Exploring the existence and potential underpinnings of dog–human and horse–human attachment bonds

Elyssa Payne [a,*], Jodi DeAraugo [b], Pauleen Bennett [c], Paul McGreevy [a]

[a] Faculty of Veterinary Science (B19), University of Sydney, NSW 2006, Australia
[b] School of Health Sciences and Psychology, Federation University, University Drive, Mount Helen, VIC 3350, Australia
[c] School of Psychology and Public Health, La Trobe University, Bendigo, VIC 3552, Australia

ABSTRACT

This article reviews evidence for the existence of attachment bonds directed toward humans in dog–human and horse–human dyads. It explores each species' alignment with the four features of a typical attachment bond: separation-related distress, safe haven, secure base and proximity seeking. While dog–human dyads show evidence of each of these, there is limited alignment for horse–human dyads. These differences are discussed in the light of the different selection paths of domestic dogs and horses as well as the different contexts in which the two species interact with humans. The role of emotional intelligence in humans as a potential mediator for human–animal relationships, attachment or otherwise, is also examined. Finally, future studies, which may clarify the interplay between attachment, human–animal relationships and emotional intelligence, are proposed. Such avenues of research may help us explore the concepts of trust and bonding that are often said to occur at the dog-human and horse-human interface.

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Contents

* Corresponding author.
  E-mail address: epay1031@uni.sydney.edu.au (E. Payne).

1. Introduction

Development of a 'bond' between a dog or a horse and its human trainer is a desired goal of many training approaches (Bradshaw, 2011; Bruce, 2011; Fallani et al., 2006; Parelli, 1993; Roberts, 1997). In these systems, a bond is believed to develop between animal and human as a result of the elimination of fear and the resultant ability of the animal to perceive, and then correctly respond to, cues to acquire resources, such as food (in positive-reinforcement training), or to avoid aversive outcomes, such as physical pressure (in negative-reinforcement training).

Attachment is a specific type of reciprocal emotional bond, developed over time, which is commonly attributed to the parent-offspring relationship. In humans, the nature of attachment bonds is thought to influence how future attachment bonds for that individual (including adult relationships) are formed and conceptualised (Lewis et al., 2000). These relationships are typically not one-dimensional, and several types of attachment relationship exist and can be distinguished by the aspects of attachment anxiety and avoidance (Brennan et al., 1998). These aspects often reflect the security of an attachment relationship. For example, an anxiously attached individual may show signs chronic emotional distress and fear of abandonment whereas an avoidant individual may experience discomfort with emotional closeness (Mikulincer and Shaver, 2003). Additionally, attachment is believed to influence social relationships in several non-human species (Bowlby, 1958; Tarou et al., 2000) and has also been observed between companion animals and owners (Topal et al., 1998; Shore et al., 2005). The relationship between an animal and a human has several implications for the behaviour and welfare of both dyad members and may compromise or improve an animal's performance in operant tasks (Payne et al., 2015). For example, owners may display signs indicative of anxious or avoidant attachment styles, which can affect their expectations of their animals, such as anxious owners expecting their animals to be unresponsive to their needs (Cohen, 2002 Zilcha-Mano et al., 2011).

This article aims to assess the existence of, and mechanisms behind, attachment relationships in horse-human and dog-human interactions. These species were selected as they are both commonly found in the human domain and exist in companion as well as working roles. Dogs and horses are both social species that, as a consequence of human actions, are often isolated from members of their own species (McGreevy and Bennett, 2010). As such, the formation of close social relationships with and perhaps even attachment to humans seems plausible, especially in the absence of conspecifics. Furthermore, as dogs are naturally predators and horses are prey, these species likely have different behavioural motivations and are thus worth comparing. Given their differences, would horses and dogs have the same propensity to form attachment or attachment-like relationships with humans?

In the emerging canine science literature, attachment bonds between dogs and humans are well documented. Dog attachment to humans is reflected by behavioural and physiological stress responses, such as decreased heart rate variability, to threats and increased discomfort-related behaviours when separated, so has

the potential to affect animal behaviour (Serpell, 1996; Gacsi et al., 2013).

Attachment has been investigated in dogs occupying various working and companion roles. In these contexts, attachment bonds were readily formed with human carers and handlers and, counter-intuitively, continue to form despite repeated bond breaking (Fallani et al., 2006; Valsecchi et al., 2010).

Attachment has not been extensively investigated in the horse, even though human-horse and horse-human interactions that are analogous to elements of the equine social ethogram (a detailed repertoire of the animal's species-typical behaviour) have been described (McGreevy et al., 2009). A recent exception to this is a pilot study that illustrated that the training style of horse trainers may be related to the trainer attachment to their horses (DeAraugo et al., 2014). However, this study examined attachment processes from the human perspective. It did not objectively study the attachment processes from the horse perspective, nor the interactive dynamic between the horse–human dyad (DeAraugo et al., 2014).

The mediating factors that influence animal–human attachment have yet to be fully investigated in the horse or the dog. Emotional intelligence (EI) refers to the ability of an individual to monitor his or her emotions as well as those of others, and to use this information as a guide for thoughts and actions (Mayer et al., 2001). Given that EI has been related to the quality of interpersonal relationships (Lopes et al., 2004; Lopes et al., 2003), this construct may also apply to interspecies relationships. Underestimating the subtleties of human interactions with dogs, especially those that may trigger aggression, threats or avoidance behaviour from dogs, can have consequences that compromise not just training outcomes but also safety (McGreevy et al., 2012). If the EI of an owner is associated with fewer incidences of these behaviours, the behaviours and interaction style of that owner are of value to all dog owners seeking to prevent disharmony. It is proposed that EI could underpin human–animal interactions and likely attachment, especially since many of these interactions are similar to those observed between caregivers and human infants. Thus, EI may partially contribute to the quality and effectiveness of human-animal interactions and help to explain the nature of successful interspecies bonds. This article seeks to explore EI in relation to dog–human and horse-human attachment as a factor, which might influence the nature of an attachment bond or, at the very least, influence the quality of animal human relationships in the absence of attachment.

2. Fundamental features of attachment

It is important to note that in the literature, the term attachment may be used to describe interspecies social bonds but may not describe the specific attachment construct outlined by Bowlby (e.g. Beery et al., 2009). It has been theorised that attachment bonds develop as a means of keeping offspring close to their caregivers because care is vital for the survival of the offspring (Bowlby, 1958). As companion, horses and dogs often rely on humans, in part at least, for their survival, there seems to be some logical basis for an attachment bond to develop. Attachment has also been used to describe adult human relationships, which are thought to arise from working models acquired from childhood attachment to par-