regarding the Perceived Emotional Closeness toward their companion dogs ($t[405] = 1.59$, $p = 0.11$).

When comparing the groups of people who had children with those who did not, it was observed that the former had scores significantly lower in this scale ($t[386.82] = 4.46$, $p < 0.001$). Nonetheless, there was no significant differences of the scores regarding the children age range, $F(4, 172) = 1.897$, $p = 0.11$.

With regard to Perceived Emotional Closeness, there was no main effect of the factors Cohabiting with a couple, $F(1, 395) = 0.48$, $p = 0.82$, neither of the interaction of Number of children x Cohabiting with a couple, $F(3, 395) = 0.19$, $p = 0.90$, although there was an effect of Number of children, $F(3, 395) = 5.73$, $p < 0.001$.

The Tukey *post hoc* analysis showed that subjects without children had significantly higher levels of Perceived Emotional Closeness than people who had one child ($p = 0.01$), two children ($p = 0.02$), and three or more children ($p = 0.01$), although there were no significant differences among the latter three groups. See Figure 1.

We wondered if the determining factor in the Emotional Closeness level with the dog depends only on the fact of having children or not, or on the cohabitation with them? To answer this question, an ANOVA with an intersubject factor was performed: Parenting status. In this analysis, we compared guardians without children, guardians who were parents not living with their children and guardians who were parents living with their children. A significant effect was found for the Parenting status factor, $F(2, 400) = 10.53$, $p < 0.01$. The *post hoc* Tukey test showed that subjects without children had significantly higher scores of Emotional Closeness than subjects with children who lived with them, $p = 0.01$, or not, $p < 0.01$. There were no significant differences between the two groups of guardian with children, $p = 0.72$ (see Figure 2).

Thus, the differences in the guardians' Perceived Emotional Closeness were only seen regarding the fact of having children or not.

The Perceived Emotional Closeness score showed a strong correlation with the Anthropomorphism scale scores ($r_s = 0.67$, $p < 0.001$).

Figure 1

Comparison of Perceived Emotional Closeness according to guardians' number of children.

** : $ps < 0.02$.

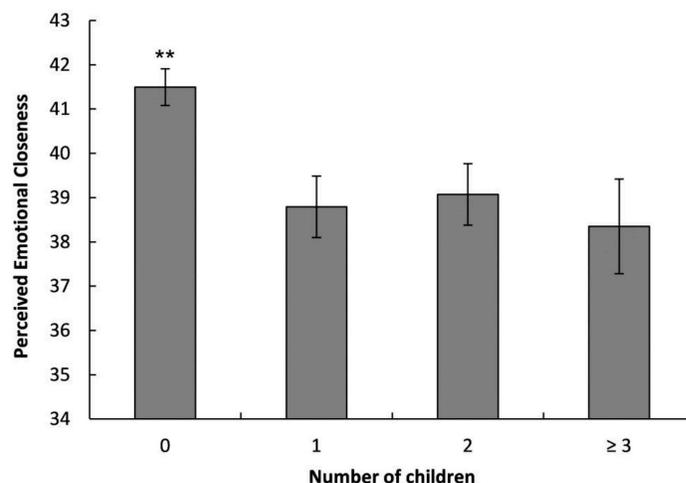
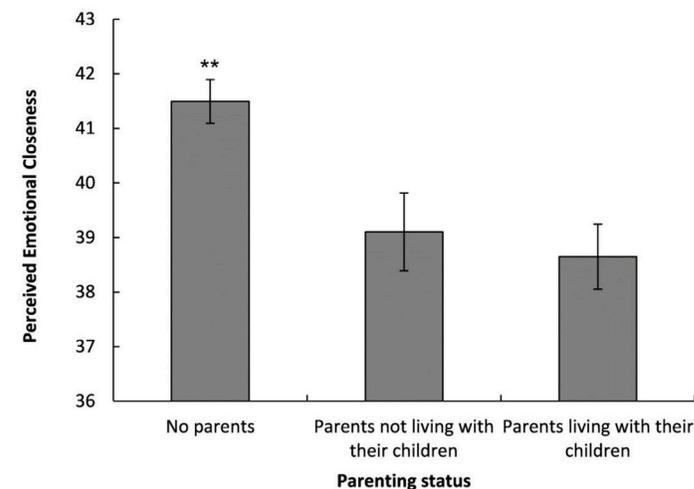


Figure 2

Comparison of Perceived Emotional Closeness according to guardians' parenting status.

** : $ps < 0.02$.



Anthropomorphism

After identifying that guardians' age was not related to this scale score either ($r_s = 0.04$, $p = 0.36$), we went further with the comparisons regarding the human family circle.

The comparison between participants who do not live with other people and those who do showed no difference in the tendency to anthropomorphism towards companion dogs ($t[124.62] = 0.15$, $p = 0.87$), neither showed any difference from people who lived with their partner and those who did not ($t[397] = 0.05$, $p = 0.95$).

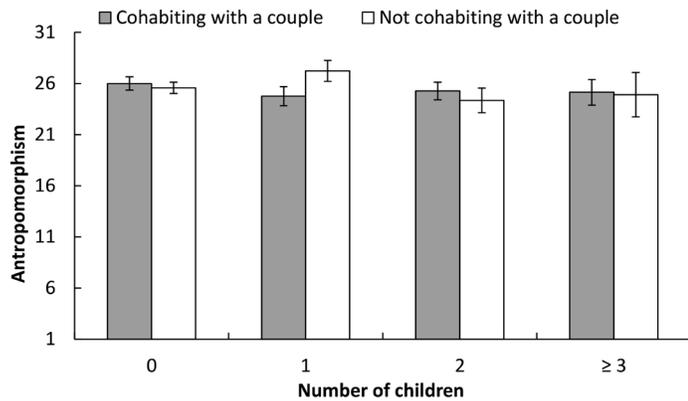
This scale levels were compared in groups of guardians according to their marital status using the Kruskal Wallis Test; no significant differences were found, $X^2(4) = 1.23, p = 0.87$.

When comparing groups of people who had children with those who did not there was no difference in the tendency toward the anthropomorphism of the dog ($t[390.43] = 0.92, p = 0.35$). Besides, the Kruskal Wallis test showed that the Anthropomorphism values did not vary depending on the children age range, $X^2(4) = 5.237, p = 0.26$.

Regarding this scale, there was no main effect of the factors Number of children, $F(3, 391) = 0.67, p = 0.56$, Cohabiting with a couple, $F(1, 391) = 0.03, p = 0.84$, nor of the interaction Number of children x Cohabiting with a couple, $F(3, 391) = 1.18, p = 0.31$ (see Figure 3).

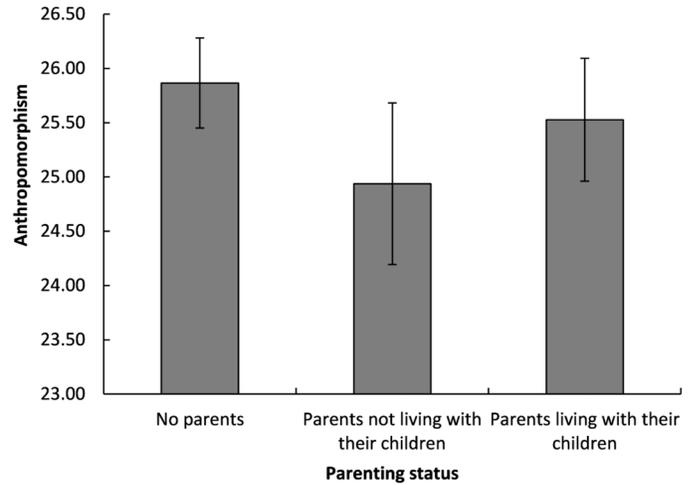
Moreover, we performed a comparison of the Anthropomorphism scale among people who did not have children, those who did but not living with them and those who lived with their children. We considered if they lived with their partner or not. There was no main effect of the factors Parenting status, $F(2, 391) = 0.45, p = 0.63$, Cohabiting with couple, $F(1, 391) = 0.16, p = 0.69$, nor of the interaction Parenting status x Cohabiting with couple, $F(2, 391) = 0.95, p = 0.38$ (see Figure 4).

Figure 3
Comparison of Anthropomorphism according to guardians' number of children and cohabiting with a couple.



The fact of considering the dog as a child was one of the items of the Anthropomorphism scale. This was related to the total scale score ($r_s = 0.79, p < 0.001$), as well as with the Perceived Emotional Closeness score ($r_s = 0.52, p < 0.001$). Guardians that had children showed no difference compared to those who did not regarding the fact of considering their dog as a child ($t[404.04] = 0.57, p = 0.56$).

Figure 4
Comparison of Anthropomorphism according to guardians' parenting status.



Discussion

This study aimed to assess the hypothesis of compensation of deficient or absent human bonds by bonding with companion animals, as it has been traditionally held by the general population (Serpell, 1996), in the beginnings of the anthrozoology investigation (e.g., Levinson, 1969) and as it continues to be proposed in more recent investigations (e.g., Shir-Vertesh, 2012).

Analyzed data could only partially support the first hypothesis, as guardians who lived with their partners but had no children showed higher levels of emotional closeness with their dogs than those who lived with their partner and had children. Similar results had been previously published by Fatjó, Darder, Calvo, Bowen and Bulbena (2013).

The answer to the question if there is any difference in the perceived emotional closeness toward the dog regarding the marital or the cohabitation status is only partially affirmative: Having children, regardless of the cohabitation with them and the guardian's marital status, links to lower values in this dimension.

Although the found correlation level between Perceived Emotional Closeness and Anthropomorphism was high, as it was reported in other investigations (e.g., Boya et al., 2012; McConnell et al., 2011), it does not mean that these are the same construct. Some divergences in their behavior regarding other variables were found. For instance, some differences in the level of Perceived Emotional Closeness in relationship with the parental status were detected, whereas none was detected with relationship with the Anthropomorphism.

Contrary to what has been indicated by some other authors (e.g., Albert & Bulcroft, 1988; Shir-Vertesh, 2012) data could not support the second hypothesis. The answer to the question about differences in the anthropomorphism towards dogs with relationship to marital-parental status and cohabitation status is negative.

The comparison of groups of guardians who were parents, taking into account their children's age, and presumably the family life cycle stage, showed no difference in terms of anthropomorphism of the companion dog, nor in the emotional closeness toward the animal. Our third hypothesis indicated that if there were a substitution effect, guardians who are parents would show higher levels of anthropomorphism and emotional closeness as children grow older and achieve greater independence and autonomy, and leave the parental home. Data could not support this hypothesis either.

Contrary to the children substitution effect traditionally held (e.g., Albert & Bulcroft, 1988), in this study guardians with or without children showed no difference in the answer to the item "my dog is like a child to me". These answers were not associated with variables such as children or guardian age either. However, the answers to this item were closely associated with the emotional closeness perceived by the guardian. Consistently with other recently published studies (e.g., Cohen, 2002; Power, 2008), considering a dog as a child would not lead to a substitution of the latter, either due to their lack or estrangement when growing old, but it would be related to the guardian's affection.

As guardians showed differences in their emotional closeness to their dogs depending on whether they had children or not, this would lead us, in principle, to consider that the affectionate resources that relate people to their children and their dogs would be shared. Albeit there is evidence in favor of an overlap between the emotional systems that motivate the behaviors of providing care and affection to both children and dogs (Paul, 2000), the results of this study set them both away from competing for affective resources. In this manner, the evidence found that the children's age, living or not with parents/guardians, and the anthropomorphism showed no difference between those who do not have children and those who do. It would indicate, on one hand, that children and dogs would not compete for the same affective resources and, on the other hand, would set dogs away from the compensatory role of absent children, held by some authors that analyze the familial dynamics (e.g., Díaz Videla, 2015; Turner, 2005; Walsh, 2009).

The differences in the emotional burden of guardians who are parents and those who are not toward their dogs could be reflecting an attitude change of the former. Parenthood could give place to lesser interspecies affective permeability, through encouraging the intraspecies affective involvement and strengthening the affective borderlines with what is identified as the exogroup.

Some studies carried out in familial contexts have pointed out that people prioritize other humans over animals of different species about resources distribution, mainly in cases of shortage, highlighting the human-animal differentiation (see Amiot & Bastian, 2015). One possibility is that the attitudinal change of the guardians as a result of parenthood found in this study could be encouraged or influenced by sociocultural factors, rather than by evolutionary factors related to resources investment.

These interference and competition for resources that should be intended for the offspring have been reflected in the scientific environment under the identification of pet keeping as a case of social parasitism (see Archer, 1997, 2011; Díaz Videla, 2014), and in their popular knowledge version, they would support the fore mentioned attitudinal change after parenthood. The lack of differentiation regarding the perceived emotional closeness toward the dog found in relation to the number of children or their age could support the supposition of the influence of socio-cultural factors, which would lead people to an attitudinal change toward companion animals after parenthood.

Implications and Future Directions

In sum, this study suggests that dogs play a particular role within the bonding environment of their guardians, rather than competing with the familial roles of other humans. The emotional intensity of the human-dog bonds cannot be explained through lack of human relationships or the guardian's vital stage characteristics. Albeit there are differences in the perceived emotional closeness by guardians that have children, we presume that these would be caused by an attitudinal difference toward interspecies bonding, rather than by the presence of children. Besides, the tendency toward dog anthropomorphism linked to guardian-dog dynamics is not related to presence or absence of other humans in everyday dynamics, but rather it reflects the incorporation of the animal within the human sphere through meaningful behaviors not seeking to compensate for lacking human relationships.

The tendency of anthropomorphism toward dogs and the emotional closeness toward the animal turn out to be two tightly related human-dog relationship dimensions, although not equivalent, as the guardian's parenthood will influence only on the latter. This should be revised through assessments that take into consideration the tendency toward the anthropomorphism through the emotional attribution, and the relationship between this one and the practices of the household dynamics in which the dog gets included in human routines and cultural habits.

We recommend, in principle, that this study be replicated with randomly selected guardians, taking into account that the participants' selection criteria of this study incorporated guardians that could possibly have a high level of emotional involvement with their dogs. At the same time, the conjectured possibility about the fact that after par-

enthood sociocultural factors would increase the affective distance toward companion animals needs to be specifically investigated. In this point, we recommend the usage of mixed designs in which it is possible to inquire initially, through interviews with guardians who are parents, about their perception of this sociocultural influence and how it manifests itself, and thereafter generalize and quantify the effect of it.

Considering the particular role of the dog in the guardian's social network could lead us to the appreciation of the differential aspects of this interspecies relationship, rather than to the idea of an overlap with human relationships. Highlighting the intrinsic value of the human-dog relationship and, presumably, human-companion animal, could favor interspecies relationships that benefit both participants.

Conclusion

The belief that bonding with companion animals seeks to substitute for human relationships has been widely held as common knowledge, receiving partial support even by scientific literature. This belief might have discouraged the creation of emotional bonds between humans and other animals, either by diminishing their legitimacy or by considering them as indicators of a deficient significant relationship network or even some pathological human condition.

The results of this study showed that contrary to what has been indicated by some other authors (e.g., Albert & Bulcroft, 1988; Shir-Vertesh, 2012), the comparison of groups of guardians who were parents, taking into account their children's age, and presumably the family life cycle stage, showed no difference in terms of anthropomorphism of the companion dog, nor in the emotional closeness toward the animal.

We concluded that dogs seem to have a particular own role within their guardian's close circle of relationships, instead of competing with human family roles.

Considering the particular role of the dog in the guardian's social network could lead us to the appreciation of the differential aspects of this interspecies relationship, rather than to the idea of an overlap with human relationships. The identification and recognition of the particular characteristics of the relationship that people have with their companion dogs might help, in principle, to understand the guardians. Although attitudes towards animals have lately changed to a certain degree, guardians usually try to justify their interaction with and emotions towards their companion animals through aspects that are external to the relationship. Some interactions related to emotions, such as kissing the dog every day, were such frequent answers in this investigation, that these items had to be replaced because of lack of variability. Far from being the result of pathological conditions, these behaviors are developed within a meaningful bond with intrinsic value and enrich the quality of life of humans and dogs. Their lack of recognition may alter the relationship in such a way that it loses its

meaning and the potential to benefit its participants. Another item that had to be replaced due to lack of variability was related to the fact that guardians tended to think of their dog's death and found it traumatic. The recognition that these and other feelings, cognitions and behaviors are part of the usual relationships that people establish with their dogs may legitimate them and bring acceptance to the guardians. These data might instruct health professionals, who may ignore or underestimate the intrinsic characteristics of the human-dog relationship and consider their manifestations as symptoms of a different etiology.

Guardians' consideration of the dog as a child would not imply the substitution for absent children. It would be rather related to the guardian's affection. In other words, guardians seem to treat their dogs in human terms regardless of the fact of having a partner and/or children, regardless of their children's age and regardless of the fact of whether they lived with their partner and children. Moreover, those with a partner, whether they lived with them or not, and those who did not have one did not differ in the emotional closeness toward their dogs. Besides, among parent guardians there was no difference in their emotions towards their dogs whether they lived with their children or not, or in relationship with their children's age.

However, there were differences in the emotional closeness towards the dog between guardians who were parents and those who were not. These differences in the emotional closeness among guardians with or without children were discussed according to a possible attitudinal change, after parenthood, which would lead to a lower interspecies affective permeability.

In general, the results yield data for the research field of the human-animal relationship and, especially, human-companion dog relationship. Specifically, encouraging and improving the understanding of this kind of bond may contribute to the recognition of its importance in the mental health field, a field that has delayed the systematic approach of the implications of the relationships between a guardian and their dog. Considering these bonds incorporates a significant dimension in the understanding of these people. The results of this study provide information that may be used to improve humans' and dogs' wellbeing, with possible application in the clinical practice with families, humans and dogs.

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