Romantic Partners and Four-Legged Friends: An Extension of Attachment Theory to Relationships with Pets

Lisa Beck and Elizabeth A. Madresh
Bryn Mawr College, Pennsylvania, USA

ABSTRACT
The founding principle of attachment theory (Bowlby 1973) is that a secure attachment to a caregiver is one of the first and most basic needs in an infant’s life. Through the decades attachment theory has expanded its scope to include central adult relationships, especially between romantic partners, and has provided a useful framework for exploring relationships with friends and family members. We seek to further extend the application of the standard model of adult attachment to another interaction that people value: relationships with pets. We compared participants’ reports of their relationships with pets and relationships with romantic partners in a web-based survey of 192 pet owners. Our adaptations of measures originally designed to measure insecurity in human relationships—the Relationship Questionnaire (RQ; Bartholomew and Horowitz 1991) and the Avoidance and Anxiety scales from the Experiences in Close Relationships-Revised questionnaire (ECR-R; Fraley, Waller and Brennan 2000) produced reliable measures of relationships with pets. The structure of dimensions of insecurity was similar for pet and partner relationships, but ratings of pet relationships correlated little or not at all with ratings of partner relationships. Surprisingly, relationships with pets were more secure on every measure. Our results provide initial evidence that attachment measures are indeed useful tools for investigating people’s relationships with their pets. It appears that pets are a consistent source of attachment security; future research with attachment measures may be useful for understanding how the relationship with a pet affects other aspects of the owner’s life, perhaps by buffering the experience of negative human social interactions.

Keywords: adult attachment, ECR-R, pets, romantic partners, RQ
“Better than a dog anyhow” (American Museum of Natural History 2005). This was one of the less romantic arguments for marriage listed by Charles Darwin in his diary. Being favorably compared to a dog probably wasn’t what won her heart, but his future bride, Emma Wedgwood, wrote that one of Darwin’s attractive qualities was “being humane to animals.” Comparing relationships with pets to relationships with human intimates continues in everyday references to pets as “my baby” and “man’s best friend.” The present study extends this kind of comparison by adapting common measures of human attachment in order to investigate human relationships with pets.

**Attachment Theory: Origins and Development**

Ethology provided the language and theoretical structure for the study of human attachment (Vaughn and Bost 1999), and research by ethologists on wild birds (Lorenz 1952) and monkeys (Harlow and Harlow 1962) has contributed to our understanding of the need for proximity to a caregiver as a source of safety and comfort.

Human attachment theory suggests that unique emotional benefits are found in some intense relationships. According to Bowlby (1973) attachment motivation is visible from birth and is as central to the development of the individual as the need for food. This is in contrast to the assumption of psychoanalytic and behaviorist theories that bonding is a secondary response to the rewards of food or sex. For Bowlby and his successors, a relationship with an attachment figure provides unique support and security that cannot be duplicated or replaced by mere affectional bonds with friends or even family.

Attachment originally referred specifically to the dependent relationship a child experiences with a caregiver, usually the mother. The child seeks the comforting presence of the mother when the attachment system is activated by hunger, the presence of strangers, or other threats to security. As the child grows, he or she becomes more comfortable in new situations and begins to form a wider network of affiliations with relatives and friends. Although the mother often remains a central attachment figure into adulthood, as the child grows he or she becomes ready to form new attachments. With adulthood, the significance of the parents recedes, and most individuals find new primary attachment relationships (Hazan and Zeifman 1999).

Hazan and Shaver (1987) demonstrate that attachment theory provides a useful framework for the study of adult relationships, and pointed out that romantic love has much in common with infant attachment. Both types of close relationships share many of the same features: touching, gazing, even baby talk. Further, they show that adult romantic partnerships fit the same “attachment style” categories originally used to describe infants’ interactions with their mothers (Ainsworth et al. 1978).

**A Two-Dimensional Model of Attachment**

Bartholomew and Horowitz (1991) further refined the theory of adult attachment by proposing a two-dimensional model (see Figure 1). The Avoidance dimension relates to expectations about others as trustworthy and supportive, whereas the Anxiety dimension relates to the individual’s beliefs about self-worth.

Four styles or prototypes arise from the two dimensions in Bartholomew’s model. The Secure prototype, characterized by trust and comfort with intimacy, corresponds to low avoidance and low anxiety; Preoccupied, characterized by jealousy and clinging, corresponds to low avoidance and high anxiety; Fearful-avoidant, characterized by distrust of others and feelings of inadequacy, corresponds to high avoidance and high anxiety; and
Figure 1. Two-dimensional model of adult attachment, including prototype descriptions from the Relationship Questionnaire (RQ, Bartholomew and Horowitz 1991).

**Dismissing-avoidant**, characterized by avoidance of intimacy because others are unworthy, corresponds to high avoidance and low anxiety. These prototypes approximate the attachment styles first described by Ainsworth in her early cross-cultural studies of infants (Ainsworth et al. 1978).

Two commonly used measures of adult attachment security are based on Bartholomew and Horowitz’s (1991) model of attachment, described above. In the Relationship Questionnaire (RQ; Bartholomew and Horowitz 1991), respondents reveal their relationship style by self-ratings of similarity to each of four prototypes, as represented by a brief paragraph (see Figure 1).

The two dimensions of relationship insecurity, avoidance and anxiety, are typically measured with the Experiences in Close Relationships scale (ECR; Brennan, Clark and Shaver 1998), or its revision (ECR-R; Fraley, Waller and Brennan 2000). In both scales, two 18-item subscales assess self-reports of relationship avoidance and relationship anxiety with regard to relationships with romantic partners.

**“Attachment” to Pets**

In research on relationships between humans and animals, the word “attachment” is often loosely applied (Crawford, Worsham and Swinehart 2006). For instance, some items in the “Pet Attachment Scale” (Albert and Bulcroft 1988) seem to address attachment issues (e.g., “I like [pet’s name] because he/she accepts me no matter what I do”) but the authors do not explicitly link their research to attachment theory. The “Lexington Attachment to Pets Scale” (Johnson, Garrity and Stallones 1992) contains a wider range of items, such as “my pet makes me feel happy,” chosen to be “indicative of respondent affection for the companion animal” (p. 162) but without reference to formal attachment theory. The authors report finding
three dimensions in their scale: “general attachment,” “people substituting,” and “animal rights/animal welfare.” Such general references to attachment can create confusion about research objectives and obscure the relevance of a substantial body of research and theory on human attachment.

Sable (1995) reviews research using these and other measures, framing his discussion in terms of human attachment theory. He concludes that pets provide comfort and companionship, and can be substitutes for human attachments, especially for the elderly. However, the evidence he reviews does not explicitly arise from an attachment theoretical perspective, so conclusions about the attachment characteristics of pet relationships remain uncertain. Again, although attachment is recognized as an important framework for understanding relationships with pets, measures and concepts from attachment theory have not been systematically applied to pet ownership.

**Extending Attachment Research to Human Relations with Pets**

True attachment bonds usually require around two years to develop (Hazan and Zeifman 1999), gradually acquiring the characteristics that distinguish attachments from mere affiliations: seeking proximity and resisting separation, using the attachment figure as a secure base from which to explore, and using the attachment figure as a safe haven in times of threat (Fraley and Shaver 2000). Although research on the human attachment system originated in studies of children’s relations with caregivers, attachment theory has been extended to inform investigations of adult relationships. Romantic partnerships are a frequent target of research on adult attachment (e.g., Hazan and Shaver 1987); however, peers and siblings can be attachment figures, as well (Trinke and Bartholomew 1997).

Yet a relationship need not be a true attachment in order to serve “attachment-related” functions (Fraley and Shaver 2000). In the same way, the usefulness of attachment theory is not limited to primary relationships between caregiver and child, or central adult attachments like spouses. The two scales adapted for the current study were developed with college students, who are likely to be in transition between using parents as attachment figures and developing attachments with peers. The first test of Bartholomew’s two-dimensional model (Bartholomew and Horowitz 1991) was on relationships between college students and same-sex friends. Participants in the development of the Experiences in Close Relationships (ECR) scales were college students instructed to respond according to “how you generally experience” romantic relationships, not just a current relationship (Brennan, Clark and Shaver 1998, p. 69). In other words, the ECR can function as a dispositional measure of domain-specific relationship insecurity (e.g., Mikulincer and Shaver 2005). The success of these extensions suggests that attachment theory and measures may be useful for exploring a variety of relationships.

Thus, concepts and measures from attachment theory offer a robust and well-documented theoretical framework for research on relationships between humans and pets. Direct comparison of relationships with humans and relationships with pets promises better understanding of the attributes that distinguish these relationships from each other, as well as linking research on human–animal bonds to the social psychology of human attachment. In the present study, we adapted common measures of human relationship style and security to investigate relationships with pets. Our adapted measures allowed us to compare ratings of human and pet relationships, and to assess how much consistency exists across these two relationship domains.
Methods

Measures and Scale Development

Two scales commonly used in research on human attachment were adapted to provide comparison of ratings for romantic partners and pets. The Relationship Questionnaire (RQ, Bartholomew and Horowitz 1991), consisting of four descriptions of relationship styles (see Figure 1), was easily adapted by changing the word “others” to “pets.” Other versions of the RQ have targeted same-sex friends (Bartholomew and Horowitz 1991) or romantic partners (Brennan, Clark and Shaver 1998). We recognize that changing the target, especially to another species, may have changed the meaning of the scales in ways not apparent in the results of the current study, and look forward to learning more about the specific attributes of pet relationships in future research.

The authors of the 36-item Experiences in Close Relationships –Revised (ECR-R; Fraley, Waller and Brennan 2000) measure acknowledge some limitations. Like its predecessor, it focuses on relationship insecurity, and lacks precision in assessing secure relationship patterns. They recommend writing new items and developing items in the reverse-scored (secure) direction. They note, too, that the 18-item scales are somewhat repetitive, and suggest that investigators “can easily modify the ECR-R scales by removing items they believe to be undesirable or redundant” (p. 362).

Following these suggestions, we shortened the ECR-R Avoidance and Anxiety scales to eight items each. Our choice of items was guided by item factor loadings within each scale, as reported by Sibley and Liu (2004), and by applicability to interactions with pets. Thus, we excluded items that did not target a particular relationship (e.g., “I worry a lot about my relationships”), and those that might not be applicable to some animals (“I rarely worry about my partner leaving me”). In addition, by rewording some of the items to the reverse direction, we balanced the scales in terms of securely- and insecurely-worded items. Finally, we modified the item “I often discuss my problems with my partner.” Pet owners often report that pets seem to understand when something is wrong and make an effort to comfort them, so rather than excluding this item the wording was changed to “share my problems.” For all of the items, we changed the words “partner” or “people” to “pet” or “pets.” Each item was rated on a Likert scale from 1 (“strongly disagree”) to 7 (“strongly agree”).

Pilot Study

Before beginning our main study, we conducted a pilot study of 181 dog and cat owners, to test the adapted scales. We did not include measures pertaining to partner relationships in the pilot survey. Recruitment procedures were the same as for the main study, except that some participants for the pilot survey were recruited through e-mails to college faculty, staff, students, and acquaintances of the experimenters.

In the pilot study, Cronbach’s alphas for the Pet Avoidance and Anxiety scales were 0.77 and 0.73, respectively. Means (with standard deviations in parentheses) of scale scores were 2.11 (0.85) for Avoidance and 2.05 (0.77) for Anxiety. Mean rating for the Secure prototype was 6.18 (1.15); means for the insecure prototypes Preoccupied, Dismissing-Avoidant, and Fearful-Avoidant were 2.50 (1.56), 2.71 (1.55), and 1.66 (1.11), respectively. From the pilot study results and respondents’ comments, we concluded that our adapted scales were sufficiently reliable measures of the two kinds of relationship insecurity, and that our items targeting pets were meaningful for participants.

Detailed information on scale development is available from the authors.
Procedure
The Pet Owners Survey was posted on the “Survey Monkey” website (www.surveymonkey.com), a site that provides a basic template for creating a personalized web-based survey. We advertised on psychology interest websites and community internet forums in different cities across the US.

The survey included the four RQ prototypes for pet relationships, the eight-item balanced Pet Avoidance scale, the eight-item balanced Pet Anxiety scale, followed by demographic items, questions about pets in the home, and spaces for comments about the survey and “anything you would like to tell us about your pets.” In the second section, the RQ, Avoidance, and Anxiety items were identical to those listed in Appendix 1, except targeting “other” (RQ) or “partner” (ECR), rather than “pet.”

Participants
Participants were recruited to take part in a “Pet Owners Survey” on the internet. Of the 192 respondents completing the web survey, 168 were female and 24 were male. They ranged in age from 18 to 56 years, with a mean age of 27 years. All but one had graduated from high school and 86% had graduated from college. Of the sample, 29% were cat owners, 36% owned dogs, and 35% owned both. Five respondents, who did not own a dog or cat, were excluded from analysis.

Results
An alpha level of 0.01 was used for all statistical tests; correlations greater than 0.19 were significant at this level.

Reliability and Means of Pet and Partner Relationship Scales
For the eight-item Pet Avoidance Scale, Cronbach’s alpha was 0.81; for the eight-item Pet Anxiety Scale, alpha was 0.75. The Pet Avoidance and Anxiety scales correlated 0.53 (see Table 1). For the eight-item Partner Avoidance scale, alpha was 0.90. For the eight-item Partner Anxiety scale, alpha was 0.89. The Partner Avoidance and Anxiety scales correlated 0.55 (see Table 2).

Table 1. Correlations of scales and prototypes for pet relationships.\(^a\)

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Secure prototype</td>
<td></td>
<td>-0.04</td>
<td>-0.37*</td>
<td>-0.28*</td>
<td>-0.33*</td>
<td>-0.36*</td>
</tr>
<tr>
<td>2. Preoccupied prototype</td>
<td></td>
<td>0.03</td>
<td></td>
<td>0.28*</td>
<td>-0.04</td>
<td>0.40*</td>
</tr>
<tr>
<td>3. Dismissing-Avoidant prototype</td>
<td></td>
<td></td>
<td>0.28*</td>
<td></td>
<td>0.39*</td>
<td>0.27*</td>
</tr>
<tr>
<td>4. Fearful-Avoidant prototype</td>
<td></td>
<td></td>
<td></td>
<td>0.33*</td>
<td></td>
<td>0.43*</td>
</tr>
<tr>
<td>5. Avoidance scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.81)</td>
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<tr>
<td>6. Anxiety scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.75)</td>
</tr>
</tbody>
</table>

Note: Alpha reliability coefficients for scales are shown in parentheses.
\(^a\) \(n = 192\); * \(p < 0.01\)

Mean RQ prototype ratings for pet relationships were significantly different from mean RQ prototype ratings for partner relationships (\(t_{191} = 8.44, -3.87, -8.71, -11.04\) for Secure, Preoccupied, Dismissing, and Fearful, respectively). Mean Pet Anxiety scale scores were significantly different from mean Partner Anxiety scale scores (\(t_{191} = 6.83\). Pet Avoidance scale...
Table 2. Correlations of scales and prototypes for partner relationships.\(^a\)

<table>
<thead>
<tr>
<th>Measure</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Secure prototype</td>
<td>-</td>
<td>-0.16</td>
<td>-0.08</td>
<td>-0.40*</td>
<td>-0.49*</td>
<td>-0.37*</td>
</tr>
<tr>
<td>2. Preoccupied prototype</td>
<td>-</td>
<td>-0.21*</td>
<td>0.31*</td>
<td>0.14</td>
<td>0.51*</td>
<td></td>
</tr>
<tr>
<td>3. Dismissing-Avoidant prototype</td>
<td>-</td>
<td>0.14</td>
<td>0.23*</td>
<td>-0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fearful-Avoidant prototype</td>
<td>-</td>
<td>0.41*</td>
<td>0.34*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Avoidance scale</td>
<td></td>
<td></td>
<td></td>
<td>(0.90)</td>
<td>0.55*</td>
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<tr>
<td>6. Anxiety scale</td>
<td></td>
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<td></td>
<td>(0.89)</td>
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Note: Alpha reliability coefficients for scales are shown in parentheses.
\(^a\) \(n = 192\); \(^*\) \(p < 0.01\)

scores and Partner Avoidance scale scores were also significantly different from one another \((t_{191} = -2.90)\). On every measure, pet relationships were rated as more secure than partner relationships (see Figure 2).

Figure 2. Means and standard deviations of self-ratings of relationship prototypes and Avoidance and Anxiety scales. For each pair, pet and partner means are significantly different \((p < 0.01)\).

Standard deviations were smaller for pets than for partners for both the Anxiety and the Avoidance scales \((F_{191, 191} = 2.25\) and 1.64, respectively), and for both Secure \((F_{191, 191} = 2.20)\) and Fearful-Avoidant prototypes \((F_{191, 191} = 1.97; p < 0.01\) for all reported \(F\) ratios). Thus, ratings of relationships with pets were not only more positive than ratings of relationships with partners, but so positive as to exhibit a ceiling effect at the secure end of the response scales.

Correlations Among Scales
In accordance with predictions based on Bartholomew and Horowitz’s (1991) model, Brennan, Clark and Shaver (1998) found that the RQ prototypes containing an Avoidance component—Dismissing-Avoidant and Fearful-Avoidant—were correlated with each other and with the Avoidance scale of the ECR. The prototypes containing an Anxiety component—Preoccupied and Fearful-Avoidant—were correlated with each other and with the Anxiety scale.
In our study, correlations among the prototypes and sub-scales were largely in keeping with theoretical predictions, with some exceptions. For pet relationships, the Anxiety scale correlated positively with the Dismissing-Avoidant prototype (see Table 1). For partner relationships, the two Avoidant prototypes, Dismissing-Avoidant and Fearful-Avoidant, were not significantly correlated, while the prototype usually considered to tap only an avoidance component, Dismissing-Avoidant, was correlated with the prototype theorized to contain only an anxiety component, Preoccupied (see Table 2).

Aside from these deviations from predicted relationships, the pattern of correlations among our scales was as expected.

**Correlations of Pet with Partner Ratings**

In order to examine consistency across the two relationship domains, prototype ratings and scale means for pet relationships were correlated with parallel ratings and means for partner relationships. Pet and partners ratings were significantly correlated for the Preoccupied prototype \( r = 0.36 \) and for the Dismissing-Avoidant prototype \( r = 0.26 \). The Anxiety scales for pets and partners were also correlated \( r = 0.30 \).

**Correlations with Respondent Characteristics and Pet Type**

Married respondents reported less insecurity than single respondents on the Partner Avoidance and Anxiety Scales (with single coded 1 and married coded 2; \( r = 0.27 \) for both), but married and single participants did not differ on RQ prototype items or the Pet Avoidance and Pet Anxiety scales. Number of dogs owned was associated with lower ratings for the Pet Preoccupied prototype \( r = -0.19 \) and the Pet Anxiety scale \( r = -0.28 \). Respondents who owned one or more cats but no dogs had higher scores on the partner Anxiety scale \( r = 0.28 \). Age and sex of respondents were not correlated with any of our relationship measures.

**Participant Comments**

Not all respondents provided comments, but many offered stories about how they came to own their animals, or specific things they enjoyed about their pets. Most interesting for us were comparisons of the relationships with pets and close friends or family. We did not undertake a formal content analysis, but provide here a sample of comments relevant to attachment security:

- I never thought that I could be as close to a pet as I am to my min pin. He is like a family member to me and I love him like he is human.
- It’s true man’s best friend is their dog.
- I was raised to regard them as “fur-kin” and trust their intuition.
- I love Jax more than I do some of my family members. I don’t really see him as a pet. He is more like a son to me. There is nothing that I would not do for him. Although I know he loves me, I sometimes think that he loves my fiancé more than he loves me, or at least obeys him more than me.

Note that the last comment displays the respondent’s strength of feeling for her pet, as well as a bit of relationship anxiety.

These remarks indicate the importance of pets in the respondents’ lives, and, more importantly for our purposes, show that some respondents spontaneously compare pet relationships with human relationships.
Discussion
The present study was designed to explore whether measures of human attachment may be useful for assessing relationships with pets. The RQ consists of four prototypical descriptions of attachment style (see Figure 1): Secure, Preoccupied, Dismissing-Avoidant, and Fearful-Avoidant. The ECR-R contains two scales of relationship insecurity: Avoidance and Anxiety. Our abbreviated version of these scales and the pet-adapted RQ permitted us to compare relationship characteristics for pet relationships and romantic partner relationships.

Structure of Pet Avoidance and Anxiety
The pattern of scale and prototype correlations for pet relationships is quite close to theoretical predictions, and to what has been reported for romantic partners and other human relationships (Brennan Clark and Shaver 1998), suggesting that the structure of relationships with pets is similar to that of relationships with humans. For pet and partner relationships, the Secure prototype ratings were negatively correlated or uncorrelated with the insecure prototypes and Avoidance and Anxiety Scales. For both pets and partners, the Anxiety scale was correlated with the two anxious prototypes, and the Avoidance scale was correlated with the two avoidant prototypes. These correlations suggest that relationship insecurity, even with pets, is not monolithic, but composed of separate dimensions—avoidance and anxiety.

Correlation of Avoidance and Anxiety Measures
The unexpected correlation between pet Anxiety and the Dismissive-Avoidance prototype is rather small, and may be accounted for by the correlation between our Avoidance and Anxiety scales. This finding is not limited to our adaptation of the measures, and may reflect an unexplored relationship between the avoidance and anxiety constructs.

As postulated in the two-dimensional theory (Bartholomew and Horowitz 1991), ECR Avoidance and Anxiety measures have often been uncorrelated (e.g., Mikulincer et al. 2001), although the relevant correlations are not always reported (e.g., Niedenthal et al. 2002). However, several studies have reported moderate correlations similar to those found in the present study. In three studies, Sibley, Fischer and Liu (2005) report substantial correlations between the ECR-R Avoidance and Anxiety sub-scales ($r_{298} = 0.48$, $r_{478} = 0.45$, and $r_{80} = 0.51$); Lopez, Mitchell and Gormley (2002) report a similar correlation ($r_{127} = 0.32$); and Treboux, Crowell and Waters (2004) found that the ECR sub-scales were “moderately to highly correlated,” although they did not provide correlation coefficients.

Despite similar correlations between Avoidance and Anxiety in our results, it is important to emphasize that our Avoidance and Anxiety scales still show ample discriminant validity in differential correlations with RQ measures. The relationship between Avoidance and Anxiety may simply be an indication of a dynamic interaction between the two insecure dimensions.

Consistency of Relationship Patterns Across Domains
After finding that the structure of pet and partner relationships is similar in our sample, we correlated corresponding pet and human scales to learn whether these attachment patterns are consistent across relationship domains. Consistency would suggest that stable individual differences or personality traits affect participants’ tendencies for anxiety and avoidance, such that a sense of anxiety in the domain of romantic partner relationships is associated with similar anxiety in relationships with pets. Previous research has generally concluded that relationship styles are specific to a particular relationship domain (e.g., Cook 2000), although the contribution of stable personality factors has not been thoroughly investigated (Vaughn and Bost 1999).
There was little evidence that patterns of avoidance and anxiety were consistent for pets and partners. Pet and partner versions of the Anxiety scale, Preoccupied prototype, and Dismissing-Avoidant prototype were mildly correlated ($r = 0.26$ to $0.36$) across domains, but pet and partner versions of the Avoidance Scale, Secure prototype, and Fearful-Avoidant prototype were uncorrelated. Continuities across relationship domains were relatively weak and may reflect personality characteristics that cross relationship domains, whether by having a consistent effect on interactions or by affecting perceptions of these interactions.

In general, however, our results support the expectation that our respondents’ relationships with partners and pets are not defined by global personality traits. Rather, relationships with romantic partners are affected by prior experience with romantic partners, and by the interactions between the individuals involved. Pet relationships are defined by a different set of experiences and interactions. Thus, while this study seeks general comparisons of the characteristics of different relationship domains, our results also point to the important contributions of the individuals—human or animal—in particular relationships.

**Pet Type**
The finding that respondents who owned more dogs reported less relationship anxiety and avoidance with their pets is not too surprising—presumably people who own multiple dogs enjoy their company and are happy to share many aspects of their lives with dogs. The finding that cat owners reported more partner Anxiety is harder to explain. We suspect that because cats are in many ways easier to care for than dogs, and can be kept indoors, more cat owners than dog owners in our sample may be in transition: recently graduated, divorced, or relocated for a new job, renting apartments in unfamiliar communities. For these socially isolated individuals, cat ownership may be a response to loneliness, which is expressed in our results as attachment anxiety. The correlation between cat ownership and partner Anxiety is small, however, and invites further investigation rather than firm conclusions.

**Relationship Security**
Comparison of prototype self-ratings and dimension scale scores revealed that relationships with pets were less insecure than relationships with romantic partners. On every measure, our participants reported more positive relationship characteristics for pet relationships.

A closer look at responses to individual items helps to illustrate these findings. For pet relationships, 50% of respondents chose “strongly agree” for the Secure prototype; for partner relationships, only 13% chose “strongly agree.” For the Anxiety scale item “I know my pet really loves me,” 52% of respondents chose “strongly agree;” for “I know my partner really loves me,” only 39% chose “strongly agree.” Clearly, our respondents perceive more security in relationships with pets than with romantic partners.

**Conclusion**
Three general conclusions are suggested by our findings. First, scales developed for exploring human relationships—ratings of both relationship prototypes and scales of attachment Anxiety and Avoidance—produce meaningful results when applied to relationships with pets. Second, there is only weak association of relationship styles from partners to pets, indicating that relationships with pets and romantic partners are based on different working models. Finally, pet owners experience more security in relationships with their pets than with their romantic partners.
Some may find this last result unsettling; how could relationships with pets be more positive than relationships with romantic partners? Simpson, Rholes and Nelligan (1992) point out that measures of relationship style have a “unique domain of applicability” and that they are not a measure of closeness or general relationship quality. Therefore, our results do not necessarily pose a challenge to the assumption that human relationships are, or should be, the primary source of social support.

Using the Network of Relationships Inventory, Bonas, McNicholas and Collis (2003) compared interactions with pets with interactions with human relatives. They found that although pets were perceived as providing less support overall than human household members, for some facets of social support (companionship, nurturance, and reliable alliance) dogs were seen as providing more support than family members. Cats were seen as providing less support than dogs, but more than other types of pets in the sample. These findings demonstrate that while relationships with pets may surpass those with humans on some measures, they can fall short on others.

Similarly, the present study only examined relationship characteristics relevant to attachment insecurity. The fact that pet relationships were rated as more secure on our measures does not require the assumption that they are fundamentally more satisfying or closer than relationships between human partners. (But see Barker and Barker 1988 for evidence that people consider their dogs to be at least as close as family members.) Rather, the pet relationships observed in our sample may reflect a general tendency of people to tolerate more insecurity in human relationships than with pets. Pets offer relationships that are relatively uncomplicated and rewarding, while relationships with humans are often more demanding. Pets are also relatively easy to dispose of when the relationship is not going well, as crowded animal shelters illustrate. Disposing of a spouse or romantic partner is much more difficult. Hence, the population of pet owners represents a certain amount of self-selection for good relationships with pets.

We speculate that pets are not merely substitutes for human interaction, but fill a specific role by providing a consistent, and relatively controllable, sense of relationship security. A dependable source of security may help to cushion the uncertainty of more complex relationships with humans, making it easier for pet owners to cope with the ups and downs of daily life. Knowing that a pet at home is always happy to see you may make it easier to put up with a difficult boss, for example, and the presence of a consistently loving animal may help to relieve tension resulting from conflicts between household members. Indeed, recent research on the effect of pets on stress responses (Allen 2003) suggests that the presence of a pet may be particularly beneficial in reducing the impact of stressful situations. As yet, however, we know little about pets’ effects on their owners’ experience of close human relationships.

Further research will shed light on how the sense of security many people derive from their pets affects measures of well-being, and interactions with other humans. One possibility is to compare people who report secure relationships with pets and non-pet owners on measures of security in human relationships, bearing in mind that pets are only one possible source of consistent support in a complex social network.

Charles and Emma Darwin were contentedly married for over 40 years. We suspect that the many pets they welcomed into their lives contributed to their happiness.

Acknowledgements
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References


Appendix 1. Eight-item Pet Avoidance and Anxiety Scales.

**Pet Avoidance Scale**

It’s easy for me to be affectionate with my pet.*

I don’t feel comfortable opening up to pets.

It helps to turn to my pet in times of need.*

I am nervous when pets get too close to me.

I find it relatively hard to get close to my pets.\(^a\)

I prefer not to show a pet how I feel deep down.

I usually share my problems and concerns with my pet.\(^{1*,*}\)

I feel comfortable sharing my private thoughts and feelings with my pet.*

**Pet Anxiety Scale**

I’m afraid that I will lose my pet’s love.

I am confident that my pet will want to stay with me.\(^{a*,*}\)

I know that pets care about me as much as I care about them.\(^{a*,*}\)

I know my pet loves me.\(^a*\)

My pet makes me feel confident.\(^a*\)

I find that my pets don’t want to get as close as I would like.

It makes me mad that I don’t get the affection and support I need from my pet.

My desire to be very close sometimes scares pets away.

\(^a\) Original ECR-R wording was changed to balance number of secure and insecure items.

\(^b\) To make this item applicable to pets, the original “discuss” was replaced with the word “share.”

* Item is reverse-scored.