

SOUNDNESS IN THE DOG ... AND HOW TO RECOGNIZE IT

By Lawrence M. Kalstone

Mr. Kalstone's article appeared in the K.C.C. Gazette, the official publication of the Royal Agricultural Society of Victoria, Australia in 1980. Mr. Kalstone's talk has been given to various breed and kennel clubs throughout the world. It not only is timeless but is soundly based on many years of study. He possesses one of the most complete collections of books on movement anywhere. Several years ago, his article also won the Dog Writer's Association of American award for Best Article.

It was pointed out many years ago that the activities of a living animal can be divided into two main categories. First would be those activities that are internal and mainly concerned with the vital organs: the assimilation of food, the excretion of waste products and the action of the endocrine glands.

The second category, and the one of more importance to us now, concerns the external activities: the ability to secure food and the ability to escape from natural enemies. In other words, the ability to move. It wasn't too many years ago that an animal had to be sound to survive.

With the domestication of dogs to fill various needs of their masters, specialized breeding began. Dogs were needed that could earn their keep. Shepherds found that they could triple or quadruple the size of their flocks if they had two or three good dogs that could keep the sheep under control and fight off the killing wild animals. Ranchers in other areas were entitled to only the land that their cattle grazed upon, so they developed dogs similar to the Corgi and trained them to nip at the hocks of the cattle and drive them out over larger areas. Hunters found that they could bring home more game with the aid of a good dog to locate it for them . . . hence the Pointers, Setters, etc. Then they found that they could shoot over water and refined the breeding of Retrievers.

Discriminate breeding over the years has produced many fine breeds, each developed for a particular purpose. With the exception of perhaps a few toy breeds, all "working" dogs of any merit have one trait in common with each other . . . the ability to do their jobs with the least amount of effort.

Actually, this is a definition of soundness. The soundest dog is the one that moves with the least amount of effort.

By learning how to recognize this effortless movement, we take the first step in understanding good conformation. Why is it that so many people try to separate movement and conformation? How many times have you heard the remark "He has beautiful conformation, if only he moved a little better"? The only difference between them is that movement is an INDICATOR of confirmation.

Understanding the Breed Standard

Movement might be likened to a thermometer. A

thermometer will indicate an infection in a person's body by reading higher than normal. But to know this, you must first know what normal is. You must have something to relate to. Everybody has a temperature, but what it is, in relation to what it should be, is what is important.

Such is the case with movement and conformation. All dogs have a conformation and all dogs move. But before you can hope to evaluate how close this comes to perfection, you must first know why particular characteristics are called for in the breed standards. Let me illustrate this by using a quote from the Poodle Standard. Concerning the neck it states: "Neck well proportioned, strong and long to admit of the head being carried high and with dignity, skin snug at the throat".

From this description it could almost be assumed that the neck is an aesthetic virtue. It is, but there is much more. What do we know of the real reason for wanting a long neck? What part does it play in movement? If a dog does not have a long neck, what should we be able to recognize, other than the fact that he will no longer be able to hold his head high and with dignity? What does loose skin at the throat tell us? The answers should be obvious, but I would be willing to wager that many serious breeders would have difficulty in answering them.

There are two major reasons for wanting a long neck, and incidentally, an arched neck which the standard does not call for but is found on all Poodles of merit.

The first reason is that the area around the arch of the neck is the anchor point for many muscles, tendons and ligaments, including some that aid in moving the front forward. A longer neck permits longer muscles, thereby contributing to better movement because longer muscles tire much less easily than short heavier ones. They are also much quicker to respond. Almost all top athletes are long and sinewy for this very reason. I'm sure that all of you have noticed that heavy boned and muscled dogs are not as quick and temperamental as finely boned and muscled ones.

The arch acts exactly as does the keystone in an archway. It is capable of assuming the stress that is directed to this area of the neck.

The second reason for a long neck is to aid in locomotion by helping to shift the "Center of Gravity" or balance point of the dog. A long neck has much more effect than

does a shorter one . . . a principle of simple leverage. I should add here that the most efficient dogs will not carry their heads high when moving, but in a rather forward position. Carrying the head high is more of an acquired or trained characteristic. The head is carried forward for the same reason that runners or sprinters always lean forward with the upper portion of their bodies —to keep themselves in an unstable position — to force the legs to catch up with the rest of the body.

As for the snug skin at the throat, it gives a good indication as to the muscle tone of the whole dog. Sloppy muscles at the throat usually indicate the same condition elsewhere.

I would like to continue in this tone, trying to explain why certain structural traits are desirable; but first, I feel it necessary to explain what movement is in the literal sense. This can be done by explaining two rather simple terms.

The Center of Gravity

The first is gravity, that force of nature which causes everything to fall towards the ground. Drop a ball and it falls to earth. Let someone pull your legs out from under you and you fall . . . or perhaps I should say that the weight of your body falls. Without being conscious of it, your legs have been pushing up to support the weight of your body with exactly the same force that gravity has been pulling down. As a result, a stalemate exists — you neither rise nor fall. (This is not completely true but for our purposes it will suffice.)

The second term is Center of Gravity. This is an imaginary point in an object or person about which all forces are equal — the balance point. In a 12 inch ruler, it lies under the 6 inch mark; in a meter, it lies under the 50 centimeter mark. If you were to pick up a length of pipe 3 meters long, you would automatically reach to pick it up in the middle. You would be placing your support under its center of gravity . . . its balance point.

We also have a center of gravity, as do dogs. Ours is located at about hip level, towards the center of our body. In a dog, it is located just back of the shoulders and about one-third of the way up the body. It's not important to know the exact location of this point, however it is very important to know and understand that this is the balancing point. When it is moved out of position without changing the base of support under it, movement results . . . perhaps the start of a walk or trot or perhaps the start of a fall. When this center of gravity has a support under it (our legs), it is prevented from falling to the ground. If it *is* ahead of or behind this support, it will fall either forward or backward.

Earlier, I mentioned runners or sprinters running with the upper part of their body in a very forward position. When in this attitude, their center of gravity is in front of its base of support (their legs). Were their legs to become instantly paralyzed, their body would fall to the ground. To keep this from happening, they bring their feet, one at a time, rapidly forward to put a base of support under the center of gravity.

Moving Efficiently

This is what movement is all about. We push off with one leg, thereby upsetting our balance. And to keep us from falling, we quickly bring the other foot forward to check this

fall. Each step that we take is a potential fall to the ground, even though it seldom happens. We have learned from childhood to check these falls by proper placement of our feet. The reason that a child falls so often in learning to walk is that he hasn't yet learned how to control his reflexes governing the placement of feet. Movement is nothing more than upsetting balance and then changing position to bring it back under control.

Movement is a series of controlled falls. I'm certain that all of you are aware of the expression "The shortest distance between two points is a straight line". This is one of the criteria used to determine whether or not a dog is an efficient mover or not. We want his center of gravity to travel forward in as straight a line as possible. An example might make this a little clearer. If you were to walk four or five blocks, the chances are that you would not be too tired when you finished. However, if you hopped the same distance, you probably would be quite exhausted. Why? Because you propelled yourself much higher than was necessary to travel the distance forward. Your center of gravity was being moved forward in an unnecessarily high arc . . . from the ground to the peak of the hop and back to the ground. Energy was being spent to move you up, when all you wanted was to go forward. You also tired because your legs received an extra jolt from the hard landing after each hop. Ideally, we would like the center of gravity to travel forward in a straight line parallel with the ground, but this is impossible without further complications such as the friction that would occur between the feet and the ground. The next best thing is to have the arc as flat as possible. Walking helped to do this. Remember, the object of good movement is efficiency, and efficiency results from moving the center of gravity in as straight a line or arc as possible.

In a dog, watch the withers. If they bob up and down too much, something is wrong, usually the shoulder set.

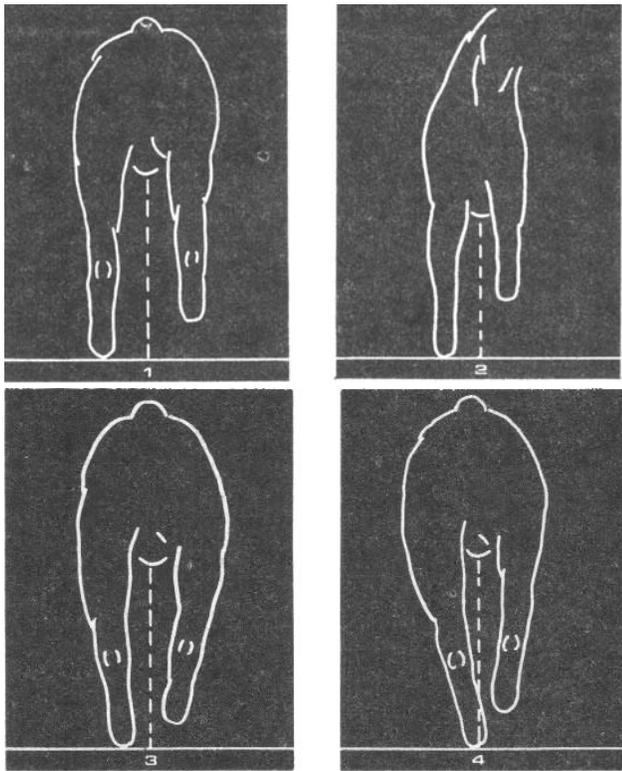
Wasted Energy

Along with wanting the dog to move forward in a level fashion as viewed from the side, we also want him to move forward in a straight line as viewed from the rear. "Rolling" is a condition that exists in all dogs; some do it very noticeably, while it is hard to detect in others. This rolling causes the dog to move side to side as he travels forward. I'm sure that all of you have seen this many times in the ring. Technically, this is known as "lateral displacement".

An illustration using a pack of cigarettes will demonstrate it graphically. Lay a pack of cigarettes flat on a table with the bottom of the pack facing you. Picture the four corners of the pack as the four feet of the dog. A dog propels himself forward by using one rear foot at a time, so let's do the same thing. Push the pack forward by using just one finger, placed on the bottom of the pack near one of the ends. You will find out quickly that it is impossible to do. The pack veers off in the opposite direction as soon as pressure is applied.

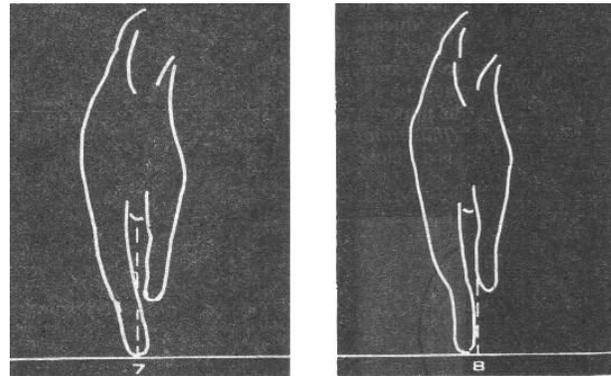
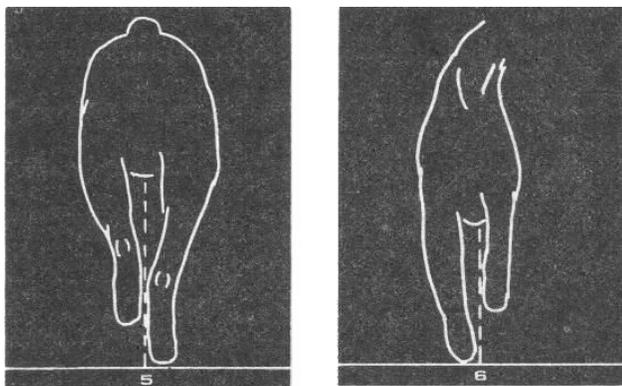
Now turn the pack on its narrow side with the bottom still facing you and do the same thing. Now you will see that the pack moves forward in a much straighter line. If you were to push on the exact center of the pack, it would move forward in a perfectly straight line. In essence, this is what a dog does to minimize this rolling. He tries to bring his feet as close together as he can when he moves. A better term to use in describing this action is "single tracking", or better yet, the "tendency to single track". A dog that moves with its feet under the corners of its body, in other words, parallel as you view them from either the front or rear, is an unsound dog. Much too much energy is being wasted. (*See illustrations 1 and 2.*) There is one other major consideration that is necessary for a dog to be considered

"single tracking". When viewed from the rear, there must be a straight line of bone from the hip to the pad when moving. The upper thigh, lower thigh and hock must appear as one straight line. (*Illustrations 3 and 4.*) If there is a break in this straight line, the dog is a "close mover" and not a sound moving dog. (*Illustration 5.*)



Part II

The same observations apply when looking at the dog from the front with him coming to you. There must be a straight line of bone from the shoulder to the pad (*Illustrations 6 and 7*) and not the break in line as to make him a "close mover". (*Illustration 8.*) Watching a dog move fore and aft should give you a very good indication as to his soundness. (*Note: Illustrations 3, 4, 6 and 7 are all of sound moving dogs.*)



The Front Assembly

There is not much doubt that the hardest working part of the dog is the front. It has more functions to perform than any other assembly, and takes more of a beating. It supports the major part of the weight of the dog. It does this so that the hindquarters can be comparatively free to deliver full drive or power. (This is not to imply that the front does not supply power and forward thrust.) Try pushing down on the shoulders of a dog in show pose and then pushing down on the hindquarters. Notice how flexible the rear is and how solidly the front is supported.

The front absorbs most of the concussion of each step. As the dog is propelled forward, it is the front that checks the fall and receives the impact of hitting the ground. The front tries to maintain a comparatively level center of gravity, thus reducing the fatigue that is suffered in moving. The front also assists the hindquarters in moving the dog forward. During the rear portion of each step, it adds an additional push.

The anchor of the front assembly is the shoulder blade. It is the shoulder blade that attaches the front to the body of the dog. It is the shoulder blade, more than any other individual part, that determines what kind of movement a dog has.

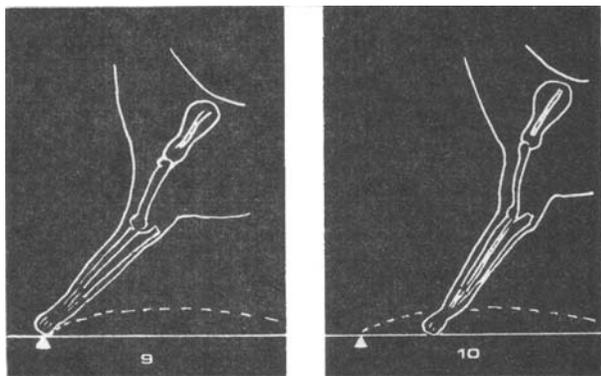
A large number of breed standards state specifically that the shoulders should be long, long and sloping or well laid back. A great number of others infer this by using various descriptive terms, i.e., the angle of the upper arm and shoulder blade should approximate ninety degrees. The only way that this can be done is to have long and sloping shoulders.

Long, long and sloping or well laid back shoulders might be best described as shoulders that form a forty-five degree angle with the ground. Upright shoulders, and unfortunately we see more of them than any other kind, generally form angles of fifty-five to sixty degrees with the ground.

A forty-five degree shoulder has two main advantages over any other configuration. First, it has two and one-half times more ability to propel the dog forward. And second, because it is longer, it can rotate the leg forward and backward in a longer arc. Due to the fact that the leg can come back farther, this type of shoulder propels the dog more forward than upward, thus reducing fatigue. The upright shoulder causes the leg to propel the dog in too high an arc, thereby causing undue strain and loss of efficiency. This would be similar to our hopping. As I mentioned before, watch the withers. You will never see top winning dogs bounce as they move ... or at least you shouldn't.

The center of gravity is propelled forward in an arc. The top of this arc is the point where gravity begins to overcome the initial push of the dog. It is at this point that the dog begins to lose

inertia and settles back to the ground to begin another step. The end of the arc is the point where forward momentum has been expended and gravity has pulled the dog back to the ground. This is the most desirable point for the dog to place his pad. It is here that the forces of gravity and forward momentum are at a minimum. (*Illustration 9.*) This is the point where the front assembly will receive the least amount of shock from impact with the ground.



If the shoulders are too straight (upright), the leg will not be able to reach far enough forward to set itself down at this spot. (*Illustration 10.*) As a result, the leg will pound into the ground before the forward momentum has been fully expended and an extra shock will have to be absorbed by the front. Hence the expression "Pounding".

Compensating Movements

In order to eliminate the strain of pounding, some dogs will compensate for it by making use of their abductor muscles. The abductor muscles are those that bend the elbow and lift the lower arm. By using these muscles, the dog is able to lift his feet just a little higher than normal and hold them there just a trifle longer. (*Illustration 11.*) This high hesitation action enables him to put his foot down at the end of the arc, thus reducing the shock that pounding gives. This is called "padding" or "hackney gait". This action is quite pretty to look at but it is a severe fault in movement because of the tiring effect on the abductor muscles. It is probably more desirable than pounding, but this is open to debate.

Occasionally, you will find a dog compensating for steep shoulders by using the rearing muscles of its hindquarters. When used for this purpose, they add a little more lift than is normally necessary to drive the dog forward. This gives a higher, but shorter arc, thus permitting the front leg to set down at the bottom of the arc. This is a little better than pounding, but not much. The front takes an unnecessary shock and the rearing muscles have extra work.

Many dogs have been criticized for not stepping out with the drive that they are capable of with good rear angulation. They seem to move with a lackadaisical rear leg action. This is one of the compensating movements that a dog may use with straight shoulders. The listless drive of the rear minimizes the forward push and therefore cuts the reach necessary for the front. Probably this is the best method for counteracting upright shoulders; certainly, it is the least tiring to the dog.

Shoulder Layback

Not all breeds want long and sloping shoulders; some call for

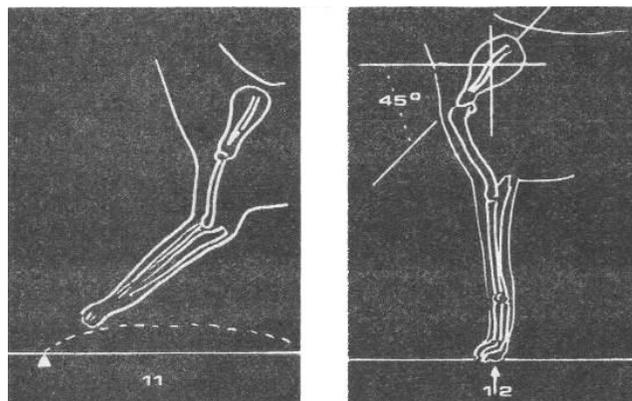
slightly sloping ones instead. The former are found on dogs where speed and unburdened movements are commonplace. Some breeds need power more than speed. The Chow-Chow, Alaskan Malamute and Bullmastiff are good examples of these breeds. As a result, their standards may call for moderately sloping shoulders. Hand in hand with this is the desire for the rear legs to be just slightly or moderately angulated. This is in sharp contrast to the extreme rear angulation found on most breeds that call for the forty-five degree shoulder. The moderate rear does not propel the dog beyond its shoulders and most importantly, it provides more direct usable power. The most efficient way to transfer power from the rear pad to the dog itself is in a straight line. The leg with little angulation presents a more compact, straighter line than does a well-angulated leg.

It has been said that a dog cannot step beyond its shoulder blades. Breeders or exhibitors who are overly concerned with extreme hindquarter angulation should be aware of the fact that they may be creating a disorganized, unbalanced animal.

Knowing that a forty-five degree shoulder is desirable is not of much use if you don't understand how to properly determine this angle. To measure this angle, you must be certain that your dog is positioned correctly.

First, stand the dog in show pose, making absolutely certain that the heel pad on the front foot lies directly beneath the center point of the shoulder blade. (*Illustration 12.*)

Advancing the foot by as little as one inch can alter the layback of the blade by five or ten degrees. As you move the foot forward, the angle becomes smaller. It is quite easy to change a fifty-five degree shoulder into a forty-five degree one by careful posing.



When you run your hand over the side of the blade, you will feel a ridge transversing the entire length. This ridge is the guide that you use in determining the blade angle. Picture an imaginary line extending from the ridge and traveling forward to the ground. This line forms an angle of forty-five degrees with the ground if it is a forty-five degree shoulder. The proper reach for a dog is the point where this imaginary line touches the ground. (*Refer back to illustration 9.*) Anything short of this will cause padding or pounding. (*Refer back to illustrations 10 and 11.*) There is just one more point that I would like to make in connection with the shoulder.

The blade is attached to the rib cage of the dog by means of muscles both on top of and underneath the blade. These muscles, as do all muscles, act in pairs. When one expands, the other contracts. They are also alike in size. If the outer muscles are heavy and coarse, so will the ones beneath be. Because of this, a mass of muscles at the shoulders will cause the blade to be pushed too far away from the rib cage and give the dog what is known as "loaded shoulders". This, in turn, leads to a dog being

"out at the elbows".

Why is it so important for a dog not to have this condition of being "out at the elbows"? The easiest way to explain it is to simply say that a solid straight column can support more weight more easily than a bent column can. If you stand with your knees flexed, you will tire a lot faster than if your knees were straight. Try it.

The Pasterns

The pasterns are more important to the soundness of the dog than most people realize. It is the pastern that truly acts as the shock-absorber for the dog. Its action is almost identical to that of the shock-absorber in an automobile. Proper ones cushion the impact of each step, thereby reducing the shock received by the shoulder. Good pasterns as far as most breeds are concerned, are not straight, but rather should have a slight but definite angle to them in relation to the bones of the forearm. This angle supplies a certain amount of "give" and as a result, gradually diminishes the shock of each step. Straight pasterns have no "give" and thus pass the impact directly to the shoulder. I don't want to give the impression that the more bend the better. There should be just enough bend at the joint to visually see the difference in line of bone. As a generalization, Terriers usually have straight pasterns and other breeds a slight bend. German Shepherds usually have an exaggeration of the latter . . . to their detriment, in many cases.

Importance of Feet

There are two types of feet that are common to all dogs. One is the cat foot, a roundish type found on most breeds of dogs and the other is the hare foot, slightly longer than the cat foot and found on most of the gazehounds . . . the speed dogs. Either of these feet is correct as long as the foot is tight and compact. (I would like to interject a personal comment at this point. I believe that the feet are the single most important elements of a dog. A perfect dog with bad feet is like a Rolls Royce with four flat tires . . . powerful and beautiful with no place to go. Even the armed forces reject men with flat feet.)

The most important reason for a good tight foot, of either variety, is to supply leverage to the leg. If you will rock your foot back and forth on the floor, you easily can see how much leverage is applied. A splayed or broken down foot does not have the rigidity to give this action. Coupled with a broken down pastern, it forces muscles rather than bone to carry the dog's weight.

The reason for the desire of thick pads is obvious. It is to help cushion the impact and protect the bones. I might mention here that the reason that some breeds want a hare foot is for the extra leverage that the longer bones give. It increases speed. The cat foot has good qualities of speed and better qualities of endurance.

Part III

A word or two about the back. Within most countries and within most breeds, fads develop. Overly refined heads and extremely short backs are two examples, with the latter being most prevalent today. All fads are bad. A dog should have a short level back, but within reason. When you see many breeds higher than they are long, look for trouble. This is not natural. There is an expression that says "For every action there is a reaction". Not only is it an expression, but it is Sir Isaac Newton's Third Law. In this case, the "reaction" is soundness, or will be shortly.

Most standards call for a level back. It is unfortunate that many breeders do not know where the back is located . . . the general consensus being that it starts at the withers and extends

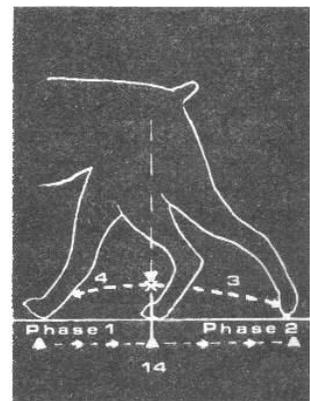
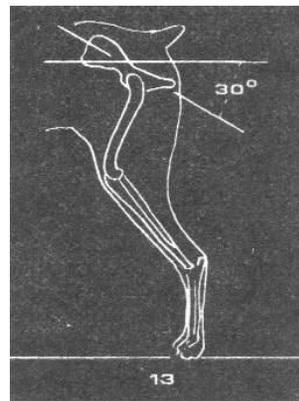
to the base of the tail. In reality, this is the topline. The back is a very short section of the topline that starts approximately at the last rib and extends forward for about five ribs.

The Croup

The croup is that portion of the spinal column from the last vertebra of the loin to the first of the tail. Croups usually are defined in one of two ways . . . either flat or steep, both having distinct advantages for particular breeds. When a flat croup is called for, it is not a truly flat croup that we want, but rather one of about thirty degrees. Most breeds, either through their standards or inference want this configuration. It should be mentioned here that slope of the croup is really just an indication of the pelvis set — its attachment to the spinal column.

The reasons for wanting a thirty degree croup or pelvis set are twofold. (*Illustration 13.*) First, it permits the rear leg to swing backward much more than does a steep croup. Understanding that the major portion of the dog's power is derived from the leg during its backward sweep should help you realize why we want a long back stroke. The second reason is that a flat croup permits longer muscles from it to the stifle. These are the muscles that draw the leg back. These are also part of the group of muscles that add power to the drive.

In talking about the front of the dog, I mentioned that one of its functions was to try to maintain a level center of gravity by keeping it in balance or stable. It checked the potential fall arising from each step. The purpose of the hindquarters is just the opposite, it upsets the center of gravity by propelling it forward. If you recall, movement is the shifting of this balance point. It is the balance that exists between the front of a dog and its rear that makes it a good or bad animal from the standpoint of movement. A dog having a front that is capable of handling a force of 50 (the number means nothing) is out of balance if the rear delivers a force of 100. It is far better to have both of them at 50.



The Phases of Movement

All movement is designed around what I like to call Phase 2. Each leg, front and rear, goes through four phases with approximately the same results for both the front and rear. (*Illustration 14.*) Phase 1 starts at the point where the leg first touches the ground at its most forward position and continues to a point directly under the shoulder or hip. During this phase, particularly with the front, the leg acts to the dog as a pole would to a pole vaulter. It propels the dog into an arc. (Remember, the legs of a dog do not move under the dog. The dog moves over its legs.) Phase 1 is critical as far as the front is concerned because the center of gravity of the animal passes over it. It has little effect on the rear.

Phase 2 starts directly under the shoulder or hip and

continues to the point where the foot leaves the ground to resume another step. This is the key phase. A dog propels himself forward by pushing on the ground with his pad. He does not pull himself forward. Take a step or two yourself and see that this is so. In regards to the hindquarters, it is during this phase that the leg begins and finishes uncoiling like a spring to give drive. To a degree, the front also adds a limited amount of propulsion to the drive.

Phase 3 starts when the leg leaves the ground at its rear extended position and is pulled forward to a position directly under the shoulder or hip. Phase 4 continues this action at this point by now pushing the leg forward until it reaches the ground to begin Phase 1 again.

To get the maximum propulsion, a dog must have good rear angulation . . . not extreme, but good. This does not apply to some of the working dogs that are used to pull loads such as sled dogs. This well-defined angulation enables the leg to compress as a spring and then explode with power. Most of this angulation begins with the upper thigh and pelvis. The two are attached at an angle of about ninety-five degrees. With a normal croup, this angle is sufficient for good angulation, however, with an extremely flat one, you can be virtually assured of little or none. Most standards call for well-angulated hindquarters. They are a necessity for most running dogs . . . Pointers, guard dogs, etc., and actually any dog that does not do heavy pulling. One of the biggest problems that we run into today is that the ability to visually see the rear angulation of an animal, in relation to the lack of ability to visually see the shoulder angle, is causing over-angulation to occur . . . and this can be just as bad as too little.

Along with wanting a dog to have adequate speed, we also want endurance; and this endurance of staying power is determined by the relationship of the hock and lower thigh. Many standards ask for "hocks well let down". This statement translates into endurance. A well let down hock means that the hock should be relatively short when compared to the lower thigh bones. As the hock lengthens, the lower thigh bones shorten, increasing speed but decreasing staying power. The rear leg of a rabbit is very similar in construction to that of a dog, but the hock is extremely long. Therefore, the rabbit is very fast for a short distance. While he can easily outrun a Beagle, the Beagle invariably will catch him after a few minutes run.

Summing Up

As a conclusion to what has been skimming the surface, look for the following when evaluating a dog in the given order:

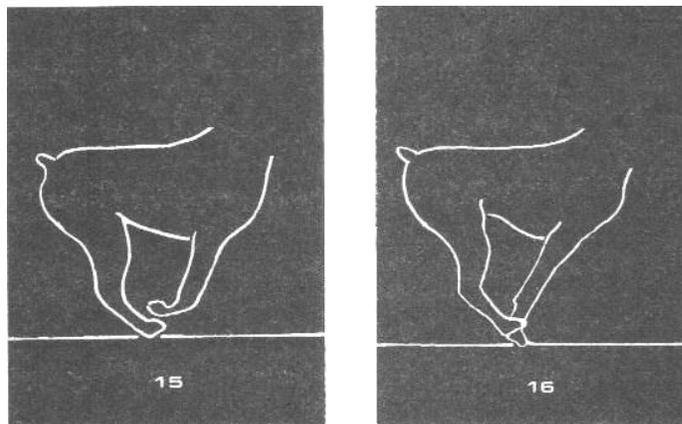
TYPE: Above all, a dog must be true to its breed type and typical of the breed that it represents. This talk is of a general nature and has expressed only the basics of movement. Each breed has nuances of its own that sometimes make it appear to be different in gait. These are subtleties that you must recognize and take into account.

BALANCE: Everything must be in proportion to the whole . . . head, neck, topline, front, rear and tail all should look like they belong to the same dog.

GAIT: A dog has three gaits that we usually observe him in — the walk, the trot and the gallop. There is, however, one additional gait that also is frequently seen — the pace. The walk and the gallop are "four time" gaits, meaning that there are four different combinations of legs that may be on the ground at any given time. The trot and the pace are "two

time" gaits, which means that there are just two feet on the ground at any time and always the same feet in the same combinations. In the pace, both legs on the same side of the body move parallel to each other, thereby making it a "lazy" type of gait. In the trot, the diagonally opposite legs move parallel to each other. This is the gait used in the show ring because it is a very simple gait to see and understand. It also shows up any structural faults that a dog may have in conformation.

PROFILE MOVEMENT: Watch for good front leg extension without a hackney action or pounding. Look for a good rear extension of the hind legs. The hocks should be extended at the end of the swing and not "sickle". The rear drive should be energetic and not stilted. Watch carefully the timing between the front and rear legs when they meet under the center of the dog. The front foot should be off the ground when the rear foot sets itself down. (*Illustration 15.*) The rear leg or foot should not have to "crab" — pass inside of or outside of the front leg or foot. (*Illustration 16.*) Watch the withers to see that they don't bounce excessively. They should be nice and smooth in their movement.



GOING AWAY: Look for the legs to converge (*refer back to illustrations 3 and 4*) and not to remain under the corners of the body (*refer back to illustration 1*). The amount of convergence does not matter, but it does matter that they do. Make certain that there is a straight line of bone extending from the hip to the pad. If there is a break in this line at the hock, something is wrong. (*Refer back to illustration 5.*) Make sure that you can see the full surface of the pad as the dog moves away. This tells you that he is using his full capabilities of drive.

COMING TO YOU: Much the same as the rear. The legs should converge (*refer back to illustrations 6 and 7*) and there should be straight lines of bone from the shoulder to the pad without any break, (*refer back to illustration 8.*) Don't worry about whether or not the pasterns swing in or out as they return to the front. This really has no meaningful effect on movement.

If there is one thing that keeps many breeders and exhibitors from understanding movement, it is kennel blindness. Don't be guilty of it.

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