A Lifting, Three-Dimensional Model of Human Structure

By Austin McElroy, Certified Rolfer

After starting my practice in 1978 it became clear very quickly that Rolfing® was a difficult concept to get across to the general public. The use of slides alone helped people grasp the notion of structure and the importance of gravity. Building upon that, the importance of gravity, structure, and proper movement could be brought together with a demonstration. However, I needed something that would evoke the concept of lift more effectively. Lift seemed to be a key ingredient in what sets Rolfing apart from other forms of bodywork. Thus, I set out to develop a simple, three-dimensional model of the human structure to show this and to ultimately give a more complete view of Rolfing. The model had to be visually interesting enough to get peoples' attention. The simplest thing that demonstrated lift was a helium balloon. As a new ingredient to a structural model, lift added new and observable dynamics previously unseen.

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The figure on the opposite page is a full representation of what I call The Lift Model. Although out of proper anatomical proportion, the model nonetheless exhibits the lifting feature that I was looking for. The lift is in the upper structure and seems to give this particular model an aliveness that is frustratingly missing in medical models, especially the two-dimensional type.

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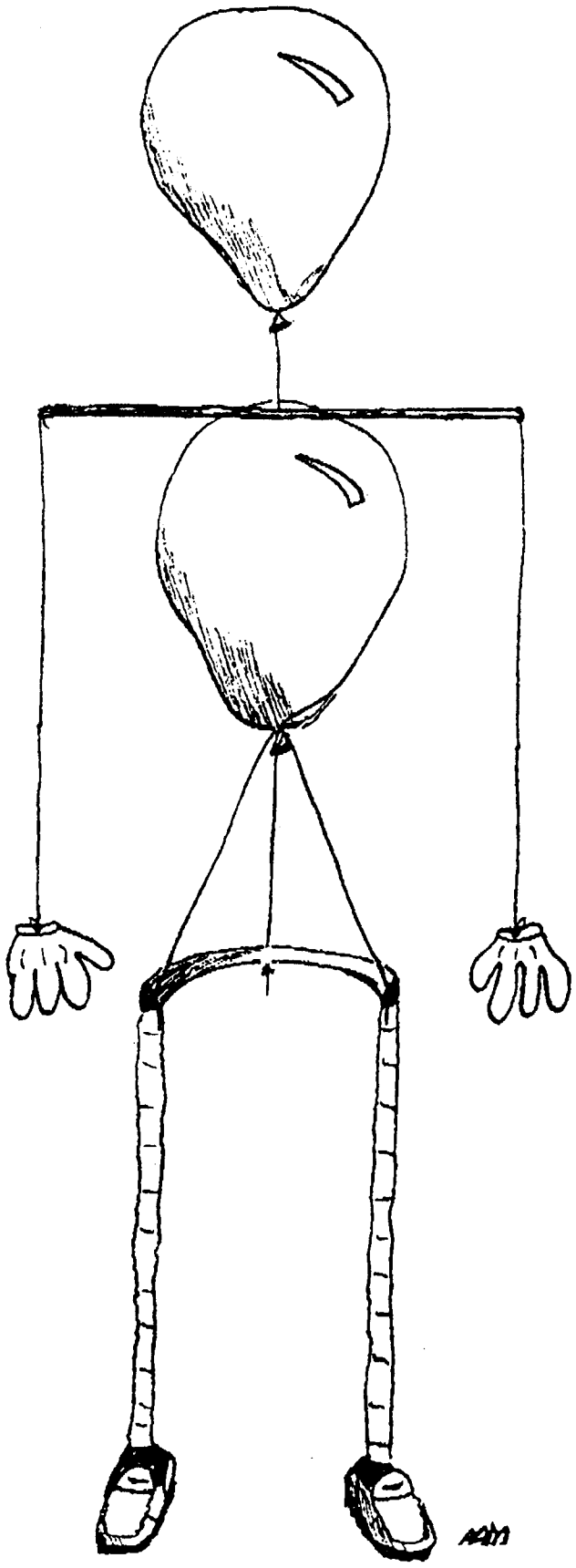
Within this three-dimensional model are several dynamics that only lift can create. These dynamics seem to set it apart from all previous models. Most importantly, the Lift Model is supported by the energy within its own core. The helium may be considered analogous to human life energy.

I found that only the lightest materials could be used to complete this human structural model. Two polyethylene strips were cut from a trashbag for legs, a piece of string for the spine; a small pair of shoes was used for feet; two large helium-filled balloons for the head and thorax. The material for the pelvis needs to be cut from something light which will not bend or torque such as a foam, take-out dinner plate. The shoulder girdle, arms, and hands are straws, string, and paper respectively. It's then put together with tape.

Right away it's possible to see that the lower body is heavy and wants to stay grounded while the upper structure wants to take off. These two opposing forces—lift and gravity—meet at the lumbodorsal hinge area. The LDH is the point in the vertebral column where the lumbars adjoin the thoracic spine. The lumbodorsal hinge, or LDH, was always emphasized during my training as a key area because it was where the psoas attached itself superiorly. It is also an area that is rich with autonomic nerves and is a posterior attachment of the diaphragm. Why the juncture of the lumbar and thoracic was called a hinge seemed vaguely understood at best. Dr. Rolf's instructors said that it was important that that's what I got.

The Lift Model of Human Structure



"Cervical Spine"

Shoulder Girdle

Lumbordorsal Hinge (LDH)

Superior attachment of Psoas muscle at the LDH

"Psoas muscles"

"Lumbar Spine"

Inferior attachment of Psoas muscle at the greater trochanter of femur

The "Cranium" and "Thorax" are helium balloons and provide lift for the model.

The "Spine" opens due to the opposing forces of lift and gravity. The lumbodorsal hinge is where these two forces meet.

The upper structure lifts from the LDH up; The lower structure becomes everything from the LDH down including the lumbar spine.

The pelvic bowl literally hangs from the spine posteriorally at the sacrum and laterally from the iliacus muscles as they flow into the psoas.

Look at the model, however. From the LDH up the model lifts and from there down it wants to drop. Upper and lower structures are delineated dynamically. The two halves of the body are not overpowering each other but seem to coexist in a manner that is characteristic of proper human structure.

Perhaps the most familiar tenet of Rolfing, horizontilization of the pelvis, can be observed with this model. Basic anatomy shows us the attachments of the sacrum to the pelvis, and the psoas muscle as it picks up the iliacus within the inner pelvic wall. In the model when one attaches the spine only (literally a string hanging from the two helium balloons) to the pelvis posteriorally, mimicking the sacrum, the natural tendency is for the pelvis to tip down anteriorly with gravity. However, after attaching two strings from the lumbodorsal hinge to the area of the hip joints to simulate the psoas muscle, the pelvic structure horizontalizes itself.

The dynamic of lift as well as the function of the psoas/iliacus muscles seem to be revealed quite clearly. The horizontilization of the pelvis can now be seen as a byproduct of lift-psoas/iliacus interaction. This model even suggests that the lower body starts at the lumbodorsal hinge and includes the lumbar spine.

Furthermore, in this lift model the pelvic bones appear to act as a shell surrounding and protecting the flow of the psoas/iliacus muscle group, as well as be a solid platform for the hip joint. The triangular sacrum appears to be anchoring itself down to the pelvis in a broad, almost parasitic grip.

It seems accurate. Each spinal vertebrae in the model is actually opening since the cranium is lifting and the pelvis is falling. As we know, an open spine makes much more sense for the human structure because it moves with much less wear and tear and helps insure that the deep intrinsic muscles are innervated. We in the Rolf community know that the body really doesn't crunch down on itself when it's upright as the medical model predicts. The lift model finally demonstrates this.

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What's new to us here is that the spine doesn't extend in the usual manner. Instead, it can be seen as a part of the structure that connects the cranium and the pelvis. The spine must eventually surrender to the opposing forces of lift and gravity that are relentlessly tugging at either end. The vertebral column certainly does not support the upper body as the medical model assumes; its primary duty, according to the model, is to support and protect the central nervous system (CNS). It could be used as support but that would be counterproductive, even harmful, to its design.

The CNS looks as if it gets feedback in the form of grounding from the lower body, and lift, in the form of lightness from the upper, to open up. More lift would require more grounding. More grounding would allow for more lift. Gravity would seem to compel the spine to open by providing proprioceptive feedback to the physical self. Lift would impel the spine to open by pleasurably teasing the CNS towards transcendence of the earth. Grounding would produce stability in the nervous system which, in turn, could open the higher potentials within the body.

There are still more interesting dynamics to the model. For example, the shoulder girdle does actually sit on top of the rib cage like a yoke as Dr. Rolf herself suggested. The element that was omitted in her statement was that the rib cage had to be held up by something. That something is lift. (Unfortunately, due to the poor lifting power of helium balloons, it's not always possible to include the shoulder girdle and arms on the model.) Plus, with just the right amount of helium, the legs could conceivably have a slight flex at the knee while the heels are fully extended. The heels can be seen to release all the way up to the LDH.

Does this model represent the human structure? Anyone can reproduce it to see for themselves. We know that the human structure has lift but we don't know exactly where it emanates from. This is a simple model that says lift comes from the upper body and then demonstrates what it does to the entire structure. It approximates lift coming from the upper body. The model would appear to be very accurate if indeed lift comes from, or through, the central nervous system. Perhaps there needs to be a model that puts more lift in the cranium and less in the thorax. This one only begins to reveal how much lift the actual human structure must have in order to be bipedal. Even so, I feel that it's a basic clarification of Dr. Rolf's work.

If indeed this model does represent our founders' vision, then the phenomenon of lift must take on a new importance, one that perhaps would put it on equal footing with gravity and structure. Saying that lift is a fundamental element of human equipoise and giving it the same emphasis as gravity and structure should enable us to do better what we do best: organize the human structure. The question becomes how the Rolf community can more reliably enhance human lift.

Or maybe we just need to show people how to get out of its way. After all, is Rolfing a process of taking away what's not the person or are we merely adding what our values are to the already overburdened individual? Can we really put in good structure or are we actually coaxing it out? Is an even myofascial release on the entire structure crucial for our process, or are we just trying to stretch and lengthen muscles? If lift is the physical manifestation of the human mind then it seems that our responsibility is to point out what is holding someone down. The lift model may be accurate if we get better results from our work by answering these and other questions. At least balancing our down-focus on gravity with an equally up-focus such as lift seems indicated by the model.

In my practice I have found that The Lift Model has been extremely useful. By imaging the model and comparing it to my client's structure, I can more easily see what needs to be done. I've used it in numerous demonstrations by asking the audience to contrast and compare the model with people in slides. This technique gets people to start seeing the Rolf way. If the model is put forth as an ideal, it becomes apparent that structural equipoise is at best a fleeting phenomenon at this stage of our evolution. I am more inclined to take my time because I now trust that both lift and gravity will continue to be the client's therapists after he or she is done with their sessions. Lift will impel, and gravity will compel them along as long as the entire structure is loosened.

Putting lift into a three-dimensional structure seems to add the missing ingredient of core energy to the lifeless medical model. Gravity, structure, and lift are now all elements that can be observed interacting within the human form. Among the dynamics presented here, The Lift Model seems to support and clarify some of our fundamental notions. It would be interesting to hear from other body disciplines about this model. I believe that only a Rolfer could come up with it.

Visualizing the dynamics created by lift should enable us to reap a fuller understanding of Dr. Rolf's work as well as lead the way to further exploration. Understanding gravity's effect upon structure was our starting point but isn't how Dr. Rolf made us unique. In order to get her message, we must fully appreciate that we are working with the energy field that lifts our weight onto two feet and defines us as human. The Rolf community can then give lift its proper emphasis in the scheme of things.