

Seeing through Shoulders Observations and Interpretations

By Sherry Brouman

Whole-body movement, breathing patterns, and psychosocial dynamics are often reflected in our shoulders. Communication between the cervical spine, which houses the brainstem, and the thoracic spine, which houses the heart and lungs, uses the shoulders as transmitters of structural and physiological data. For example, a forward head weighing heavily on the cervical spine creates the need for internal shoulder rotation, scapular abduction, and a kyphotic thoracic spine—all by way of a gravitational compensation for the forward head.¹ Over time, this posture causes changes in bodily functions, often depressing respiration and cardiovascular efficiency. These shifts may first appear as a downshift in energy/mood-state or as shoulder pain, reflecting a difficulty in sustaining yogic homeostasis (a state of balance and wellbeing).²

As yoga therapists, we incorporate all bodily systems in working to create comprehensive programs that reach the entire bio-psycho-social-spiritual spectrum. We are able to take cues from the shapes and movement patterns of the shoulders to infer structural and physiological ramifications, as well as emotional climate, only when we understand how the shapes have developed and currently respond to each other.

Seeing Shapes

Our movement habits begin in early development and are influenced by factors such as genetic inheritance, parental and cultural models, our physical history—habits, exercise, injuries—and our emotional climate, both past and present. The way that we use or do not use muscles determines our movement patterns. Muscle usage is influenced by the complex interplay of the *koshas* (body, energy flow, thoughts and beliefs, and state of wellbeing). Even tall, lean ectomorphic body types whose muscles remain lean no matter how much they exercise (as opposed to stockier mesomorphic bodies whose muscles grow in diameter quite easily)

exhibit joint shapes and movement arcs that reveal movement habits such as shoulder internal or external rotation that often include psychosocial ramifications.

Let's look at some shapes and consequential body landscape. An excessively lordotic cervical spine (see Fig. 1) is often accompanied by some amount of thoracic kyphosis (round mid-back) as well as excess lumbar lordosis.³ Because it is not always visible, the thorax (rib cage) may not appear rounded, and the restricted thoracic extension that comes with kyphosis can remain hidden until an attempt to do even a small backbend, for example (see Fig. 2). On closer observation or even palpation, you would see or feel a thoracic flatness that is at least temporarily unable to extend. Whether round or flat, thoracic kyphosis usually causes shoulder internal rotation.

To assess the shapes and patterns deeper into the body we must first understand the influence of the spinal curves on the shoulders and thoracic cage because connective tissues continually adapt to long-term, habitual postures. In kyphosis, the anterior shoulder musculature will tend to adaptively shorten while the posterior musculature will adaptively lengthen. Once the proximal shoulder joint musculature has shifted in this way, the transmission of joint-shape influence continues, not only distally into the elbows and hands so that pronated forearms and flexed elbows deliver hands to the front of thighs (instead of the sides) but also inferiorly into rib musculature, where the lower front ribs might descend and compress while the upper back ribs elevate and broaden by way of their accommodating intercostal muscles. These shapes then begin to affect deeper bodily systems. The rib/thorax shapes contribute to lung shape and



Figure 1



Figure 2

breathing capacities because of the strong membranous connections between lungs and the inner surfaces of the thorax. When you are observing the shape of the thorax, you are also observing the shape of the lungs.⁴

If you imitate excess thoracic kyphosis in your own body and attempt a deep breath, you can feel how the front lower lobes of the lungs are compressed and lose some capacity. Depressed lung volume means less oxygenated blood being transported to the heart, less cardiac efficiency, and potential implications on overall energy levels. Less energy is often perceived as or creates negative mood. Imitate again and breathe with this lower lung restriction for a whole minute and notice if you experience any emotional shifts. Even as a brief exercise, this posture can feel disconcerting and demoralizing, so that over time, posture can affect mood and long-term difficult moods can also affect posture negatively. Conversely, using yoga therapeutically can affect posture and mood positively.⁵

Validation and Invalidation of Our Observations

It is important to note here that not all early assessments get validated with further exploration; in fact, invalidation of our assessment is as informative as validation! We make assessments to understand bodies so that we can articulate for our clients how and why we are choosing the programs and sequencing designed to help them heal themselves. Body shapes and movement patterns make wonderful potential signposts.

Considering the validation/invalidation investigation, a client with thoracic kyphosis, including what appears in mountain pose as excess shoulder internal rotation, may have plenty of strong shoulder external rotation hidden to the eye due to bony compression. Even though we can't see the external rotation, it may be functioning perfectly well. This client may even have developed normal lung volume by using gravity well—pressing onto the ground to lift and stretch into his or her full height; the pressing down becomes an anchor for the ultimate width of the wide-opening thorax.⁶ Explore whether you can slouch and breathe comfortably. Now press strongly into the ground, lift up inside, breathe deeply, and note the difference in your potential lung and rib expansion laterally as well as vertically. Despite spinal curve deviations and/or joint asymmetries,

lung capacities and spinal stability, fluid movement can be perfectly healthy.

Breath Assessment

Now let's move on to more specific breath assessments to discuss how to validate or invalidate what we have seen so far in shoulder shapes.

Because we know that soft tissues adaptively shorten or lengthen with long-term skeletal positioning, the current postural state is usually determined by movement habits designed long ago to manage gravity and breathing in that body. Even lung capacity for inhalations and exhalations is determined by available muscle patterns that reflect old movement habits throughout the body. These habits create the current functional (or dysfunctional) muscular length; muscles are habitually used in the same manner because the same muscles work in their same teams for any and all bodily activity.

As mentioned above, constantly rounded shoulders, forward head, restricted breathing patterns, and cardiovascular inefficiency can lessen body economy and the sense of bodily freedom.⁷ From these physical movement habits, we can begin to think about potential psychosocial elements.

From Structure to Psychosocial

To get an initial systematic take on the emotional and perhaps spiritual reflections in a breathing pattern, ask yourself the following questions while observing your client:

- Where is the inhalation initiated? Ideally, this would be from the center of the body so that the entire diameter of the diaphragm increases, which capitalizes on central power.
- Are inhalations and exhalations initiated gradually or are they sudden?
- Do the clavicles rise up and overactivate the neck flexor musculature and the sympathetic nervous system? Do the upper trapezius muscles rise up?
- Do the exhalations go to completion comfortably and consistently?
- Are breaths placed comfortably between words as your client speaks?
- Is the breath pattern interrupted or stopped during posture transitions or moments of asana difficulty?
- Does the breath pattern seem to calm the client, thus engaging the parasympathetic nervous system?

- Are there visual cues that imply melting/releasing/opening? Or do they imply tensing/holding/closing?

If you read my last column about the importance of studying the feet in an initial assessment, you may be wondering, "Well, which is it? Should yoga therapy evaluations begin by reading from the feet or by reading from the shoulders and breath assessments?" To answer, I'll say that I have found that the overall engineering system of each body is a simple Legoland-like puzzle in which every weight-bearing joint (which is really all of them at some point in a yoga practice) both complements and is affected by every other weight-bearing joint. This means that we can peer in from almost any vantage point: feet, knees, hips, spine, shoulders, or breath, depending on the priorities most needed for your client's first assessment. Regardless of the entry point chosen, you will essentially arrive at the same conclusions to begin an effective multi-kosha yoga therapy program.

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