

Making Connections
Total Body Integration
Through Bartenieff Fundamentals

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CHAPTER 6



Breath

- ... *One with the life giving universe*
- ... *One with nature's fluidity*
- ... *filling and emptying in an ever on-going cycle*
- ... *being nourished, getting rid of what is no longer needed*
- ... *feeling whole*
- ... *no aims, no goals*
- ... *simply BEING*

Imagine, if you will, a situation where all is in harmony, complete in its rhythm . . . emptying to fill, filling then emptying in an ongoing ever-flowing wholeness. Life-giving fluid enters the system, rich in nourishment, swirling, laden with life energy. . . . A great whoosh connects what is outside, air of the world, with the inside of me . . . connects the inside of me with myself. Every cell receives its portion of food, healthy and at one with the environment . . . ready to pour out what is not needed, ready to release the waste, to open a space to make room to expand for new food. Emptying and filling, the circle is complete and the cycle continues. There is no goal to be reached and no targeted task. It is sufficient to BE, simple and whole, connected within, in unity with the universe.

You might ask, "How can I be in this wondrous place of perfect unity? How can I partake of this wholeness?" Simply by participating in the primal pattern of **BREATH**.

All human beings breathe. We breathe to keep ourselves alive. Our cells respire even within the womb, before our lungs develop and call for air. We have an active relationship within us that brings life and nourishment from our mother, and takes away waste in a basic pattern: Cellular Respiration—Cellular Breathing. When we are born, the cellular breath of life coming through the blood is fed by lung respiration, nourishment from the world mother, and the rhythm continues. We are aware that our lives depend on this pattern. Yet we give it little thought. In fact, part of the beauty is that it **requires no conscious thought to breathe. It happens automatically. Why mention Breath at all then?** For several reasons:

Breath is the key to life, movement, and rhythm. "Breathing is the central biological process among the core functions of the live organism. It is a rhythmical act, repeated incessantly all through our waking days and sleep-filled nights."¹

We breathe automatically, but breath can be influenced by and is reflective of changes in consciousness, feelings, and thoughts. We can attend to our breathing and

become attuned to changes in our own inner attitude as we go through our day. (For instance, noticing tension building up and breathing becoming shallow as we approach fearful situations.) And we can consciously choose to alter our breathing to affect our feelings, thoughts, and patterns of moving. (For instance, when I take time to breathe fully before rushing into a meeting or performance, it changes my way of being in that situation. I feel more sense of presence and ease.) This gives breathing a special place among our life-sustaining processes. It is possible to influence breath through conscious intention. Thus breath can be an ally in any desired approach to change.

As the first developmental pattern in the infant, breathing is the foundation, the ground base, for all patterns which follow. "Wherever the breathing is blocked in the body, future patterns will be blocked; wherever the breathing is free, the future patterns will develop efficiently."²

Conscious cultivation of breath is recognized in many cultures to be an important part of attuning to a spiritual connection between the individual and the universe. This is very clear in disciplines such as Tai Chi or Zazen. Breathing also plays an important role in ritual as well as in attaining changes in bodily or mental awareness (as in the study of Yoga). The healing arts in numerous parts of the world are cognizant of the spiritual aspect of their task. In such cultures, breath awareness is frequently central in training for these professions.

Healing of the Body-Mind is directly connected with restoring full functioning respiration. Health requires each cell to be doing its job. "Cellular breathing forms the building blocks of our 'life process'. Where it is not taking place, the cells are dead, where there is difficulty, the cells are struggling; and where it is occurring freely the cells are alive and healthy."³

Many people have disturbances in their breathing pattern and/or are not breathing fully. This can happen for numerous reasons including the following:

- a. birth defects
- b. accidents (acute trauma to the system, such as a motor vehicle accident)
- c. feelings and emotions (such as fear, anger, frustration, etc.)
- d. movement habit patterns (such as slumping or holding in the abdomen)
- e. addictions (such as smoking)
- f. misconceptions about the nature of breathing (for instance, trying to "make it happen")
- g. environmental stress (such as pollution or pollen)

It is obvious from the preceding that probably most people are enjoying less than their complete breath support.

In Summary, we study the nature of breathing because Breath⁴ influences every aspect of movement. **Everyone could benefit from spending some time each day tuning-in to his/her own breath.** By doing so, you confirm your own life connection.

As stated earlier, the importance of Breath in all aspects of movement is an underlying truth of Fundamentals. A basic principle in teaching or rehabilitation using Fundamentals is the following: **In patterning or repatterning, deal with the breath first.** If you are not sure why this might be recommended, I suggest that you return to Chapter 5 and reread the section on Principle #2: Breath Support on p. 41.

Tuning-In To Your Breathing

Above I mention that everyone could benefit from spending some time each day tuning-in to his/her own breath. If the idea of "tuning-in to your breath" is new to you, that phrase means giving yourself a chance to perceive what is going on as you breathe. It is taking time for sensate awareness, which might include any or all of the following:

- a. Noticing where in your body you feel the filling and emptying to be happening. Do you swell mainly in your chest area, your belly? Both simultaneously? Where does the emptying begin? There is no need to change your normal way of breathing, just notice.
- b. Notice whether the inhalation or the exhalation is longer. Notice if there is a time that you feel no need to do either—there is a natural pause as part of your breath phrase.
- c. When you breathe are you aware of any areas of your body moving subtly? Try putting your hand on an area that is moving to give yourself a touch sensation of the nature of the movement quality of Breath. Just let it happen.
- d. Are you aware of any areas in your body that feel tight and that are not moving, but feel like they would like to? Try putting your hand on that area. Notice what happens as you bring attention to that area through breath and touch. If you are patient, your touch may let you sense a subtle growing and shrinking in this area, bringing a feeling of new life and flow.
- e. Notice any adjustments in your posture that you want to make to feel more comfortable and able to put your awareness on your breath. Let your body adjust.
- f. If you close your eyes do you have a greater sense for the centrality of breath to your liveliness? Try it.
- g. Is there anything about your breath you are curious to try? Go ahead.

These are a few suggestions for "tuning-in." You will find more on your own, and there are many more movement experiences later in this chapter under the heading "Movement Exploration." As you read the following section, which deals with situations when you might want to tune-in to your breath, confirm for yourself when circumstances such as these occur in your own life. The next time one occurs, experiment with "tuning-in."

Some Situations When You Might Want To Take Time To Tune-In To Your Breath:

1. **When you're feeling exhausted, "dead".**
Breath brings liveliness. Taking time to be moved by Breath Patterning is a way of cultivating aliveness.
2. **When you're feeling far away from yourself.**
Breath helps put you in touch with your own internal state. It is a link to your proprioceptive self. It can help you locate where you are in the moment, what you are feeling.

- 3. When you're feeling tense or are under a great deal of pressure.**
Participation in the rhythmic phrasing of breathing allows you to release unwanted tensions, since at least half of the cycle is given over to removing waste from every cell. Quite frequently stress comes from "taking-on" or "taking-in" unneeded or unwanted responsibilities, noxious substances, etc. With every breath you have the chance to expel what does not nourish and is not useful to you. With every breath you also have the chance to take in sustenance, life energy.
- 4. When you are healing from an illness or injury.**
Healing is accelerated when oxygen reaches an area that has been injured. It brings new life to those cells. By using your active imagination to envision cells in the injured area filling and emptying, you can maintain a conscious connection with that area. I call this "Breathing-into" the area. In my experience there is a relationship between physiological processes and metaphorical images in my body-mind. The medical field of Psychoimmunology is exploring this relationship and is making important discoveries about a patient's contribution to his/her own healing.⁵
- 5. When you want more Mobility.**
Flow is the key to mobility. Breath creates flow in your body. The word "flow" in the English language refers to movement that is characteristic of fluids, and fluids are substances readily able to change shape. Both liquids and gasses are fluids. In the process of breathing, the fluid of the *liquid* blood carries the *gaseous* fluid (oxygen), streaming and circulating to enter our cells and bring them life food. Thus, breathing gives us a chance to enjoy both the wateriness and the airiness of fluids. By attending to our breathing we physically bring life and also remind ourselves metaphorically that we are fluid by nature, just as our universe is mostly water and air. The breath pattern aids me in becoming more mobile by enabling me in my mind's eye to open spaces in my body (similar to making more space in the lungs) and letting the fluid rush into the space facilitating mobility and change.
- 6. When you want more Stability.**
Stability is increased by sensing connection within the body, and from the body down into the earth. Stability is also aided by sensing the volume of the container for our fluid nature—as in the common reference in our language to a statement being valid or solid, "it holds water." Breath gives both a sense of the body as container and the body as connected spaces which can be filled. Indeed, in every cell, the cell membrane can be relied upon to contribute to stability by embracing and containing the cellular fluid. Giving attention to your cell membranes as you breathe will bring a sense of "presence" in your body. In addition, lung respiration is stabilizing in the clarity of its phrasing. The cycle can be counted upon—inhale, exhale, pause. You can trust that the inhale will come when it is right for your organism. There is security in that knowledge. It allows for a stabilizing sense of being in the Now moment. You do not have to worry about the past breath or anticipate any future one. You can be completely present and stable.
- 7. When you want to connect and communicate with another person.**
Attuning to another's breath pattern is one of the best ways to connect, whether that connection is in conversation or in a movement event such as

playing tennis, dancing, or making-love. Tune-in to another person's breathing and you know something about that person and are able to be with them at a core level. Most of the time we build this rapport unconsciously. But it is also valuable to be able to choose to be in-synchrony through breath. The connective power of breath is so strong that even when consciously attended to, the connection feels magical! Its mystery remains.

If you noticed situations on this list that are of concern to you in your life, you are now aware of one extremely powerful yet gentle way of dealing with them: Breath.

Let's move on to delving into some movement experiences with Breath. But first I'd like to talk a little bit about my general approach to designing movement explorations.

Approach To Movement Exploration

When I work with classes exploring the Breath Pattern, I approach it from many different ways, because I want the learning experience to be as rich as possible for people with different learning styles. Some people learn best through touch and proprioceptive knowing. Others learn through moving and knowing kinesthetically, while still other people are attuned to sound. Some have an immediate response to images in their mind's eye and/or actual visual experiences. Some individuals connect experiences immediately to spiritual feelings, others tap inner emotions, others respond to clear conceptual statements, perhaps backed with scientific findings. Multiple inroads to learning are also important even if only one person is involved (perhaps yourself, or a one-on-one tutorial). Any experience is enriched and amplified as more senses become involved. Because learning is a creative process and these different ways of knowing are part of the creative process,⁶ I include several diverse types of work in each class or individual session, even when just working by myself. There is no one way—it is always a matter of being sensitive in the moment to yourself and those you are working with. Sometimes people need to know the anatomy before they feel free to release into open-ended movement exploration.⁷ Other times the specific detailed information about a phenomenon has no meaning until there is a movement experience.⁸

Attending to Cellular Breathing (as described below) can bring back very early memories. It is an ancient embryonic pattern and frequently people feel "unformed" when doing it. Lying on the floor and simply Being may feel like life's greatest luxury or it can feel disorienting, because it is so far removed from our very structured daily existence. I always encourage people to listen to their own bodies and stop when they want to, then continue when they feel ready.

In addition to working individually, I suggest exploring in duets or in groups. In this way there is a chance to experience the relationship issues which emerge from the pattern. Again, this can feel uncomfortable to some people. I suggest they stay attuned to their feelings and keep working as long as they can. One Engineering student who was in my class and was used to achieving alone asked in a pointed way, "Why do we have to do all this stuff working with other people? Why can't we just work by ourselves?" I replied that I had noticed that most companies (whether dance companies or engineering firms) did not succeed merely on the strength of individual excellence, but on the success of people in the company being able to move into action together, appreciating both commonalities and differences. Another person in the class mentioned that this is also true in romantic relationships. We all acknowledged that in our culture we rarely have the chance to build relationship skills. Since movement is one of the primary ways we connect, it is quite appropriate to know more about relating to people through moving with them.

The above conversation was biased toward developing a "reasonable" justification for working in partners or groups. A question might just as easily come from the other end of the spectrum. I have also had students who have said, "I really feel like I need to spend more time just moving and being a part of other people. Why are we cutting ourselves off and working alone?" To this I might respond that in my experience being able to be with myself is equally a part of the rhythm of relationship as being with another. Again, our culture does not provide much support for taking time to be with ourselves and, hence, most of us have difficulty doing it. Being with yourself in movement, especially when supported by breath, is one very satisfying way to begin.

Movement Exploration

The following movement explorations are suggestions for finding the richness available in putting your attention on moving from the Breath Pattern. They are in no way a formula that should be followed. As you proceed you will find your own ways of being with your movement through Breath. The first time through each experience, some people find it helpful to ask a friend to guide them through the experiences by reading slowly, leaving long gaps of silence for experiencing the movement. Another possibility is to record your own voice on a tape recorder.⁹ Of course neither of the above are necessary. Simply reading the paragraph, getting the gist, and beginning to move might be the best for you. Whatever you choose, follow your own movement impulses and enjoy yourself. There is no need to rush. Let yourself stay with an experience until you feel complete.

As you explore you might want to surround yourself with fluid ongoing sound—perhaps the sound of the ocean, voices chanting in long tones, or the Australian instrument which is played with circular breathing, the Didjeridu.

A. Find a warm comfortable place where you can lie down or sit. Allow your eyes to close as you gradually leave the problems and experiences of your daily life behind for a while. Feel the total support of the earth beneath you and release your weight even more into it. Begin to notice that you are continually filling and emptying. Don't change it, just notice it and enjoy the inner experience of growing and shrinking that it brings. Your shape is subtly flowing and changing, supported by your breath. If sound comes naturally as you breathe, let it happen. You might find you want to sigh, moan, hiss, or make pitched tones.

B. Put your attention into your cells and relish the nourishment that is coming into them, filling them. Confirm for yourself also that you are letting go of all that is not needed, emptying to make room for new life energy. You may want to put your hand on a part of your body to help direct your attention to cells in a particular area. You will probably notice that you can feel the filling and emptying clearly. You may also notice that you can feel a fluid "inner ocean." Spend quite a bit of time just Being with your cells in the area of your hand, then let your hand move to another area. Your skin is a sensitive perceiver. Touch is a wonderful way to gain knowledge and give knowledge.

C. Notice that you are already moving ever so slightly as you breathe. Enjoy that very small movement. You may notice that, almost without any effort, the Breath could lead you into larger movement. Go ahead and allow yourself to be moved by the Breath. Let go of any set shape you are maintaining and allow yourself to close a little. Feel how satisfying it is to release into yourself, emptying any unneeded concerns. After a moment of being closed, yield to your desire to open spaces in your body. Whichever space your attention goes to, allow that area to open and fill voluminously. For instance you might want to fill the bowl of your pelvis and let it open the space at your femoral joint and down into your

legs. Your legs may want to expand away from each other, almost like lungs. As you fill, let the spaces between your ribs open, feel your shoulder blades spread, sending a breath of air down into your arms and moving them. Continue playing with closing and opening, letting your breath move your whole body.

D. Open your mind's eye and become aware of the image that is there for moving in this way. Let your own image give life to your movement. Perhaps your image is of an amoeba, yourself as a single cell, an enormous bag full of sloshing water, a balloon, or an ever-expanding and contracting universe. Whatever your image, let it move you.

E. Try a different relationship to the earth. If you have been lying on your back, let your belly greet the earth and vice versa. Even though you may be lying on the floor, you can sense a connection with the earth. Open the cells of your skin and spend quite a bit of time breathing into the earth.

F. Gradually you may become aware that you want to roll from side to side. Go ahead and roll, melting into the ground as each part of your skin comes into contact with it. Open the cells of your skin to the earth and breathe into the earth.

G. If you feel you get stuck in a shape, spend time breathing within the shape and its own "way out" will come naturally. You may even want to condense or congeal the shape even more momentarily to heighten the experience of easy release that the Breath can bring as it follows its own flowing journey into a new form.

H. Spend time finding where your weight wants to shift. Do very small shifts as you discover how your breath is related to your weight center.

I. Experiment with gradually coming to a stillness, noticing what body parts are supporting you. Explore equipose relationships on one, two, three, or four body parts. Find how your breath relates to balance and stability.

J. Let your breath move you toward more mobility and level change. Play with changing level, going into and out of the floor "riding" your breath like a wave. (See Figure 1)

K. Play the game of "automatic moving"—noticing which part of your body is already moving (even in the tiniest subtle way) and following it with breath until its phrase is complete, then noticing the next movement that is already starting to happen somewhere in your body and following it to its completion. Notice which part of the breath cycle is the most satisfying to you, the closing or the opening. When you have done this for a while you might start to notice how the closing and opening relate to the exhalation and inhalation. Is emptying or filling the most gratifying today? Keep going until you want to stop. This can be done even while sitting at a desk.

L. Let the breath pattern your movement in structured forms as well as improvisation. Work with very simple movement structures which you already know well. Choose from everyday life, such as climbing stairs or going into and out of a chair from standing. Or choose from a sport movement, such as a tennis serve, or a dance "plie." Do the movement several times, just noticing how your breath is serving you. Don't try to push the breath or the movement to happen in a specific way.

M. Pick a movement sequence you usually find difficult to do. Do it several times while attending solely to your breath. Be aware of how moving from your breath is different from focusing on the task . . . just flow along from your breath.

N. Develop your own ritual form of subtle opening and closing involving weight shift with breath support. Experiment until you find several movement sequences which feel like "home," core to who you are, and are gratifying to do over and over again. Treat yourself to this ritual every morning as a way of greeting yourself and the earth. (Many people around the world use Tai Chi or Yoga in this way.)

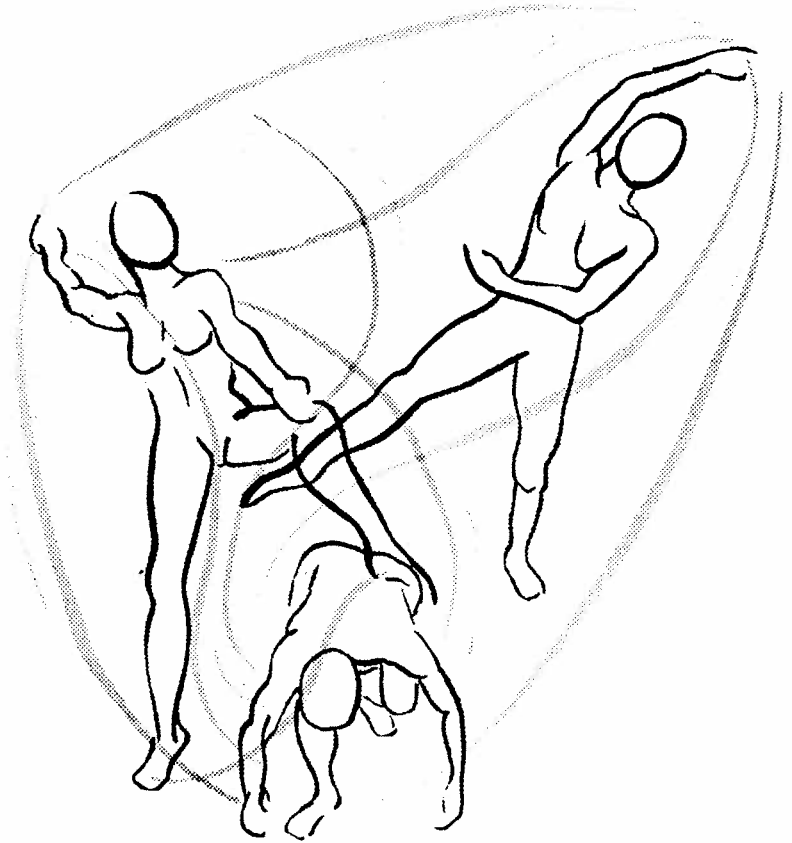


Figure 1. "Riding" breath like a wave for more mobility and change.

O. As you go through your day and are aware of a mood change in yourself or in other people, notice your breathing. Does your breathing change in different situations? (For instance, when you feel comfortable, when you are anxious, when you are speaking to someone, when you are singing, when you are running.) Notice how your mood and the situation interact and are reflected immediately in your breathing. Simply become aware of Breath in your everyday life.

Movement Explorations With A Partner

The experiences above are primarily suggestions for your own individual explorations. It is also very valuable to spend time with a partner tuning-in to breath.

P. Spend time with your partner, simply becoming aware of your individual breathing. Without attempting to change how you breathe, stay with your own breathing and just be in close proximity with your partner as he/she is being with his/her own breath. Notice whether you sense that you are in a common kinesphere (movement sphere).

Q. When you feel comfortable with your partner, allow some part of your body to come into contact with his/her body. Give your attention particularly to the area of contact and "breathe into" the cells in that area, enlivening them and opening a flow channel between

your two bodies. It is not necessary to try to change your breath pattern, nor is it necessary to try to change your partner's pattern. Just be there in contact, attuned to filling and emptying. After a while, gradually let the contact flow to another part of both bodies. (For instance, if you began with your hand on your partner's belly, perhaps you will roll through to being back to back.) Keep experimenting.

R. If it seems satisfying to both of you, allow yourselves to merge into a similar breath pattern while you are in contact. Let your growing and shrinkings come into synchrony. Become aware of the movement that wants to happen and gradually let it happen. Notice that you move easily in contact together, each person seeming to automatically sense what the other is doing. If this is enjoyable stay with it for a long while. Notice what you are discovering about relationship possibilities in the Breath Pattern.

S. Continue moving with your partner, but not necessarily in contact. Stay attuned to your breath and your partner will stay attuned to his/her own breath, which may or may not be in synchrony with yours. See what kind of duet emerges. Spend time afterwards dialoguing with your partner about what you both experienced. What was your experience of being connected when your breath was in synchrony? When it wasn't? Was the nature of the connection different? Which was most enjoyable to you?

It is also possible to be with another person utilizing Breath as your central organizing awareness even though you are not moving in large movement, but are simply watching him/her move.

T. As your partner continues moving in whatever way is satisfying to him/her, watch and participate by actively being attuned to his/her breath. When this feels comfortable, release the intent to stay attuned to your partner's breath and simply continue to watch, but remain attuned to your own breath pattern. Be with yourself while also attending to another person. Spend time afterwards discussing this experience together. What new knowledge do you both have? How did you feel as the observer and how did your partner feel while being observed? How was this similar or different from previous observer/observee experiences in your life?

Bonnie Bainbridge Cohen might refer to what we have been doing in this and previous exercises as participating in the "Mind" of Breathing (i.e., utilizing Breath as your central organizing awareness). I sometimes refer to this as a "World View" (i.e., moving in a way that the nature of reality for you is experienced as the rhythm of a particular bodily organization, such as the Breath pattern).

U. Ask your partner to travel through space, challenging him/herself to move fully in types of movement that might previously have been difficult (for instance, a demanding movement combination from a dance technique class, a martial art, or a sport). Be with him/her again from the "Mind" of Breath and also begin to notice where in the body the movement could be fuller. (You might notice a holding in the neck, ankles, pelvis, etc., or you may simply kinesthetically identify with wanting to breathe more fully into a area.) As your partner continues to move, gently touch the area of his/her body or mention it verbally, saying "breathe into the back of your neck." Continue until both people feel complete. Then discuss what happened. How was this experience different or the same as other previous life experiences you have had in teacher/student relationships or in situations where correction was involved?

Empathy

The type of sharing and ability to be with a partner which you experienced in all of the above explorations is a part of what is commonly called "empathy." You now have a bodily knowledge of what it is to be empathetically attuned to another person through the Breath

pattern in both merging and maintaining separateness. You are also aware that it is possible to be truly "with" someone while also staying "with" yourself. In other words, you do not have to give up yourself to be with someone else. This has important implications for all relationships, but is especially crucial in therapist/client or teacher/student interactions.

Group Movement Exploration

V. *If you are working with a group of people, gradually move into a group form where you can be in body contact with each other. Staying with the breath, experience the group slightly growing and shrinking together, letting the shape subtly flow as the group fills and empties. Put your attention to every part of the group body even as you are also attuned to every cell in your own body. Feel the new life, yet also the continuity of Beingness. As you continue to be with the group, remember that change is a natural part of Being, and it is not necessary to decide to change (i.e., allow the group to do what it needs but don't feel it has to change. It is fine just Being.) Let this experience continue until it comes to its own completion. Take time to discuss the experience as a group.*

Approach To Medical/Scientific Information

After you have experienced moving while attending to the Breath Pattern, you might be interested in a short bit of anatomical information which I have found useful in my own understanding of Breath and its importance for me and my students. Only brief information is included here and it is preceded by a statement concerning my own approach to using such information.

Anatomy, physiology, kinesiology, and other medical-scientific fields overlap extensively with the study of Fundamentals and provide rich information which can be utilized by the student of movement. Such knowledge does not automatically increase one's skill in *moving*, however. **The key element in usefulness of medical-scientific information to increase movement facility is the degree to which it facilitates a more lively moving image (and, hence, an active understanding) of physiological or neuromuscular connections within the body.** I encourage you to seek the latest medical-scientific information and utilize it for yourself to creatively engage your body-mind in what *for you* would be meaningful images in your current life. There is no *one bit* of information that would be crucial for every person. Medical science is so vast, it is important to frame the search for information within larger questions that might be of concern.

For instance, when I first began studying breathing in relation to movement, my own movement concern was to be able to connect my upper body with my lower body. I had a habit of breaking the coordination and connective flow of movement from my lower to my upper at my waist area. When I moved my arms fully, I tended to hold my breath slightly and lose my grounding. This was disturbing and I needed anatomical support for an image that could let me experience how my whole body was related through my central core. When I discovered the integrating relationship of the diaphragm and the psoas (how breathing supported connection into the lower body, see below pp. 62-64), I was intrigued and kept studying more. Gradually my own internal understanding grew, aided by the anatomical information. But also as my own creative involvement with that anatomical information kept developing, I was excited about its implications for movement connectivity. Scientific information was important because I had a larger purpose than simply

accumulating facts and I was able to translate the information into useful metaphors for inviting efficient, connected movement.

As I became more aware of "Whole Systems" through the ecology movement in the United States, I wanted to know more about my own intimate relationship with the world "out there." Simultaneously, I wanted to be more in touch intimately with my world "in here" (a desire to tune-in to myself in a sensate way). Bonnie Bainbridge Cohen began teaching about Cellular Breathing, and I explored moving with that awareness. It seemed to fill a need and was a new approach to breathing. At this point I found it valuable to deal with the physiology of respiration in the way I do below. All this is simply to say that my approach to scientific information in *Fundamentals* is to attempt to keep knowing bodily as I take on more "facts." I seek out information which will actively serve me and shed light on curiosities I have about moving at that time. Then I attempt to find the most movement-oriented way of understanding the information (generally in terms of a metaphor or image). In the future, I look forward to an ever-continuing development of scientific metaphors, "facts of the imagination" which will emerge.

Here are a few ways in which I might utilize physiology in my work to support an understanding of Cellular Breathing and amplify the metaphor of universal connection implied in that "World View."

Cellular Breathing Within The Lungs:

When I read about the process of respiration in physiology books, I am drawn to such aspects as the oxygen/carbon dioxide exchange through the tiny sacs called alveoli, which are the ends of the smallest branches coming down the bronchial tree of the wind-pipe (trachea). These tiny sacs are surrounded by minute blood vessels (capillaries) which embrace the sacs in a weblike net, so that the capillaries are touching the sacs in an ongoing "contact improvisation." The alveolar wall is only one cell thick and the traffic through the cell wall is two way. In the inhalation phase the alveoli expand and fill with air, taking in oxygen from the environment outside. In their contact with the capillaries through the permeable cell wall they release their oxygen into the bloodstream to be circulated and given as nourishment to cells throughout the body. In turn the alveoli through this "dance" of cellular contact, accept the carbon dioxide from the capillaries and dispose of this waste product through exhalation, releasing it out the bronchial tubes and into the world.

With every breath we connect and have an exchange with the environment outside of ourselves. The fuller our respiration, the more each and every cell of our bodies is dialoguing with the world.

Cellular Breathing Throughout The Body:

Frequently when I suggest "breathing into" a part of the body, for instance the feet, and feeling the feet respond to the air in the environment, a student will say, "That's impossible. I don't have lungs in my feet!" Of course I agree that the lungs are not located in the feet. But physiologically each cell is like a metaphorical lung. Consider the following imagistic re-framing of physiology:

As I inhale, I take in oxygen from the world which is welcomed into my bloodstream in the lungs (see above) and is then carried to every cell in my body by the circulatory system. I imagine each cell swelling and becoming satiated with oxygen-rich nutriment. Inside each cell the oxygen is used in a metaphoric "life-bonfire," fueling the job of that cell. In

this process of energy production it releases carbon dioxide, which then pours out of the cell carried by the blood, emptying the cell of what is no longer useful. My carbon-dioxide-rich blood is then transported back to my lungs where it is released into the world again and can be utilized by plants for life. My cycle connecting the world with my insides and my insides with themselves is complete.

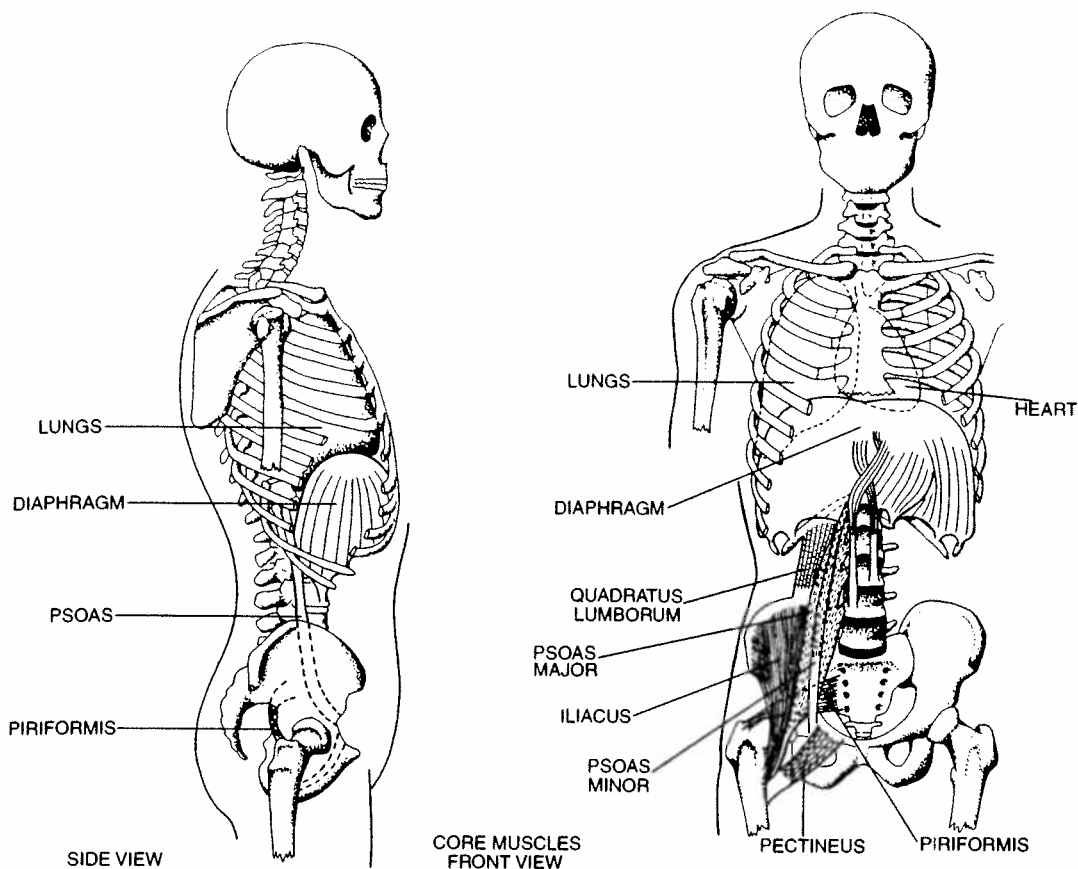
When I am attending to Cellular Breathing I feel a unity with the universe, a harmony with all living beings. I sense that I am part of a larger ongoing round rhythm that is comforting. It is useful to me to know that my own body perception is supported by physiology. As Bonnie Bainbridge Cohen points out, "The air that comes into our lungs is of a different quality than the air leaving our lungs. The carbon dioxide that we breath out is breathed in by the plants and is necessary for their survival. The plants, in turn, transform the carbon dioxide into oxygen in their cells and release the oxygen back into the outer environment for our use. The in-coming air is a gift from our outer environment, rich in oxygen. The out-going air is a gift from our inner space back to the world, rich in carbon dioxide."¹⁰

Anatomy and Kinesiology have also been quite useful to me in exploring the nature of Breath and how it facilitates connectivity. As you read this you will no doubt notice that my discussion of lung respiration emphasizes different aspects than did my discussion of cellular respiration.

Upper-Lower Connectivity In Relation To Lung Respiration:

Sometimes people think of breathing as an upper body activity—associated totally with the lungs. But air rushes into the lungs because of muscular action lower down in the body. Anatomy and Kinesiology tell us that respiration is an activity facilitated mainly by the diaphragm, aided by the abdominals. The diaphragm contracts and descends (like a piston going down), increasing the internal volume in the upper body and automatically pulling air into the lungs. The diaphragm then releases and ascends upward (again, somewhat like a piston) and the air is expelled from the lungs. This simple process continues to repeat itself all of our waking and sleeping lives. How does this relate to Upper-Lower connectivity?

The diaphragm is a muscle which is like a dome forming the floor of the thorax (i.e., the chest area, which contains the heart and lungs) and simultaneously the roof for the abdominal contents (see Figure 2 & 3). In other words, it is a muscle that is more "central core" than "upper." Even more interesting is the fact that the muscle fibers of this dome radiate out from its apex to attach to the costal cartilages, the lowest ribs (11 and 12), the costal arch, and even as far down as the 3rd and 4th lumbar vertebrae (by means of the crura). Thus, the diaphragm connects far down into the pelvic basin. In this process, its fibers interdigitate, like fingers crossing through one another, with fibers of the psoas muscle and other muscles which form the internal muscular wall of the abdomen, such as the quadratus lumborum. Since the psoas major connects the lesser trochanter of the femur with the lumbar vertebrae traveling all the way up to the 12th thoracic vertebrae (level of the lowest rib), it is also not simply a "lower body" muscle, but is also (like the diaphragm) a muscle of the "central core." The psoas is a link from the legs to the spine and can form a "kinetic chain" with the diaphragm to integrate upper and lower body activity through the breath. In other words, there is an internal communication pathway set up between the upper body and the lower body through the diaphragm/psoas interrelationship. This will be seen to be a major factor when we discuss limb-torso connections, weight shift, and travel-



Figures 2 & 3. Relationship of diaphragm and iliopsoas.

ing in later chapters. Because the psoas is a powerful flexor of the femur and an important part of the pelvic floor as well as a major element in postural alignment, its central location in relation to the major muscle of "life breath," the diaphragm, cannot be ignored.

Upper and lower body are also in an intimate relationship through the synergistic and complementarily opposite roles of the diaphragm and abdominal muscles. The diaphragm would be less effective in the absence of abdominal muscles that are actively alive to change. A held abdominal area will cut down on efficiency of breathing and will eventually begin to "deadend" that area for sensate movement, perhaps leading to what in Fundamentals we might refer to as an Upper/Lower disconnection. This has implications for dance and sports training which frequently stress *holding* in the abdominal area in order to look thin (i.e., "suck in that gut and keep it there!"). The diaphragm and abdominal muscles "are always in active contraction but their activity varies reciprocally. Thus, during inspiration the tonus of the diaphragm increases while that of the abdominal muscles decreases, and vice versa during expiration. Hence, there exists between these two muscle groups a 'floating equilibrium' constantly shifting in both directions. . . ."¹¹ This also indicates that the whole torso is involved in breathing. It is certainly not simply an adventure of the upper. I imagine the experience of breathing to be like an internal massage, with the movement of the organs (viscera) massaging the muscles which then feel more alive to

movement. **By fully breathing I am surging sensation throughout my torso. I am “contact” with my internal core.**

Let's be more specific about the relationship of the diaphragm and the abdominals:

In order to **inhale**, the diaphragm contracts and the central tendon is pulled down, thus making more space in the thoracic cavity and decreasing the intrathoracic pressure relative to the outside atmosphere. This difference in pressure pulls air into the trachea and lungs. The excursions of the diaphragm downward pushes on the internal organs in the abdominal area, causing them to move subtly, slightly decreasing contraction in the abdominal muscles. But because the internal organs are contained within an abdominal “girdle” (formed by the rectus muscles, the transversus muscles, and the internal and external obliques), the abdominal contents are not totally displaced forward and downward (anteriorly and inferiorly) but are able to stabilize the central tendon to allow the diaphragm to elevate the ribs. “This antagonistic-synergistic action of the abdominal muscles therefore is essential for the efficiency of the diaphragm. This is borne out in disease, e.g., in poliomyelitis, where the paralysis of the abdominal muscles reduces the ventilatory efficiency of the diaphragm.”¹²

During **exhalation** the diaphragm relaxes slightly and recoils upward and the abdominal muscles contract. Since the diaphragm is no longer pulling down on the diaphragm's central tendon and elevating the ribs, the ribs release in toward the center of the body. As the diaphragm excursions upward and the ribs release, the thoracic space is diminished and internal pressure in the thoracic area is increased relative to the outside atmosphere. This causes the air in the lungs to rush out to the external world. The abdominals are an aid in this whole process. They contract as the diaphragm relaxes, and in doing so they increase the intra-abdominal pressure and push the internal organs (viscera) upwards. This movement of the viscera helps to raise the central tendon of the diaphragm and contributes to full respiration. In my own body I experience this sequence as a slight sensation of suctioning inward and upward at the end of the exhalation which I imagine to be happening along a line of energy that is similar to that of my psoas. It feels like a subtle internal massage. This contributes to my ability to feel alive in my internal support system. The resulting internal “lift” may be one aspect of what is sometimes referred to in dance training as “standing above one's legs” or “pull up.” It is important to notice, however, that this is **an alive activity within the body and is not about holding the abdominals**. In fact, holding the abdominals keeps them from participating in their natural ongoing reciprocal action with the diaphragm and will lessen the sense of internal connectivity.

Breathing is not only about connectivity, **Breathing is also our first experience of inner space**. In our form-defined world, space reveals itself in three dimensions, vertical (up-down), sagittal (forward-back), and horizontal (side-side). With each breath we have the possibility of experiencing change in all three of these dimensions.

The above statement is supported anatomically as we discover a bit more about the action of the diaphragm. On the inhalation, the diaphragm increases all three dimensions of the thoracic cavity.

- a. It increases the vertical dimension by pulling down the central tendon.
- b. It increases the horizontal dimension by elevating the lower ribs.
- c. It increases the sagittal dimension by elevating the upper ribs with the help of the sternum.

During exhalation, action of the diaphragm (assisted by the abdominals) decreases all three dimensions of the thoracic area.¹³

Movement Exploration—A Spatial Approach To Breath

In a very basic way we can begin to experience our relationship to space simply by tuning-in to our breathing. I suggest that you *begin to notice which dimension feels most emphasized in your own natural breathing process. Enjoy letting your breath move you into space. Then, just for fun experiment with other spatial emphases in your breathing, noticing how each emphasis in space affects your feeling about yourself in the world and how it influences your expressivity. Now return to your own easy breathing and enjoy how it supports your own preferred way of moving.*

You might find it helpful to experience the spatial aspect of the anatomy material in movement. There is no one correct way to do this. Use your imagination in relation to the anatomical information which interests you. For instance . . . ***In a group form it is possible to move the action of the diaphragm***, pulling down on the inhalation and releasing upward on the exhalation. Let the entire group experience descending while filling and rising while emptying . . . Now explore the action of the ribs—spreading away from the center of the group on the inhalation and releasing into a “soft embrace” around the center on the exhalation. Let the whole group experience this aspect. Then divide the group into two parts, letting one part reveal the diaphragm and the other part of the group reveal the ribs. In this process a beautiful rhythmic “movement choir” will emerge if you stay with the breathing and amplify the spatial feeling.

As we come to the end of this chapter, take a moment to return to the more basic general experiences of “tuning-in” to your breath, which you were encouraged to try at the beginning of this chapter (p. 53). Notice how your experience of breathing has changed as you have invested in the Pattern of Breath in many different ways. Relish the fullness of your experience.

Notes

1. Irmgard Bartenieff, manuscript, p. 239.
2. Bonnie Bainbridge Cohen, *Contact Quarterly*, Fall 88.
3. Bonnie Bainbridge Cohen, *Evolutionary Origins of Movement*, p. 11.
4. Henceforth in the text, I have chosen to capitalize the word “Breath” whenever I am referring to the whole gestalt of the breath pattern as a way of organizing the body-mind. This includes the metaphoric aspects of breath as a connector with the life-giving universe as well as the actual physiological process of bringing oxygen to the lungs and cells. Using Breath as a central organizing awareness is like living in a very special “world.” The view of reality from inside that world is different from the complex work-a-day world of the 20th century, or even from the view of the world that is possible when organizing from another pattern of bodily organization, such as Head-Tail. This “World View” concept is dealt with in detail in a later chapter.
5. This field is changing so rapidly it is not useful to site specific data. I recommend that the reader explore the latest scientific findings for him/herself.
6. See Charles Johnston’s, *The Creative Imperative*.
7. If you have this need, you may want to skip ahead and read the anatomical information on Breath in this chapter, pp. 60–64, and then return for the movement experiences.
8. I happen to be biased toward moving first, but this could be because I am a kinesthetic learner myself—or it could be because I trained with Irmgard Bartenieff, who very much believed in learning through action.