

The anthropomorphization of the human-animal bond in family dynamics: A documentary review

La antropomorfización del vínculo humano-animal en las dinámicas familiares: una revisión documental

A antropomorfização do vínculo humano-animal na dinâmica familiar: uma análise documental

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Abstract

Introduction: The study of the interaction between humans and companion animals has become more relevant due to changes in current social dynamics. **Objective:** To conduct a documentary review of the evolution of research on anthropomorphization in animals and its impact on the human-animal bond characteristic of contemporary family dynamics. **Methodology:** This is a documentary review study supported by the Tree of Science (ToS) web tool for literature selection. The search was conducted in Scopus and Web of Science. Thirty-one studies were included in the review. **Results:** The results were categorized into classical, structural and recent studies. It was found that the anthropomorphization of the animal and its inclusion in the family makes it possible to modify behaviors and establish habits in family life. The role of animals in the family scenario is directly influenced by the degree to which they are anthropomorphized, which generates both advantages and disadvantages for the family, the pets and their direct caregivers. **Conclusions:** Anthropomorphizing practices respond to contemporary changes in human relationships and perceived loneliness and may promote bonds in human-animal and human-human interactions.

Keywords: Anthropomorphism; Family; Pet; Human-animal bond; Domestic animal; Pets.

Resumen

Introducción: El estudio de la interacción entre humanos y animales de compañía ha cobrado relevancia debido a los cambios en las dinámicas sociales actuales. **Objetivo:** Realizar una revisión documental de la evolución de la investigación sobre la antropomorfización en los animales y su impacto en el vínculo humano-animal propio de las dinámicas familiares contemporáneas. **Metodología:** Es un estudio de revisión documental con apoyo de la herramienta web Tree of Science (ToS) para la selección de literatura. La búsqueda se efectuó en Scopus y Web of Science (WoS). Se incluyeron 31 estudios en la revisión. **Resultados:** Los hallazgos se segmentaron en estudios clásicos, estructurales y recientes, encontrando que la antropomorfización del animal y su inclusión en la familia posibilita la modificación de conductas, e instaurar hábitos en la vida familiar. El rol de los animales en el escenario familiar está influido directamente por el grado en que son antropomorfizados, lo cual genera tanto beneficios como perjuicios para la familia, los animales de compañía y sus cuidadores directos. **Conclusiones:** Las prácticas de antropomorfización responden a cambios contemporáneos en las relaciones humanas y la soledad percibida, y pueden favorecer los vínculos en la interacción humano-animal e interacción humano-humano.

Palabras clave: Antropomorfismo; Familia; Animal doméstico; Vínculo humano-animal; Mascotas

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Resumo

Introdução: O estudo da interação entre humanos e animais de companhia tem vindo a ganhar relevância devido às alterações nas dinâmicas sociais actuais. **Objetivo:** Realizar uma revisão documental da evolução da investigação sobre a antropomorfização em animais e o seu impacto na ligação humano-animal característica das dinâmicas familiares contemporâneas. **Metodologia:** Trata-se de um estudo de revisão documental apoiado na ferramenta web Tree of Science (ToS) para seleção de literatura. A pesquisa foi efectuada nas bases de dados Scopus e Web of Science. Foram incluídos na revisão 31 estudos. **Resultados:** Os resultados foram segmentados em estudos clássicos, estruturais e recentes, constatando-se que a antropomorfização do animal e a sua inclusão na família permite modificar comportamentos e estabelecer hábitos na vida familiar. O papel dos animais no contexto familiar é diretamente influenciado pelo grau de antropomorfização dos mesmos, o que gera benefícios e prejuízos para a família, para os animais de companhia e para os seus cuidadores directos. **Conclusões:** As práticas de antropomorfização respondem às mudanças contemporâneas nas relações humanas e à percepção de solidão, podendo promover vínculos na interação humano-animal e humano-humano.

Palavras-chave: Antropomorfismo; Família; Animal de estimação; Ligação homem-Animal; Animal Doméstico; Animais De Estimação



Introduction

The scientific study of coexistence with companion animals has acquired greater relevance in recent years by generating transformations in the daily relationships of contemporary family environments (Walsh, 2009a). According to the American Veterinary Medical Association (AVMA), companion animal ownership has increased in recent years, with a growth between 9 % and 16 % between 2017 and 2022, and in the United States the ownership of dogs in households has increased from 76.8 million in 2016 to 83.7 million in 2020 (Larkin, 2021).

At the local level, it has been reported that between 40% and 67% of households in Colombia have at least one pet (Departamento Administrativo Nacional de Estadística [DANE], 2022). In Medellín (Colombia), it was estimated that "three hundred and ninety-six thousand four hundred and sixty-nine (396,469) canines and one hundred and thirty-three thousand seven hundred and seventy-five (133,775) felines" (DANE, 2019, p. 6) were owned, compared in the same year with "a total of 2,376,337 inhabitants in the city" (p. 10). Of the 40.4% of households in Bogotá that reported living with pets, 66% were dogs (DANE, 2022).

This scenario reflects the domestication of animals, such as dogs and cats, to provide emotional companionship and social support functions to humans, implying the integration of these animals into the relational dynamics of average human families (Fox and Gee, 2019). The proliferation of pets in households has been associated with the perceived benefit of their role as members of the family system, which has eventually led to their anthropomorphization in the construction of the emotional bond with them.

Anthropomorphism in companion animals

The concept of anthropomorphism corresponds to giving animals human characteristics, which allow them to fulfill a specific role in contemporary societies by granting them rights, norms, actions and omissions (Díaz Videla, 2017). Seen in this way, anthropomorphism in companion animals "has been considered in the literature from the attribution of human emotions and motivations, as well as from the inclusion of these animals in the human sphere from practices or rituals" (p. 50), establishing a role in the life of their caregivers and their family, becoming a position that is generally named or categorized as part of the family.

The aforementioned position incorporates animals into human dynamics, attributing to them emotions, feelings, desires or thoughts, which are energized according to the evolutionary moment of the main caregiver and the needs he/she has. In accordance with the above, Epley et al. (2008) state:

Anthropomorphism is an evolutionary need that has been modified following the desire to feel competent or to interact effectively with the environment or the need to establish social ties with other human beings, whose absence or weakness is compensated for by making non-human agents human (p. 146).

In this sense, it is in the need of humans to feel loved and to love, to establish strong and reciprocal relationships, that the attribution of human characteristics to animals is generated, which allows the experience of a much closer bond with them than with other animals.



human beings. Likewise, Antonacopoulos and Pychyl (2008) agree with the above by stating that it is likely that the anthropomorphic behavior of pet owners, such as dogs, leads to a reduction of stress in pets.

For their part, Díaz Videla et al. (2015) establish that companion animals have evolved and have adapted to this role of accompaniment according to the needs that families develop through the life cycle in which they are, establishing themselves as a fundamental part of these and fulfilling an active role in the family nucleus, in attention to the development of the origin of pet ownership and its respective historical evolution (Díaz Videla, 2017). In this regard, Mueller et al. (2015) also established that human-animal relationships can be associated with the outcomes and adaptive and non-adaptive functioning in the family system.

In addition, Díaz Videla (2017) has problematized the term "pet" with which pets are traditionally referred to, standing out as a term that denotes a co-marketable object, while referring to the term "companion animals" as a way of naming a relationship oriented to equality in terms of the roles that each species occupies in the family environment. In this sense, both terms represent a dualism between considering the animal as another member of the family, marking a difference in the treatment, the idea of the animal and the social role it fulfills in the family environment. Thus, the degree of relevance in terms of the logic of the language used to designate the human-animal bonds established and that determine the type of relationship established between the two species is evident.

The study of anthropomorphization in the human-animal bond.

Although anthropomorphic behavior is a common phenomenon among individuals who consider their pets as family members, the field of study on this phenomenon is relatively recent. In this regard, Díaz Videla and Olarte (2016) sought to "identify and describe the possible relationships between the perception of benefits from the relationship with the companion animal and the personality characteristics of its custodians" (p. 3) with the phenomenon of anthropomorphization. The authors established that characteristics such as flexibility to change or interest in non-conventional values were linked to the dimension of anthropomorphization. Likewise, it was found that the personality dimension of openness to experience was significantly associated with the score of perceived benefits of considering the companion animal as a member of the family.

On the other hand, Acero Aguilar (2017) sought to understand the relationship between humans and companion animals and the readings derived from their interactions in the framework of public health as a social phenomenon in Bogotá (Colombia). While it has been shown that human-animal interactions can significantly improve human physical health and psychological well-being (O'Haire, 2010) in relation to the phenomenon of anthropomorphization, Acero Aguilar (2017) establishes that animals are represented as members of the family structure and, in turn, as objects that are humanized, infantilized and civilized in different socialization environments.

This relationship between humans and companion animals entails the risk of ignoring the typical nature of their species, as well as possible practices of negligence, mistreatment and abandonment that trigger some public health and coexistence problems typical of the Colombian national context. In this regard, Díaz Videla (2019) points out that the esteem that owners give to their pets is not the same as the esteem in which they are treated.



The company leads to exempt them from some economic considerations and a resistance to focus on an anthropocentric position, which highlights the caregiver-companion animal relationship and the representations included in it, as well as the interactions in the human-human relationship.

Simultaneously, other studies establish a relationship between anthropomorphism, bonding relationships at the family level and their effect on family therapy, whose contributions allowed "providing recommendations for clinicians to include pets in the work with multi-species families" (Díaz Videla & Rodríguez Ceberio, 2019, p. 1), which provides a guide for linking animals within the family structure and recording the dynamics, roles and patterns of interaction between the animal and family members (Rodríguez Ceberio and Díaz Videla, 2020; Walsh, 2009b).

Another study that complements the aforementioned developments was carried out by García (2020) based on a sample of a group of male motorcyclists who formed their family based on the decision not to have human children. In this regard, the author found that the participants of the study were oriented to form a family in a different way from the traditional structure that implies human biological offspring, choosing to have a sex-affective couple or to form families alone, with pets or contemplating the possibility of adopting a human child. Regarding the phenomenon of anthropomorphization, this research is relevant to the extent that it provides significant terms such as "gathijos" and "perrhijos", evidencing an anthropomorphic relationship established by the population in this study.

The current problem of anthropomorphization in the human-animal relationship

Taking up the different research precedents mentioned above, it is possible to highlight that the bonds established with companion animals in the family environment have been transformed over time thanks to the phenomena of anthropomorphization that have taken place in the daily environment with humans, also transforming the ways of interacting with animals and the usual spaces where they are made participants. However, these links can positively or negatively influence the individual and social human contexts, and thus create new forms of socialization that intervene and give rise to new ways of relating at the family level. In this sense, it is worth mentioning that the conformation of the family and its daily dynamics precede the consideration of the companion animal as an individual, beyond its profit or benefit. Thus, the companion animal, throughout history, goes from being an object for a purpose, to forming a bond with its caretaker in which it is configured as an end in itself, which offers a benefit that is received in exchange.

In this order of ideas, the relationship established in the caregiver-companion animal-family triad is a system that has been transforming over time thanks to the phenomena of anthropomorphization that permeate it, mainly impacting the life of the caregiver by creating, for him or her, new and varied responsibilities, as well as favoring motivational factors related to the increase or regularity of physical activity, The reduction of feelings of loneliness and the facilitation of social integration, generating a positive impact on the reduction of daily stress, as well as the enrichment of family ties and with the animal itself, due to the communicative and non-contradictory nature of the relationship with companion animals.

Although some of the categories have been studied in isolation, there is a lack of depth in the analysis at the local and national levels in this study.



This creates a need to provide new information in this area of knowledge in order to answer the question that occupies this research: how does the anthropomorphization of pets impact the human-animal bond established in the social dynamics of the family environment? This question is considered scientifically relevant insofar as it allows us to delve deeper into a current issue that is increasingly raising questions about the influence of anthropomorphism in the creation and consolidation of bonds in the current social dynamics of multispecies families. This is particularly relevant given the social status that companion animals have been acquiring and how this has repercussions on contemporary human social dynamics, through the transformation of such relationships between humans and non-human agents.

The purpose of this research is to identify the benefits derived from the multiple interactions generated in the caregiver-pet-family triad. In addition, the study aims to question the assumption that placing the companion animal in a human role is beneficial, as this can have detrimental effects, such as the annulment of its species-typical characteristics, as well as some negative consequences for the caregiver and its family.

In this order of ideas, it is considered that analyzing the evidence and evolution of research on the anthropomorphization of human-animal interaction is relevant because it makes visible a promising field of research in our context and can contribute to the current reflection on the place of companion animals in contemporary families and, especially, on the limits and scope of their care and protection.

These aspects allow reflection on the establishment of clear and contingent limits within human-animal contact, in which respect for the needs of non-human species is prioritized by generating awareness of the way in which, by placing the companion animal in an anthro-pomorphic position, a certain need for control that the human being has towards the animal is perpetuated, mediated by feelings of loneliness, which are satiated by this companionship, satisfaction provided by the animal in the face of social needs and emotional attachment, perpetuates a certain need for control that the human being has towards the animal, mediated by feelings of loneliness, which are satiated by this companionship, the satisfaction provided by the animal in the face of social needs and the emotional attachment generated by the human being (Díaz Videla, 2017).

Methodology

A review of the scientific literature was carried out using the Tree of Science (ToS) methodology that employs the SAP algorithm proposed by Valencia-Hernández et al. (2020), which consists of mapping a field of study to build a citation network of scientific production (Zuluaga et al., 2022). ToS recruits metadata information from the search equation of databases, such as Scopus and Web of Science (WoS), and uses graph theory to create a citation network and segment it into three clusters, according to the position of each record within the network. These clusters reflect the evolution of the research field by visualizing the presentation of studies in (1) classics (roots), (2) structural (trunk) and (3) recent (leaves), based on the metaphor of the tree of science (Robledo et al., 2022; Zuluaga et al., 2022).

The following is a detailed description of each step of the methodological procedure and the process of

analysis conducted by ToS to carry out the literature review on the anthropomorphization of the human-animal bond in family dynamics.

Initially, the Scopus and Web of Science (WoS) databases were used to search and select records. The search period was between 1993 and 2021. The use of Scopus and WoS for the documentary search is justified by the fact that they are the largest and most impactful databases in the world scientific community, having a volume of registered articles that is comparable between the two (Martín-Martín et al., 2018). The following search terms were implemented in WoS and Scopus separated by the Boolean operators "OR" and "AND" as follows: "anthropomorphization" OR "anthropomorphism" OR "anthropomorphous" AND "family" AND "human-animal interaction". The results yielded 27 records in WoS and 118 in Scopus, for a total of 145 articles.

Once the results of the search equation were obtained in each of the databases, they were exported and unified in TXT format and the file was uploaded to the ToS web platform, which uses the citation network structure to identify the most cited literature on a specific topic (Robledo et al., 2022; Zuluaga et al., 2022).

Unlike traditional documentary review methods that focus on the scope of the researcher to select and systematize bibliographic records according to their access to information (Tancará, 1993), the SAP algorithm using ToS analyzes both the records in the equation and the references used in each record, eliminating duplicates or those that are not connected to the network, using the Jaro-Winkler (Jaro, 1989) and Louvain (Blondel et al., 2008) algorithms. This procedure using ToS makes it possible to capture records from different databases, eliminates bias in the time interval of the search equation and provides greater security in the selection of records for the documentary review based on scientometric indicators (Gómez Tabares, 2022; Robledo et al., 2014).

The ToS algorithm selects the relevant records based on a "tree of science" structure, by classifying the different studies into three sections corresponding to the root or classic studies, the trunk or structural studies and the leaves or recent studies (Robledo et al., 2014, 2022). The classic studies correspond to the first research developed on the subject, which is why they have a greater number of citations. Structural studies are those that, generally, were based on the classic studies and expand them, allowing the opening of new study perspectives that give room for other more recent research on the subject, which are located in the section on leaves (Valencia-Hernández et al., 2020).

ToS has been widely used in bibliometric and systematic literature review studies in the field of neuropsychology and neurocognitive disorders (Landínez-Martínez et al., 2022; Martínez Morales et al., 2023), the study of suicidal behavior in children and adolescents (Núñez et al., 2024), canine cognition (Correa Duque and Gómez, 2021), parenting and prosocial behaviors in adolescents (Gómez Tabares et al., 2021), social marketing (Duque et al., 2024), inclusive education (Ramírez and Restrepo, 2024), among other areas of knowledge, which validates the usefulness of this methodology.

According to the ToS structure, the records corresponding to the root, stem and leaf studies were sectioned and reviewed, reflecting the field of study with respect to the categories

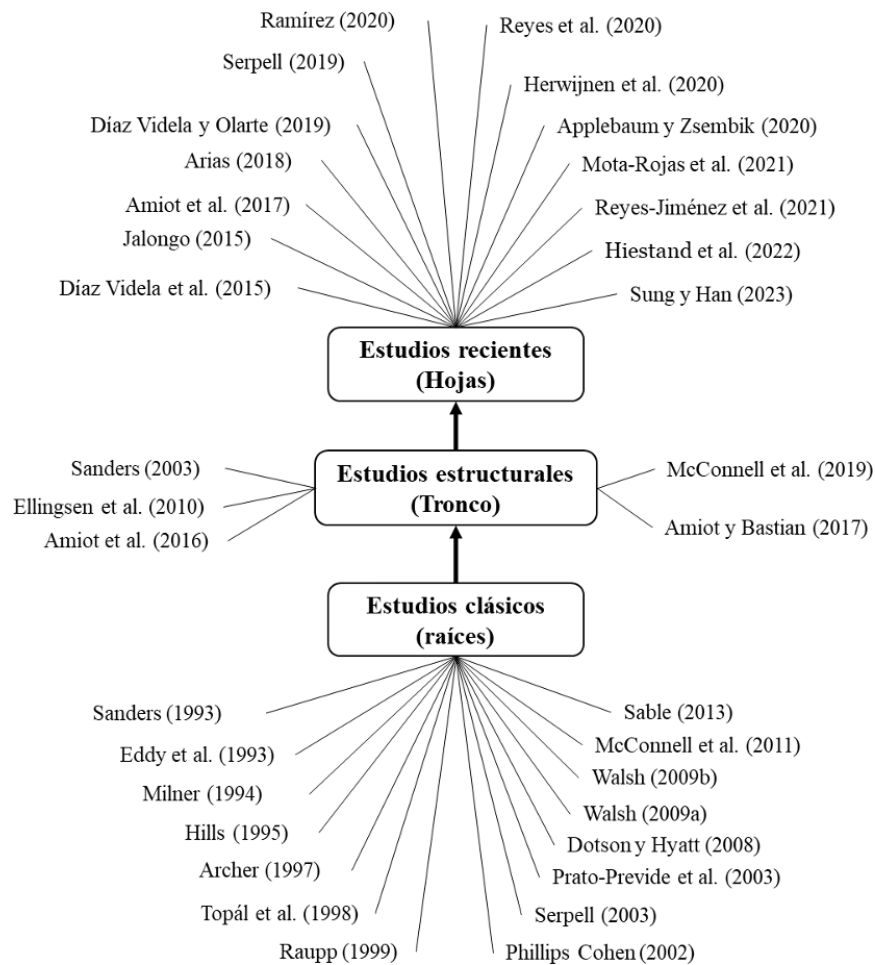
of anthropomorphism, family and human-animal interaction. Thirty-one records were selected for the full review, which accurately reflect the evolution of the study of the anthropomorphization of the human-animal bond in family dynamics based on ToS metrics.

Results

In accordance with the process established in the methodology, the main findings of the studies selected for the documentary review on the incidence of anthropomorphization in the human-animal bond established in the family dynamics of multispecies families are presented, organized into classic studies (root), structural studies (trunk) and recent studies (leaves), according to the tree of science (ToS) structure (Figure 1).

Figure 1.

Tree of science on the anthropomorphization of the human-animal bond in family dynamics.



Source: Own elaboration.



Classical studies (roots)

The studies corresponding to this section share a common interest in some aspects that are generated within the human-animal relationship, such as attachment and the perceived similarity between humans and companion animals in the processes of social interaction. In this regard, Sanders (1993) focused his study on the main criteria used by 24 dog owners to define their animals as mentalistic agents with whom viable and satisfactory social relationships can be maintained. According to the author, it is established that people who perceive their dog as an authentic and empathetic social agent tend to involve them in their routine social exchanges, attracting mentalistic traits of rationality similar to humans.

Along the same lines, Eddy et al. (1993) and Hills (1995) analyzed perceived attributions of similarity between humans and animals in terms of cognitive traits, e.g., degree of consciousness, rationality, and feelings. Hills (1995) notes that empathy for animals is directly associated with beliefs that the animal is endowed with a mentalistic capacity involving thought and emotion, which reinforces the perceived similarity between humans and animals. However, he also points out that this association between empathy and beliefs in the animal mind can be weakened when there is an instrumental motivation, i.e., using the animal for personal gain. Furthermore, Eddy et al. (1993) found that, in the case of dogs, cats and primates, there was a significant increase in perceived similarity and in the tendency for humans to make attributions about complex cognitive characteristics characteristic of the human species, such as self-recognition, similar experiences, deceiving others or determining the intention to act.

Both the studies by Eddy et al. (1993) and Hills (1995) agree that, as animals are perceived as similar to humans, their experiences are more likely to be considered equivalent to those of humans, as well as establishing a perception that animals have mental faculties comparable to those of humans.

In relation to the above, the documentary review developed by Archer (1997) established the reasons why people love their dogs from a Darwinian perspective. According to the author, it is determined that, in the proximity of this human-animal relationship, there is an influence of the neotenic characteristics that provide an initial attraction, the latter being understood as the conservation of the juvenile state of a certain species in an adult organism, allowing the human owner to obtain continuous satisfaction from the interaction with the companion animal, such as the attribution of feelings and mental processes to organisms similar to humans. These mechanisms may, in some circumstances, cause pet owners to derive more satisfaction from their relationship with pets than with other humans, since animals provide a type of unconditional relationship that is not always present in relationships with other humans.

On the other hand, Topál et al. (1998) implemented Ainsworth's strange situation experiment in order to investigate the incidence of the human-animal relationship on the preference of dogs for their owners in stressful situations in a sample of 51 dog-human dyads. However, no effects of this attachment were found on most behavioral variables, such as play, exploitation, proximity seeking to the human, or others such as gender, age, living conditions or breed of dog. In spite of the above, dogs living in large families showed a higher



proximity-seeking behavior towards the owner and tended to behave more passively in stressful situations. This effect may be attributed to differences in the socialization of dogs in particular, since, in large families, companion animals form multiple bonds with different family members, which explains why these dogs showed less owner-attached behavior.

Prato-Previde et al. (2003) also implemented Ainsworth's strange situation experiment as a development and extension of the results of the study by Topál et al. (1998). In this regard, Prato-Previde et al. (2003) aimed to recognize the nature of the social relationship between dog and human by observing 38 adult pairs of dog owners under controlled conditions (in an unknown habitation), introducing them to a human stranger and subjecting them to four brief separation episodes. The results were consistent with the study by Topál et al. (1998) in concluding that the dog-human relationship is mediated by a baseline affective bond; however, the evidence that it conforms to an attachment is not entirely conclusive. The order effects inherent in Ainsworth's procedure meant that they were only able to obtain one positive indicator of a secure base effect, namely the fact that the dogs played with the stranger in the presence of the owner, but not in his absence. The above suggests that the conclusions drawn from the Topál et al. (1998) study were premature and that further research is needed to better understand the nature of the dog-human bond and to test, specifically, the effects of secure basing on the dog-human relationship.

On the other hand, Raupp's (1999) study conducted a survey of 160 university students (111 women and 49 men) who had pets, applying the subscales of pet physical abuse potential, pet abuse potential, appearance validity, and ego strength, adapting 19 items from Milner's (1994) scale of child abuse potential, changing the terms of children to pets. Among the results of the survey, it was found that childhood socialization experiences with pets tend to be very positive in terms of the social relationships that are established in adulthood. However, the study also established that there are greater risks to companion animals if the owners' childhood socialization experiences were negative. The study also showed that companion animals are especially vulnerable to harm in relationships with males during childhood, even though some per-judicial behaviors, such as hitting pets or giving them away, are so common among males and females as to be normative. In this sense, for the author of this study, it is clear that mistreatment of pets (or their potential development), as well as strong emotional attachment to them, can coexist.

Although the sample evaluated showed a low potential for abuse of their current animal companions in socially unacceptable ways, they did show a certain orientation towards rigid and unrealistic expectations regarding pet ownership, given that the lack of knowledge and understanding that pet ownership implies can affect the quality of the relationship and even lead to poor treatment.

On the other hand, from the parents' perspective, threatening to give away children's pets as a form of punishment may actually harm their relationships with their future pets by translating this punishment into a series of rigid demands for good behavior on the part of their future pets. Phillips Cohen (2002) investigated the role of pets in urban American families by comparing the role of the companion animal with that of each member of the human family. It was found that attachment to pets was not associated with

a lack of human interaction in family relationships, as all participants stated that, although they felt "very close" to their pets, this did not have a significant effect on the lack of relationships with other people.

Simultaneously, Serpell (2003) explored through a documentary review the origin and evolutionary implications of anthropomorphism in the context of relationships with companion animals. In this regard, the author analyzed variables such as the quality of life and welfare of companion animals when anthropomorphized, considering that, although for the humans involved in these relationships anthropomorphism has provided the opportunity to use animals as alternative sources of social support and the means to benefit emotionally and physically from it, for the animals it has also created a new ecological niche, as well as a set of unusual selection pressures and a variety of corresponding adaptations, some of which are detrimental to the welfare of the animals. In this respect, pet ownership is no different and certainly no worse than other forms of using animals for human purposes, such as agriculture or biomedical research. For this reason, this author concludes that there are ethical boundaries beyond which they should not be crossed, and those boundaries surely should not permit deliberate actions in companion animal husbandry that encourage painful, distressing or disabling physical or emotional disabilities or surgical mutilations for reasons of human fashion or convenience.

In this same line, Dotson and Hyatt (2008) conducted a survey in which they investigated the interactions of 749 owners with their dogs, in addition to the realization of the focus group strategy in order to provide aspects related to the relationship and behavior with their companion animals. In this regard, this research identifies seven underlying dimensions that comprise the configuration of the relationship with the companion animal, which include a) symbiotic relationship, b) dog-oriented self-concept, c) anthropomorphism, d) activity/youth, e) boundaries, f) special purchases, and g) willingness to adapt. In addition, the results suggested that certain sociodemographic variables, such as gender, age and educational level, are related to these dimensions, as well as the length of dog ownership period, the amount of quality time shared with the dog, and whether the dog is purebred or mixed breed.

Walsh (2009a, 2009b) explored the benefits of pets and their importance for the development of resilience through a documentary review, establishing that companion animals provide socioemotional support that facilitates coping, recovery and resilience by offering comfort, affection and a sense of security in the couple and family processes, given their involvement in relational dynamics and tensions, being in tune with the emotional climate of the family and being sensitive to the emotional states of its members. In addition, she addressed grief due to loss of a pet, as well as the factors that complicate or facilitate grief, for example, the degree of attachment to the pet, the function of the role it plays in your life, as well as the moment and circumstances in which this loss is generated.

In relation to the above, McConnell et al. (2011) evaluated in 217 people how measures of well-being and individual difference may differ in pet owners from non-pet owners. In this regard, the authors found that pets can serve as important sources of social support, providing their owners with both physical and psychological positive benefits by increasing physical exercise, self-esteem, secure attachment, and healthy human social relationships.

Finally, Sable (2013) described by means of a documentary review how the relationship with

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a pet, especially a dog or a cat, reflects certain attachment dynamics that may explain the sense of comfort and connection that interaction with these animals provides to people at all stages of their life cycle, highlighting that pets provide an attachment component that promotes well-being and security by offering opportunities to assume the commitment required for their respective care.

Structural studies (trunk)

Structural studies included aspects related to human-animal similarity, empathy, attachment and the inclusion of the companion animal in the family environment. In this regard, the documentary review developed by Sanders (2003) sought to define how humans understand and interact with their companion animals, the process by which caregivers come to define the unique identities of their animals, and the ways in which the identity of the human-animal pair shapes the social interaction between humans. In this vein, the author states that the growing interest in the study of human-animal relationships promises to broaden the appreciative understanding of how the human personality, mind, and culture are constituted around these interaction processes. From an interactionist perspective that gives relevance to the meanings embedded in language and social interaction as a major element in making sense of existence, it is of particular importance to broaden understanding of the emotional connections that bind people and their companion animals, and how they are created and maintained even in the absence of a shared body of linguistic symbols.

Ellingsen et al. (2010) were interested in studying the relationship between empathy, attitudes and perceived animal pain. The results showed that Norwegian dog owners had very high levels of empathy toward animals and equally high levels of positive attitudes toward pets. There were gender-based differences; for women, they scored higher than men on all three instruments assessing childhood pet care, income, and education. Ingrained differences were also found in the owners' use of their dog, whether for companionship or hunting, as well as household size. A statistically significant correlation ($r = 0.58$) was found between positive attitudes toward pets and empathy directed toward animals, also establishing empathy as the best predictor of how people rated pain in dogs. However, for the latter, correlations were moderate.

On the other hand, Amiot et al. (2016) developed a review of research on human-animal relationships focusing, particularly, on the psychological mechanisms involved in the relationship with companion animals, and concluded that the adoption of an intergroup perspective, by including them as belonging to the same group and leaving aside their identification as an exogroup with respect to human-animal relationships, provides a broader and more important view of the nature of relationships with animals and of the conditions under which these relationships are likely to be harmonious in contrast to conflictive and exploitative relationships. This perspective thus has the potential to identify the factors that lead to greater or lesser speciesism (a form of discrimination based on species membership), as well as to enable new avenues for the development of social interventions that can foster mutually beneficial relationships between animals and humans.

Similarly, Amiot and Bastian (2017) examined the psychological effect of social connection with other animals through a factorial and correlational study by developing a specific measure of solidarity with animals in eight studies. The authors concluded that solidarity with animals showed predictive relationships with relevant variables, such as anthropomorphism and empathy. In this sense, correlational and experimental tests confirmed that perceived similarity between humans and animals increases solidarity behaviors towards animals, showing, for example, that pet owners and vegetarian-oriented people present higher levels of solidarity with animals.

For their part, McConnell et al. (2019) addressed how considering the pet as a family member improves well-being through two studies: in the first, they used a correlational design that showed positive relationships between viewing the pet as a family member with higher perceived social support traits and greater well-being, according to several measures of mental and physical health, while in the second study they experimentally manipulated the degree to which participants viewed their pets as family members evidencing that, by inducing people to view pets as family members, the level of well-being is increased.

Accordingly, the authors concluded that companion animals can play an important role in providing social support that helps to improve the physical and mental health of their owners, and the processes underlying the inclusion of animals in the most important group of belonging for people, which is the family.

Recent studies (sheets)

In this section, the impact of anthropomorphism on animal welfare, its effects and similarities with human rearing are analyzed. In this regard, Jalongo (2015) explored through a documentary review the implications in the interaction of young children with companion dogs from the perspective of attachment theory, based on the way they treat animals in the family, the influences of the child/dog bond in their developmental process, the uniqueness of the bonds formed with dogs and canine attachment behaviors. In this regard, the study reported data supporting that empathy for animals, especially when developed at an early age, is associated with a higher level of empathy for people in later spheres of their lives; furthermore, the child's interest in dogs may be a way to motivate their learning and strengthen their social tools through attachment behaviors towards the pet.

These findings are consistent with recent studies by Hiestand et al. (2022) and Sung and Sung and Han (2023) in showing that empathy is an essential aspect of building the human-animal bond, as well as recognizing the emotionally and socially supportive responses of companion animals, such as dogs and cats, to their caregivers in times of need. Affective empathy and attachment to dogs has also been shown to have a significant effect on human quality of life, and empathic concern is a psychological mechanism mediating the link between attachment and quality of life for both human and companion animal.

Simultaneously, Díaz Videla et al. (2015) conducted a documentary review in which they analyzed the findings of anthrozoology (the science that studies human-animal interaction and the links between animals and humans).

The study concludes that human-animal bonding in relation to human-dog interaction is based on the multimodal approach of Lazarus, a cognitive-behavioral psychotherapeutic approach, whose basic principle is the conception of humans as biological beings that think, feel, act, perceive, imagine and interact. The study concludes that affective bonds between humans and dogs, and also with other companion animals, bring benefits in all aspects that constitute the human personality. Likewise, the authors also established that pets are members of the family who, with the same flexibility with which they were incorporated, can also be expelled and discarded.

In addition, it is also stated that pet ownership confronts an egalitarian relationship style towards animals, which morally disagrees with the inhumane treatment of species used for instrumental and economic purposes, since it is considered that the ownership of unnecessary and uneconomical pets may evidence a pathological tendency by not reporting any practical utility, so they are simply human substitutes. Díaz Videla et al. (2015) propose an alternative point of view in which, "far from being perverted, extravagant or victims of misdirected parental instincts, most pet owners are normal, rational people who make use of animals to enhance their existing social relationships and thus improve their physical and psychological well-being" (p. 85).

On the other hand, Amiot et al. (2017) conducted two correlational studies to test whether similarity between humans and animals promotes affiliation with animals and reduces the need to assert the superiority of humans relative to animals. It was found that the more participants perceived a difference between animals and humans (i.e., low similarity), the more likely they were to view humans as superior to animals. Likewise, in an inverse relationship, the more participants perceived humans and animals to be similar, the less they needed to positively distinguish humans from animals. This negative association between similarity and status was mediated by a greater sense of identification with animals.

In contrast to the above, Arias (2018) sought to explore from a qualitative approach the bond between the caregiver and their pet in young people between 18 and 24 years old in the metropolitan area of Lima. This study had seven participants who had lived with their pet (dog or cat) for at least one year and to whom semi-structured interviews were applied for the information collection process. In this regard, the author showed how the bond with the pet is influenced by the individual's experiences, family dynamics, fantasies and desires. Likewise, it was established that the result of the dynamics of all these elements and the coexistence with the pet allows the individual to grant a meaning that manifests itself in a behavior towards others, including the pet. This is how this study establishes that the bond with the pet is beneficial for the pet when it receives attention from the owner, who, in turn, seeks to satisfy psychological needs, such as feeling tranquility, calm and happiness as benefits derived from this relationship. Finally, changes in self-concept were evidenced through reflections, insights and discovery of personal aspects by the study participants in the context of the relationship with their pets.

On the other hand, Díaz Videla and Olarte (2019) described differences in the human-dog relationship according to the owner's gender in multiple relational dimensions (interaction, emotional closeness, costs, anthropomorphism, willingness to adapt and benefits) using a sociodemographic questionnaire and the human-dog relationship scale (MDORS). In this regard, the findings reported that females showed higher scores for emotional closeness and anthropomorphism, while only males showed higher scores for emotional closeness and anthropomorphism, while females showed higher scores for emotional closeness and anthropomorphism.



young men showed higher cost perceptions than young women.

In addition, Serpell (2019) conducted a documentary review to explore some of the complex ways in which anthropomorphism and subjectivity can cloud the ability to make reliable judgments about companion animal welfare, even in the face of seemingly obvious and overt indicators of pain and suffering on the part of animals. Indeed, in modern times many companion animals are becoming anthropomorphic or padeomorphic (preservation of juvenile characteristics) projections of human desires, wishes and emotions, so that companion animals face particularly difficult obstacles in objectively assessing their quality of life.

Van Herwijnen et al. (2020) investigated the associations between child-directed parenting and dog-oriented parenting by the owner, finding an association between a dominant orientation and an authoritarian-correction-oriented style. This indicates that dog-oriented parenting that combines demanding and unresponsive parenting is related, in part, to the owner's perceived need to dominate his or her dog. A humanistic/protectionist orientation was associated with the intrinsic value-oriented style, suggesting that the combination of parental responsiveness and relatively low demand results in the humanization of dogs.

Simultaneously, the research by Ramírez de la Cruz (2020) identified the influence of the pet on family dynamics in three young childless couples between 30 and 35 years of age in Sevilla (Valle del Cauca, Colombia). The study concluded that the couples who participated in the research perceive their pet as an agent that exerts great influence in the family and this factor makes the pet have a preponderant role in the family dynamics, becoming a facilitator of cohesion and communication processes in the family group. According to the above, the role of the pet in the families studied is that of a child and, as such, it has clear and defined rules in the home.

Similarly, Reyes Plazaola et al. (2020) described the triangulations performed by couples with their companion animals, comparing them with the triangulations performed by couples with their children. The study yielded similar results in terms of the frequency with which triangulation behaviors toward children and animals were expressed. Couples with companion animals and no children had higher scores on triangulation behaviors about animals compared to couples who had children and companion animals simultaneously. Direct and significant correlations were also found between couples' triangulation toward children and toward dogs, indicating similar processes of involvement in family dynamics.

Similarly, Applebaum and Zsembik (2020) explored how the strength of attachment to pets is associated with family conflict reported by primary caregivers of children with pets. A sample of 1421 individuals was analyzed to understand how family conflict and pet attachment might be associated. Test results indicated that there was a significant association between family conflict and the strength of attachment to pets. That is, as the amount of family conflict increased, so did the strength of attachment to the family pet. Accordingly, family conflict is a significant predictor of the strength of pet attachment with the inclusion of sociodemographic control variables, which indicated that the association was not an indirect result of other correlations.



On the other hand, Reyes-Jiménez et al. (2021) evaluated the attitude towards animal welfare based on the analysis of four study groups establishing a comparison between university students of Primary and Child Education and retired people over 60 years of age. In this regard, it was found that the most significant factors in relation to the dimensions evaluated are age and gender, which have been the determining variables as final factors or components that defined the attitude towards animal welfare. Thus, there is a higher valuation towards animal welfare of the female gender belonging to the group of university students.

Mota-Rojas et al. (2021) sought to understand the adverse physiological and behavioral effects that can result from anthropomorphism through a documentary review in order to understand the magnitude of the repercussions on the welfare of companion animals. In this regard, they established that practices, such as misinterpreting the dog's feelings during supposedly positive interactions, can lead to injury to the human or discomfort of the animal, as well as misinterpreting behaviors and responses of the animal, in cases such as separation anxiety, anthropomorphizing these responses and giving a humane solution to the issue, such as physical punishment.

Discussion

According to the findings described above, at first, it is evident the scarcity in the pre-liminal studies of anthropomorphism as a developed theoretical category and its influence on the dynamics of multispecies families. In this sense, classical studies focused mainly on addressing aspects related to the human-animal bond and its possible implications in human life without establishing a direct connection with the anthropomorphic character that some of these interactions acquire. However, initial research highlighted that, when companion animals are allowed to participate in the usual social interactions in the family context, it is possible to recognize them as active agents and perceive them as additional social actors to whom human-like characteristics are attributed (Sanders, 1993), aspects that have subsequently been associated with the phenomena of anthropomorphization in companion animals.

In this sense, the scientific literature has established that animals possess mental traits similar to those of humans, such as a certain degree of consciousness, rationality and emotions, which endow them with mental faculties comparable to those of the latter (Hills, 1995; Sanders, 1993), and these attributions of complex cognitive characteristics of the human species in other animals, such as dogs or cats, is one of the main factors that influence the occurrence of anthropomorphization phenomena in pets (Eddy et al., 1993).

On the other hand, fulfilling the role of another social actor in the family dynamics implies performing functions as facilitating agents of cohesion and family communication processes that generate changes in the daily reality of the family system and that, in turn, determines the configuration of clearly defined norms for interaction with that animal in that environment. These interactions have an impact on both the collective and the individual, which can be reflected in aspects related to the construction of the personality, mind and culture of human beings (Ramírez, 2020; Sanders, 2003). In several of the studies reviewed, the positive impacts of early socialization experiences with animals in childhood were evidenced, specifically, in the processes related to learning, socialization, and the



development of empathic behavior, mediated through attachment relationships with companion animals (Jalongo, 2015; Raupp, 1999). Likewise, the human-animal bond promotes the discovery of personal aspects that generate changes in self-concept through reflection (Arias Jiménez, 2018).

Frequently, companion animals are involved in the dynamics and tensions typical of crises in the life cycle of the couple and the family because they are in tune with the emotional climate of the family given their sensitivity and response to the emotional states of each of its members (Walsh, 2009b). In this regard, it is noted that the socioemotional support provided by companion animals offers comfort, affection and a sense of security in crisis situations, aspects that facilitate the coping, recovery and resilience processes, which also reinforces the attachment to companion animals by their humans (Applebaum and Zsembik, 2020). This is consistent with other preliminary studies that have established how the human-companion animal relationship can be explained and understood with the help of attachment theories (Endenburg, 1995). However, understanding of the emotional connections that bind people and their companion animals, and how they are created and maintained even in the absence of either, needs to be further expanded through scientific research (Sanders, 2003).

Another aspect highlighted in the review of the classic studies was how this human-animal bond also promotes the development of empathic behaviors in humans through the identification processes that owners experience with their companion animals, since, being perceived as more similar to humans, they are more likely to consider the experiences of the animals as equivalent to those of their owners, inducing mental faculties in the animals similar to those of the cognitive structure of humans, animals' experiences are more likely to be considered as equivalent to those of their owners, inducing mental faculties in animals similar to those of the cognitive structure of humans, an aspect that considerably increases the levels of empathy oriented towards companion animals, in particular, and other animal species, in general (Amiot and Bastian, 2017; Amiot et al., 2016; Archer, 1997; Eddy et al., 1993; Hills, 1995). These identification processes experienced by owners through the human-animal bond have subsequently been associated in the scientific literature to the degree to which companion animals are anthropomorphized (Amiot et al., 2017; Arias, 2018; Díaz Videla et al., 2015). In this vein, empathic responses on the part of humans towards animals translate into practices, such as positive attitudes towards their companion animals and increased animal-oriented solidarity behaviors in general (Amiot and Bastian, 2017; Ellingsen et al. 2010). In addition, other more recent studies have corroborated the importance of empathy in the construction of the human-animal bond, as well as for recognizing the emotionally and socially supportive responses that companion animals offer toward their caregivers in times of need (Hiestand et al., 2022; Sung and Han, 2023). Likewise, affective empathy and empathic concern have been established as mechanisms that mediate the link between attachment toward companion animals and the quality of life provided by this human-animal bond (Sung and Han, 2023), knowing that companion animals can provide social support that helps improve the physical and mental health of their owners (McConnell et al., 2019) by incorporating healthy practices, such as physical exercise, self-esteem, secure attachment, and healthy human social relationships (McConnell et al., 2011).

Along the same lines, it has been questioned whether attachment to pets affects the lack of interaction with other people, given that many owners have stated that they obtain greater satisfaction from their relationship with animals than with other human beings, given the unconditional nature that is not always present in human relationships (Archer, 1997). However, attachment to pets is not necessarily associated with a lack of humane interaction in human relationships, since



This did not generate a significant effect on the lack of relationships with other people, and thus understand that these differences are directly related to the personality and individuality of each pet owner (Phillips Cohen, 2002). On the other hand, anthropomorphizing the companion animal in the contexts of human social practices can be a factor that stimulates or stops social contact with other human beings, depending on the personality and lifestyle of each person (Bulsara et al., 2007).

Subsequently, the relationship between personality and the dimension of anthropomorphization is extended by relating it to personality characteristics, such as interest in unconventional values, flexibility to change or openness to experience (Díaz Videla and Olarte, 2016).

In the research addressed in the structural studies, it is clearly visible how early relationships with companion animals influence the development of human personality and empathic behavior, contributing the component of attachment as a new element in the research, which enhances subjective and relational well-being by increasing self-esteem, learning-oriented motivation and the development of healthy human social relationships (Arias Jiménez, 2018; Jalongo, 2015; Díaz Videla et al., 2015; McConnell et al., 2011; Sable, 2013). Likewise, other studies highlight the differential factor of gender in the development of the human-animal bond attributing to women the role of care, valuing animal welfare, empathy, emotional closeness, acceptance in relation to pet ownership and a greater possibility of anthropomorphizing them (Díaz Videla and Olarte, 2019; Ellingsen et al., 2010; Raupp, 1999; Reyes-Jiménez et al., 2021).

Recent studies brought a new concern for the impact of anthropomorphic practices on the welfare of companion animals, an aspect that has been evidenced in publications that problematize this aspect of anthropomorphization in companion animals (Acero Aguilar, 2017; Mota-Rojas et al., 2021). Despite the fact that anthropomorphism has created a new ecological niche for animals that live closely with humans, and this bond is beneficial for the companion animal by receiving attention from the owner, this relationship also involves the satisfaction of the owner's psychological needs and the pressures that this entails for the animals, which can sometimes affect their animal welfare. Likewise, the lack of knowledge and understanding on the part of the owners regarding the implications of animal ownership can affect the quality of the bond and even lead to the animals being discarded and expelled from their family niche, putting them at risk of suffering mistreatment by their owners (Díaz Videla et al., 2015; Raupp, 1999).

On the other hand, the anthropomorphization of companion animals can also contribute to the creation of biases from which the animal's feelings, behaviors or responses during supposedly positive interactions with the animal are misinterpreted and cloud the ability to make reliable judgments about the welfare of companion animals, even in the face of seemingly obvious and overt indicators of pain and suffering (Mota-Rojas et al., 2021; Serpell, 2019).

This is how ignorance of the species-specific nature of the animal, neglect, mistreatment and abandonment are established as negative aspects that impact their welfare by having to adapt to the changes brought about by negative forms of anthropomorphism (Serpell, 2003, 2019). Despite the above, it is also emphasized that, for humans involved in these relationships, anthropomorphism provides the opportunity to use animals as alternative sources of social support and the means to benefit emotionally and physically from it (Pooley,

2007; Triebenbacher, 2000). Even so, it is essential to continue promoting research on the negative effects of the phenomena of anthropomorphization of animals, for their respective understanding, and in addition to this, the configuration of ethical practices oriented to animal welfare and not exclusively to the welfare of human beings.

Finally, this work is not without limitations. The citation analysis was based on the ToS algorithm, which may have amplified the most cited results in the scientific literature and excluded less cited authors and studies. Therefore, it is important to consider these limitations when interpreting the results of this study. Studies on anthropomorphization in animals are scarce, so further empirical studies are recommended to explore the effect of the phenomenon of anthropomorphizing the human-animal bond not only from the perspective of the human, but also from the implications for the animal in the natural expression of its species-appropriate behavior. Additional review studies incorporating both meta-synthesis and meta-analysis are also recommended to examine the available secondary data on the effect of anthropomorphizing the human-animal bond on different social dynamics.

Conclusions

The findings found in the documentary review are consistent with the idea that the anthropomorphization of the companion animal and its inclusion in social interaction environments, such as the family, enables the modification of behaviors at the individual and social level. Specifically, the documentary review allows concluding that the role of companion animals in the family field is directly influenced by the degree to which they are anthropomorphized and this role can bring both benefits and detriments to the family, the companion animals and their direct caregiver.

There are positions found in the literature reviewed that maintain that anthropomorphic practices may be due to contemporary changes in human relationships and to the loneliness perceived in relation to these. However, there are other positions that relate these practices to the favoring of relationships and the strengthening of bonds in human-animal interaction and human-human interaction. It is recommended that future research establish the specific situations in which these differences are generated.

Finally, it is evident to question every type of relationship that is established and the impact that is generated from it, considering, specifically, that the companion animal cannot put in a verbal language its needs, but it can express in other ways the discomfort caused by some anthropomorphic practices that violate the animal nature of its own species. Thus, it is necessary to continue broadening the understanding of the emotional connections that unite people and their companion animals, as well as the negative effects brought about by the phenomena of anthropomorphization of animals that perform a certain task, whether as companions or as service animals.

Conflicts of interest

The authors of this study declare that they have no conflicts of interest with respect to the article submitted for publication that may involve third parties in the future.



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