

Better than Cats or Dogs?

An Anthropological Perspective on the Human-Avian Bond

American Federation of Aviculture 2014 Meeting
Portland, Oregon

Patricia K. Anderson, PhD
Associate Professor of Anthropology
pk-anderson@wiu.edu
Department of Sociology & Anthropology
1 University Circle
Western Illinois University
Macomb, IL 61455

Abstract:

Though birds are among the most popular companion animals in the United States, little scholarly research has focused on the human-companion parrot relationship. This study uses an anthropological perspective, including survey and observation in a veterinary clinic specializing in avian and exotic medicine. Both textual analysis and observations in the veterinary clinic reveal some interesting insights into the social dimensions of the human-companion parrot relationship, which is rated superior to that of cats and dogs by some bird owners. Various patterns of human-avian interactions emerged from the data, including childhood experience with birds, affection and physical contact with birds, birds as family members and the nature of the human-parrot bond, infantilization (delayed weaning and parrot as child surrogate), anthropomorphism (celebration of holidays, diet, death and spirituality, and misinterpretation of bird behavior), intersubjectivity and cognition, and anthropocentrism (bird as object). The data presented indicate that the human-avian bond can be quite profound, and best supports the social support hypothesis of pet keeping.

Better than Cats or Dogs? An Anthropological Perspective on the Human-Avian Bond

Humans have kept parrots for at least as long as recorded history, a practice that continues today. Social scientists (Arluke and Sanders 1999; Irvine 2004; Sanders 1993) and others have recently invested a great deal of research into studying the pet owner relationship, but these studies focus primarily on dogs and cats. Although parrots are among the most popular pets in the United States, little scholarly literature devoted to study of the human-avian bond has resulted. This study investigates the social aspects of the human companion parrot relationship through analysis of survey texts and ethnographic observation at a veterinary clinic specializing in exotic and avian medicine.

Preliminary research suggests that the human parrot relationship can be quite complex and profound (Kidd, Kelley and Kidd 1983; Harris 1989; Anderson 2003; Bennett and O’Hara 2013). According to previous research exploring the avian–human bond (Anderson 2001a, 2001b, 2003) I found evidence that a number of companion bird owners call their birds “fids” (feathered children), fictive family members with whom they share deep emotional bonds. I compare results of my previous research (Anderson 2003, 2006) to the current results in a further exploration of the cultural and social dimensions of avian companionship, and implications for avian welfare.

Methods

Research methods include analysis of 100 out of more than 300 responses to a 48-question survey on the human–avian bond and short-term ethnographic observation at a

veterinary clinic specializing in avian and exotic medicine. Qualitative analysis of the essays is valuable because they provide insight into owners' attitudes toward their birds, in their own words. Analysis of the remaining data and survey texts will be presented for later publication.

Survey

I initially planned to interview clients about their birds at the veterinary clinic, but soon found that most drove long distances to take their birds to the avian specialist, and that an interview would inconvenience them. Consequently, I turned to surveys that could be administered at the participant's convenience. I gave copies to clients in the veterinary clinic and also broadcast a request for participation on the Internet to various avian interest list serves. The response was positive. Many bird owners were not only happy to complete the survey questions, but also wrote long essays about their relationships with their birds. This study is based on the results of quantitative data from the survey as well as a qualitative analysis of 100 texts from the survey essays.

This survey is a revision of a 1999 survey on avian companionship that I carried out and is based on consultation of references on survey research (Bernard 2001; Dillman 1999) and helpful comments from bird owners. The current survey includes questions on demography of owner (gender, age, marital status, ethnicity/race, religion, occupation), questions on experience of bird owners (source of birds, years owned, number of birds and species owned, ownership of other pets, species of other pets, membership in bird clubs), questions related to welfare and husbandry (diet, treats given, frequency of veterinary care, where the bird is located in the home, number hours of sleep, use of a

separate sleep cage(s), who primarily cares for the bird(s), how often water is changed, awareness of dangers of nonstick cookware, aware of dangers of household cleaners/other products with caustic fumes, the presence of smokers in the homes, smoking around birds, changes in the owner's diet as a result of keeping birds), questions regarding experience as a bird owner (source of birds, years owned, birds owned in childhood, membership in bird clubs, publications on bird care owned, number birds owned, wing trimming, fly aways, death of birds, time out of cage daily, time spent with bird daily, substrate of cage, how often cleaned). In addition, there were ten questions related to attitudes toward parrots (annual expenditure on bird and bird products, celebration of religious holidays, celebration of bird's hatch/adoption day, dressing birds in costumes, bird provided for in will at death of owner, and five Likert scale questions (my birds are family members, birds are sentient beings with thoughts and feelings, my bird uses human language meaningfully, I understand my bird's natural body language and vocalizations, and birds have souls or spirits). The response options to these scaled questions was: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree. The last question was an open-ended essay: "Please tell me about your birds. How has keeping birds changed your life?" The rich variety of essays are analyzed using qualitative analysis and grounded theory, and provide the bulk of the data considered here (Glaser and Strauss 1967; Strauss and Corbin 1990; Bernard 2006). The unit of analysis, as in Anderson (2003), is the individual American household.

Ethnographic observation

The study site and veterinarians, names of clients and their birds are all anonymous to protect their identities, following the code of ethics of the American Anthropological Association and the Institutional Review Board of Western Illinois University, who approved this research. The primary veterinarian with whom I observed is a board certified Avian Diplomate with more than 15 years of experience in a practice devoted to avians and exotics. The period of observation was 2.5 weeks in the summer of 2006 and is meant to be a pilot study for a future longitudinal study of greater length.

Ethnography and participant observation are key research methods of anthropology. Ethnography can be both an end product as in ethnographic writings, as well as a process in participant observation or fieldwork. Typically, an ethnography focuses on a specific population, culture, or subculture with the purpose of explaining it to others (Barnard and Spenser 2002, p. 296). Participant observation is the study of another culture or subculture, through learning the language or special vocabulary and “experiencing the lives of people you are studying as much as you can” (Bernard 2006, p. 344). First developed by anthropologists, many disciplines including nursing, social psychology, education and criminology use participant observation today (Bernard 2006, P. 346). Both quantitative and qualitative data may be collected through participant observers. Quantitative data are those that can be counted or quantified, such as census data. Qualitative data deal with description (such as color, religion, smells, and tastes) and are collected in an effort to understand human behavior.

During my ethnographic observation at the veterinary clinic I followed the veterinarian, like a vet student, although I did not interact directly with patients or

equipment. Thus, my approach was as “complete observer” or “following people around and recording their behavior with little if any interaction” (Bernard 2006, p. 347). I observed surgeries and examinations, and after the vet had taken samples for analysis I introduced myself to the bird owners.

I viewed interactions between twenty-four different clients, five males (21%) and 19 females (79%) with 26 different avian patients. The patients were 92% parrots and included 2 Budgerigars, 1 Grass Parakeet, 7 Cockatiels, 1 male Eclectus, 3 African Greys, and a single Double Yellow Headed Amazon, Lilac Crowned Amazon, Orange-Winged Amazon, Red-Headed Amazon, Quaker Parakeet, Blue & Gold Macaw, Severe’s Macaw, Red Bellied Macaw, Umbrella Cockatoo, and Sun Conure, in addition to a white dove and a Mallard Duck.

Because there were few male owners represented, it was difficult to detect differential patterns in gender behavior. This gender imbalance is similar to results of a previous survey of companion bird owners (Anderson 2003) and have the same gender ratio, 87% female ($n = 87$) and 12% male ($n = 12$). In Anderson (2005), the sample was divided into 203 females (88%) and 27 males (12%).

The typical bird owner answering the earlier survey is a married woman in the age range 41-50, who has owned birds for five years or more. A similar pattern is seen in the current study. Since not enough males participated to be statistically significant, the data are combined, regardless of gender, excepted for preliminary commentary.

Results

The resulting analyses revealed various insights about the human-avian bond, including whether or not bird owners had also owned birds as children; physical interaction with

birds; birds as family members, anthropomorphism, infantilization, intersubjectivity (communication with birds), anthropocentrism (bird as object).

Childhood Experience with Birds

Previous studies suggest that pet owners tend to own the same kinds of animal pets as adults that they did as children (Serpell 1981, pp. 651–654, 1996, p. 41). Approximately half of the bird owners I surveyed (47%) did own birds as children, while 10% were exposed to positive interactions with birds owned by friends or relatives. However, 43% did not own birds until they were adults. Psychologists Kidd, Kelly and Kidd (1983: 728), in a study of pet owner personality, noted that adult owners of turtles, horses, or snakes tended to own the same animal they had as children, while only a quarter (about 25% of 50 study participants) had owned birds as children. In a later study of bird owners they (Kidd and Kidd 1998, p. 135) found that 42% had owned birds as children, and 30% during adolescence. Thus, other factors seem to affect when people become bird owners.

The Importance of Touch in the Human-Avian Bond

Psychologists Beck and Katcher (1996, p. 84) note, “No matter what kind of emotional bond people have with their pets, touch is an essential part of that relationship.” Touch is important to conspecific avian social relationships, particularly in pair bonding (Seibert 2006). Young captive reared parrots are often habituated to touch to socialize them for life as companion birds and to make routine husbandry and veterinary procedures less traumatic (Linden and Luescher 2006, p. 107). Indeed, many young parrots enjoy cuddling with humans (Linden and Luescher 2006, p. 106).

Physical contact was the ninth most common aspect of the human-avian bond mentioned by survey participants in Anderson (2003). Psychologists Kidd and Kidd (1998, p. 137) note that, “One particular similarity between birds and humans not usually noted in the literature is affectionate behavior. While interviewing owners at pet stores, the authors noted birds flying to their owners or even to visitors or customers the birds obviously felt comfortable with and cuddling up under a human’s chin or ear and snicking or chirping or talking to them to get stroked or petted.”

However, psychologists Loughlin and Dowrick (1993, p. 171), note in their study of Alaskan bird owners, “Given most pet birds are kept in cages, it was not surprising that the bird’s ability to fly and how its feathers feel were considered unimportant to bird owners in our study”. These finding conflict with Kidd and Kidd (1998, p. 137), as well as the current study, and likely with the experiences of many AFA members.

Further, I note in Anderson (2014):

Affectionate behavior by both males and females toward their birds was observed in the [veterinary] clinic. The three single men observed tended to hold their parrots away from their body compared with females who tended to hold the birds close to their bodies, and often under the chin where they may “snuggle” and kiss the bird. One man, who otherwise held the bird away from his body, also brought his parrot close to his body to kiss him on the head and beak. A male survey respondent mentioned, “My cockatiel loves to snuggle under my chin and have his head rubbed.” One of the other patients, accompanied by a young woman, was so covered with red lipstick, that upon seeing the bird, the veterinarian asked if the bird was injured.

For more authoritative conclusions about gender, touch and the human-avian bond, a greater sample of bird owners is needed.

Although physical contact may be an important and treasured part of the human-parrot relationship, it may be damaging to this relationship when it encourages

reproductive behaviors (Van Sant 2006, p. 242), and owners are cautioned to avoid touching the parts of the parrot (back, under wings, tail) that may cause sexual stimulation.

Parrots as Family, Companion, Winged Therapist

Fictive kinship is an important strategy, which extends the bonds of kinship and social support beyond blood relations. Typically, fictive kinship refers to kin who are related neither by affinal (marriage) or consanguineal (blood) ties. In western society, this may include adopted children, favored family friends, and more recently, pets (e.g., Arluke and Sanders 1996, p. 68; Beck and Katcher 1996, pp. 40–62; Serpell 1996, pp. 78–79; Wilson et al. 2013, p. 229). I found that most owners consider their birds to be family (Anderson 2003). In response to the statement in my survey, “My birds are family members,” 86% strongly agreed and 10% agreed. Only 1% disagreed, 2% were neutral, and one did not answer. In a previous survey, 40 out of 100 pet owners specifically described their birds as “fids” (“feathered kids”) or some other familial term (Anderson 2003).

The Human-Avian Bond in Context

Scholars have developed various hypotheses to explain why humans affiliate with other species. Some of the most popular include the deficiency argument (Shepherd 1978, 1996), biophilia hypothesis (Wilson 1984; Kellert and Wilson 1993), the dominance argument (Tuan 1984) and the social support hypothesis (Serpell 2005; Beck and Katcher 1996; O’Haire 2010).

According to Shepherd (1978, 1996), pets are poor substitute for people with whom pet owners are unable to sustain healthy relationships. Logically, according to this argument, the 68% of American households that own pets (APPA 2013) would be those of single, maladjusted individuals, but obviously that is not the case. Most of the bird owners surveyed are married (2003, current study). Indeed, animals may be social facilitators, encouraging positive social interactions with other humans (Messment 1983; Sanders 1999).

The biophilia hypothesis (Wilson 1984; Kellert and Wilson 1993) is based on the assumption that humans have an innate or biological drive to associate with living things. One weakness of this perspective is that advocates use it to explain both the human need to appreciate nature and to destroy it (Kellert 1993, p. 42). Further, it is ahistorical and impossible to test. Irvine notes much of human history has been devoted to controlling and “improving” nature by anthropocentrically razing forests and draining wetlands, and it is only recently that animals and nature have been assigned positive attributes. The reality is that people relate to animals and nature on very different terms, depending on cultural and historical contexts (Franklin 1999, p. 53).

True affection between pets and owners is impossible because of the power imbalance, according to Tuan (1984). Thus people keep pets because of a need to dominate others. To some extent his argument is convincing because there is a human tendency to “sanitize” and control animals through neutering and other body modifications. However the human-companion parrot relationship is very complex. Many bird owners fondly recognize their avian companions as sentient beings and minded actors who have active roles in household decisions. In addition, Irvine (2004, p. 29)

notes, “the relationships between people and animals are too varied and too fluent to attribute to a single cause.”

The social support model is based on studies that suggest that human–pet relationships benefit humans mentally and physically (e.g., Beck and Katcher 1996, 2003; Fine 2001, 2006; Serpell 2005; Kruger and Serpell 2006; McNicholas and Collis 2006). According to Katcher (1981, p. 50), pets provide a type of relationship that humans do not, rather than being surrogates for humans. Serpell (1996, p. 143) notes, “Pets do not just substitute for human relationships. They complement and augment them. They add a new and unique dimension to human social life.” The results of this study of avian companionship support the social support model, as avian companionship is described by bird owners as helping to ameliorate the pain, stigma, and isolation of chronic disease, and to also help owners cope with depression and the stress of their occupations and daily lives.

Parrots as Social Support: Better than Dogs or Cats?

Animal companions, most commonly dogs and cats are attributed with providing social support for their owners. Certainly parrot owners may also claim the same benefit for their feathered companions. Twenty survey respondents referred to their parrots as “life savers,” who had saved them from depression. Two mentioned that their birds had saved them from potential suicide, and provided them “a reason for being.” Others mentioned that their birds helped them cope with the challenges of living with chronic illness and disabilities such as fibromyalgia, rheumatoid arthritis, multiple sclerosis, and partial paralysis. A survey respondent confided:

Bird ownership has helped me to overcome loneliness, depression and overall sadness. I am in a wheel chair with paralysis of my legs and can't work. My birds are the best company while my husband is at work. Taking care of them (cleaning, feeding, bathing, etc.) gives me a purpose where I used to feel there was none . . . I take them everywhere because they are part of my family.

Bird owning therapists responding to the survey described patients as more open when their birds were present during sessions. One professor, who kept parrots in his university office, reported that student interactions were enhanced with the parrots, and that when one parrot died, students he didn't know visited to express condolences. Eight respondents, including a physician specializing in trauma, stated that their birds helped them cope with the stress of their occupations. Twenty respondents noted that their parrots also inspired them to a "better mood," and to be a "better person." Eight respondents mentioned that their health had improved since having a parrot, and three specifically referred to their parrots as therapeutic.

Seventeen respondents specifically discussed the human–avian bond in their essays. Four described the bond with their parrots as "superior," and eight mentioned that the bond was "qualitatively different" from that with other pets. Two even mentioned the bond as superior to that with the humans in their lives: "Don't tell my human kids, but I actually love my birds more!" Five participants described their parrots as "unique," and three "beyond words." Twenty respondents stated that they "wouldn't trade [their birds] for anything," or "couldn't imagine not having" their parrots.

Kidd and Kidd (1998, p. 136) also recognize the intensity of the human–avian bond: "human–avian interaction can often be more warm and caring than human interactions with dog, cat, or horse." Parrot owners surveyed by Bennett and O'Hara

(2013) consider parrots to be equal to or better than dogs as companions. Kidd and Kidd (1998, p. 136) suggest that the reason that the human–avian bond is so profound may be related to the similarities they share with humans such as capacity for parrots to imitate human speech and speak cognitively. My findings tend to support Kidd and Kidd’s assertion. In addition, I suggest that potential longevity of parrots is an important factor. Most parrot species have the capacity, with proper care and good genetics, to outlive any cat or dog, and this confers a distinct advantage to the pet owner who is deeply attached to their bird. However, it also may be problematic when the parrot outlives the owner, or the owner has an unavoidable life change.

Parrots who Out Live their Owners

Compared to dogs and cats, many of the larger parrot species are capable of living with their owners for several years, and in some cases outliving their owners (Seibert 2005, p. 285). Species such as Quaker parrots may potentially live to be 35 or even 40 (anecdotal report from the Quaker Parakeet Society e-mail list), while some Amazon parrots and macaws may live into their 80s or longer with proper care and good genes (Perry 1997, p. 5). Due to their capacity for longevity and the unpredictability of life, owners are encouraged to include their parrots in their formal wills (Seibert 2005, p. 285). In response to the question, have arrangements been made for your parrots in the event of the owner’s death, 44% stated they had informal arrangements with family or friends, and 16% indicated that their birds were included in their formal wills.

Anthropomorphism—Benefits and Concerns

Anthropomorphism is the attribution of human qualities to nonhumans or inanimate objects. Traditional definitions of the term imply that those who anthropomorphize make a categorical error. Today, we recognize that humans and animals share more in common than previously recognized, and what can be defined as uniquely human changes seems to change almost daily as new findings about animals are revealed, thus contributing to the ambiguity of the term. Cultural factors also shape how humans perceive others, and as Asquith (1997, p. 23), observes, “what we consider to be uniquely human is affected as much by culture and historical fashion as by our ignorance of animals themselves.” Some researchers suggest that careful or critical anthropomorphism, which is based in an understanding of an animal’s natural behaviors and adaptation, is a better way to understand animal behavior (Burghardt 1985, 1997).

However, pet owners may misinterpret pet behavior by inaccurately attributing desires or intent to their animals. This is known as “situational anthropomorphism,” which occurs when one, “misinterprets an animal’s behavior in ways that correctly apply to that animal, but which do not apply to the situation in question” (Fisher 1991, p. 61). Bradshaw and Carrey (2007, p. 149) suggest that beliefs about how an animal experiences the world strongly affect how owners treat their pets, and that when these beliefs are in error, the pet may be treated badly. Although there is overlap, it can be argued that how animals perceive the world is often superior to that of humans, for example the extra keen olfactory sense of canines or the ability to see in ultraviolet of parrots (Graham et al. 2006, p. 34). Consequently, it is difficult if not impossible to truly see the world as they do. Situational anthropomorphism differs from reductionist

approaches where the mentality of an animal is denied, but rather proposes the possibility of an animal mentality that differs from that of humans (Fisher 1991, p. 66).

It is easy to think of parrots as human-like because they are so intelligent, social, and potentially have the capacity to speak to us in human words. Potty training, first words, and weaning are themes that could appear in popular publications devoted to either human infants or parrot care. Further, they are bipeds, like humans, although humans lack wings and tails! In general, birds share many qualities with humans (Barber 1993), so it is not surprising that bird owners should consider their feathered companions as “human-like”.

Serpell (2003) notes that anthropomorphism has historically been adaptive to humans and is an important part of the human-animal bond. Anthropomorphism can be positive when it elevates the status of an animal to beloved family member with the associated perks, including their own medical specialist, inclusion in the celebration of holidays and other family rituals, and are mourned with a funeral ritual when they die. However, it can be negative when it anthropocentrically serves human ends at the risk of avian welfare.

Parrots and Spirituality

A comforting popular belief is in the existence of “The Rainbow Bridge,” a beautiful boundary that departed pets cross. There they are thought to wait faithfully until their owners join them. As in life, our pets in death, anthropocentrically seek to spend eternity with their humans rather than their own species. Thus, the pet continues to be an extension of their owner’s identity in death as well as life (Anderson 2014).

In response to the Likert scale question—"Birds have immortal souls or spirits"—bird owners responded as follows: 66% strongly agreed, 14% agreed, 15% were neutral, 1% disagreed, and 3% did not respond. In summary, a majority, 80% of bird owners surveyed believes in an afterlife for their parrots. The reported religious affiliation of the 66% who strongly agreed, included 79% of the Protestants (30/38), 53% of the Catholics (8/15), 67% of the Jews (6/9), and each of the single Muslim, Hindu, Atheist, Native American, Pagan, Wiccan, and each of the three "other" Christian and 48% (12/25) of the "other, unspecified" religions.

Celebrating Rituals with Birds

In response to the question—"Do you celebrate holidays (e.g., Christmas, Hanukah, or Easter) by doing special things with your birds?—40% said yes, 23% said "sometimes," 36% said "no," and 1% did not answer. Thus 63% of bird owners surveyed celebrate holidays, at least part of the time, with their birds reflecting on their status as fictive family members. The importance of including pets in ritual events has been described in other studies (Serpell 1986; Dresser 2000) and it is not surprising that family rituals should also be shared with companion parrots. Increasingly, American couples count their pets as members of their wedding parties (Somma 2006). Some Americans include their animal companions in their obituary (St. Petersburg Times 2009 Webster 2009; Wilson et al. 2013). Wilson et al. (2013) reviewed obituaries for three months in three newspapers--*Washington Post*, *Richmond Times Dispatch*, and *Zurich Daily News*--for mention of companion animals. Birds as survivors were listed in both the American papers, along with cats, cattle, dogs, puppies, donkeys, and horses, while only one

incidence of pets (cats) named as survivors was found in the Swiss paper (Wilson et al. 2013, p. 232, Table 1).

The “Demon” Bird

People do not naturally understand avian body language and behavior, however, and those who are inexperienced with birds, may misinterpret bird behavior by attributing anthropomorphic motives. Even some experienced owners refer to “mean,” “vicious,” or “dominant” birds without attempting to understand their behavior. These words are constructs or vague labels that are not observable behaviors and are therefore not helpful in understanding why a parrot may bite, for example, because behavior does not occur independent of environmental events (Friedman, Martin and Brinker 2006, p. 148).

Arluke and Sanders (1996, pp.169-170) note that humans tend to assign a moral character to animals and to anthropocentrically rank them in terms of their usefulness in a “sociozoologic scale,” of “good” versus “bad” animals, which helps to reinforce the dominant social order. Animals that stray from their assigned place or cross human constructed boundaries may be labeled as “bad” animals, pests or vermin (Arluke and Sanders, 1996, p. 178).

Even worse than pests, according to Arluke and Sanders (1996, p. 180, are “demons,” those animals who seek to reverse the “master-servant” relationship in which humans have control. Certain human groups, including women, minorities, and pit bull owners, who have been perceived as violating the social order, have been historically demonized (Arluke and Sanders, 1996, pp. 181-184).

People, who have no experience or knowledge of parrot behavior or parrot body language, may fear and misunderstand them and perceive them as a threat to their safety.

One day while a friend was visiting, I attempted to introduce him to my gentle Pionus parrot. When I walked into room where he was seated, the bird started from my hand toward the friend then veered away. The (rather large male) friend panicked, and threw up his arms while shouting, “don’t let it [sic] on my head, don’t let it on my head!” The parrot had tried to escape a perceived danger, a stranger, but the friend assumed that the bird intended to attack him. On another occasion, a relative who was visiting my home, walked suddenly into the bird room, and the Pionus, who was confined to her cage, began thrashing against the cage bars, trying to escape this sudden frightening intruder and potential predator. To my astonishment, the relative (who had grown up on a farm and worked with and owned many species of animals during their life including poultry and doves!), instead of correctly interpreting the bird’s behavior as a fright response, shouted, “Oh my God! Look how mean that bird is! He (sic) wants to kill me!”

Another example of misreading bird behavior is the popular myth that birds bite to “punish” their owners. According to my observations on avian list servers, many companion parrot owners indicate that they expect to be bitten as “punishment” when they return to their birds from travels. Without actually observing the interaction, it is difficult to know what is really going on, but owners may feel guilty for traveling without their birds, and expect the bite because they have heard about parrots “punishing” other owners when they return. Friedman, Martin and Brinker (2006, p. 150) note that we tend to see in other species those behaviors that are expected, and that “observer-expectancy bias is well documented even among those who watch birds.” In addition, both owner and parrot are likely emotional at the reunion, so the owner may engage in forceful or

threatening behaviors that encourages biting. However, in over 15 years of life with companion parrots, I have never been bitten when returning from a trip.

Martin (2002) notes that the myth, “Biting is just part of having a parrot for a pet,” is common among companion parrot owners. Yet he states that the opposite should be true. Parrot owners should endeavor to never get bitten by their birds. In his interviews with four parrot field researchers (Brice, English, Munn, and Gilardi cited in Martin 2002) with a combined experience of 35 years observing wild parrots, only two incidences of parrots biting another hard enough to draw blood were observed, and these were in defense of nest sites. Normally, aggressive interactions between wild parrots are limited to body language, raising of head feathers or eye contact. To avoid being bitten by a parrot, Martin urges parrot owners to never coerce their parrots. He also notes, that the companion parrot literature is replete with bad advice about “dominating” parrots that is very damaging to the human-parrot relationship. Instead, parrot owners should attempt to understand their parrots by studying natural parrot communication—body language and vocalizations—and use positive reinforcement to build a trusting relationship and shape cooperative behaviors. Instead of considering bite scars, “badges of courage,” they should be considered indicators of insensitivity, signifying that the parrot has bitten because it has been forced to, or because the owner has taught it to bite (Martin 2002).

Talking Birds: Intersubjectivity and cognition

According to cognitive ethology, through evolutionary continuity animals have emotions and mental states and are thus more similar to humans than has been traditionally accepted (Griffin, 1976). Various scholars describe the pet-owner

relationship as a social and interactive one with pets taking active roles (e.g., Alger and Alger 2003; Irvine 2004; Sanders 1993, 1999). Serpell notes that past studies of the health benefits of pets on their owners have ignored or deemphasized the social nature of the relationship, and states, “clearly these relationships should be studied as dyadic interactions in which both participants—human and animal—play important parts (Serpell 1989b; 2005, p. 90). What is unique about the parrot-human relationship is that parrots have the ability to both mimic human words and also potentially speak cognitively, meaning that they have the capacity to learn and use a human language meaningfully, sometimes in surprisingly sophisticated ways. Most pet owners speak to their pets, but with parrots, one not only has a pet who may answer, but one who may even engage their owners in conversation.

Research on avian cognition has lead to a paradigm shift in the way that many scientists view avian intelligence, which has been grossly underestimated (Skutch 1996), and recently been reassessed. Consequently birds are now considered more comparable to mammals in their cognitive abilities (Meredith, 2005; Reiner et al. 2004). The ability for a parrot to learn a human language and use it cognitively certainly makes them seem human-like. In addition, the intelligence of parrots has been compared to that of nonhuman primates (Pepperberg 1999, p. 322) and consequently, their considerable intelligence is one reason people are drawn to them. Wanker et al. (2005) discovered that Spectacled Parrotlets (*Forpus conspicillatus*) make unique vocalizations in addressing members of their social group—in other words they appear to be naming family members. Wright et al. (2005) have documented evidence of vocal dialects in wild Amazon parrots (*Amazona auropalliata*).

At the time of his death, Alex, the famed Grey parrot who worked with Irene Pepperberg for over 30 years, had acquired labels for more than 100 objects, actions and colors, and could identify certain materials, and count object sets up to six, and also had a “zero-like” concept (<http://alexfoundation.org/>). In addition, Alex could express boredom and pique with researchers when they didn’t comprehend or acknowledge what he was trying to tell them, as in the time when he repeatedly asked for a nut, to no avail, then finally spelled out the word in frustration (Pepperberg 2008, p. 179). Alex manipulated new graduate students by ordering them around, asking to be carried to various places, and repeatedly asking for certain objects. Further, Alex creatively developed new labels for items, including “banerry” for apple, a lexical elision of the words banana and cherry (Pepperberg 1999, p. 243). Alex clearly had a mind of his own, and, “Our notion of what a bird is has forever been changed” (Frans de Waal, cited in Pepperberg 2008, p. [i]). New studies of avian intelligence by scientists continue to surprise the public, but likely not sensitive and observant companion parrot owners who have known for a long time that their birds are incredibly smart, and are active members of their households. A survey respondent writes:

I do not ‘own’ these creatures that share our home. It might be more accurate that they ‘own’ me, since they ARE high-demand animal companions. They require much attention, affection, high quality food and play things, a lot of cleaning up after, MORE toys, their vet bills are atrocious, etc. . . . They are a lot like my five human children. ☺ They give me love, they accept my love (emphases by respondent).

However, no matter how intelligent parrots are, and despite their similarities to humans, one should never forget that they are parrots and in some ways experience the world differently than do mammals (Birkhead 2012; Graham et al. 2006). Further, parrot

owners should recognize that parrots are not constrained by human cultural constructs of what is proper behavior, so when you parrot masturbates in front of guests, or chews your great-grandmother's antiques, it is hardly their fault.

My Bird Talks!

In response to the statement, "My bird sometimes or consistently uses human language meaningfully," 54% strongly agree, 22% agree, 7% are neutral, 4% strongly disagree, 1% did not answer because their bird were species not known for their abilities to emulate human speech, and 3% chose not to answer. A majority of bird owners (66%) agree that their bird uses human language meaningfully or contextually, at least part of the time. Indeed, the intelligence and attribution of agency are the dominant themes emerging from a qualitative analysis of survey essays (Anderson 2006).

Most parrots have the capacity to meaningfully learn at least a few human words, if taught the words in proper context, much as a parent patiently teaches a young child their first words. Rote memorization products, sold to teach birds amusing phrases, do not provide this important social context and are cruel, in my opinion. It is better to empower a bird, by giving them a means of communication and potentially some control over their environments. Many members of the Quaker Parakeet Society Internet group report that their birds purposely verbally request when they want to bathe, when they wish to sleep, when they want out, and make requests for specific treats or toys or persons or other pets, because they have learned the meaning of these words contextually. In a survey essay, one owner describes the wonder of having a companion who can communicate with you:

They will sit and talk with you anytime, anyplace, not only in real words, but with their own unique sounds and clucks and body language. Of course, having a pet

that yells, “Daddy’s home!” when you walk in the door or says “Good morning!” when you open the drapes is quite a significant event too (Anderson 2003).

Although the data discussed resulting from my study are anecdotal, Pepperberg’s (1999) studies of the cognitive and communicative abilities of grey parrots have demonstrated that parrots are similar to primates in their level of intelligence and ability to communicate. The nightly exchange between Alex and Pepperberg is compelling.

‘Bye. I’m gonna go eat dinner. I’ll see you tomorrow.’ I hear these words, or variations, each night as I leave my laboratory. Exactly what one expects to hear from the typical graduate or undergraduate student—but these words do not emanate from human lips; rather they come from a beak—the beak of my research subject, a Grey parrot (Pepperberg 1999, p. ix).

In response to the statement, “Birds are sentient or aware beings with thoughts and feelings of their own,” 90% of bird owners strongly agree, 9% agree, 1% neutral, while no one answered “disagree,” or “strongly disagree.”

In addition, bird owners respond favorably to the statement, “I understand my bird’s body language and bird vocalizations,” with 67% strongly agreeing, 31% agreeing, 0% neutral, 1% disagreeing, and 0% strongly disagreeing. Thus 98% agree that they can understand their bird’s natural language, which suggests that they spend a lot of time watching and interacting with their parrots.

Those who interact directly with animals, either professionally or as a pet owner, understand the value of studying the natural behavior of animals to better understand and work with them in a captive environment to avoid stress and danger to either the human or the animal (Lorenz 2002). Susan Friedman (<http://www.behaviorworks.org>), and Barbara Heidenreich (<http://www.goodbirdinc.com>; Heidenreich 2005) teach humane, non-coercive training techniques to parrot owners and others through encouraging

students to study nuances of avian body language, and to use positive reinforcement and operant conditioning to shape the birds to develop cooperative behaviors. Pryor (1999, p. 153) notes that “reinforcement theory has enabled professional animal trainers to establish behaviors in creatures that simply cannot be trained by force: cats, cougars, chickens, birds in the air, whales and dolphins.” Further, “To me as a behavioral biologist, the most useful and wonderful aspect of reinforcement training is the window that the training opens up into an animal’s mind” (Pryor 1999, pp. 153-54).

Parrot as Teacher

There were 19 references to parrots as teachers by survey respondents. One respondent mentioned that her parrots had taught her to be kinder to people with disabilities, because most of her parrots had come to her family preowned with behavioral issues and disabilities of their own:

One has a wing injury from a previous abusive owner. They’ve also taught me patience, love, more patience . . . This has translated into good things at my job, where we have a few ‘alternative’ coworkers . . . Folks with various ‘handicaps,’ who were formerly just bodies that show up every day but were basically ignored for being ‘different,’ but are now respected and part of the our daily Gang of Idiots. Not because I have magical powers or anything, but because my birds taught me to look for the good stuff that lurks in all of us, no matter how damaged or ‘mean.’ Just takes one person to see this, and show by example. Thanks, bird friends.

Another respondent mentions, “I am a better person because of watching and learning from my parrots. I see them groom each other and feed each other with love, tenderness and playfulness. It give me great “heart connection” to watch them.”

When the Bond Fails: Parrot as Object

Not all human-companion parrot interactions are positive, however. The motive for acquisition of a parrot is important. Since parrots have long been considered as rare or exotic symbols of colonial conquest, their ownership has historically, in Western societies, been restricted to the upper classes (Boehrer 2004; Robbins 2002). Parrots continue, to some degree, due to their initial cost and the expense of properly maintaining them, to be associated with status. In this context, the parrot is not subject, but more likely an object to be anthropocentrically manipulated for the pleasure of humans.

In these instances, a live bird is not necessary and to some callous individuals a dead bird is preferred, as it has none of the demands of a living being. An associate related to me her experience working in a pet store. A man came in who was seriously interested in purchasing a macaw that was for sale. When the clerk asked what kind of cage the man had set up for his new companion, he answered that none was necessary as he was going to have the bird killed and mounted for display! The horrified clerk told the customer that the bird was no longer for sale. Pet columnist and reporter Gina Spadafori describes (Spadafori and Speer 1999, pp. 241-242) an interview with an interior designer who likewise trivialized the lives of birds by picturing an aviary full of blue macaws as a colorful design element rather than a space occupied by sentient beings.

During my observation at the veterinary clinic, two employees of a pet store that sells parrots brought in a parrot chick for a checkup. This particular pet store requires new parrot owners to complete a class in parrot care before the bird is allowed home. I asked the two, who were the parrot nursery attendants, about their experiences and they said that it was largely positive but that some clients are very troubling. In particular,

there were two young macaws who they were hand rearing and who had been sold to individuals who would claim the birds when fully weaned. They said that most clients visit their new, feathered family members daily, or at least several times, to bond with them after purchase and before the weaning process is complete and the bird is permitted to leave the store. However, according to the attendants, these owners, neither of whom had visited the birds since their purchase, were neglecting these two macaws. In fact, the wife of one of the new owners had requested that the store order a cage that could be serviced without direct interaction with the bird because she would be caretaker while the husband traveled. The nursery attendants described the wife and children as fearful toward the bird, who was a gentle, hand-reared baby macaw well socialized to human interaction! The opinion of both the nursery staff was that severe behavioral problems would soon develop with such a negligent and ignorant attitude, and that both the birds would be miserable in their new homes. In both these cases the birds are apparently being objectified as items of exotic status without thought to their welfare. Such social birds as parrots should not be kept alone unless the client can meet their needs for social interaction (Harrison 1997, p. 47). Birds left in such circumstances bereft of environmental enrichment are likely to develop problem behaviors such as aggression, fearfulness, screaming, feather picking or mutilation, and other stereotypies (Meehan and Mench 2006).

A further instance of apparent objectification of parrots comes from conversation with another clinic client. A young woman brought in an older parrot for a new bird checkup. She had recently adopted the bird from a shelter some distance from her home, and her experience in finding a suitable bird rescue was distressing. She mentioned that

she had visited a local bird rescue in contemplation of adopting one of their parrots, but the living conditions were so appalling that she left without a bird. She described four adults playing cards in the center of the bird room while they chain-smoked. Ashtrays overflowing with cigarette butts were even placed on top the birdcages! While not healthy conditions for humans, for parrots, “passive exposure to cigarette smoke commonly causes severe respiratory and other problems in birds including conjunctivitis, sinusitis, air sacculitis, rhinitis and dermatitis” (Tully and Harrison, 1997 pp. 302-203). Further, ingestion of cigarette butts could cause fatal toxicosis and treatment for exposure to cigarette smoke is of little use if the bird remains in an environment with smoke (Dumonceaux and Harrison 1997, p. 581).

Certainly the “rescued” parrots seemed to be no better than an excuse for this group of nicotine addicts to congregate and socialize. Although they may think they are considering the welfare of these birds, they clearly do not realize or accept that they are in reality severely impairing their welfare. In contrast, some of my survey participants have apparently responsibly given up tobacco or at least smoking inside their homes to benefit the air quality of their feathered family members.

The failure of the bond is a problem that should be addressed in future research. Clearly the existence of bird shelters in several places in the USA and Canada indicate the need for research into why owners relinquish their parrots (Echols 2011), and what happens to them after. A number of owners indicate being active in rescue or owning preowned birds with physical or behavioral issues.

Infantilization

Infantilization, is to “treat [someone] as a child in a way that denies their maturity in age or experience (oxforddictionaries.com). One troubling, but interesting, example of infantilization of a parrot by their owner was noted during the clinic observation. The patient, a four-year old male Umbrella Cockatoo, was presented to the clinic by his owner, with the complaint that he would only consume hand-feeding formula. As she spoke, she fondled the large white bird on her lap, which also supported a small dog, each animal about the size of a human baby. The cockatoo held his wings out to his sides and bobbed his head as if soliciting feeding. The clinic staff revealed in private that the owner had brought the bird to the clinic previously with the same claim. The staff were able to wean the parrot successfully in about a week, while the bird resided in the clinic. However at home, the owner apparently encouraged the parrot to revert to formula, perhaps to continue the bird’s dependency.

The veterinarian advised the owner to feed a proper diet and cease fondling the bird in his erogenous zones, or she would soon be attacked by the frustrated parrot which would lead to her being forced to give up the bird, likely through euthanasia. As she listened, she nodded her head in apparent agreement, but kept stroking the bird inappropriately. Aggression toward mates is a common issue in captive cockatoos and Welle and Luescher (2006, p. 215-16) advise parrot owners to foster a more platonic bond by avoiding cuddling and petting.

Van Sant (2006, p. 235) notes that prolonged feeding of this inappropriate diet can lead to cloacal prolapse syndrome, a problem common to hand-raised Umbrella and Moluccan cockatoos who have experienced delayed weaning. Although it can be corrected

by surgery, it is likely to relapse if the parrot continues to view their human as their mate (Wilson and Lightfoot 2006, p. 76).

Feeding Parrots

Feeding inappropriate foods or quantities to birds and other companion animals may cause welfare issues. Perhaps it is not surprising that pets are beginning to suffer many of the diet related issues that face humans, such as morbid obesity and Type II diabetes (Rock and Babinec 2010). In response, Tufts University recently opened a clinic to treat obesity in companion animals (<http://now.tufts.edu/news-releases/tufts'-school-opens-obesity-clinic-pets>).

Twenty-three % (n = 53) of survey participants in my first survey admitted feeding human foods high in fat and sugar such cookies and ice cream (Anderson 2003). Interestingly, over half of these also reported taking their birds to avian specialists for annual checkups. Compared to wild birds, most pet parrots have very little exercise and the extra calories and improper nutrition can potentially lead to a number of diet related issues.

One distraught client, referred to the clinic after her local veterinarian told her that they could not help her Amazon parrot, drove 85 miles without a proper driver's license. Although it had been several years since she had driven and she had no one to drive her, she got her beloved companion to the clinic in time to save her bird, who was so weak he could not perch. "You can do anything to save him, because he is my friend," she told the veterinarian who had explained the charges for diagnostic tests. This caring owner, ironically later confided that her bird's favorite foods were orange sherbet and hot dogs. These are not foods found in nature, but are foods many parents might share with a

human child or feathered surrogate. However, some survey respondents reported improving their own diets with inclusion of organic vegetables and fruits they had purchased and prepared for their parrots.

Conclusion

American pet owners tend to form deep bonds with their parrots who they may regard as cherished family members. Companion parrots appear to provide much emotional support, joy, and routine. The nature of the human–avian bond seems to be quite profound and complex and some parrot owners consider it superior to that with cats and dogs, a pattern that agrees with the findings of psychologists Kidd and Kidd (1998, p. 136) and Bennett and O’Hara (2013). Avian companionship best fits the social support model for why humans keep parrots as pets. However, misinterpretation of avian behavior and needs can damage the human-avian bond and impair avian welfare.

Kidd and Kidd stated in 1998 (p. 131), “Because research literature on humans and avian interactions is limited, it seemed important to investigate the benefits and liabilities of pet-bird ownership.” As I write, the human–avian bond continues to be largely unexplored by scholars.

Acknowledgements

I thank the anonymous veterinarians and their dedicated staff and clients for permitting my clinic observations and patiently answering questions, the bird owners who completed my survey, and Western Illinois University for funding this research. I dedicate this study to the parrots who are my inspiration and social support: Otis and Poochie (in memory), Beaker, Petie, Ozzie, Quito, and Max, all good birds!

References Cited

- Alger, J. and Alger, S. 2003. *Cat Culture: The Social World of a Cat Shelter*. Philadelphia: Temple University Press.
- American Anthropological Association (AAA). 2012. Statement on Ethics: Principles of Professional Responsibility. Accessed on July 25, 2013.
- American Association of Avian Veterinarians (AAV). n.d. Position Statement Regarding the Sale of Unweaned Birds . Accessed on July 25, 2013.
- American Board of Veterinary Practitioners. Diplomates. Accessed on July 25, 2013.
- American Federation of Aviculture (AFA). n.d. Position Statement of the AFA: Concerning the sale of unweaned baby birds. Accessed on July 25, 2013.
- American Pet Products Association. APPA National Pet Owners Survey Statistics: Pet ownership and annual expenses. 2013–2014 Survey. Accessed on April 5, 2014.
- Anderson, P. K. 2001a. Our feathered friends: Avian companions in everyday life. Paper invited for presentation at the Midwest Sociological Society Annual Meeting, St. Louis, April 5–8, 2001.
- Anderson, P. K. 2001b. The social dimensions of avian companionship. Paper presented at the American Sociological Association 2001 Annual Meeting. Anaheim, CA, USA, August 18–21, 2001.
- Anderson, P. K. 2003. A bird in the house: An anthropological perspective on companion parrots. *Society & Animals* 11: 393–418.
- Anderson, P. K. 2005. Further explorations into the avian-human bond. Paper presented at ISAZ 2005, 14th Annual Conference, Niagara Falls, USA, July 11–12, 2005.
- Anderson, P. K. 2006. The human–avian bond: An ethnography of a veterinary clinic. Paper presented at ISAZ 2006, 15th Annual Conference, Barcelona, Spain, October 5–6, 2006.
- Anderson, P.K. 2014. Social dimensions of the human-avian bond: Parrots and their Persons. *Anthrozoös* 27(3).
- Arluke, A. and Sanders, C. R. 1996. *Regarding Animals*. Philadelphia: Temple University Press.
- Asquith, P. J. 1997. Why anthropomorphism is not metaphor: Crossing concepts and cultures in animal behavior studies. In *Anthropomorphism, Anecdotes, and Animals*, 22–

34, ed. R. W. Mitchell, N. S. Thompson and H. L. Miles. Albany: State University of New York.

Barber, T. 1993. *The Human Nature of Birds: A Scientific Study with Startling Implications*. New York: St. Martin's Press.

Barnard, A. and Spenser, J. 2002. Ethnography as product: A history of ethnography. In *Encyclopedia of Social and Cultural Anthropology*, 296–298, ed. A. Barnard and J. Spenser. London: Routledge.

Beck, A. M. and Katcher, A. H. 1996. *Between Pets and People: The Importance of Animal Companionship*. Revised edn. West Lafayette, IN: Purdue University Press.

Beck, A. M. and Katcher, A. H. 2003. Future directions in human–animal bond research. *American Behavioral Science* 47: 79–93.

Bennett, P. and O'Hara, S. 2013. An evaluation of perceptions of parrots as human companions. Poster presented at ISAZ 2013, 22nd Annual Conference, Chicago, USA, July 18–19, 2013.

Bernard, R. H. 2001. *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. 3rd edn. Walnut Creek, CA: Alta Mira Press.

Bernard, R. H. 2006. *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. 4th edn. Walnut Creek, CA: Alta Mira Press.

Boehrer, B. T. 2004. *Parrot Culture: Our 2500-Year-Long Fascination with the World's Most Talkative Bird*. Philadelphia: University of Pennsylvania Press.

Bradshaw, J. and Casey, R. A. 2007. Anthropomorphism and anthropocentrism as influences in the quality of life of companion animals. *Animal Welfare* 16(S): 149–154.

Burghardt, G. 1985. Animal awareness: Current perceptions and historical perspective. *American Psychologist* 40: 905–919.

Burghardt, G. 1997. Amending Tinbergen: A fifth aim for ethology. In *Anthropomorphism, Anecdotes and Animals*, 254–276, ed. R. W. Mitchell, N. S. Thompson and H. L. Miles. Albany, NY: State University of New York.

Crist, E. 1999. *Images of Animals: Anthropomorphism and Animal Mind*. Philadelphia: Temple University Press.

Daston, L. and Mittman, G. eds. 2005. *Thinking with Animals: New Perspectives on Anthropomorphism*. New York: Columbia University Press.

- Dillman, D. A. 1999. *Mail and Internet Surveys: The Tailored Design Method*. Hoboken, NJ: John Wiley & Sons.
- Dresser, N. 2000. The horse bar mitzvah: A celebratory exploration of the human–animal bond. In *Companion Animals & Us: Exploring the Relationships between People and Pets*, 90–107, ed. A. L. Podberscek, E. S. Paul and J. A. Serpell. Cambridge: Cambridge University Press.
- Dumonceaux, G. and Harrison, G. J. 1997. Toxins. In *Avian Medicine: Principles and Applications*, 566–584, ed. B. W. Ritchie, G. J. Harrison and L. R. Harrison. Lake Worth, FL: Wingers Publishing, Inc.
- Echols, M.S. 2011. Attitudes of people who relinquish parrots. Proc Annu Conf Assoc Avian Vet, Seattle, 2011; 301.
- Fine, A. H. ed. 2001. *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice*. San Diego: Academic Press.
- Fine, A. H. ed. 2006. *Handbook on Animal Assisted Therapy: Theoretical Foundations and Guidelines for Practice*. 2nd edn. San Diego: Academic Press.
- Fisher, J. 1991. Disambiguating anthropomorphism: An interdisciplinary review. *Perspectives in Ethology* 9: 49–85, ed. P. Bateson and P. Klopfer. Plenum Publishing Corporation.
- Franklin, A. 1999. *Animals and Modern Cultures: A Sociology of Human–Animal Relations in Modernity*. London: Sage Publications.
- Friedman, S. G., Martin, S. and Brinker, B. 2006. Behavior analysis and parrot learning. In *Manual of Parrot Behavior*, 147–163, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Glaser, B. and Strauss, A. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine.
- Graham, J., Wright, T. F., Dooling, R. J. and Korbel, R. 2006. Sensory capacities of parrots. In *Manual of Parrot Behavior*, 33–41, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Griffin, D. R. 1976. *The Question of Animal Awareness: Evolutionary Continuity of Mental Experience*. New York: Rockefeller University Press.
- Harris, J. 1989. Avian companions and the human–animal bond. *Journal of the American Veterinary Medical Association* 195: 1517–1518.

- Harrison, G. J. 1997. Perspective on parrot behavior. In *Avian Medicine: Principles and Applications*, 47–53, ed. B. W. Ritchie, G. J. Harrison and L. R. Harrison. Lake Worth, FL: Wingers Publishing, Inc.
- Irvine, L. 2004. *If You Tame Me: Understanding Our Connection with Animals*. Philadelphia: Temple University Press.
- Katcher, A. 1981. Interactions between people and their pets: Form and function. In *Interrelations between People and Pets*, 41–67, ed. B. Fogle. Springfield, IL: Charles C. Thomas.
- Kellert, S. 1993. The biological basis for human values of nature. In *Biophilia Hypothesis*, 42–69, ed. S. Kellert and E. O. Wilson. Island Press/Shearwater.
- Kellert, S. and Wilson, E. O. eds. 1993. *Biophilia Hypothesis*. Island Press/Shearwater.
- Kennedy, J. S. 1992. *The New Anthropomorphism*. Cambridge: Cambridge University Press.
- Kidd, A. H., Kelley, H. T. and Kidd, R. M. 1983. Personality characteristics of horse, turtle, snake, and bird owners. *Psychological Reports* 52: 719–729.
- Kidd, A. H. and Kidd, R. M. 1998. Problems and benefits of bird ownership. *Psychological Reports* 83: 131–138.
- Kruger, K. A. and Serpell, J. A. 2006. Animal-assisted interventions in mental health: Definitions and theoretical foundations. In *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice*. 2nd edn, 21–38, ed. A. H. Fine. San Diego: Academic Press.
- Lawrence, E. A. 1986. Neoteny in American perceptions of animals. *Journal of Psychoanalytic Anthropology* 9: 41–54.
- Linden, P. with Luescher, A. 2006. Behavioral development of Psittacine companions: Neonates, neophytes, and fledglings. In *Manual of Parrot Behavior*, 93–111, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Lišková, S. and Frynta, D. 2013. What determines bird beauty in human eyes? *Anthrozoös* 26(1): 27–41.
- Loughlin, C. and Dowrick, P. 1993. Psychological needs filled by avian companions. *Anthrozoös* 6: 166–172.
- Martin, S. 2002. Biting, it's not for the bird. Psittascene February 2002. World Parrot Trust.

- McNicholas, J. and Collis, G. M. 2006. Animals as social supports: Insights for understanding animal assisted therapy. In *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice*, 49–71, ed. A. H. Fine. San Diego: Academic Press.
- Meehan, C. and Mench, J. 2006. Captive parrot welfare. In *Manual of Parrot Behavior*, 301–318, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Meredith, D. 2005. “Birdbrain” no longer means “stupid,” asserts Scientific Consortium. Duke Med News, January 31, 2005. Dukemednews.duke.edu. Accessed January 5, 2007.
- Messent, P. R. 1983. Social facilitation of contact with other people by pet dogs. In *New Perspectives on Our Lives with Companion Animals*, 37–46, ed. A. H. Katcher and A. M. Beck. Philadelphia: University of Pennsylvania Press.
- Mitchell, R. W., Thompson, N. S. and Miles, H. L. eds. 1997. *Anthropomorphism, Anecdotes and Animals*. Albany, NY: State University of New York.
- Mithen, S. 1996. *The Prehistory of the Mind: A Search for the Origins of Art, Religion, and Science*. London: Thames & Hudson.
- O’Haire, M. 2010. Companion animals and human health: Benefits, challenges and the road ahead. *Journal of Veterinary Behavior: Clinical Applications and Research* 5(5): 226–234.
- Pepperberg, I. M. 1999. *The Alex Studies: Cognitive and Communicative Abilities of Grey Parrots*. Cambridge, MA: Harvard University Press.
- Perry, R. A. 1997. The avian patient. In *Avian Medicine: Principles and Applications*, 1–12, ed. B. W. Ritchie, G. J. Harrison and L. R. Harrison. Lake Worth, FL: Wingers Publishing, Inc.
- Pet MD. 2008. Infantilization in pet keeping and its unintended consequences for animal health. <http://www.petmd.com/blogs/fullyvetted/2008/april/infantilization-pet-keeping-and-its-unintended-consequences-animal-health/>. Accessed on June 10, 2013.
- Phillips, M. 1998. The Wild Bird Conservation Act. *Endangered Species Bulletin* 23(4): 32.
- Reiner, A., Perkel, D. J., Bruce, L., Butler, A. B., Csillag, A., Kuenzel, W. et al. 2004. The avian brain nomenclature forum: Terminology for a new century in comparative neuroanatomy. *The Journal of Comparative Neurology* 473: E1–E6.
- Rock, M. and Babinec, P. 2010. Prototypes connect human diabetes with feline and canine diabetes in the context of animal–human bonds: An anthropological analysis. *Anthrozoös* 23(1): 5–20.

- Sanders, C. R. 1993. Understanding dogs: Caretaker's attributions of mindedness in canine–human relationships. *Journal of Contemporary Ethnography* 22: 205–226.
- Sanders, C. R. 1999. *Understanding Dogs: Living and Working with Canine Companions*. Philadelphia: Temple University Press.
- Seibert, L. 2005. Mental health issues in captive birds. In *Mental Health and Well-Being in Animals*, 285–294, ed. F. D. McMillan. Oxford: Blackwell Publishing.
- Seibert, L. 2006. Social behavior of Psittacine birds. In *Manual of Parrot Behavior*, 43–48, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Serpell, J. 1981. Childhood pets and their influence on adults' attitudes. *Psychological Reports* 49: 651–654.
- Serpell, J. 1996 [1986]. *In the Company of Animals: A Study of Human–Animal Relationships*. Cambridge: Cambridge University Press.
- Serpell, J. 2003. Anthropomorphism and anthropomorphic selection—Beyond the “cute response.” *Society & Animals* 11(1): 83–100.
- Serpell, J. 2005. People in disguise: Anthropomorphism and the human–pet relationship. In *Thinking with Animals: New Perspectives on Anthropomorphism*, 121–136, ed. L. Daston and G. Mittman. New York: Columbia University Press.
- Shepherd, P. 1978. *Thinking Animals: Animals and the Development of Human Intelligence*. Athens, GA: University of Georgia Press.
- Shepherd, P. 1996. *The Others: How Animals Made us Human*. Washington, DC: Island Press.
- Skutch, A. F. 1996. *The Minds of Birds*. College Station, TX: Texas A & M University Press.
- Somma, A. M. 2006. Rover and Fluffy are joining the wedding party. Chicago Tribune, Tuesday, December 26, 2006, Section 2, p. 6.
- St. Petersburg Times. McClatchy-Tribune Newspapers. 2009. Increasingly Pets Pop Up in Obituaries, Wills. Tuesday, January 20, 2009. Accessed on May 23, 2013.
- Strauss, A. and Corbin, J. 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Thousand Oaks, CA: Sage.
- Sweat, R. 1999. Adopting a second-hand bird. *Bird Talk* March: 60–67.

- Sweat, R. 2001. Providing for your bird: Wills and trusts. *Bird Talk* September: 12–14.
- Tuan, Yi-Fu. 1984. *Dominance and Affection: The Making of Pets*. New Haven, CT: Yale University Press.
- Tully, T. N., Jr. 2005. Almost as nature intended? Probiotic diets strive to replicate the good bacteria passed from parents to chicks. *Bird Talk* October: 16–18.
- Tully, T. N. Jr. and Harrison, G. J. 1997. Pneumonology. In *Avian Medicine: Principles and Applications*, 292–305, ed. B.W. Ritchie, G. J. Harrison, and L. R. Harrison. Lake Worth, FL: Wingers Publishing, Inc.
- Van Sant, F. 2006. Problem sexual behaviors of companion parrots. In *Manual of Parrot Behavior*, 233–246, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Voren, H. and Jordan, R. 1992. *Parrots: Handfeeding and Nursery Management*. Pickering, Ontario: Silvio Mattacchione & Co.
- Webster, T. 2009. Obituaries Mention Pets as Surviving Family Members. Pet Examiner. Examiner.com. Accessed on May 23, 2013.
- Welle, K. R. and Luescher, A. U. 2006. Aggressive behavior in pet birds. In *Manual of Parrot Behavior*, 211–217, ed. A. U. Luescher. Oxford: Blackwell Publishing.
- Wilson, C. C. and Netting, F. E., Turner, D. C. and Olsen, C. H. 2013. Companion animals in obituaries: An exploratory study. *Anthrozoös* 26: 227–236.
- Wilson, E. O. 1984. *Biophilia*. Cambridge, MA: Harvard University Press.
- Wilson, L. and Lightfoot, T. L. 2006. Pubescent and adult Psitaccine behavior. In *Clinical Avian Medicine, Vol. I*, 73–84, ed. G. J. Harrison and T. L. Lightfoot. Palm Beach, FL: Spix Publishing, Inc.