

Letters

Knowledge of domestic animal welfare is helpful in understanding the welfare of wild animals and vice versa

J van Rooijen

Churchillweg 37c, 6707 JB Wageningen, The Netherlands;
email: jeroenvrooijenAkira@hotmail.com

Addison and Thomas (2010) called the assumption that wild animals possess the same mental reactions as their domesticated relatives a fundamental welfare error. This statement is based mainly on their remark: “The dog with its ten thousand years plus of human selection must be the extreme example of domestication, its psychology so changed that even our closest relatives, chimpanzees, trail behind dogs at reading the intentions, emotions and faces of humans”. This is an anthropocentric remark.

This statement is anthropocentric because it assumed initially that only species that are closely related to us may possess capacities that resemble human capacities. However, it turned out that dogs resemble us more, in particular capacities, than chimpanzees. The dog is less related to us than the chimpanzee. This statement is anthropocentric because it assumed that these capacities must be the result of many generations of intimate contact with human beings. However, ten thousand years is a negligible period on the evolutionary timescale. For this reason, domestication has never resulted in the emergence of completely new traits.

Domestication may result in an exaggeration of traits that are already present in the wild ancestors. Domestication may also have the result that behaviours (for instance, aggression and fear) become more rudimentary (van Rooijen 1982, 1983, 2010a). An example is that most dog breeds are less aggressive and less fearful than their ancestor, the wolf. Another example is the behaviour of silver foxes selected to approach humans without aggression or fear. These animals showed less aggression and fear towards humans (Plyusninas *et al* 1991). The above statement also refers to the capacities of chimpanzees and dogs but, although it is claimed that the behaviour of dogs is dramatically changed during domestication, the behaviour of the ancestor of the dog, the wolf, is not mentioned.

Morris (2002) wrote: “Wolves are pack-hunters that pursue large prey, and in their behaviour it is possible to see all elements that have been exaggerated in different breeds of dogs”. It seems more important that man and wolves are adapted to a similar niche than their degree of relatedness (van Rooijen 2010b). Both species have developed a co-operative hunting strategy. Chimpanzees have a more competitive feeding strategy (Hare & Tomasello 2004).

Therefore, particular capacities of chimpanzees have less resemblance to human capacities than those of dogs. There exist more species with a co-operative hunting strategy (for instance pelicans). However, wolves have not only

developed a co-operative hunting strategy but, due to a parallel adaptation, also possess similar communicative behaviour patterns as man. Not surprisingly, dogs (descendants of wolves) performed equally well whether a human or a conspecific pointed towards hidden food (Hare & Tomasello 1999). Udell *et al* (2008) even claimed that wolves outperform dogs in following human social cues.

It is unlikely that our ancestors started to keep wolves only for fun. Wolves are dangerous animals. Other species seem more suitable to be kept for fun only. Furthermore, our ancestors that domesticated the wolf were hunter-gatherers. They were nomads that had to move around in order to gather sufficient food: they would probably be unable to collect sufficient meat for a wolf to be fed as a pet. It is more likely that wolves were kept because of their profit than for fun. Most likely wolves were able to increase the efficiency of hunters in collecting prey (van Rooijen 2010b).

Hunters could make use of the ability of wolves to dig small mammals from below-ground-level hiding (emphasised in terriers) and to flush prey from ground-level hiding (emphasised in flushing dogs). They could also use the capacity of the wolf to point to the location of potential prey by performing pointing behaviour (emphasised in pointers). Further, they could make use of the capacity of the wolf to follow a scent trail (emphasised in scent hounds) and its capacity as a long-distance runner (emphasised in sledge dogs). They could also use its capacity to follow prey on sight (emphasised in sight hounds) and its capacity as a sprinter (emphasised in greyhounds). Morris (2002) wrote: “When the pack comes closer to the prey they fan out and encircle it. This is what has been accentuated in the modern herding dogs”. So, hunters could also make use of the tactical insight of the wolf. Morris (2002) wrote further: “‘Setting’ in wolves occurs at the moment the hunting pack has surrounded its prey and is preparing for a final rush to make the kill”. And, “This is the action that has been emphasised in the development of modern setters”. The hunters could also use the ability of the wolf to kill large prey (emphasised in bear- and bullfighting breeds) and to retrieve prey (emphasised in retrievers), eventually by swimming (emphasised in water spaniels). Finally, they could eat the wolf (emphasised in chow chows).

This increase in the amount of meat collected by hunters with a wolf compared with those without was apparently larger than the amount of meat necessary to maintain a wolf. Probably the domestication of the wolf represented the largest increase in the efficiency of food collection prior to the development of agriculture. It is, therefore, not surprising that the wolf was the first species to be domesticated. Perhaps the wolf also had a function in the battles with rivalling ‘packs’ of hunters.

Thus, wolves were domesticated because their behaviour bore a very close resemblance to that of our present-day dogs. This is in line with the opinion that the behaviour of domestic animals is not fundamentally different from the

behaviour of the corresponding wild species. Therefore, we may assume that knowledge of the welfare of wild animals may help us to understand the welfare of domestic animals and *vice versa*.

References

- Addison IE and Thomas LH** 2010 Wild brains-domesticated minds: opposites in welfare? *Proceedings UFAW Animal Welfare Conference. Darwinian Selection, Selective Breeding and the Welfare of Animals* p 141. 22-23 June 2009, Bristol, UK
- Hare B and Tomasello M** 1999 Domestic dogs (*Canis familiaris*) use human and conspecific social cues to locate hidden food. *Journal of Comparative Psychology* 113: 173-177
- Hare B and Tomasello M** 2004 Chimpanzees are more skilful in competitive than cooperative cognitive tasks. *Animal Behaviour* 68(3): 571-581
- Morris D** 2002 *Dogs*. Trafalgar Square Publishing: North Pomfret, Vermont, USA
- Plyusninas IZ, Oskina IN and Trut N** 1991 An analysis of fear and aggression during early development of behavior in silver foxes (*Vulpes vulpes*). *Applied Animal Behaviour Science* 32: 253-268
- van Rooijen J** 1982 The value of choice tests in assessing welfare of domestic animals. *Applied Animal Ethology* 8: 295-299
- van Rooijen J** 1983 Genetic adaptation and welfare. *International Journal for the Study of Animal Problems* 4: 191-197
- van Rooijen J** 2010a Questions in relation with natural and artificial selection and animal welfare. *Proceedings UFAW Animal Welfare Conference. Darwinian Selection, Selective Breeding and the Welfare of Animals* p 149. 22-23 June 2009, Bristol, UK
- van Rooijen J** 2010b Do dogs and bees possess a 'theory of mind'? *Animal Behaviour* 79(2): e7-e8. doi:10.1016/j.anbehav.2009.11.016
- Udell MAR, Dorey NR and Wynne CDL** 2008 Wolves out-perform dogs in following human social cues. *Animal Behaviour* 76(6): 1767-1773 doi:10.1016/j.anbehav.2008.07.028