

Seeing the Ground of a Movement: Tonic Function and the Fencing Bear

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This article introduces the idea that movement has two parts—a figure and a ground. Figure means in this case the literal action expressed in terms of shape or biomechanics. Ground means the background of the movement that occurs in the tonic system of the mover. In addition, the topic of seeing is considered—seeing meaning here the process of seeing the background to a person’s movement. These ideas are illustrated by a very old story about an unusual bear.

To begin thinking about the “ground” of a movement, consider the observation that we move before we move. The body prepares to do a movement by orienting itself. For example, when I take a breath, before I breathe my back muscles anticipate the pull down of the diaphragm and, if they didn’t, my diaphragm would create some forward collapse of my structure. As another example, before I raise my arm, my calf muscles prepare by anticipating the change in loading. In both of these cases the body stabilizes itself appropriately to not fall over. An example of counterproductive pre-movement would be someone tightening his belly to stand up from a chair. In this case, stabilization is making it harder for the person to stand up.

In the first brief moments in which a movement is conceived and prepared for, the essential story of a movement can be predicted. The quality of movement—the flow, the economy, the effectiveness—is determined by how someone consciously or unconsciously sets the tone in the tonic system of his/her body. Thus, to change structure, to change a person’s postural habits and coordination, we need to be able to see and help change the pre-movement embedded in each of that person’s actions.

To see another’s pre-movement, it appears we can best do so in a state of resonant empathic observation. We must know these places of preparation in our own body, in order to see it in someone else’s.

This point is relevant to any inquiry into how one might teach a bodywork practitioner to see. Teaching seeing means teaching him/her to sense his/her own pre-movement, and to find the perception necessary to change it. By learning to work with our pre-movement we gain access to the gravity response system that governs our quality of movement.

Movement that begins with appropriate pre-movement means movement that starts with dynamic orientation to ground and to space. This is the perceptual state in which observation of movement is primarily sensing the ground of a movement, rather its shape. Taking this point a little further, we might consider that part of the body practitioner’s education is relearning the capacity to perceive the ground of his/her own and another’s movement.

Thus, here is a purportedly true story about a Russian nobleman, and a bear that has been taught fencing (swordsmanship). The story introduces the reader to gravity response as the largely unconscious ground that precedes and determines the shape and story of our movements.

From Kleist, About Marionnettes

“I broke my journey into Russia with a visit to the estates of von G., a Livonian nobleman, whose two sons at that time were enthusiastic swordsmen--particularly the elder who

had just returned from the university convinced he was an adept. One morning, as I happened to be in his room, he offered me a foil. We fenced, but it fell out that I was the more experienced, and his passion too bewildered him, so that almost every thrust of mine struck home, until at length his foil flew into a corner. Half jokingly, half in earnest, as he stooped for his weapon, he told me he had met his match, but then again everything in this world must, and that he should now have the pleasure of leading me to mine. Both brothers began to laugh and shout “Away with him! Away with him! To the woodshed with him!” Then they took me by the hands and led me to a bear which their father, old von G., had raised in his yard.

“At my astonished approach the bear was standing on his hind legs, slouched against the stake to which he was chained, his right paw was raised ready to deal a blow; he looked me straight in the eye: this was his way of standing on guard. I thought I must be dreaming, confronted by such an adversary; but no, old von G. suddenly cried “Engage! Engage! See if you can touch him a single time!” I made a lunge--once I was somewhat recovered from my astonishment. The bear parried my thrust with the most off-hand riposte. I tried to throw him off with feints: the bear refused to budge. I lunged again with the adroitness of the moment: a merely human breast could not have withstood my steel. With one paw, the bear parried my thrust. Now I was in almost the same position in which young von G. had been. The bear’s gravity contributed to my loss of composure, as alternating thrusts and feints I began to run with sweat. And all in vain! It wasn’t simply that this bear was the equal of any swordsman in the world at parrying thrusts, but that my feints, and in this no swordsman in the world approached him--provoked no reaction at all; staring straight into my eyes, he seemed to read my very thoughts; he just stood there, that paw at the ready, and whenever my lunges were not in earnest, he refused to budge.”

Why isn’t the bear fooled? If we separate the figure and ground of a movement, we could say that the bear is reading the ground of his opponent; the ground is the state of the tonic system, the management of the center of gravity. When the swordsman is not completely committed to his gesture, as in a feint, he holds back a part of his weight, very subtly, but perceptibly. Before any intentional action occurs, there is a pre-movement. Another term for pre-movement is anticipatory postural activity (a.p.a), a regulation of the postural system to prepare and adjust for changes in the center of gravity. The a.p.a., an involuntary and unconscious adjustment, *precedes* voluntary, intentional actions-- it is the ground of the gesture. This is why a given gesture can never be given a consistent particular meaning. The meaning of a gesture depends on the tonic activity underlying it. As babies, we are like the bear: we read the state of our parent’s tonic system; and that is how we learn to hold ourselves, in imitation or response to the tonic system to which we are in relation. Hubert Godard has organized observations concerning the functioning of the tonic system into a theory that he has termed Tonic Function.

In the above story, Kleist’s character states “Affectation appears, as you know, when the soul, vis motrix, inhabits any other point than the center of gravity” In other words, our body language gives us away if we are pretending. Here, body language is defined more specifically as the a.p.a. (the anticipatory postural activity) of the movement. Learning to see a.p.a is a central skill for a movement therapist, and is useful to many other fields of human endeavor as well. Dr. Rolf, the founder of Rolfing Structural Integration, called this “seeing.” Another important skill is the capacity to infer the perceptual field of the client—to begin to sense the perceptual habits of a client. For, it is only by evoking changes in perception that the a.p.a. will change. By

contrast, teaching movement in terms of voluntary postural adaptations, such as effortful standing-up-straight, interfere with tonic function. Just like Dr. Rolf, we all may sometimes succumb to this unfortunate strategy.

The fencing bear reminds us that the capacity to see the movement behind a gesture is not a human-invented skill, but rather a part of how all mammals perceive. Our human preoccupations seem to dictate that we must start by noticing our own tonic function in order to perceive it in another.

References:

Kleist, H. *About Marionettes*. Translated by Michael Lebeck. Mindelheim: Three Kings Press, 1970.

For further references about Tonic Function and to request an annotated bibliography of more detailed references, go to: www.resourcesinmovement.com and click on “articles.”