



Only the NOSE really KNOWS a tracking perspective by Armin Winkler

Tracking books, videos, articles, and seminars have one thing in common. They are written, produced or taught by people. That factor also presents the biggest flaw in tracking: The human perspective on the subject. As people, I believe we have to accept our position in tracking. We are to a large degree spectators to this "magic act" that is referred to as tracking. What a dog's nose is capable of has often been written about and documented. What the limitations of a dog's nose are, we still don't clearly know. It is a very difficult position to accept, we are trainers, and as such we like to play an active part in the training of our dogs. We want to show them, guide them, help them, coax them, or force them to do it. But what is it? In all honesty, I have to say I don't truly know. I don't believe any human does. A dog's nose is a miracle, and what they can do with it is nothing short of miraculous. And just like any other miracle, we admire it and marvel at it, but understanding it is just beyond our capabilities. That realization makes tracking and in fact all scent work disciplines quite a bit different than any other working dog discipline. When doing scent work, we have to reverse the roles of trainer and dog somewhat. While it is always a human trainer who takes the lead role in obedience training and protection training, in all scent work we have to allow the dog to take the lead. After all, he is the one with the nose that knows.

Those among you who have read some of my articles in the past know I like to draw certain parallels between a dog's natural and instinctive behaviors and what we are trying to achieve with the dog in training. My approach to tracking does follow that general guideline. However, I am talking about sport tracking here. Schutzhund tracking to be specific, or I guess more correctly after the recent name change VPG tracking.

Tracking is a natural behavior for dogs. However, the natural tracking has one common component that we will not find in sport tracking and that is the deposited scent of the creature that left the track. This is the scent that the dog pursues, and it is always the same scent. Whether the dog follows another dog, or a cat, or a deer, or any other critter that may be running around out there. The scent remains constant it is always the scent of the animal the dog follows.



How is that different from sport tracking? Well, in sport tracking we ask the dog to follow a biologically meaningless odor. I know I am going to catch some criticism for that statement, but I'll stand by it anyway. Konrad Most conducted experiments in the early part of the last century, and documented the

fact that the dog does in fact follow the scent of the disturbed environment more competently and more accurately than any potentially deposited human scent left behind by the track layer. The famous "tracking wheel" experiment he documented in 1917 made that point very clearly. No matter what the surface is, it is the impact the tracklayer had on that surface that makes up the largest part of the scent for the dog. The residual odors that are deposited on or near the track by the tracklayer add an individualized signature to the track that expert trackers can in fact identify. But for the purposes of teaching fundamentals we have to leave that part in the background and concentrate on the part of the track that makes up the majority of the scent and is also bound to the actual tracking surface. That is the scent created by the damage done to the surface.

Now let me return to my point above. A dog may sniff a disturbance of the ground due to curiosity, but the scent has to the dog no biological significance. Therefore, I say in sport tracking we are asking the dog to follow a meaningless odor. The first task in tracking training then has to be to attach meaning to a previously meaningless odor.

Scent Prioritization

The first thing we have to teach in tracking training is scent association. Associate something that is meaningful to a dog with the odor that up to that point had no meaning for the dog. There are several motivations that drive a dog to pursue scent in nature. One is based on the social desires of the dog and its goal is to find companionship. One is to find a mate. And another is to locate food. For the purposes of training the most useful motivation is the one in the food-gathering realm; in other words food drive. We use the dogs desire to eat to associate meaning with the odor of disturbed ground surface. At this stage the association is food.



Here is a technique that I have had good success with. I trample an area that measures approximately one and a half body lengths of the dog by one and a half body lengths of the dog. So the size of the dog determines the size of the square. I trample the entire area down, so that every inch of the inside of this square has disturbed ground.

I personally prefer grass as the beginning surface. I feel that trampled grass makes a more obvious scent for the dog, and also the dog is less likely to see the area than he would be in dirt. Also, in grass the dog has to use his nose to find the food more than on dirt. Having said that though, it is just a preference. If dirt is more available, starting on dirt is certainly not going to ruin your dog.

Inside this trampled square area I scatter a handful of food, being careful that no food lands outside the disturbed area. At this point, the concept of scent prioritization becomes very important. What does that term mean? Well, for the dog there will be two clear scents in this trampled square. One has meaning, his food. One has no meaning, the odor of the track, crushed grass, insects, dirt, etc. whatever the ground may consist of. In order for the dog to make the association that becomes useful and helpful for us in the future, the meaningless scent has to be priority #1, and the scent of the bait has to be priority #2. In other words, the scent of the track has to be the primary scent for the dog, while the scent of the bait has to be secondary.

How do we achieve this? Fairly simple actually, we stomp our foot down on the surface we are going to track on and then drop one single piece of bait into that stomp. Then we get down on the ground on our hands and knees and we close our eyes about a foot over the stomp. Start sniffing and lower our nose towards the stomp with the piece of bait. Whatever you smell first is the primary scent.

A dog's nose is much better than ours, but ours is good enough to determine which emits the stronger odor. If we can smell the bait before we smell the disturbance to the ground, then this bait is not going to be useful to us in the association process. Hot dogs or cheese are not good for that reason. They smell too strong.



I prefer to use just dry dog food kibble. Some kibble smells stronger than others, but do the little test and you'll see whether or not it is OK to use. Kibble also helps in other ways. It is always available, it is easy to pack, no cutting up necessary, no big deal if you waste some if the dog has a bad day. And let's not forget that it will not turn green and slimy in your pocket if you forget it in a coat.

For dogs that are picky eaters, we may have to be a little more innovative. I use a low temperature dried liver, it works well and has to the human nose virtually no odor. Dried beef or lamb lung works equally well. Dried beef heart is OK, but smells more than the liver, so make sure prioritization is maintained. Sometimes having a second variety of kibble in the house that is used for tracking only to make it a little more special may already help a lot.

Let me make another point here. The dog may not go crazy over kibble, but as long as he likes it enough to look for it and find it in the scent of the square, the dog is learning what we intend for him to learn, that the scent that had no meaning does have some. This association is crucial. Should the order of scents be reversed, the dog may never treat the track scent (in this case secondary) as truly meaningful, and always look for his primary scent. Even if the dog uses the secondary scent (the track) to guide himself along the scent is of secondary importance to the dog.

So, once I have decided what bait I will use, that is the food I will scatter in the above-mentioned square. Let it sit for a few minutes, then get the dog and bring him to the square. Give the dog the command to track ("such" or whatever), and if necessary point to one of the pieces of food in the square. Then let the dog do his thing. Occasionally remind him with the command to track, so he learns the command as well, but the work is pretty much up to the dog.

I have a three-strike rule for dogs, especially young beginner dogs. They are allowed three chances to work in the square. If they wander out, I point at the square, maybe even a piece of food, and I show them what to do again. If they leave three times, though, they are done. No playing, no walk nothing to reinforce that behavior in any

way shape or form. After the third time he leaves the square, he is put back in the crate and that is it.

If he works well and shows several times that he is choosing to stay inside the square, we pull him out of there and then he gets whatever we had planned for him. Some ball playing, or a walk or whatever. Maybe I should mention a basic rule of thumb here as far as when a young dog or beginner dog should be pulled out of the square. Obviously as I said above the dog has to show a behavior that says that he is choosing to stay in the square. I think I should be a bit clearer about what that looks like. A dog will audibly sniff around in the square and pick up pieces of food as he finds them. Some dogs are quite noisy about that and sound like little "truffle hogs" as they sniff and snort for their food. As the dog now works towards an edge (of the square), the dog will notice that the outside of the square smells different. He will take a sniff and pause, maybe sniff it again, then deliberately bring his head back into the square, and sniff that area. The sound of sniffing he made before will continue and he'll get to a piece of food and eat it. That little scenario has all the pieces we need for learning in it. The dog works in the scent, the dog compares the scent, then returns to the successful scent and finds confirmation (food).

For all intents and purposes that is enough in the beginning to leave it at. Of course the better the dog gets the longer we ask him to work. But in the beginning it is perfectly OK to pull the dog away after one such revelation.

In order to keep this brief, I will not go into the many details on how to manipulate food drive for dogs of different ages to help with motivation and commitment. Most do well within the above parameters. But readers are welcome to contact me with specific questions.

Scent commitment

As the dog learns to associate the scent of the disturbed ground with finding goodies, we will see a reaction on the part of the dog every time he comes to an edge. The dog will comparatively sniff the disturbed and undisturbed ground on either side of the edge. The choice to stay within the disturbed area, because that is where he has had success in the past, is a demonstration of the onset of the proper scent association. Too often people are in a big rush to get out of the square. "I want my dog to learn to track" is what I hear. I want

people to understand that the dog is learning to track as he is working in the square. Puppies will very often work a square very instinctively and nicely and people hurry on to get them onto tracks. I don't follow that concept. Puppies are governed by their stomachs, and as such do food-motivated activities extremely well. This is by no means an indication that the dog has learned to track. As puppies get older, they become curious about the world and exploration becomes part of their fun. Their attention span seems to start varying and things other than food seem to actually matter to them. These natural parts of growing up will cause problems in tracking because the dog is no longer motivated by only one thing.

When then is the right time to take the dog from a square and put him on a track? Well, what I'd like to see is a certain level of scent commitment, not only scent association. Commitment cannot be seen in a very young puppy. Not being tempted by other things is not commitment. Acknowledging other outside factors and making a commitment to the scent in the square and staying with that scent is something that has to be observed. It almost looks as if the dog is inside a glass box with invisible walls. But there are no walls, just the edges of the scent of disturbed surface.

There are other reasons why working in the square longer than a few sessions is beneficial. It allows us to study our dogs. We can see when they compare disturbed and undisturbed ground. We can see when they just wander around, but are not really searching or even sniffing. We can see when they notice something else interesting. We can see them stopping to track and we tell them to get back to work. Just to name a few. All those behaviors have body language clues with them. We should be aware of what those clues mean, and what they look like. Because the time will come when we have to be able to read these clues from 33 feet back at the end of a line in a trial.

Work in the square long enough to give yourself the opportunity to give your dog the first "Pfui! Get back to work!" Wait until you see that the dog is committed to the scent in the square. Because all a square is, is a track that doesn't go anywhere. And all a track is, is a square that is really, really stretched out. Commitment to the scent is the key to good tracking later on.

Let me make an additional point here. Tracking is about scent work, identifying it, and staying with it. Yes, eventually also following it, but first and foremost it is about sticking with the scent that matters. In

my opinion too many young pups learn that tracking means going somewhere. But that isn't what a dog should learn.

Tracking is about using the nose, not using the legs. We are not teaching a funny looking "Voraus" here. We are teaching the dog to use his nose with a purpose and in a deliberate manner. Dogs that have learned to get walking as soon as they hear the command "such" are in trouble, because the biggest part of the brain should be on the task at hand, and that task is working scent. Make sure the dog learns this lesson before he learns anything else about tracking.

Let the nose lead the way

So you may ask when is it time to actually get the dog onto a track. As I said above, when a certain degree of commitment can be seen. The dog works diligently, and without interruption, without needing help and constant reminder. A dog who works the edges of the square accurately and with a clear understanding of which side is the important side. A dog who works uninterrupted for about 3 minutes or longer. A dog who when he sees or hears or even smells a distraction and gets a command to get to work does so without needing to be shown where to sniff and what to do. That is a dog who can be presented with a track.

So how do we do that? I always do a square. It gets the dog into the right frame of mind it settles him and refreshes the association and level of commitment we are looking for. It also let's me gauge the dog. A dog who is having a bad day for whatever reason should not be presented with a new challenge. If the dog does not act optimally on the square, leave it at that and do not proceed. Only proceed onto the track if the dog did what has become his consistent best on the square.

The track, which was laid at the same time as the square is laid this way. A trampled triangle, each side about 2- 2 1/2 feet long, trampled like the square, food scattered in it like in the square. At one of the tips of the triangle, we stomp our first footstep. It should be about 2 inches from the tip. The next step should be 1-2 inches ahead and 1-2 inches to the side of the first step. Do not make the gaps too far apart. And mostly, do not make the gaps too wide. In each step place one piece of kibble (not a handful). Put down about 20 steps. The dog is put in the square, and started there. If he works with good concentration and settles well, then after about ? a minute to 1 minute, take him by his collar and kind of pull him to the triangle.

Don't do anything that breaks his mindset too much and don't influence him harshly, so his drive stays up. That way, if anything his drive may go up a bit by being pulled away from what he wants.

Bring him into the triangle and give him the command to track. Let him get to work. He will work the triangle like he worked the square. But like in the square, he will do comparisons along the edges. In the triangle the edges will inevitably lead him to the first step outside the triangle that also has the disturbed ground odor and also has food in it. This should pull him right along from footstep to footstep. The size of the gap is important to keep the dog in his natural ground sweeping action and being able to reach into the next step without having too large a break in the scent.

In the beginning it is quite common that a dog may turn around and look as if he does not know which way to go as far as the direction of the track is concerned. That is no big deal -- dogs work through that quite easily.

Things that are important.

- Do not show the dog the first footstep. If he works the triangle the way he worked the square in the past, he is doing fine.
- Manipulate the distance of the first step in some of the subsequent tracks maybe even having it touch the tip of the triangle. The dog has to follow his nose when he tracks, nothing else. His nose has to lead him out of the square, and it will. Trust me. If it doesn't, maybe the dog is not quite ready to follow the scent anywhere. Stick with squares a bit longer and try the track set up again in a couple of weeks.
- Also, make sure that you always approach the triangle from different directions relative to the track. Always bringing the dog to the triangle in a straight line behind the track will give the dog a clue that his nose is not giving him.
- Always make sure he has to use his nose to find the track and where it goes.

I like to put a small handful of kibble in the last step to signify the end of the track for the dog. I don't make it too big of a jackpot, because I don't want to dog to rush to it. I want him to work along the track -- the small handful is really just to end the track. I slowly lengthen the track from there on, while still continuing the same set up. The better the dog gets at identifying the track and the more accurately he picks it up and works his way along from footstep to footstep, the less

important the triangle becomes. I shrink that down until the track begins with a normal one foot by one-foot scent pad to begin the track. However the separate square remains as a constant as a way to get the dog settled and to gauge the work attitude of the dog any given session. The advice remains the same. If the dog does not show good work and commitment in the square, he will most likely not have a good track.

Along with lengthening the track, we should also begin to slowly start to skip the occasional footstep with food. So some of the steps have no food in them. This goes hand in hand with skills improvement and track length. We can't lengthen the track if the skills are not to that level, nor can we leave food off footsteps if the dog has not shown that he can work at that level.

The colored dot concept

Once a dog has learned to follow the scent of disturbed ground cover in a specific direction and has made a clear connection between having success and following a previously meaningless odor, a big part of the tracking foundation has been laid. From here on the work will be making the track longer, and eventually introducing turns. Before we can get into that though, I want to explain a concept to you that I use to help people visualize a little bit how tracking works for the dog.

I call this my colored dot concept. Let me be clear here, this is totally made up and only an aid to help people understand things a little better. As you all know (if you don't you should) dogs are macrosomatic animals. Loosely translated that word means, large nasal cavity. All animals that are categorized as macrosomatic are animals which use their sense of smell as the sense they trust in the most and through which they primarily perceive their environment.

As we all know things are not what they look like to our dogs, until they get to smell it first. We have to understand then that our dogs use their noses in a similar way we use our eyes. They literally "see" with it. So let's talk about what they "see" when they are tracking. Imagine that you could see what a dog can smell. What would you see when you look at an individual footstep? This is where the colored dot concept comes in. Imagine for a moment that each footstep and the damage it does creates a picture made up of a set of 20 different colored dots. Much like the color-blindness charts that an optometrist may show you. The number 20 is of course completely arbitrary and serves a purpose only to illustrate the concept. But imagine for a

moment that each footprint contains 20 dots. And each footstep contains the same 20. You would be able to follow this visual track quite clearly. Even if there were other footprints around that had a different set of 20 dots, you could very easily compare them and pick out which print is part of the track you are following and which one is different. I imagine that a dog has that clear an image in his mind when he sniffs a footprint.

Let's expand on this concept a bit further and use it to illustrate difficulties dogs have when they track. Dogs who do not concentrate well and who have a bit of a superficial attitude about the whole thing may not take the time to clearly identify all 20 dots. I have worked with many dogs who had their foundation training with very smelly bait. These dogs seemingly track quite well, as long as the bait is there, because the bait for them represents a constant that is not found anywhere else. But what often happens is, that by having the scent priority reversed, the dog never really identifies all 20 colored dots in the "track scent picture". So when the constant scent of the bait is removed, the dog is working on a pretty flimsy and sketchy idea of what a track "looks" like they may have a picture of only 5 dots. And that often leads to problems until the dog is taught to properly identify and "see" the track (in other words all 20 dots).

Another common problem with any dog is the terrain change. Even different grass length and having a different mix of plants on a field will create a slight change in the scent picture for the dog. It may only be one or two dots out of 20 that are changing in the overall picture. But there is definitely a difference for the dog. Dogs who work by identifying all 20 dots will pause at the change, and then go with picture that resembles the original the closest. Dogs who work with much fewer dots, because they do not concentrate well, or because they do not take the time to identify all 20 dots before they head along a track will run into problems, because too large a percentage of the track scent picture has changed for them so that the changed track hardly resembles the original track at all. It only stands to reason that a dog who is "looking" at a completely new "picture" will act confused and will not know exactly what to do next. Corners are such scent picture changes that we lay for the dog. We should know that we are making a change in the scent picture. In other words we are adding colored dots or taking some away, or changing some of the colors. One thing is for sure, the picture will not remain the same for the dog.

I often hear analogies about how a dog will run the same zig-zag pattern on a field that a rabbit ran, so corners mean nothing to a dog

if the motivation is high enough. WRONG! When a dog follows a rabbit it always smells like rabbit. Before the corner, on the corner and after the corner, it will always smell like rabbit to the dog, so the scent picture is always the same for the dog.

But when a dog follows the scent of crushed vegetation, the scent picture will change. The different wind direction will affect the degree of fermentation that happens. Plants face in different directions depending on where the sun is in the sky, and a different part of a plant will get damaged by a step, etc. There are changes that a dog can and will notice. And he should. He should realize there is a change and work through the change with the skills we are teaching him. What we have to realize is that some of the colored dots will change for the dog at a corner. We have to allow him to acknowledge this change, and make a clear decision to follow the slightly changed scent picture and make that his new set of 20 dots to compare things against.

Dogs who work with fewer than all 20 dots will have greater difficulties to work out problems such as corners because the change in the scent picture will be much greater in their perception. So keep that in mind as we go on. Dogs can follow one or a few colored dots just as much as they can follow 20. But the clearer and more accurate a picture the dog has of the track he is supposed to follow, the higher his likelihood of success.

Corners

As we stretch out the lengths of the tracks we present to the dog, we will inevitably encounter changes in conditions, drier grass, longer grass, shorter grass, more clover, less clover, sparser vegetation, different plant composition, etc. All these changes in cover help a dog to adapt to changes in his track. When a change is very obvious and visible to us, we should use that as a teaching opportunity. My approach is to not place food at any changes that are significant enough for a dog to register. I have some food leading up to the change then no food while the dog is going through the change, then food again at increased frequency after the change. What is the reasoning behind that? I believe the dog has to acknowledge the change he is working through and should not be guided along with food reminders to a degree where he will not notice that anything has changed. Changes in the scent picture are inevitable in tracking and we should prepare the dog for those changes by letting him learn that they happen and that he has the skills to work through them. Corners

are one such change that we set up deliberately for the dog. How do we lay corners for teaching? Naturally, there are different ways. I will give you my way of laying corners for most dogs.

I "railroad" my corners. That means I stop single step walking, and shuffle my feet along and around the corner without lifting my feet up off the ground. I make as close to a 90 degree angle as possible and do not round the corner much at all. But I lay a continuous strip of slightly heavier ground damage for the dog to guide him around the bend. I do not believe in double laying a corner, because as the tracklayer I will deposit an unusually concentrated pool of air scent around the corner (by moving his own body back and forth) that will only confuse the dog.

So, I stomp along laying my track. Putting food in about every footstep until about a dog's body length before the corner. Then I stop with the food. I railroad about 3 feet before and again 3 feet after the corner. Then I resume stepping again by about the first or second step, I will also begin putting food again into every footstep.

Another point to make here is that I will base where I put my corner on the length of track the dog has done in straight lines. Meaning if the dog has managed to work 80-100 pace tracks without any difficulties, I would put a corner near the 50-60 pace mark and then proceed for another 20 paces after the turn.

I want the dog to be well in the track and confident in his pursuit when he comes to the turn. I want him to register the turn. He will show a slight hesitation as he heads around the corner and onto the second leg. A moment of doubt will occur. This is all perfectly normal and understandable. Aside from the colored dot concept that should help us understand that there is a scent picture change for the dog, we also have to realize that a dog also uses landmarks to guide himself along in his environment. And as he makes a turn all landmarks, including where in relation to him his handler is, will change. The dog will have his moment of doubt. He should use his nose to guide himself forward, and right at the point where he says "this is not the same, but it is close", he should be reinforced for his efforts by finding perfectly placed food right there. He will get confirmation that he is in fact "on the right track" and continue from there with confidence.

Naturally, this has to be repeated many times and in both directions. More difficult terrain conditions will make the issue larger. Again, the harder it is for the dog to have a clear and accurate picture of a track,

the harder hit he is by changes in that picture. Be aware of what you are asking your dog to do when you lay a track. It will let you be more fair and certainly more understanding to the troubles he may have.

Patience, patience, more patience

This concludes the bulk of foundation training in tracking. The hard thing in this discipline is always that we are only guessing at what we are seeing. When a dog sits, I know he sits. But when he is tracking, many things are going on that are much beyond my understanding of what exactly occurs inside the dog's brain when he is doing this "tracking thing". And that is why here more than in any other phase we have to be patient and if we ever make an error, let it be an error on the side of caution. Because we can't ever be 100% sure the dog is not doing what we hope he is doing. Patience is the biggest virtue you can have in this discipline.

Going back a step is more common and more necessary here than in any other phase. Take your time, stay on squares. Go back to squares if you feel you went on too fast. Stay away from turns unless your dog has shown he is ready and if he acts confused and bewildered take it as a sign that you went one step beyond his skills, not that he is defying you.

Up to this point tracking is totally up to our macrosomatic partner, because we don't have a clue how to do what he is supposed to do. A square will never hurt your dog. It may not accomplish all you want it to, but it will surely never hurt. And none of what I have described will cause any problems for you or your dog. So it is safe to do.

Naturally we are far from finished. Up to this point all the work has been purely motivated by the dog's inclination to do the work. We have no sense of duty yet, except for whatever a dog may impose on himself to find food. We have not addressed articles yet. And we have not come close to doing all this without any food on the ground. So, as you can see, there is more to do. And more for me to write about. Thanks for your time, until part 2.