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## Should We Let Sleeping Dogs Lie... With Us? Synthesizing the Literature and Setting the **A**genda for Research on Human-animal Co-sleeping Practices

**Introduction.** Human sleep practices are highly divergent across culture and time (Blunden, Thompson & Dawson; Worthman and Melby; Munroe, Munroe, and Whiting). In the same way that sleeping spaces in industrialized societies have increasingly become divided according to age (adult and child), so have spaces been segregated according to species (human and non-human animal), although many cultures have practiced or still practice co-sleeping. This is often related to crowding or a response to domestic spaces having no physical internal divisions, but also because co-sleeping is the norm for some cultures — devoid of the taboos of incest and bestiality, or the socio-cultural construction of sleep disorders that can be found at the core of (or indeed contribute to) solo-sleeping practices in other cultures.

Although co-sleeping in indigenous societies primarily involved humans (particularly children), it is likely to have also involved companion animals or pets. The practice of pet keeping dates back to Paleolithic hunters and early agriculturalists, who kept animals for leisure activities (with inherent social and emotional rewards) and as functional assets (e.g., to assist in hunting or as educational and play “objects” for children [Serpell]). Whilst the sleeping arrangements of pets were not the focus of early anthropological accounts, human-animal co-sleeping has been widely recorded in ethnographies of indigenous Australians. During cold nights, indigenous Australians were often reported to sleep alongside their dogs for warmth (Hamilton; Meggitt; Smith and Litchfield). This practice is implicated in the common Australian expression “three dog night”: the colder the night, the more dogs are needed to keep warm (Breckwoldt).

Today, humans continue to show strong attachment to their pets, and often consider them important members of the family (Archer). In return, companion animals are sources of unconditional support, love, comfort, security, and stability that also provide health benefits (Smith). These benefits are felt strongly in Australia, which has one of the highest levels of pet ownership in the developed world, with around sixty per cent of households owning at least one pet (Australian Bureau of Statistics). Pet ownership in Australia has remained relatively stable during the past few years, current figures

indicating that thirty-six per cent of households own dogs, and twenty-three per cent own cats (Australian Companion Animal Council).

Companion animals not only often live inside the home, but many also share their guardians' beds or sleep in their bedrooms (Beck and Katcher). Such practices are particularly meaningful in contemporary Western cultures, where the parental bed has been increasingly sexually constructed. Sleeping space has evolved over time, particularly around the end of the nineteenth century when the individual bed was regarded as an essential ingredient of civilized society, informed by ideas of privacy. "The bed remained a highly problematic, indeterminate space, facilitating deviant as much as civilized behavior, and giving rise to all manner of pathologies, perversities and phobias" (Crook 15). In many Westernized and industrialized nations such as Australia, the majority of families encourage infants to sleep alone from any early age (Blunden, Thompson, and Dawson). Allowing animals in the private space of the bed and/or bedroom therefore indicates the status and value that is placed on many companion animals. Some authors have alluded to the untested assumption that letting a dog sleep on the bed is indicative of a positive pet attachment (e.g., Katcher, as cited by Archer). Franklin, for example, interprets pets in bedrooms as indicative of their status as intimate family members. Beck and Katcher go so far as to suggest that the "pet's privilege of sharing the master's bed elevates him [sic] above human children, who are usually banned from the parental bedroom at night" (20).

Unfortunately, little is known about the prevalence of human-animal co-sleeping relationships or their impact on sleep. The research reporting human-animal co-sleeping practices is piecemeal at best, using data from non-dedicated or non-validated surveys (such as those undertaken by the pet care and pet food industry). An indicative picture of human-animal co-sleeping practices can be sketched by drawing from various studies that are based on a variety of tools and which span several decades and research populations. Estimations of prevalence rates are often limited to online surveys or those conducted by commercial pet organizations. Various studies from around the world report that approximately half of pet guardians let their pets sleep in their beds with them during the night (eg. Katcher et al.; Albert and Bulcroft; Westgarth et al.; Overgaauw).

The manifestation of this practice differs according to several factors, such as the type of pet — cats and dogs are the most frequent bed visitors, with cats more likely to sleep with the family than any other type (Albert and Bulcroft); the size of the pet: most dogs allowed in the bed are smaller breeds (Eckstein); the number of children in the household, higher for those with no children (Albert and Bulcroft); and guardian characteristics, such as gender (more common in females) and ethnicity (higher in Anglo-Saxon than African American [Brown, “Ethnic”; Brown, “Companion Animals”]). Despite any benefits experienced by the pet owner or guardian, there are various consequences of having pets in bedrooms. These include health hazards, effect on sleep quality, and behavioral problems displayed by the pet, as well as its impact on the interpersonal relations of humans in the bedroom.

*Health hazards:* There are various health hazards associated with pet ownership that are accentuated by allowing pets into the bedroom and bed. These include immunologic responses resulting in allergic disease, asthma, and/or hypersensitivity pneumonitis; bites and scratches from pets causing tissue damage and inducing infections and infectious diseases associated with pets (see Plaut, Zimmerman, and Goldstein for a comprehensive review). A dog sleeping in a family member’s bedroom may also be a risk factor for biting (Messam et al.). The most susceptible include small children, pregnant women, and immuno-deficient patients (Smith). However, overall health risks are relatively low — particularly if the animals are kept clean and routine veterinarian care is maintained.

*Effect on sleep quality:* While common causes of sleep disturbance involve partners (e.g., kicking, snoring, visits to the toilet) and children, having pets can also represent a significant cause of disturbance for those who allow pets in the bed or bedroom. For instance, the Mayo Sleep Clinic in the US surveyed 300 patients with an existing sleep disorder, and found that fifty-three per cent of pet guardians who allowed their pet(s) to sleep in their beds were disturbed every night by the animal in some way. It is difficult to determine the significance of these disruptions, with only one per cent of patients feeling that their sleep was disrupted for more than twenty minutes on average per night (Fayerman). Smith et al. compared the self-reported sleep of pet versus non-pet co-sleepers, and found that sleeping with pets in the bed had a small impact on sleep quality e.g., time taken to fall asleep, and feelings of tiredness upon waking — a sign of disrupted sleep). The authors inferred that the continued practice of co-sleeping

with pets indicates attendant benefits such as social support and social interaction, and increased feelings of personal security, despite any disadvantages.

Disruptions may be related to mismatches between human, dog, and cat core temperatures, as well as differences in sleep-wake cycles, as pets do not spend eight hours in a sleep state (see Campbell and Tobler). For example, Adams and Johnson examined the sleep-wake cycles of dogs in various urban backyards, and found that dogs had an average of 23 sleep/wake episodes (or 3 sleep/wake cycles per hour), with active sleep followed immediately by spontaneous arousal. They found that dogs are also responsive to auditory stimuli regardless of whether the sleep state was quiet or active (Adams and Johnson). Their responses to such stimuli often led to dogs being a nuisance to people in the neighborhood (e.g. due to barking) and potentially disrupting the sleep of guardians and non-guardians alike.

*Pet behavioral problems:* Jagoe and Serpell found that dogs who are allowed to sleep in their guardians' beds or bedrooms at night may experience such behavioral problems as an increase in competitive aggression (i.e., aggression when attention is paid to others; aggression to other dogs in the household) and separation-related problems (i.e., separation-related urination and defecation). Beck and Katcher describe a woman who complained that she was unable to make the bed in the morning because when her husband went to work, the dog would jump on the bed and growl, snap, or bite if she tried to remove him. Although Jagoe and Serpell could not determine the direction of causation, they note it is likely that dogs sleeping with or close to the guardian will develop an "unbalanced" attachment for that person and thus react adversely to separation. Another explanation may relate to the aforementioned impact of dog bed-sharing practices on the ranking of household individuals — human and animal. The guardian may be forced to accept an overly attached canine sleeping partner to avoid nocturnal separation problems in the dog (Jagoe and Serpell).

*Effect on interpersonal relationships:* Pets sleeping in their guardians' beds can be a source of conflict for couples, sometimes leading to problems with intimacy, particularly if the pet is unwelcome to one partner. Jagoe and Serpell, for instance, describe a couple whose dog was interfering in their sex life. "The husband felt sexually inhibited and turned off when the animal was in the bed, yet his wife would not otherwise have intercourse" (50).

Broad as it may be, the literature on human-animal co-sleeping is risk-centric. That is, it is equated with risks to health or sleep hygiene, or considered a threat to the intimacy of couples. Moreover, the practice is associated with deviant sexuality in the form of bestiality, or, at the least, unhealthy romantic attachments (Beetz and Podberscek; Dekkers). This risk-centric bias, which emphasizes the disadvantages of human-animal co-sleeping, has contributed to the psychological, social, and cultural benefits of human-animal co-sleeping practices being overlooked and under-researched.

Why do people human-animal co-sleep? Despite a lack of rigorous data on the prevalence of human-animal co-sleeping, there is no doubt that people continue to share their beds with pets. In some instances, the practice occurs despite negative impacts, such as an increase in the time taken to fall asleep (extended sleep latency), or sensitivity to sleep disturbance from animal noises (Smith et al.). This raises the question of why people (continue to) co-sleep with pets. First, there are some very practical considerations that provide ready explanations. For example, some pets may be more distracting if they are not in their guardians' beds. That is, they might scratch at doors or vocalize their attempts to sleep in beds with humans. Voith describes a woman who allowed her dog to sleep in her bed (even though it would bite her during the night) because it refused to sleep on the floor and would bark incessantly if shut out of the room. Moreover, some human sleepers who would prefer to sleep without pets might not have any choice, such as when the final decision is made by another human with whom they share their bed.

Second, there are also several theoretical and practical explanations that provide insight. Attachment theory, originally developed by John Bowlby, explains interpersonal relations between children and adults, whereby children feel secure in the presence of adults to whom they are attached (Bowlby, *Attachment*), and feel separation anxiety at the perceived short- or long-term loss of those "attachment figures" (Bowlby, *Separation*). The theory has been extended to discuss human relations with animals (Beck and Madresh; Julius, Beetz and Kotrschal). Whilst many people who feel attached to their pets have no need or desire to share their beds with them, attachment theory suggests that some humans are motivated to sleep with their pets in the bed to feel secure and avoid separation anxiety.

Further theoretical explanation for human-animal co-sleeping can be found in Russell Belk's consideration of animals and pets as "extended selves" ("Possessions"). Belk considers the ways in which relationships with pets can be so important to the identity

of some humans that pets might best be understood as special cases of extended human selves. He describes how animals (like objects, money, other people, prostheses, and so on) can become extensions or parts of human selves that “define who we are” (“Possessions” 139). This idea is established empirically, not only in relation to typical pets such as dogs, but also to non-traditional companion animals such as horses (Belk “Metaphoric”). Sue-Ellen Brown (“Ethnic” and “Companion”) similarly considers animals as “self-objects” that are integral to human identity, sometimes surpassing the ability of other humans to provide a sense of self.

The idea of animals as human extensions challenges the very question of why humans would want to sleep with pets in their beds at all. That is, if a pet is considered an extension of a particular human, it would be expected to accompany that human self in sleep. The concept of pet as extended self enables an immediate recognition that asking some people to sleep without their pets is akin to asking them to sleep without a part of their selves, and as absurd as asking them to leave their pets behind during evacuation from disasters (Thompson). Nonetheless, humans who consider or act as if their pets and animals are extended selves are unlikely to be accompanied by that pet throughout all their daily activities (such as work, travel, showering). Therefore, the decisions humans make about where lines of pet accompaniment are drawn are complex and dependent upon other philosophical, psychological, cultural, emotional, and practical factors.

**Future research on human-animal co-sleeping: setting the research agenda.** The literature reviewed in this paper suggests that pet owners frequently share their beds with their pets, yet human-animal co-sleeping has been taken for granted, failing to attract dedicated interest from (or funding for) animal studies scholarship or sleep research. Rather, the implications have been considered narrowly through a focus on threats to human health and social relations. As such, existing research can be considered both risk-centric and anthropocentric, providing only a partial understanding of human-animal co-sleeping and its multiple implications. To ensure a comprehensive and symmetrical consideration of the practice of human-animal co-sleeping, there is a need to identify benefits or trade-offs and understand the implications from a bi-directional and relational perspective. As humans and animals exist in relation with (Haraway *Companion* and *When Species Meet*) and in “being alongside” (Latimer) one another, the impact of pet-bed sharing from a relational



perspective seems warranted. To establish a more comprehensive body of knowledge on human-animal co-sleeping which is free of biases towards human beings and risk, we propose the following three broad areas of focus: on humans, on animals and on the human-animal relation.

*Humans:* In the preceding discussion, we proposed some practical and theoretical explanations for (continued) human-animal co-sleeping. To fully evaluate our propositions, there is a need to collect empirical data on motivations and rewards for human-animal co-sleeping, using inductive research techniques, such as open-ended surveys and interviews that can capture the unanticipated dimensions of human-animal co-sleeping. From a more positivistic perspective, there is a need for a dedicated and comprehensive survey of human-animal co-sleeping practices that combines and uses knowledge from the disciplines of sleep research and animal studies. As a minimum data set, and based on our own survey research (Smith et al.), we recommend that the following four demographic questions be included in basic sleep research participant demographic collection, as well as in research on human-animal co-sleeping: 1) do you own a pet, 2) do you sleep with your pet, 3) where in the room is your pet (on floor, on bed, in bed), and 4) can the pet toilet independently (i.e., can it let itself in and out of the room for toileting without waking the respondent).

The third question of the minimum data set on human-animal co-sleeping is designed to capture the location of the pet in relation to the human. This would enable an evaluation of any differences in sleep hygiene, quality, and quantity between pets being in the bedroom and pets being in the bed. The resulting knowledge could be used to assist those with sleep problems to review their sleeping practices and justify and support any behavior change interventions. For example, having pets in the same room rather than the same bed might provide an incremental pathway for necessary behavior change (as noted above), without causing undue emotional stress to the pet or guardian, or reducing the benefits that guardians enjoy when human-animal co-sleeping.

A particularly novel application for an understanding of the impact of the pet's location in the bedroom supports the need to undertake more research on the impacts of human-animal co-sleeping on the sleep of children. Triebenbacher found that "children perceive their pets as special friends, important family members, and providers of social interactions, affection, and emotional support" (191). The role of pets in children's lives can change according to developmental stages, but Robin and Bensal identify their

general roles as “parents” as well as transitional objects. Psychotherapist D.W. Winnicott discusses transitional objects in relation to children’s development, considering objects such as a baby’s favorite toy as mediating and crossing the boundary between inner mind and outer reality. The object is both independent of the baby and, consistent with Belk’s “extended selves,” a part of the baby who “created” and modified it. If we replace the object with a pet (real or toy), the pet can be seen to be part of the child. As a result, a child required to sleep without a pet may experience difficulty falling asleep due to anxiety over the absence of something that can be understood as a part of the child.

As transitional objects, there may be a role for pets in developing solo sleeping practices amongst children (where “solo” is understood to exclude other humans). Parent-child co-sleeping is frequently constructed as problematic in Western society (Blunden, Thompson, and Dawson). However, pets could play a role as transitional objects (subjects) in encouraging solo sleeping practices amongst children who would otherwise seek comfort and security by sleeping in their parents’ or siblings’ beds (Triebenbacher). Research evaluating this proposition should compare real versus toy pets as transitional objects, and consider the moral and ethical implication of using pets for this purpose. Beetz and Podberscek, for example, found that amongst “male children with insecure/disorganized attachment, the interaction with a real dog rather than with a toy dog ... lowered salivary cortisol levels during a social challenge situation” (361). The greater ability for a real dog to serve as an attachment figure and reduce stress does not necessarily preclude the ability for a toy dog to provide some benefit. A toy dog may be a preferable alternative in many situations, especially where families may lack the space or resources to care for a real pet or where a householder may be allergic to other animals.

Research attention also needs to be paid to the potential disadvantages of human-animal co-sleeping in general, or of using pets specifically for the purpose of developing solo sleeping practices amongst children. For example, there may be instances where humans become dependent on the presence of pets to fall asleep. This may cause problems in relation to short-term changes to sleeping routines (traveling or going to hospital), as well as longer-term changes such as the unavoidable death of a pet. Researching such cases would provide interesting perspectives on the social dimensions



of sleep, where “social” is defined in a way that includes “humans and other animals,” as is accepted practice in the field of animal studies.

*Animals:* The limited and disparate research on human-animal co-sleeping has been concerned with the impact of human-animal co-sleeping on human sleep quality and quantity. However, there is an equivalent need to consider the impact of human-animal co-sleeping on animals, especially in relation to their health and welfare. In the same way that there are moral and ethical considerations for working animals, such as those used in animal-assisted therapy (Serpell), so too should the health and well-being of animals involved in human-animal co-sleeping be of central importance. Concerns include the unlikely risk of anthroponotic diseases as well as negative impacts on animal social relations and behavior.

For example, if attachment theory can be applied to an animal’s attachment to humans, could human-animal co-sleeping practices exacerbate its separation anxiety during waking hours when attachment figures are not physically present? Where human-animal co-sleeping practices differ in a household with more than one pet (that is, one dog sleeps inside and another outside), there is a need to understand the impact on inter-pet relations. This is especially the case where negative inter-pet relations can lead to anti-social behaviors which can impact inter-personal relations (between husband and wife; for example, Jagoe and Serpell), jeopardize human health (through increased biting behavior; for example, Smith) or cause community conflict (through barking complaints; for example, Kobelt et al.). Furthermore, as noted above animals have different circadian rhythms, temperatures, and sleep-wake cycles (Campbell and Tobler; Adams and Johnson). Accelerometers may provide a non-invasive and cost effective method for determining circadian rhythms in pets, particularly dogs and cats (Hansen et al.).

*Human-animal relations:* Further research should be conducted that determines any significant relationship between objective scores on animal attachment scales such as the owner-pet relationship scale (Winefield et al.), and the practice of human-animal co-sleeping. This research could assist with an understanding of the role that attachment plays in decisions for humans and animals to co-sleep or in the impact of human-animal co-sleeping on attachment. It could also be used to critically review a fundamental assumption inherent in previous research that human-animal co-sleeping is indicative of positive attachment (e.g., Katcher, as cited by Archer). In addition to the use of surveys, researchers should employ open-ended techniques to consider the impact of

human-animal co-sleeping on the human-animal relationship. Where sharing a bed with a pet is shown to influence a particular kind of human-animal relation, research should consider the implications for human-animal relations where bed-sharing is improbable (with larger animals such as horses, for example). Whilst human-animal co-sleeping may be found to be indicative of positive human-animal attachment, the inability to share a bed (for health reasons or because the animal is large) or its non-practice does not necessarily preclude particular experiences of positive or profound attachment between humans and animals.

**Conclusion.** The benefits of pet ownership and companionship have been extolled by researchers for several decades and by owners and guardians for centuries more. There is little doubt that pets contribute to the everyday experiences of humans, and some pets contribute to their “everynight” experiences too. In fact, more than half of the sixty per cent of pet owners and guardians in developed countries will spend approximately one third of their lives sleeping alongside their pets. In this paper, we have synthesized the scant research on the topic to establish the high incidence and significant implications of this taken-for-granted behavior for humans and animals and their relations with one another. It seems that humans and animals are not strange bedfellows after all. What kind of bedfellows they are remains to be determined.

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