The Core Of The Matter

Core and Sleeve in the Rolfian Paradigm

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The concept of "core and sleeve" is central to the Rolfian paradigm of bodywork. Their abstract nature makes them useful descriptive terms for understanding structure in space. These concepts speak clearly to our intuition about the physical body's relationship to three-dimensional reality and are undeniably a part of the rich oral tradition left by Dr.Rolf. Yet it is interesting to note that in all of her writings she never explicitly defined "core" or "sleeve." "Intrinsic and extrinsic" pose another problem for the Rolf practitioner because, as we shall see, their usage in the Rolfian paradigm, while more explicitly defined than "core/sleeve," is quite different than their anatomical definitions. Currently the two sets of terms are often used interchangeably, with "core" being synonymous with intrinsic and "sleeve" being synonymous with "extrinsic." In *Ida Rolf Talks*, Rosemary Feitis includes core and sleeve with the concept of "intrinsic and extrinsic" in the appendix discussing some key Rolfian concepts.[1] Dr. Rolf relates the two sets of terms at one point in the text of the same book.[2] Dr. Rolf was clear, according to some of those who studied with her, that her use of the terms "intrinsic/extrinsic" and "core/sleeve" were generally describing two different things, yet she used "core/sleeve" with some ambiguity at times in her writing.

In a recent article in *Massage and Bodywork* entitled "SI, Finding Balance from the Core," Jeffrey Burch paraphrases Dr. Rolf as saying the core is "everything you can't live without."[3] Mr. Burch then identifies "core" with the viscera and the visceral space, based on the idea that these basic vegetative functions of the guts constitute the essence of what we MUST have to remain "alive." In the expanded version of this model currently presented at the Rolf Institute, the "sleeve" is defined as the bounding elements of the visceral space, specifically the ribs and soft tissue of the trunk. This model is further extended by considering the neurocranium/spinal column and the two appendicular girdles as three additional (and completing) structural elements. As we shall see, this model bears some resemblance to one of the ways Dr. Rolf used "core/sleeve." However, it is questionable whether or not this is the definition of "core" which she preferred since the attribution cited by Burch isn't referenced anywhere in Dr. Rolf's written work. In fact, the relationship of "core/sleeve" to "intrinsic and extrinsic" is much less ambiguous.

If Dr. Rolf wanted "core" to be identified with the visceral space and "sleeve" to be its bounding elements, wouldn't she have explicitly stated it? According to Emmett Hutchins, for Dr. Rolf "core and sleeve" was a metaphor which evolved over the course of her work and was used to define several different phenomena, all of which shared as common traits an inside/outside symmetry and relationship. "Intrinsic and extrinsic" had a more concrete meaning, but one that is significantly different from the anatomical usage. Both sets of terms have as a central theme the idea of balancing the inside with the outside.

All of this considered, this paper will attempt to clarify these ideas and what Dr. Rolf intended by these terms.

ANATOMY

"The surgeon or the anatomical dissector starts his work with an incision that, by its presence and in its infliction, violates the integrity of both function and form. There is another way to know a body and to understand its structural sense. This method, our method, recognizes that a body is organized in concentric layers, that body function can be understood only by realizing the interrelationship of these layers. In this type of analysis, our first concern is not with the skin (which derives from embryonic ectoderm) but with its underlying layers of fascia (derived from mesoderm)."[4] Anatomy is primarily a descriptive language, useful for describing where we are and how deep we are in the body. Those who knew her say that Dr. Rolf had an ambiguous relationship with the study of anatomy. While she felt it was important for practitioners of Structural Integration to know anatomy, she was less than enthusiastic about them believing the ideas about the body that anatomy represented. The popular sound bite from Alfred Korzybski when taken in its context illuminates this point:

"A map is not the territory it represents, but if correct, it has a similar structure to the territory, which accounts for its usefulness."[5]

At best anatomy represents the territory of the "flesh," the postmortem body on the anatomist's table. How far this abstraction can be extended to what Korzybski called the "organism-as-a-whole", the living body moving and breathing in the gravity field of the earth, is another question.

Dr. Rolf's assertion that the body is organized in concentric layers is not readily discernible from anatomy books (unless one looks at the newest anatomy from the Visible Human Project) but they are obvious under the hands of any practitioner working with a client.

ROLFIAN STRUCTURE

"The implications of the term 'structure' are clear, even from its daily sense. To have 'structure' we must have a complex of ordered and interrelated parts."[6]

"In any plane, physical or nonphysical, structure implies relationship."[7]

If someone says "structure" we might think of a building or a bridge, something tangible. Anatomically, "structure" is often used to refer to the various parts of the body. However, Dr. Rolf understood structure in a broader sense. Rather than referring to a specific thing or class of things, Dr. Rolf, borrowing from Korzybski, used it to mean a quality or property of relationship of some thing or things. For her, structure was a

property of material elements, not a simple pronoun used to refer to some anatomical element, such as a liver or a femur. Rolfian *structure* is a reference to the conformation of the major body segments which have a specific relationship defined by their order. These are the "ordered and interrelated parts" that the Rolf practitioner is interested in, because it is this segmentation that allows the system to resonate with gravity. And it is this resonance of the segmented *kinetic chain* with the gravitational field of our planet that we call graceful, easy movement.

SYMMETRY

"Balance and/or integration implies symmetry."[8]

Symmetry is a central and recurring theme in the Rolfian paradigm. Dr. Rolf has been criticized by some for being naive in regard to her assertions about symmetry. However, it is obvious from her written work that she knew that literal symmetry was not something that could be found or was even necessarily desirable in the human system.

Bodies are not perfect, the precise symmetrical planes of theory are not actualized in nature. Differences in habitual muscular use (right-or left-handedness) as well as visceral structure (liver complex on right side compared to heart and stomach on left) preclude literal symmetry.

Nevertheless, to ensure reasonable physiological health, weight-bearing must approach a practical balance.[9]

Webster's defines symmetry as "due proportion between parts of an object."[10] Etymologically, symmetry means "similar measure." In biology the term symmetry is usually used in reference to morphology or shape. Bilateral symmetry, the form of symmetry associated by vertebrates, manifests as a right/left mirror image in musculoskeletal structure and surface contours. Dr. Rolf used symmetry in its larger sense indicated by this statement from *Rolfing*:

It must be remembered here that the word "symmetry" refers to structure in three dimensions of space rather than two. Thus there is a lateral symmetry, an anterior-posterior symmetry, an upper-lower symmetry. Additionally, and most important of all in human systems which are vertically organized and move in space, there is the intrinsic-extrinsic symmetry which is concerned with the relations between deep and superficial myofascial structures in the body.[11]

Here Dr. Rolf equates symmetry NOT with morphological similarity but with balance in three dimensions of space and gravity. She postulates that symmetry manifests in four domains of spatial relations: front/back, side/side, top/bottom, and, "most importantly," inside/outside. Morphology can be an indicator of this kind of symmetry in the right/left dimension, however top/bottom, front/back, and inside/outside do not display similar contours and therefore, Dr. Rolf cannot be referring to simple morphology in her use of the word symmetry. The "due proportion" which Rolf speaks of in this statement has to do with the dynamic balance of the body in three-dimensional space and gravity rather than simple, static morphology.

AGONIST/ANTAGONIST

All body movement is dual action. At any given moment in time, movement is the result of the action of paired muscles: the moving muscle (agonist) and its balancing mate (antagonist). (It would be more realistic to look at these as cooperating rather than antagonistic units.) Balance results when agonist-antagonist pairs pull to an equal degree in their appropriate directions. Properly paired muscles are of similar strength and flexibility.[12]

The accepted myth is that if certain individual muscle groups need strengthening, repetitious specific movement patterns can be employed to accomplish this. The assumption fails to recognize that "strength" is a function of a reciprocal agonist-antagonist balance.[13]

In well-balanced activity, each half of the agonist-antagonist pair contributes a substantially equal share to a given muscular task. Again, for best results, agonist and antagonist must occupy positions in three-dimensional space that allow each member appropriate directional pull and equivalent force. Paired muscles in a precise spatial balance have substantially similar tone levels; they stimulate and reinforce each other.[14]

Kinesiologically, agonist/antagonist balance is used primarily in reference to tissues on either side of a joint. For one side to shorten and flex a joint, the other side must lengthen proportionately to accommodate the change from the other side. Obviously this necessitates a tonic balance between these paired myofascial units. Dr. Rolf asserted that appropriate agonist/antagonist balance was related to appropriate spatial relationships, rather than simply reciprocity in tonus. For her, appropriate spatial relationship is the ground of being for appropriate function and tonic balance. When tissues are situated in the appropriate relationship with each other, they manifest balanced function. If their relationship is distorted, their tonic balance and therefore their function MUST be distorted as well.

Understanding that for the elbow to function the biceps and the triceps must both be in their respective appropriate positions is fairly straightforward. But Dr. Rolf asserted that in the living being, agonist/antagonist balance is not simply a matter of what is happening on either side of a joint, but also from surface to deep, between deep and superficial myofascial structures in the body.[15] It is these myofascial structures which she referred to as "intrinsics" and "extrinsics."

INTRINSIC AND EXTRINSIC

Standard medical nomenclature defines *"intrinsic"* as situated entirely within or pertaining exclusively to a part. Thus, the intrinsic muscles of the tongue are those entirely within the structure of the tongue (superior, inferior, transverse, and vertical linguinalis). We have used intrinsic and its correlate, extrinsic, to denote, respectively, muscular elements that are invested in the deepest fascial layers of the body (intrinsics), and their paired antagonists (or cooperators), the extrinsics, which are more superficial, occupy greater volume, and are more directly and obviously subject to the plastic changes of the integrative technique.[16]

The anatomical meaning of intrinsic and extrinsic is specific to the particular skeletal region in which the muscle exists. An anatomically intrinsic muscle is a muscle that lies completely within either the axial or appendicular skeleton. An example of an anatomically intrinsic muscle would be the soleus, gastrocnemius, vastus lateralis/medialis/intermedius/rectus femoris, or the biceps brachii. An anatomically extrinsic muscle is a muscle which crosses from one portion of the skeleton to another. An example of an anatomically extrinsic muscle would be the psoas (lumbars to femur), quadratus lumborum (lumbars to

ilium), pectoralis major (humerus to sternum), pectoralis minor (scapula to ribs) or rhomboids (scapula to thorax).

Dr. Rolf used these terms to indicate an inside/outside relationship. In some ways, this is intuitively more accurate since these terms usually indicate something deeper (intrinsic) or something more outside (extrinsic). She postulated a symmetry, a reciprocal, agonist/antagonist relationship between the smaller deeper muscles and the larger, more superficial muscles.

This symmetry and balance is a necessary ground of being for "normal" movement. This symmetry is sometimes expressed in the idea that the intrinsics are the "being" muscles while the extrinsics are the "doing" muscles.

Research cited by Gibbons and Comerford[17] suggests that there is indeed a reciprocal relationship between superficial and deep myofascial elements. Deeper, mono-articular muscles (stabilizers) are primarily concerned with stabilizing the structure while the more superficial, larger, multiarticular muscles (mobilizers) are primarily concerned with creating movement.

The mobilizers resemble the Rolfian description of the extrinsics as "doing" muscles, while the stabilizers resemble the "being" description of the intrinsics. The research indicates there is a reciprocal, agonist/antagonist relationship between these two groups evidenced by inhibition of the stabilizers by the mobilizers in dysfunction. This is evidence supporting the Rolfian theory of intrinsic/extrinsic balance. Additionally, the stabilizers are thought to have a more proprioceptive function than the mobilizers. The inhibition of proprioceptive function of the stabilizers by inappropriate and/or excessive activity of the mobilizers/extrinsics would have far-reaching effects on the movement of the system, leading to further imbalance or possibly being an initiating factor in imbalance.

This research suggests that the simple manipulative principle "hold things where they are supposed to be and get them to move" works to some degree because we hold the mobilizers/ extrinsics in a position where appropriate action is demanded and ask for movement that activates the previously inhibited stabilizers/intrinsics.

CORE AND SLEEVE

Emmett Hutchins describes Dr. Rolf's use of the terms core and sleeve as "more like an electric motor than anything else." An electrical motor has a center armature (core) and a surrounding "sleeve" of magnets. Her use of this metaphor was originally specific to the relationships of the sixth and seventh hours where the concern was the creation of an appropriate environment for the autonomic nervous system elements, particularly the sympathetic chain. This electrical metaphor was the central idea for the work of these two hours. Order is established in the spine during the sixth and seventh hours primarily so that there would be an appropriate environment for the autonomic nervous elements.

According to Mr. Hutchins, Dr. Rolf also used the metaphor of core/sleeve to describe the relationship of the girdles to the trunk as well. She referred to the trunk as the core and the girdles as the sleeve. This is a useful description for the work of the integration hours, eight, nine and ten. With the creation of the "core" in the trunk at the end of the seventh hour, the "fitting" of the girdles (sleeve) into the trunk (core) and the relating of their movement to the center at the lumbo-dorsal hinge becomes the primary job of the completion of the process of the recipe. If Rolf did say that the "core is everything you can't live without," then the "post-seven" structure of the trunk would certainly fit this model. However, the original model described by Mr. Hutchins is more specific to the central Rolfian concern of the dynamic integration of the segmented structure in the gravitational field than the revised model currently in vogue at the Rolf Institute as discussed earlier.

CORE/SLEEVE = INTRINSIC/EXTRINSIC

"I think the neck is designed so that the function of rotation is taken on by the intrinsics (the deep short muscles) of the neck. If the head is too far forward, rotation is done by the extrinsics because the intrinsics then lack span and can't function, but to the extent that this happens, the normal patterning of the body is destroyed."[18]

This statement is open to interpretation with regard to whether or nor Dr. Rolf is clearly saying that core/sleeve and intrinsic/extrinsic are precisely equivalent. However, this clearly equates these two terms rather than suggesting that "core" is the visceral space. Core/sleeve here is used as an abstract idea for an inside/outside balance describing the more specific case of intrinsic/extrinsic balance.

ROLFIAN EXTENSIONAL MOVEMENT

Core/sleeve can be extended into a more dynamic domain as well. According to Mr. Hutchins, Dr. Rolf described the movement of the segments as feeling like the "sliding of cylinders over each other." We can imagine the kind of extension that occurs around an old fashioned telescope (spyglass) as it goes from its shortened closed position to its extended, open position. The spyglass consists of cylinders which slide upon themselves in order to extend along a central axis. This is the essence of "Rolfian extension," the body gets longer along its long axis (the central vertical line, the center of a joint or series of joints) rather than simple "bending." Dr. Rolf's preferred term for this was "Spannung" (German for lengthening or spanning), Ed Maupin[19] refers to this as "Omnidirectional Expansion" (from his work with Oscar Aguado), and Jeffrey Maitland[20] has re-christened this "Palintonicity" (from the Pre-Socratic philosopher Heraclitus, meaning "to stretch back and forth"). The central Rolfian notion is that core extension, an intrinsic trophic response, is predicated upon a balanced system, one exhibiting core/sleeve, intrinsic/extrinsic balance.

LIFT AND CORE EXTENSION

The phenomenon of "lift," which many practitioners have reported both personally and with clients receiving the work, is a specific example of core extension. According to Mr. Hutchins, Dr. Rolf said that, "the integrated body should not feel weight due to gravity." When the system is organized so that its moment of inertia is neutral, its profile in gravity is such that the downforce of the weight of the body falling toward earth in gravity is canceled out by the upforce of the ground force reaction of the weight of the body contacting the earth, the weight of the body is essentially "canceled out." Since there are no blocks to the manifestation of the innate vertical tropism, the system "goes up." This "weightless" body is able to extend along the axis of its moment of inertia (the physical equivalent of the "Rolf Line") and in fact does so without any volition on the part of the client, since there is no weight for it to resist.

CONCLUSION

One of the fundamental things that the Rolf practitioner is working toward is balance between the inside and the outside of the three-dimensional structure of the body in gravity. Inside/outside functions as a metacategory for the categories "core and sleeve" (which can be used to describe the relationships of the sixth and seventh hours as well as the relationships of the final three hours of the Recipe) as well as the categories intrinsic/extrinsic which have been seen to have a coherence with known neuromuscular functions and phenomena. Additionally, the abstraction "core/sleeve" can help to illuminate a theory of extensional movement and even lift. While there may be some uncertainty and ambiguity regarding how Dr. Rolf used these terms, it is clear that they were never confined to a specific anatomical definition. To confine the descriptive language provided by Dr. Rolf to a single category of anatomically coherent elements misses the point of Dr. Rolf's abstract exposition. In the end, it may limit our ability to find a creative coherence with what research tells us about movement and what we intuitively know to be true about living and moving in gravity.

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