

What is a “sound” dog?

by [Joanna Kimball](#) on July 15, 2010, [61 comments](#)

Across the spectrum of animals that are deliberately bred, there is a concept that in dogs we call "soundness."

When I first heard it used in connection with dogs, it took me a long time to figure out what was meant; I finally realized that it was the same thing I'd learned in rabbits twenty years before.

Soundness is, basically, the architectural quality of an animal. It's so consistent across all dogs, and across virtually all animal species, because the same problems are being solved by all living things. They have to stand up (and bear their own weight), they have to move while consuming the fewest calories, and they have to convert food into energy that allows them to get more food.

What you are looking for is an animal whose body easily and naturally performs those functions in the very best and most efficient and most pain-free way.

Across all species, you want weight-bearing joints placed well under the body to support the bulk of the animal's mass. This is just physics – if the supports are straight and under the area of greatest weight, the weight is given through the supports to the ground. The supports themselves don't have to be spectacularly strong. If, on the other hand, the supports are on the diagonal or are under a different area, the pressure of the building is given to the supports themselves, which means they are much more vulnerable. In a building you can compensate for this by using different materials, but the supports are still an inherently weak spot.

In animals, when you put pressure (the weight of the body) on the legs, the legs should carry the pressure to the ground in a straight line. If they don't, they are forced to endure much more stress even just when the animal is standing still. A lifetime of physical stress equals a middle age or senior life of muscle issues, arthritis, and so on.

Above the bulk of the animal you want a laid-back shoulder (meaning that the shoulder points somewhat toward the animal's tail, not straight up and down; this becomes increasingly crucial as the weight of the animal increases) so that the front assembly is set well back and the mass is behind the neck, not under it. A nicely laid-back shoulder also lets the animal get its head up high easily, meaning that they can eat more efficiently or watch for danger or hunt.

Again, across all animals you want a good hinge to be the powerhouse of the rear, so the rear can coil under itself and then push against the ground and propel the animal forward. You want the animal to have to take as few strides as possible to get the same distance, because fewer strides consume fewer calories.

You want the pelvic area to allow rear legs that come down straight (when viewed from the rear), pointing neither in nor out. If a horse's rear legs point to the east and the west instead of the north and the south, it can injure itself. When you want a sheep

who can give birth easily and then not injure its own udder, or a camel who doesn't get mastitis, you're asking for the same pelvic construction.

An animal's topline (the line formed by the backbone) should be evaluated just the way you would if you build a little house and then press your finger on the roof of the house. A stiff level roof is fine. A roof that peaks or curves upward is also fine. A roof that curves downward is NOT fine; a downward curve will buckle (or the walls will buckle first) when you put weight on it. Exactly the same principles apply to animals. A level topline is sound. A curve upwards is also sound. A curve downwards is NOT sound. If you want a goat who can still carry a pregnancy without pain at age eight or ten, after years of bearing weight (like your finger on the roof of the toy house) you're looking for the same topline as I look for in a corgi or a terrier or a greyhound or horse (horses look like they have a concave back but the spine is actually level – horses just have more meat on their toplines).

The last thing that you think about when you're seeing if an animal is sound is what's called BALANCE. If you are looking at an animal that stands at rest on the tips of its toes (meaning a sheep, goat, horse, dog, cat – not a rabbit or a rat) you want a front that can get out of the way of the rear legs when they move. The hinge formed by the shoulder and upper arm should be very close to the hinge formed by the femur and the tibia/fibula. The front and the back legs should naturally take strides of the same length – without the animal either having to artificially lengthen the rear by swinging its hips (which puts stress on the spine) or artificially shorten the stride of either half.

The goal of conformation is to make an animal – of ANY species – that can obey its heart and its instincts, as long as possible, without pain. A really poorly put-together dog can still hunt (and often hunt well), but it's fighting its body to do so. It's going to be in pain at the end of the day and it's going to be arthritic by the time it's five. A horse with a genuinely concave back will jump, but it'll be sore and quite possibly broken down by the time it is in its teens. A wild pig who is badly constructed will still root, but it'll get tired faster and won't make it through the winter several years earlier than one that can forage efficiently. A really unsound corgi can still herd, but why on earth should we be asking it to fight its own body to do so? That strikes me as unfair at best. And then breeding that animal, knowing that its offspring are also going to be more tired, more painful, need to eat more, etc., is just a terrible idea. You always breed to produce the most pain-free and most efficient example of your breed that you possibly can.

Bringing this into real life, and the decisions you as pet owners will have to make, I've seen a lot of mention of leg length as being the difference between the "show" corgi and the "working" or "old style" corgi. The same thing happens with the basset and the dachshund. You'll hear that the more "genuine" dog has – depending on the breed – the shorter back, longer back, shorter leg, longer leg, this head, that head, this coat, that coat.

In dwarfed dogs of all breeds a strong implication that a longer leg makes a more "herdy" or "historic" corgi, or a more "fielby" or correct basset, and is somehow healthier than the show-type corgi or basset or dachshund.

Leg length is NOT what you should be worrying about.

Leg length allows the dog to take longer strides IF all else is equal (if joint angles are equal and so on). So, yes, a Border Collie will take longer strides than a corgi, and a foxhound will take longer strides than a Basset. If what you care about is taking longer strides, I'd strongly suggest that you go get a different breed, but I honestly don't get heated about the absolute length of the leg.

What I see as very troubling is the trend toward breeding CARELESSLY and then saying that what a person is producing is a "working-type" corgi or basset or dachshund. These breeders are not actually making a judgment about SOUNDNESS, which is what you should be concerned about as a pet owner, and deciding that a particular feature is desirable; they're just producing a poorly bred puppy and then saying that it's going to be healthier because it doesn't look like a show dog anymore.

So let's TOTALLY ignore leg length – and coat length and head type and all those things – and look at what you must insist on to know that you have a good, sound dog regardless of breed.

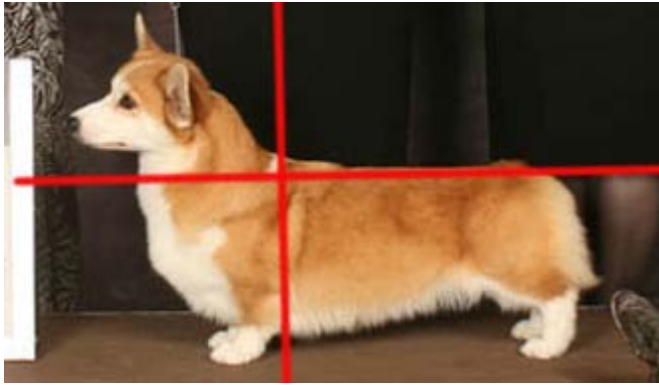
Just to make absolutely sure that nobody thinks I'm tooting any horns in Cardigans, I'm doing this with Pems because I don't know very many Pem breeders and am in no way associated with ANY of the dogs.



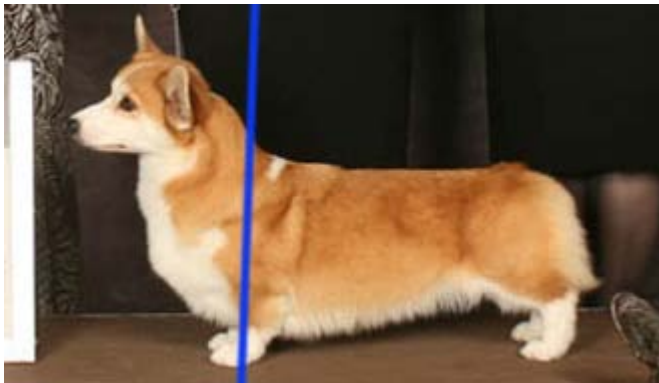
Here's a show-type Pem.

The first thing you should do – and this is not a corgi-specific evaluation; it's something we're taught to do in any breed – to evaluate soundness is to draw a line from the elbow through the top corner of the shoulder, and another line across the topline.

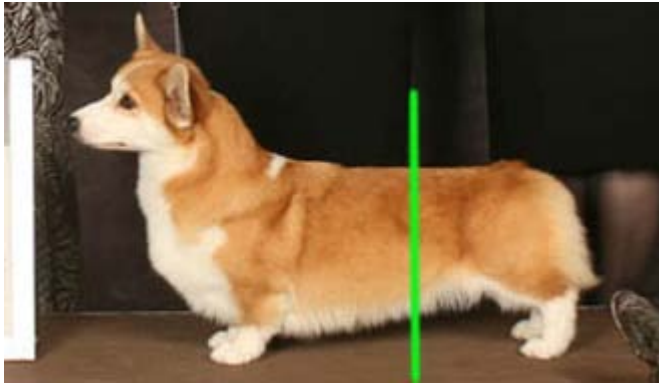
In a good, sound dog, the entire head and most if not all of the neck should be both above and in front of the lines you draw. This shows that the shoulder is laid back correctly and the mass of the dog's front, which is the heaviest part, is behind the neck instead of under it.



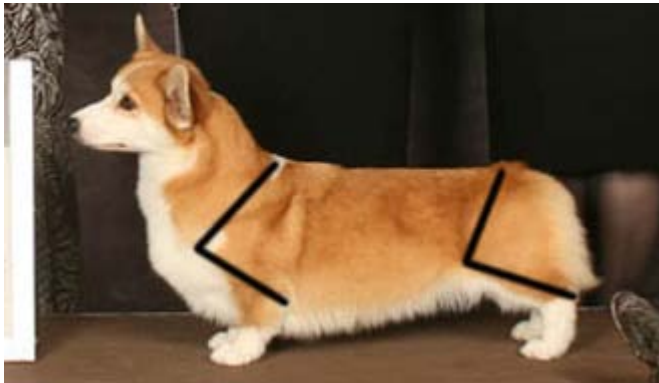
The next thing you do is draw a line up through the middle of the front paw and toward the sky. This is the line of weight bearing on the heaviest part of the body. That line should look like it is through the front part of the body, NOT through the neck.



The next step is to make sure the dog can take good deep breaths and get lots of oxygen. The rib on a dog should end more than half-way down the body. No matter how long or short the dog's body is, from the Siberian Husky to the Dachshund, the majority of the dog's body should be rib, not empty space.

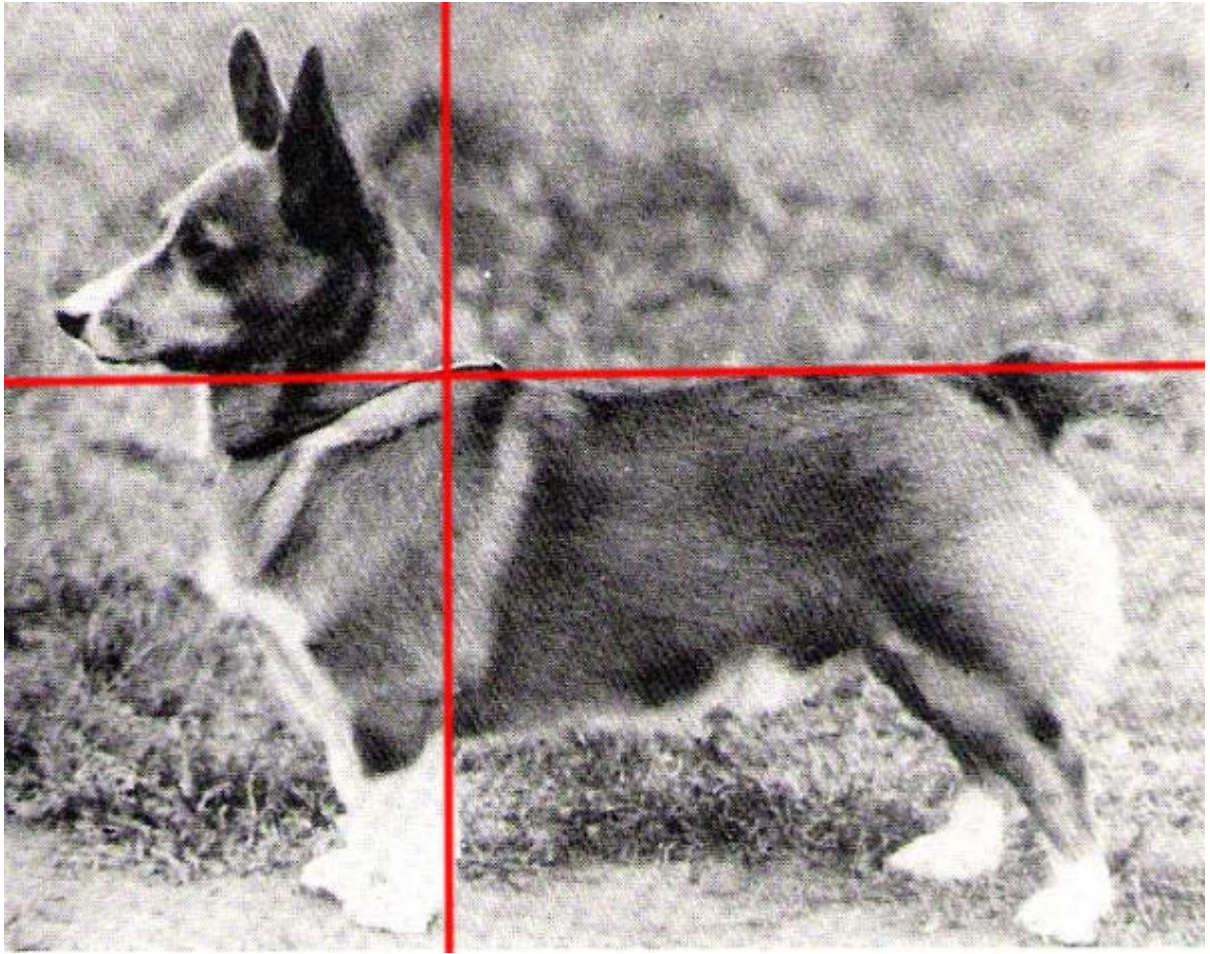


Finally, you want a dog who is balanced – the angle formed by the shoulder joining the upper arm should be roughly like the angle formed by the femur joining the knee (in dogs we call it the stifle). On this lovely bitch you can see that the angles are very similar (it's normal for the rear angle to be turned a little bit; they're not supposed to be identical in inclination, but in the openness of the triangle).



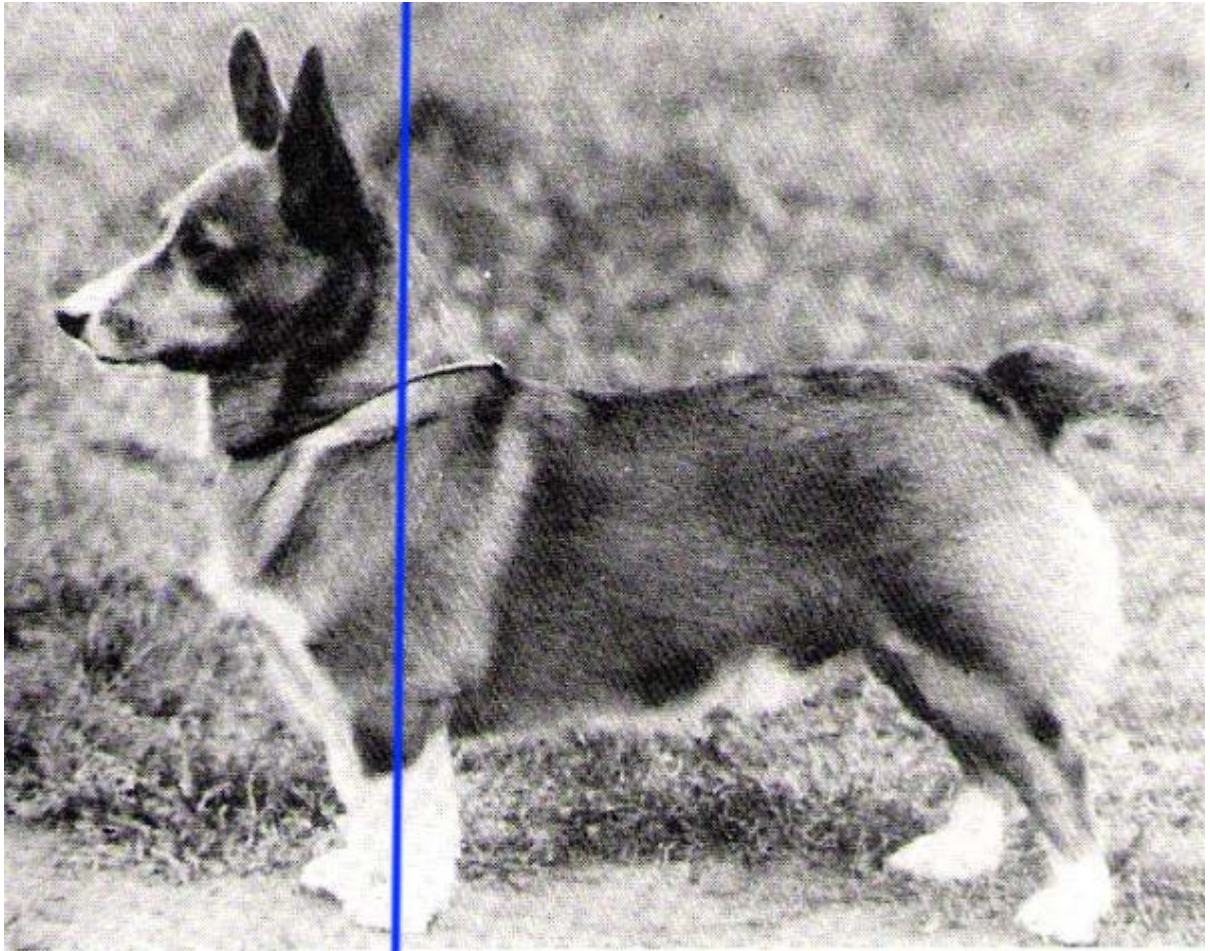
Let's look at one of the early corgis, Ch. Rozavel Red Dragon.

Divide him in fourths first.



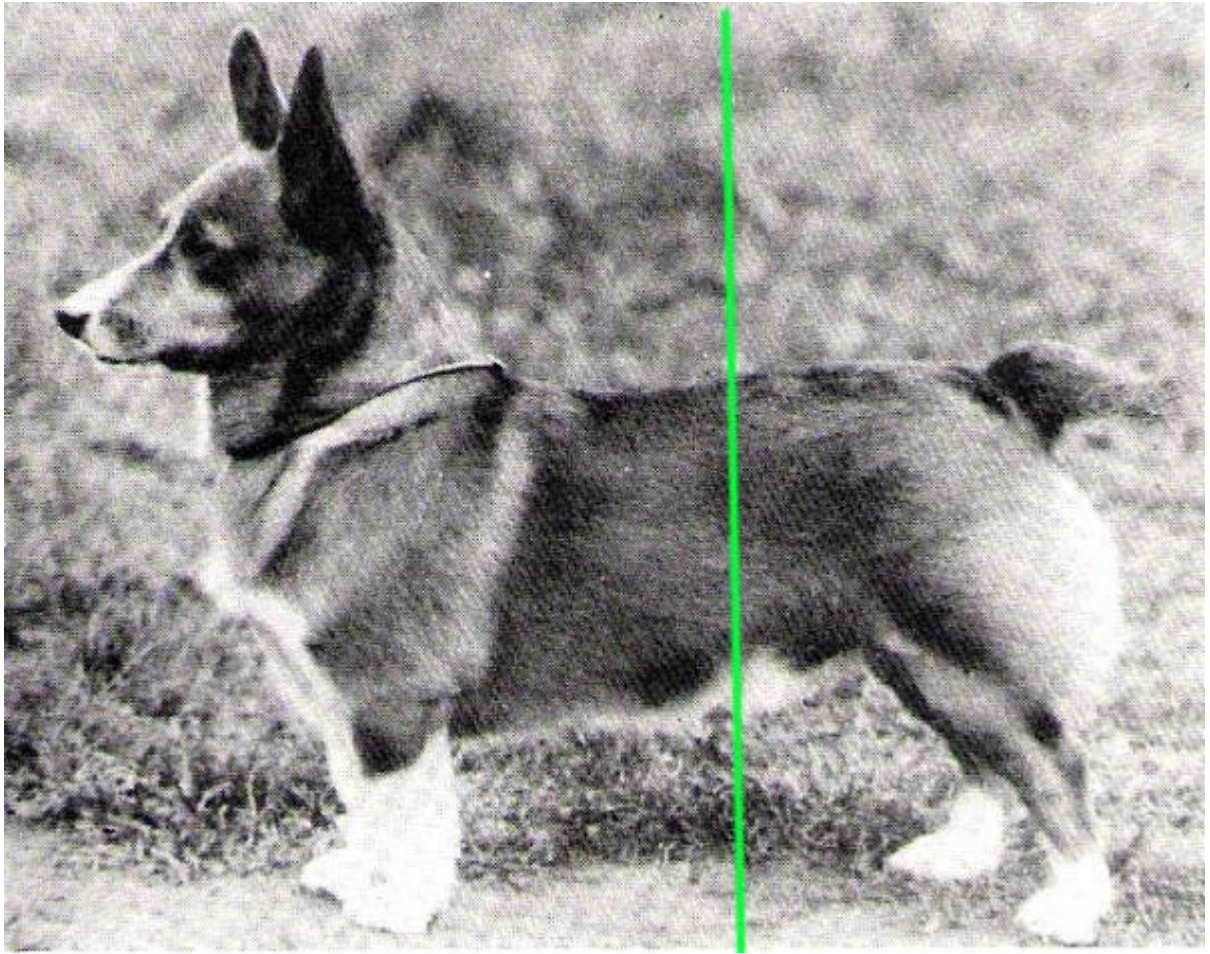
Do you see how much shorter his neck is, how much more upright the whole shoulder and front assembly is? His head is barely out of that quadrant and most of his neck is under it.

The weight-bearing line:



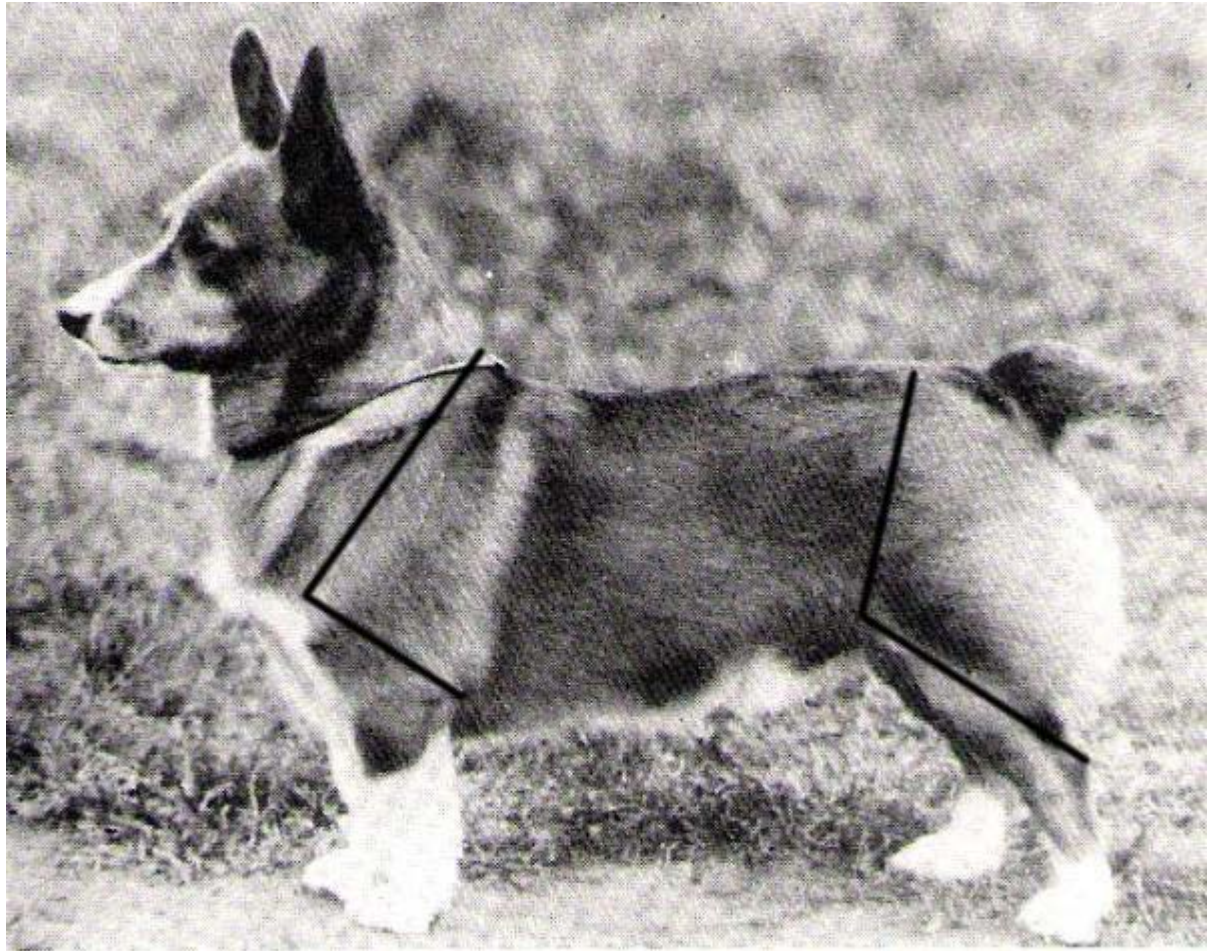
His front leg supports his neck, not the big mass of weight that is formed by the front half of his body. You should be able to see now why it is that his topline sags in the middle – if his shoulder and arm were set further back, the topline would be straight.

Ribbing:



His rib is just slightly past the middle of his body; not as good as the modern corgi.

And balance of angles:



He's not badly balanced, but there are two things that worry me – the angle in the rear is appreciably more open than 90 degrees, which means that the "hinge" of his leg was already open as he was just standing there. He's not going to be able to get much more drive from the powerhouse of the rear than he's got at a standstill; he'll have to move from the hip instead of from the knee. Second, see how very much shorter the upper arm is than the shoulder? The upper arm should be as close to the same length as the shoulder as it possibly can be.

The early corgi breeders, one of the most prominent of them Rozavel, took this very early dog and, over the next couple of decades after Red Dragon died, worked very hard to change the construction of the Pembroke. They did NOT do this in order to make the legs shorter. Shortness of leg is a style decision and, while I think it's extremely functional, you can have a sound dog regardless of leg length. They did this because they looked at these early Pembrokes and they knew they had to improve the soundness of the dogs.

As a result, within four generations you have this:

Completely ignore her leg length – she's just a better DOG, a sounder dog, and an improvement over her close ancestor in the ways that matter to you as a pet owner.

If someone is trying to sell you a "working" corgi, or a working basset, or a field-bred Dachshund; if you're thinking of adopting a dog and want one that can work with you; if you are looking at adding ANY dog to your family, IGNORE the leg length. Ignore the hair. Ignore the head.

Ask for an eye-level stacked photo – you CAN get any dog to stack; put them on a stone wall or a countertop and they'll stand still – and draw these same lines on them. If the dog is sound, the lines won't lie. You should see a good straight topline that's created by a well-angled front that supports the body, not the neck. You should see lots of "hinge" created by a front and rear that are at 90-degree angles or very close to them. You should see a long arm, not a short one. You should see a good long rib. You should see a head and neck that are well up off the body. A dog built like that will be able to move easily and efficiently, and won't break down with activity. Leg length, in the end, means very little.

To show you what I am talking about, here are some dogs to look at:



Rescue Chihuahua mix. Fantastic. See how he is a little straighter in the hinges of the front and rear but the angles are the same? Beautifully balanced dog, and because he has those loooooong bones in the rear (his femur and tib/fib) he's going to have plenty of power back there even though the angle isn't as tight. This is a dog I'd be thrilled to own, would bring me pleasure every time I looked at him.



Beautiful. Balanced, square, just wonderful.



Jack Russell sitting at the Hartford Pound right now. He's tied to a fence and he's self-stacking. Only a dog whose body feels best in that position – feels most at ease when he's square – would do that. Wonderful front, great topline. Somebody needs to go get him.



Goldendoodle. Yeah, I know, gag me on the breeding methods, but this is a sound dog and can probably move just beautifully.



Bully-something tied to the same fence in Hartford. Very different body type from the above but you can lay the same lines and get the same results. Look at the beautiful even muscling over his loin and down his thighs – that's a dog who feels good moving, which is the whole point.



Everybody in the show world knows this boy – I've seen him in real life and he is absolutely one of the soundest and most correct dogs I've ever laid eyes on. He blew me away; he floats when he moves, and that's on a low and heavy little terrier.

Ok, now take a look at this dog:



What do you think? Can you begin to see the lines on her? Would you put her in an agility ring or ask her to retrieve ducks?

Soundness is what good dog breeding is all about. It's not about the show wins; it's not about field trial wins; it's not about titles or coat or head type. In my breed, I can do the best job creating a sound dog if I participate in AKC shows, and I think the community of Cardigan breeders can do the best creating a sound dog within the show community, which is why i will go to the wall to defend the practice of showing dogs.

If I was breeding foxhounds, what I did to access the soundest dogs might be completely different. If I bred pig dogs or bear dogs by combining six different breeds, my job would still be the same thing and I'd do whatever I had to do within that culture to get access to soundness.

I DO NOT CARE WHAT OR HOW OR WHO YOU BREED, if you are a breeder. I DO NOT CARE WHAT OR HOW OR WHO YOU OWN, if you are an owner. What I care deeply about, and think YOU should care deeply about, is following the practices of breeding or buying that don't hurt dogs.

That's it. Don't hurt dogs. It's an incredibly simple edict but, if you actually follow it, it will swallow your entire life and you will not be ABLE to breed carelessly or buy carelessly. Not hurting dogs is at the root of everything I write, from "How to kill a shelter dog" to "How to choose a trainer." It's everything.

And, very specifically in this case, it's breeding sound dogs. If you don't know what that means, don't breed. If you do know what it means, then every decision MUST put that first, before any cosmetic considerations.

Build your little house. Breed good dogs. Keep your promises.