B - Behaviour

# UNDERSTANDING DOGS THAT FIGHT

*Karen L. Overall, MA, VMD, PhD*

Diplomate ACVB
ABS Certified Applied Animal Behaviorist
Center for Neurobiology and Behavior
Psychiatry Department - Penn Med Translation Research Laboratory125 S. 30th St.
Philadelphia, PA 19104
overallk@mail.med.upenn.edu
http://psych.ucsf.edu/K9Behavioral/Genetics/

To understand and help dogs that fight it is necessary to both understand their signaling in a larger context of overall pathological behavior, and how to utilize these signals to distinguish when animals are communicating and interacting normally from abnormally. Accordingly, we must give practitioners some guidance that can tell them where their patients might be on the continuum of normal, but scary to pathological, and possibly fatal. This is nowhere more important than for aggression between dogs because there is an almost uniform belief that some aggression can be 'normal' in dog-dog interactions. The inherent problem is whether the aggression label is misapplied to normal, tussling social behaviors. An approach that educates practitioners about behavioral patterns and sequelae can help here.

Unfortunately, these goals are impossible to accomplish is we cleave to an outdated, unfortunate, and unsubstantiated terminology: that of the 'alpha' or 'dominant' dog. The modern and evolving understanding of complex social behaviors is going to require that we relinquish simplistic and damaging labels: the concept of a 'dominant' dog is not useful in these situations, and asking clients and practitioners to identify and support the 'dominant' dog can cause not just further morbidity, but mortality. An unpublished study of dozens of cases involving interdog aggression between household dogs (as contrasted with dogs with whom the participant(s) do not live) (1) found that most clients had been advised to support or reinforce the 'dominant' dog, and that when they did so, the aggression worsened. One could accordingly argue that the clients are any not correctly identifying the 'dominant' dog, but if a label is causing such difficulties, it may be time to just let it go. The issues of 'dominance' and social rank on group interactions comprise one of the oldest, most confusing, and hotly debated areas in the behavioral literature. It's important that we understand why this concept has caused problems in the practice of veterinary behavioral medicine.

The existence of a hierarchy has been postulated to be a stress-reducing device (2); however, situations where hierarchies are most rigidly maintained are also ones where measures of stress are high (3). The traditional concepts are represented in the article under discussion: the animal who 'submits' - which is generally undefined - or gives way to another as a result of prior interactions is considered the 'subordinate' while the individual inducing such behavior is usually considered the 'dominant' animal in the pairing. 'Dominance' has been traditionally defined as individual's ability, generally under controlled situations, to maintain or regulate access to some resource (4-7). Given that the definition of 'dominance' can be further refined as a description of winning or losing staged contests over resources (8), and that a winning outcome needn't confer priority of access to those resources (8), we must accept that variable distributions of resources (e.g., access to attention, beds, resting sites, toys, food dishes, et cetera) will lead to variable hierarchal classifications.

Concerns about such terminology primarily focus on 2 related issues: (1) the extent to which the labeling of an event, interaction, or pattern of interactions may interfere with our ability to truly understand behaviors and signals, in-context, and (2) the extent to which, if we subscribe to a hierarchical system, we are then tempted or constrained to force all interpretations of behaviors into that system. Such practices have encouraged humans to treat dogs inhumanely under the guise of being 'dominant' to them, and have likely resulted in the injury or death of many dogs because we have reinforced a truly pathological animal as 'dominant'. These concerns are not new: the potential to mislead was

Rowell's primary concern when she published her ground-breaking study on the intricacies of baboon social interactions (9). In fact, when free-ranging baboon interactions were classified by behavioral types (e.g., friendly, approach-retreat), and then analyzed according to specific behaviors of the participants, no 'dominance' system was noted. A much more complex, elegant system of interactions that reflected relatedness, age, sex, social history, et cetera became apparent.

Most social behaviors, when fully examined, are not characterized by agonistic encounters, but by fluid, context-specific deferential behaviors (10). Deference is not analogous to submission or subordination. Deference is about relative status that is freely given, not imposed. The animal to which most others defer is the animal that behaves most appropriately given the context, not the animal which must always be at the door first, or must eat first. In fact, a need to control regardless of context can be neither adaptive, nor normal. The role for deferential behaviors is suggested by authors who have looked extensively at social interactions when they discuss the variability in the behavior of high ranking animals.

Accordingly, it may be easier to ask clients and practitioners to do 1 basic thing: correctly identify the animal in the interaction who is behaving most appropriately and protect and reinforce this animal. If clients and practitioners can watch videos of the dogs interacting in low-to-no risk circumstances, even without knowing what to call the behaviors, they will see differences. This is the first step in learning to better read feline and canine signaling. If they review enough interactions while emotionally removed from the situation (hence the use of video - real-time observations are notoriously unreliable), they will be able to recognize the animal whose behavior is most contextually appropriate. They will also able to identify the specific behaviors and signals of concern.

Interactions are not an event - they are a process. A fight is a snap-shot viewed without the reference frame of the long movie that is the animals' lives together. In the absence of repeated snapshots, videos, or some other evaluation of social interaction over time, we can learn about variability in response and when it changes to abnormal by viewing a series of videos of dogs interacting with different outcomes. Clinicians can learn to read behaviors and assign probabilistic outcome to interactions using this type of approach.

Clients need to know that their dogs will learn from their interactions with each other, and both 'combatants' may hone their aggressive skills. Attackers may become faster, and signal their intent less intensely with time, and victims may learn that they can minimize damage to themselves if they exhibit a pre-emptive attack. In such circumstances, it is easy to err in identifying the aggressor v the victim. The key is to able to identify when the behaviors are about learning normal social roles in changing social environments, and when they are about truly pathological behavior. Because learning works by altering neurochemistry (11), clients should understand that both early intervention designed to avert anxiety associated with underlying aggression and pharmacological intervention can help, but neither approach will be used appropriately until the clients can understand the signaling and interactions from the dogs' viewpoints (12). That said, some general guidelines that allow clients to deal with a range of potentially problematic interdog interactions from the relatively normal to the potentially fatal can be developed. The following example is from Step 3 of the Protocol for Interdog Aggression (13):

3. Choose an order in which to reinforce the dogs based on identifying which dog is behaving the most appropriately. **Remember - reinforcement is not about rewarding the pushiest, most 'dominant' dog.** It's about rewarding the dog who is most appropriate so that all the dogs get the message that obnoxious behaviors are not rewarded, but calm, non-threatening ones are. This type of reward-based reinforcement works because it mimics canine social systems and uses deferential behaviors to get attention and other 'currencies'. When you reinforce the most appropriate dog you feed that dog first, give him or her attention first, give them access to the yard first, et cetera. You can get hints about what will be most successful from the dogs' behaviors, as follows.

a) For example, you have two dogs and the younger one has begun to passively challenge the older, the older is snarling, and most of the time the younger backs off. The older one is larger and stronger than the younger, just as healthy, and not that different in age. Reinforce the older over the younger. The younger dog here is likely normal, but just too pushy, and can learn how to have a better relationship with his companion once the threats subside.

b) The older dog perceives a threat from the younger, but the younger isn't really doing anything active. The older is weaker than the younger, and while the younger is sweet, she is huge. Reinforce the younger dog and make sure that the older receives needed attention, including tasks he or she can still accomplish, so that the shift in relative social relationships is more fluid. The younger dog is actually behaving most

appropriately, and if you work with both dogs the older dog can learn that she is not a threat. You cannot reward the older dog because then you would be telling him that his out-of-context aggression - and his perception that he has to exhibit such aggression - are acceptable when they are not. Please remember the role of exercise in reactivity: if the younger dog is not getting enough aerobic exercise she will be a brat, and pester the older dog. One solution here would be to find a play group of young, rambunctious dogs for the younger dog so that she is tired when she comes home to her older companion.

c) The younger dog is actively pushing around or challenging the older and is getting very aggressive. The older is fighting back and the younger is meeting the challenge. The old is arthritic, and weaker, but the dogs are fairly evenly matched in size. It will break your heart, but reinforce the younger dog and see what happens. If the younger dog then recalibrates his or her response to the older dog, you'll be fine. If the younger dog is normal and just provoking the social system around her as part of the social learning that occurs as dogs (and humans) enter social maturity, the younger dog will become less aggressive. **However, if there is no return aggressive response to her threat and she still continues to threaten, you have a problem.** This behavior is abnormal and out-of-context, and the time to deal with it in the manner discussed in this handout for true aggression is NOW. Again, remember to meet the older dog's mental, physical, and behavioral needs, even if it means changes in your behavioral interactions.

d) One of the dogs - regardless of age - perceives a challenge and exhibits behaviors consistent with deferential or disengaged behaviors (eg, turning the head or neck away, ceasing motion or other activity, turning the body away, displaying the ventral neck or the groin, tucking the tail, et cetera), but the aggressor / challenger doesn't seem to care. **The last time the challenged dog rolled over on her back the other dog moved in for the 'kill', and attacked the more passive dog's belly and neck. CAUTION. This is the true problem scenario, and it is almost always misunderstood and mishandled!!.** Reinforce the challenged (deferential) dog. This may be very difficult to execute successfully, but if you are not able to give this dog some status (regardless of his or her age) so that the aggressive dog realizes that this dog has a right to exist, he or she will be a terrific victim. **Remember, it is abnormal to respond to a deferential behavior with a threat. By definition, aggression that occurs when the recipient is signaling that they are not a threat is inappropriate and out-of-context.** *DO NOT ASSUME THAT THE DOGS WILL NOT INJURE EACH OTHER.* They can seriously disable or kill each other in such circumstances. If the dog that is deferring cannot hold the status in a way that encourages the aggressive dog to back down you will either have to keep the dogs continuously separated or find one of the dogs another home. If you decide to place the challenger, that dog can ONLY go to a home where he or she will be the single dog. You do not know if this dog will behave in the same manner to another dog in a new home, but in the interest of the welfare of all of the dogs you should assume that this could be the case and minimize the cost of error.

Reinforcing the chosen dog has active and passive components. First, separate them as discussed above. Second, enforce the concept that the dog being threatened has the right to exist by feeding him dog first, letting him out before the other dog(s), giving him a treat or toy first, walking first, playing with first, grooming first, et cetera. Make sure you understand what is really being said here.....this is NOT about 'dominance'. Because misunderstandings are so injurious to dogs a short discussion about what 'status' means is warranted.

**You are not imposing a 'rank' order on these dogs**: instead, you are encouraging the normal types of social deference that would be exhibited by dogs under normal conditions. Unfortunately, myths about dog-dog relations are so ingrained that we have come to believe that dogs seize control and force others to wait for them. Nothing could be more wrong. By reinforcing an appropriately behaved dog you encourage the normal fluidity of the social system and can then reward the aggressive dog for not reacting.

You can also more passively encourage the aggressor to understand that the victim has some status by allowing the victim sleep in a crate in your room, on a bed there, or on your bed (if you like this and the dog never growls at you while you are sleeping), while the other dog is banished to a room or crate outside your room. This has nothing to do with beds and 'spoiling' and everything to do with the fact that access to preferred spots or to attention is a currency for dogs.

Regardless of how you decide to work with the dogs, each dog needs daily individual attention. The dog that is being reinforced should always get the attention first, in the presence of the other dog if this can be done quietly and without threats or overt aggression. If necessary, restrain the inappropriate dog using a harness.

Finally, if you are walking the dogs as a group, make sure that if there is a dog that is "out in front", that dog is the one whose right to exist

in an unmolested manner you are trying to reinforce. Under normal circumstances dogs should not need to care about who is in front of whom. If you are having these types of struggles on walks your canine household has issues that need to be addressed. If you are unsuccessful in gently requesting that the pushier dog steps back, consider some trial separations of the dogs to see if one dog blossoms when not harassed. If this happens, you need to work with the situation immediately. Remember that in anxiety-related conditions, like interdog aggression, many of the provocative behaviors are exhibited to gain information, and that part of the pathology may be that the dog is incapable of interpreting the response in all but the worse light for the victim. Also, abnormal dogs may misinterpret the behavior of a dog who pulls out in front of the others: to the normal dog, such behavior may just indicate that the dog is following a scent; to an abnormal dog the dog who pulled out in front may be seen as a deliberate threat.

In this world view, treatment is about both understanding the neurochemical changes that occur with learning and repeated exposure, and about becoming humane. To do this, we must begin to see the world from the dog's point of view, which minimally requires that we let go of labels which may say more about us and our need, than they do about the behavior. The situation with interdog aggression demonstrate why we need to be more mindful of terminology, issues, and approaches which can inadvertently do more harm than good.

References:

1. Overall KL, Dunham AE. Unpublished 2004.

2. Collias NE. Social behaviour in animals. Ecology 1953; 34: 810-811.

3. Rowell TE. Hierarchy in the organization of a captive baboon group. Animal Behaviour 1966; 14: 430-443

4. Hinde RA. The nature of aggression. New Society 1967; 9: 302-304.

5. Hinde RA. Animal behaviour. 2nd edition. New, York, McGraw-Hill, 1970.

6. Landau HG. On dominance relations and the structure of animal societies. I. effects of inherent characteristics. Bulletin of Mathematical Biophysics 1951; 13: 1-19.

7. Rowell TE. The concept of social dominance. Behavioral Biology 1974; 11: 131-154.

8. Archer J. The behavioural biology of aggression. Cambridge, Cambridge University Press, 1988..

9. Rowell TE. A quantitative comparison of the behaviour of a wild and a caged baboon group. Animal Behaviour 1967; 15: 499-509.

10. Overall KL. Clinical Behavioral Medicine for Small Animals. St. Louis, Mosby, 1997.

11. Overall KL. Pharmacological treatment in behavioral medicine: The importance of neurochemistry, molecular biology, and mechanistic hypotheses. The Veterinary Journal 2001; 62: 9-23.

12. Rooney NJ, Bradshaw JWS, Robinson IH. Do dogs respond to play signals given by humans? Animal Behaviour 2001; 61: 715-722.

13. Overall KL Manual of Clinical Small Animal Behavioral Medicine. St. Louis, Elsevier, 2005.