



GUIDE TO BECOMING A PROFESSIONAL DOG TRAINER – *SAMPLE*

Breeds and the Genetics of Behavior (from Phase 1) How Breeds Came to Be and the Behavioral Implications



Assigned CATCH Video from the Student Center Online

[Dogs from Wolves – What I Learned from Studying the Dump Dogs of Mexico City](#)
(CATCH of the DAY #18 in the series, Presentation by School Director, David Muriello)

Breeds and the Genetics of Behavior How Modern Breeds Came to Be and the Behavioral Implications



Let's take a look at the wide variety of breeds that came from early domesticated dogs. Picture a Bulldog compared to a Sheltie, or a Chihuahua compared to a Husky (those are the breeds from left to right above). How did these members of the same species come to look so amazingly different?

The staggering variation we see in dog breeds today is largely a result of artificial selection: *humans intentionally, selectively, breeding for specific traits they found in the dogs around them*. To understand how this works, let's start with the creation of breed *types* that are not as refined as what you would see at a dog show. Have you ever travelled to a region of the world where there are many stray dogs and noticed that they all have similar traits, like a breed, but they don't fit any standardized or formal description like a purebred? These can informally be called breed *types*, and this happens when local people (e.g., in tribes, villages, or even resorts) influence the survival rate of some dogs by supporting one type of dog over another. This may not be intentional, but it still produces results. For example, there are "hotel dogs" in the Caribbean islands that have taken on a uniform look and set of behaviors. This is because those dogs have been given a survival advantage by getting food handouts from resort

staff and guests that favor that type. They may get favored for appearance or behavioral reasons, or both (e.g., the bolder or “cuter” behavior of those dogs puts them in position to get food).



Notice similarities in the physical appearance of these village dogs? Look at the tails, shape of the muzzle, eyes, and ears.

Over time, the favored type becomes the commonly seen “breed” of the area because they are the ones passing on their genes to their pups. “Whatever distinguishes the chosen dog, that characteristic increases in the population” (Coppinger, 2002). One Caribbean dog type even has an unofficial name for their “breed”, which is *potcake*. Another example of this, though more intentional, would be the Maasai tribes of Africa favoring red dogs to match their clothing. Or, from a behavioral standpoint, Maasai people favoring those dogs who warn them of lions coming on the property. The survival advantages that these dogs gain could be food handouts, access to edible garbage, or access to territory. Any of these advantages will empower these dog types to pass on their genes and become the uniformly seen “breed” in the region.

Culling is a harsh and different form of artificial selection that is not seen as common today, but is still practiced in some places. This is when breeders keep only the preferred pups from a litter and put the others to death (or allow them to die on their own in nature). For example, a sheep herdsman who is breeding dogs to protect his flock might only keep the puppies whose lighter coat coloring will make the dogs easy to distinguish from wolves if they are in a fight and the herdsman must shoot (think of a white Great Pyrenees or a fawn-colored Anatolian Shepherd). A uniform breed type would take shape because only those dogs with the breeder’s desire traits will be allowed to survive and pass on their genes to the next generation (Coppinger, 2002). This practice can be seen as cruel selective slaughter as opposed to selective breeding, but it is one of the ways that the variety we see in today’s breeds was initially created.

In most cases, the driving force behind the creation of so many different breeds was that humans desired *specific types of dogs* to help them carry out specific tasks. The traits they selected for were 1) physical traits, and 2) behavioral traits. For a simple example, imagine you were a farmer who wanted a few dogs to help rid your hay storage building of rats. You ask each of your neighbors which one of their dogs kills the most rats, and then you “select” the most accomplished male and female rat-killers to breed to one another. This mating will produce a litter of puppies that are instinctively very good rat hunters. They have the natural traits without being taught. All of these puppies will be good rat killers, some will be very good, but one will be *the best*. Maybe the best one is an even better rat hunter than his parents. That means he is likely the very best in the area. This is the dog that sets a new standard for excellence in rat hunting, due to his exceptional physical and behavioral traits for the task. That means he is the dog that will be picked to father (sire) the next generation. Who will he be selectively bred to? He will be mated to the best female rat hunter, of course. Now, project this scenario out for several generations. Generation after generation, the best rat hunting dogs are being selected by farmers to breed with other farmers’ best rat hunters. The best physical and behavioral traits for rat-hunting continue to be selected for. These specific traits have now become intensified and common in what is now much like a uniform “breed.”



Pretty cute for a rat hunter, don't you think?

What traits might the best rat hunters have? Small, quick, alert, focused, tireless, strong chase instinct, fast digger, kills what it catches with a quick shake and/or bite. Sound like any terriers you know? You can see how dog breeds become very specialized in 1) physical traits, and 2) behavioral traits, when you continually breed the best performers for a specific function. As a result of repeatedly selecting for specific traits for hundreds (or in some primitive breeds, thousands) of years, these traits are embedded in the genetic programming (hard-wiring) of the breeds we have today.

The key information here for dog owners and trainers is that **the behavioral tendencies of breeds are based on the purpose for which they were originally bred**. Some of these behavioral tendencies are still useful, but most don't fit in with modern society and have become either an interesting part of the breed's personality or a difficult issue for a pet owner who just wants a companion. (Most dogs were bred to do much more than be a companion.) There are always

exceptions to the rule, but for most dogs, they are going to display the physical and behavioral traits that their ancestors have carried in their genetic code. In summary, when considering how a breed is likely to behave, look at the original purpose for which the breed was developed.

Body Language and Behavior (from Phase 2)

Eyes

Just like with humans, eyes can be a "window into the dog's soul." That's not scientific, but it rings true! What is scientific is that eyes can tell you a lot and while you can often "feel" what the eyes are "saying", you need to look closely to observe subtle details in them. For our purposes, you need to recognize four different basic eye states:

➤ Soft Eyes

- Relaxed, partially closed, or even squinty - not wide
- Usually seen with relaxed facial features, no tension around eyes
- Signifies a relaxed dog in a non-threatening state, or appeasement

➤ Hard Eyes

- Usually seen with tension in the facial muscles around the eyes, and the appearance of a wrinkled or furrowed brow. (Think about what a "glare" looks like, in humans.)
- Eyes may look "dialed in" with eyebrow lowered and lower eyelid puffed.
- Can look like a frozen, lifeless stare. It's hard to pinpoint what is happening in the eyes, but trainers agree they "feel it" when the eyes "go cold" (www.patriciamccconnell.com).
- Always accompanied by tension in the body and dog is often "frozen" or moving very deliberately and slowly.

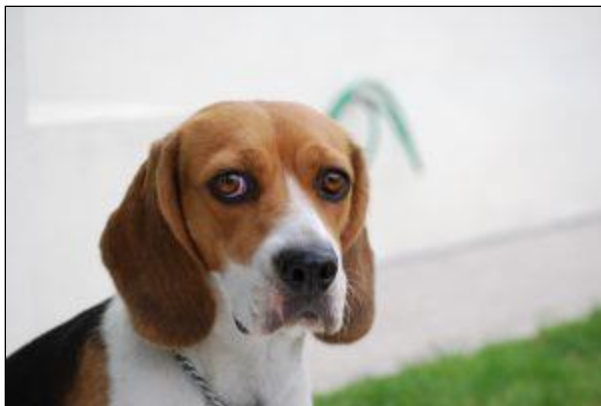


Classic soft eyes – partially closed (squinted) on a very relaxed, smooth face (no facial tension ridges).

- Signifies stress or threat of conflict and is a distance increasing behavior - essentially, “back off!”
- **Dilating Pupils**
 - The dark circles inside the eyes (pupils) are open wide
 - Signifies low light, or stress, or excitement (wide range here)
- **White in Eye:** Also called crescent moon eye because the white in the eyes can look like a crescent.
 - When you see more “white” in the eye than usual
 - White in the eye often signifies stress or threat but it can appear for any or all of the following reasons:
 - The facial muscles and skin are tense, pulling the eyelids open more than normal
 - The dog may be holding his head firmly in one position (such as over a food resource he was chewing) while orienting only his eyes in the direction of a competitive threat that is coming from an angle not directly in front of him. This white in the eye is often called “whale eye,” when the head is held firm but the eye follows a threat
 - White may also appear in a dog’s eye during excitement such as during high arousal play or when stretching forward to grab a treat or toy. It’s important to note the context before making an interpretation.



Above: Dog in front has soft eyes, relaxed ears, and no facial tension. Dog in back is more stressed about the camera: ears back, long lips, and facial tension lines.



This dog is worried. Note wide eyes with white, ears slightly back, closed mouth, and facial tension lines.



Notice the comparably soft eyes on Betsy the hound with CATCH student Morgan. Maybe Betsy is a little stressed by the camera and pose – showing appeasement?

Greeting Behavior

NICE TO SEE YOU – OR NOT?

Mutual sniffing is the most commonly seen greeting behavior. This includes dogs sniffing each other's muzzles, butts, and genital areas. Let's look at a number of other behaviors that are common to greetings.

Appeasement and Submission

Appeasement behaviors are similar to calming signals in that they tell the other dog, "Don't be aggressive, I mean no harm, let's be peaceful." Appeasement signals help dogs stay out of conflict. A dog that gives an appeasement signal upon greeting is deferring status or control to the other dog he is meeting. Appeasement behaviors are also known as pacifying behaviors. Submissive behavior is very similar to appeasement behavior. Technically, the difference is that appeasement is designed to *prevent* an aggressive act before it starts, whereas submission is shown to a dog that is *already* acting aggressively – in order to "turn off" the aggression. If one dog threatens, and then the other presents a submissive behavior such as lowering his head or rolling on his back, then the dog that threatened is likely to be calmed and the situation is defused.

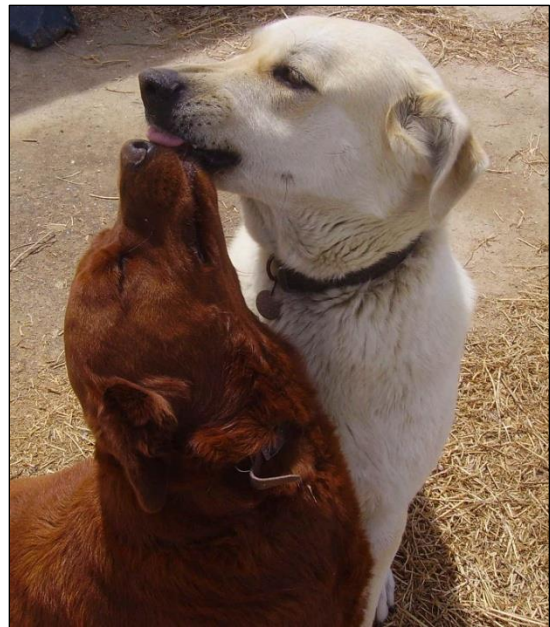
Examples of common appeasement behaviors:

- Lowering head or body
- Averting gaze
- Ears back
- Tongue flick
- Wagging tail
- Rolling on back
- Submissive urination

Some submissive behaviors can be easily confused with different signals. Two examples are the **submissive grin** and **submissive urination**.

As discussed earlier, a submissive grin is when a dog pulls up his front lips to reveal his front teeth and it is often misinterpreted as a threatening snarl (when it is in fact just the opposite). You can tell a submissive grin from a snarl in a few key ways:

- A submissive grin usually



The dog on the left is showing appeasement to the dog on the right in this greeting. The dog on the left is pushing so forcefully up and in that you might also call this "obnoxious submission". This tactic may be used to gain access or space without eliciting an aggressive response.



Look at the tail heights of these dogs and also notice which ones are initiating the action (who is sniffing who). Based on what you see, which two dogs do you think are more confident-assertive in this situation and which two are showing appeasement (more passive-submissive)?

includes showing a lot of the *front* teeth, directly under the nose, whereas a snarling dog is often showcasing his sharp canine teeth by lifting his lip from the side.

- A submissive grin is often accompanied by other submissive body language such as the dog being on its back; squinty eyes; ears back; lowered head or body; lowered tail, etc.
- Sometimes a dog may show a submissive grin, but still have hard eyes or some other sign of stress that can make it hard to tell whether he is snarling or not. Use the overall picture of the body and the *context of the situation*, as always, to determine if it makes sense for the dog to be submissive in that situation.

Submissive urination is often confused with a housetraining mistake. It is not. Submissive urination is a *communication signal* where the dog is actually “being polite” by saying, “I mean no harm, let’s be peaceful”. Submissive urination may be seen when a dog is on its back, but it is also commonly performed by dogs that are standing and that is when owners get it confused with a housetraining mistake. Unfortunately, many owners make the problem worse by getting loud or physically threatening, which in turn makes the dog even more submissive, and more sensitive to having the behavior triggered again in the future. Sensitive dogs may submissively urinate at the slightest trigger, such as a hand coming towards their head to pet them. We’ll cover more on this in later discussions about behavior problem solving.



Assigned CATCH Videos

**Enrolled students go to the online Student Center and click on this phase to access your videos.*

1. Dog Body Language Simplified with CATCH School Director, David Muriello CPDT-KA
2. Greeting Behaviors – Observational Skills Exercise with CATCH School Director, David Muriello CPDT-KA

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