BREEDS AND THE GENETICS OF BEHAVIOR
How Breeds Came to Be and the Behavioral Implications

Assigned Video: After reading this section, you will learn how dogs evolved from wolves when you watch the PBS documentary, *Dogs and More Dogs*, in your CATCH Trainer’s Library. In this video, you will meet Dr. Ray Coppinger, a leading expert who our school founder had the honor of studying village dogs with in Mexico City.

Now, let’s first 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. How did these members of the same species come to look so amazingly different?

The wide variation we see in dog breeds today is a result of artificial selection: *humans intentionally, selectively, breeding for specific traits they found in the dogs around them*. Humans first created specific breeds to 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.”

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 selectively breed the best performers for a specific function. As a result of repeatedly selecting for specific traits for hundreds (or in some 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 they served for humans hundreds of years ago. 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 just 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 for hundreds of years. In summary, when considering how a breed is likely to behave, look at the original purpose the breed was bred for.

Let’s look at a few examples to understand how selected breed traits might play out in a modern situation for a pet dog and its owner:

- The Vizsla was bred to work with a hunter in wide open spaces all day with unlimited endurance and zest for the hunt. Given large amounts of exercise and mental stimulation in large spaces, this breed is likely to be satisfied and easy-going at home. However, if not given a chance to be mentally and physically active every day, this breed will easily be frustrated, destructive, anxious, and unable to think clearly. Many other breeds whose function was to be highly active outdoors (e.g., retrievers, pointers, herding dogs) have the same negative consequences when their needs for energy release are not met.

- The Labrador Retriever was bred to be comfortable around loud noises (guns) and to jump into icy cold water to grab nets or game in its mouth and bring it back to a hunter. It is therefore easy to teach a lab to fetch, and many retrievers...
will play fetch with their owner for hours on end, which makes for an easy way to exercise them. On the other hand, the typical lab is very high energy and not physically sensitive (remember tolerant of loud sounds and icy cold water). This insensitivity coupled with a zest for activity can mean lots of jumping and body slamming into people and kids if not trained carefully. Also consider the selected passion for retrieving objects. This means that labs like to put everything in their mouth. Again, this usually means everything goes into the lab’s mouth, constantly – from toys and furniture to your arm, clothing, remote control, shoes, and more.

The **Beagle** was bred to have a tireless focus on trailing the scent of a hunted animal, and for making a constant “baying” sound that made it easy for hunters to follow their progress. The incredible scenting ability of this dog means that every time her nose is engaged, you will have a very hard time getting any other communication through to her. In other words, the nose is priority – your words are easily ignored. The good news is she will be very motivated to train for food rewards as the strong sense of smell apparently comes with a love for all things delicious. But, it also means Beagles will seek out food everywhere else they can find it – on the street, in garbage cans, and on your table. Then there is that baying. It may be useful to a hunter in pursuit, but in an apartment that sound can carry a long way, and go a long way towards irking neighbors.

---

**Thanks for checking out the CATCH Sample Study Materials.**
**Have you tried the interactive quizzes on our website yet?**

**Give us a call today to learn more about a career in dog training.**

**877.752.2824  (877.75.CATCH)**

**info@CATCHdogtrainers.com**

Our friendly Student Support Team would love to answer your questions and talk to you about your goals!