Canis Cousins:

Unraveling Ancestral Ties

Patricia B. McConnell

Dogs aren't wolves, pure and simple. Except, uh, they are. Sort of. Sometimes.

Lest you think I've lost my mind, I'd like to explain why the statements "dogs are wolves" and "dogs aren't wolves" are equally correct. I'm writing about this issue because it's inherently a confusing one, and if we really want to understand our dogs, it's important to get it right.

I say it's a confusing issue because even most of the casual of readers can find authors who authoritatively argue for one side or the other. Innumerable articles and books have stated that the way to understand dog behavior is to understand the behavior of wolves. For example, in Leader of the Pack, authors Nancy Baer and Steve Duno say "Dogs continue to remain instinctively loyal to an autocratic leader, holding a mind-set identical to that of their cousin, the wolf." Perhaps most tellingly, Roger Abrantes' book, Dog Language, is illustrated primarily with drawings of wolves.

But the opposite view point can easily be found in recent writings. In the book Dogs, authors Laura and Raymond Coppinger argue: "But dongs can't think like wolves, because they do not have wolf brains." What's going on here? Roger Abrantes and Raymond Coppinger not only both have PhDs in relevant fields, they both have spent their lives interacting with dogs. Surely they must both know what they're talking about. They do. It just depends on what behavior you're looking at. Of course dogs are like wolves in many ways—how could they not be? Wolves are dogs' closest genetic relatives and immediate ancestors, and we know that much of behavior is heritable. But there's a reason wolves aren't allowed in family-dog training classes; treating a wolf exactly as you'd treat a dog is a fool's game at best. What's important if you want to understand dog behavior in any depth is to know when it's true that "dogs are wolves" and when it's not.

Dogs and wolves share a remarkable number of behavioral traits, the most obvious being their visual signals. There's a good reason Roger Abrantes used the visual signals of wolves to illustrate social communication in dogs—their signals are virtually identical. They use the same postures and expressions to signal status; to appease others; and to express fear, excitement and playfulness, to name a few.

That's just one way in which dogs are wolf replicates. In a study done by Eric Zimen, one of the world's authorities on the behavior of wolves, dogs and wolves were found to be exactly equivalent in their grooming behavior, courtship behavior, delivery of newborns, nursing behavior and infantile behavior.

This all makes perfect sense, given that dogs and wolves are more than just closely related. In some ways, they are actually the same species. They may have different Latin names (Canis familiaris and Canis lupus), but they don't actually fit the biological definition of separate species. Animals are considered to be of a separate species if their progeny can't reproduce. Reproductive inviability is the result of their being too many genetic differences for each parent's chromosomes to line up during the process of genetic combination. That's why horses and donkeys are classified as separate species; a horse bred to a donkey results in a mule, but mules can't reproduce themselves. It's an evolutionary dead end. But wolf-dog hybrids are common, and can continue to reproduce no matter how many generations are combined.

Ironically, although DNA analysis can separate one individual canid from another one (or one individual human from another), there is no genetic test that can distinguish a wolf from a dog. Their genetic makeup is too close to be separated at a species level. That's part of why the wolf-dog hybrid issue is so complicated. It you can't determine whether an individual has wolf in him, how can you regulate his care and breeding?

The issue—who's a hybrid and who's not—is important, because just as dogs are so similar to wolves, they are also profoundly different from them. People who have spent time around wolves always mention how inquisitive, active and smart wolves are, with the subtext being "compared to dogs." If you're a dog lover like I am, don't be offended. I am stupid in love with dogs, but I've walked away from wolf-dog hybrids amazed at how different they are from dogs. I worked with a five-month-old, 80 percent wolf-dog hybrid who was simply beside himself in his owner's tiny apartment. In the hour I was there, he never stopped climbing (on me, the coffee table, the walls…) and never stopped looking for something to do (with me, the coffee table, the walls…). This was far beyond the normal activity level of a high-energy and bored puppy. This felt like a whole other animal altogether. It was.

Wolves aren't just active and inquisitive. People who work with them take every opportunity to remind us that wolves are wild animals, period. That means that they are rarely house-trained, can't be kept off the furniture and can't be punished for getting into the garbage. Wolves have their own set of social rules, which they take very seriously. Punishment for getting into the garbage would be perceived as an unprovoked attack, and would be responded to in kind.

Ray Coppinger tells a wonderful story in the book Dogs in which wolf expert Erich Klinghammer of Wolf Park fame told him to treat the wolves he was about to meet as if they were dogs. Ray heartily thumped an adult female wolf on her side by way of an enthusiastic greeting, which resulted in an equally enthusiastic attack on his forearm and another wolf tearing at his pants. Granted, those of us who work with aggressive dogs have dropped enthusiastic thumps from our greeting repertoire, but there are plenty of dogs who love them, even from strangers. Not wolves.

Possibly the most important area of comparison between wolves and dogs is the role that hierarchies play in their social structures. This is the most controversial aspect of wolf/dog comparisons, and understandably so. It's mentioned most often, but is probably the least understood. How often have you read that "you've got to get dominance over your dog!" with references to the social structure of a wolf pack? Dog lovers have been advised to solve an infinite spectrum of behavioral problems by "getting dominance" over their dogs. But the problems with this approach are legion. First, the concept of dominance, even in a wolf pack, is often poorly understood. Many people equate dominance with force and aggression. Being the dominant individual of the group, or being the one with the most social freedom, is a way to avoid aggression, not an excuse to use it. Social status can be contained with or without force—Gandhi and Saddam Hussein were both dominant individuals in their culture at one time, but they got there by completely different routes.

Secondly, even in a wolf pack, dominance doesn't get an individual every single thing that he or she wants every single second of the day. It's just not that simple. If you have it, it gives you more social freedom than others, but that doesn't necessarily give you license to do anything you want any time you want it.

Another problem is whether the social system of dogs is really equivalent to that of wolves. It's been argued that we shouldn't expect dogs to show any type of social structure akin to that of wolves because dogs evolved as scavengers instead of pack hunters. Scavengers don't need closely knit packs to make a living, since digging up trash in a garbage dump doesn't take a coordinate group effort. But you can't credibly argue that hierarchies are irrelevant to dogs—the awareness of a social hierarchy is as much a part of dog behavior as is tail-wagging and ball play. But just like wagging tails and fetching balls, individual dogs vary tremendously in how much they engage in them. Some dogs wag their tails all the time, some rarely; some dogs would kill themselves playing ball, others couldn't care less.

I think that dogs and wolves are similar in that social hierarchies are part and parcel of who they are, but I think they differ in at least two ways. First, social status may be relevant to dogs, but it's less important to them than it is to wolves; and second, individual dogs vary more than wolves in how important status is to them. Here's the logic behind those statements: We know that dogs behave most like juvenile wolves —they're the Peter Pans of the wolf world. Dogs never really quite grow up, which is why they stay more docile and biddable than adult wolves. As individuals who never quite grow up, it seems likely that dogs wouldn't take social hierarchies quite as seriously as their adult wolf cousins.

Less intuitively obvious is that the process responsible for creating eternal adolescence also creates a high degree of individual variability. "Paedomorphic" animals are reproductively mature individuals who still look or act like youngsters, and it turns out that selecting for such a phenomenon also selects for a higher degree of variability. That's one of the reasons it's so easy to create Great Danes and Chihuahuas from the same gene pool. But it's not just size and structure that's variable in our domestic dogs, it's also behavior and temperament. The importance of who's who in the hierarchy varies tremendously from dog to dog, as do, for example, interests in herding sheep or retrieving game birds.

And so, I return to my earlier statements, "dogs are wolves" and "dogs aren't wolves," and the fact that they are equally true. Perhaps one way to look at it is that dogs are baby wolves who have adapted to living with us in our world, and wolves are wild animals who can adapt to letting humans live in theirs. Keep this in mind the next time you read a wolf/dog comparison, always asking yourself exactly what is being compared. Don't let their simultaneous similarities and differences throw you. After all, oranges are different from grapefruit, but it's important to know that they're both citrus fruits. And just like different types of citrus fruits, dogs and wolves are very similar, but ultimately very different. So give your furry, little orange a pet from me, and viva la difference!

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