Joan Melton

♥ilates¹ is a low-impact workout that can make you "longer, leaner, and stronger"!² While there are distinct differences in breathing technique between Pilates training and voice work for the actor and singer, the powerful benefits of Pilates and of Gyrotonic®, which is taught in many Pilates studios, may override those technical incompatibilities. This chapter suggests practical solutions to specific problems through communication between movement trainers and voice specialists, individual adaptation of voice-related breathing patterns to movement work, and the use of modified Pilates-based exercises in the voice class.

PILATES: BACKGROUND AND PERFORMANCE CONNECTIONS

Studios offering Pilates and Gyrotonic training may be found throughout the world and are frequented by a range of performers from dancers to actors to music theater performers to opera singers. While the two systems, Pilates and Gyro, have different and unique origins, they are often taught by the same teachers. \Diamond

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Pilates was a well-kept secret, known mainly to classical dancers and a few athletes before the 1990s, when studios began to appear in major cities throughout the United States, the United Kingdom, and in other parts of the world. The training is named for its creator, Joseph Pilates (1880–1967), who was born in Germany, immigrated to the United States in 1926, and taught in New York City until well into the 1960s.³ The Pilates method involves slow and controlled movements, either on Pilates equipment, the best known of which is the Universal Reformer, or on a mat. The Reformer looks like a long table with straps, springs, and a box for activities designed to strengthen muscles and joints. The training is usually available in individual sessions as well as in small classes. "The beauty of Pilates is that it engages the body and mind simultaneously. The actions, which are gentle and flowing, promote excellent tone, sleekness and grace."4 Approaches vary from one part of the world to another and can range from calisthenics-like multiple repetitions to individualized programs for specific concerns.

The Gyrotonic Expansion System was known mainly in New York and San Francisco in the 1990s. Its originator is the Romanian-born Hungarian ballet dancer Juliu Horvath (b. 1942). In 1970, while performing in Italy with the Romanian National Ballet, Horvath defected from Romania and ultimately found his way to New York City. He performed with several ballet companies in the United States and, while a principal dancer with the Houston Ballet, suffered a serious injury that ended his career. He turned to yoga and meditation, and then began to create his own exercise method, known first as Yoga for Dancers.⁵ "Gyro includes movements of Tai chi, yoga, swimming, dance, basically all things the body naturally does. . . . Gyrotonic® is primarily the equipment work and Gyrokinesis® is the non-equipment work."⁶

My first awareness of Pilates came during a visit to Gastown Actors Studio (GAS) in Vancouver, Canada, in the winter of 1995. Although I did not observe a Pilates class at GAS, I was intrigued by the enthusiasm with which the training was described. Four years would pass before I had the opportunity to do a three-week intensive with an excellent Pilates teacher in California. I was an immediate convert and continued to train with Karen Shanley (b. 1940), who was head of a dance program near California State University Fullerton, where I taught. Pilates had

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a strong appeal to me personally and was immediately applicable to my teaching of voice and movement to actors and singers.

Gyrotonic equipment was just beginning to appear in Pilates studios in 1999. I had an introductory session during my three-week intensive, and then did not encounter the training again for several years. It was my former teacher, Karen Shanley, now in Colorado, who said, "You must explore Gyrotonic," and put me in touch with an excellent trainer in New York. I connected with the work instantly and saw huge potential for integrating voice with all of the exercises, not in a prescribed way, but totally exploratory, allowing the body to release the vocal sounds it wants at any given moment.

RELATED RESEARCH

One of my favorite Pilates-based exercises for vocalizing and speaking a variety of text is the often-photographed V shape, in which the performer balances on the buttocks and makes a V with the legs and torso. To facilitate singing or speaking, hold the feet, ankles, or legs with the hands and maintain an elegant (not stiff), elongated spine!

I used this exercise for years, personally and with my students, and as we'd spent considerable time on anatomy, I pointed out that *something* in the abdominal area released for inhalation, even as the abs were obviously involved in maintaining the position. Thus, we were able to speak even long phrases of Shakespeare with a voice that was free and full. But I didn't know *what* released.

Then, at a conference on performance breath in January 2007 at the Royal Academy of Dramatic Art (RADA) in London, physiotherapists Ed Blake (b. 1970) and Jane Grey (b. 1969) presented a workshop entitled "Ultrasound Imaging of Abdominal Support Mechanisms whilst Voicing." "[Blake and Grey] demonstrated . . . the advantages of Real Time Ultrasound in assessing abdominal muscular patterns while voicing, and consequently the effect of poor support. . . . This Real Time approach is ground breaking in its speed to diagnose and see the problems."⁷

This was intriguing! But as I worked primarily with actors in training, my interest was somewhat different from that of a therapist. So after

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Figure 4.1. Adapted Pilates V. Photo by Shea Smith.

the conference, I met with Jane, and together we initiated the first-ever study using ultrasound imaging to observe abdominal muscle activation patterns of professional performers during a wide range of vocal tasks, for example, laughing, crying, calling, speaking, singing, in a variety of physical positions—including a Pilates V! \diamond

Abdominal Muscle Activation Patterns

A defining moment came early on. At our first filmed session, both Jane and I noticed that the deepest muscle, transversus abdominis, and often internal oblique as well, released for inhalation and engaged for voicing. Then in Pilates and yoga-based positions, we saw the multitask-

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ing of those same muscles as they moved to effect the positions and continued to work with the voice.⁸

So what released was transversus abdominis, which connects with the diaphragm. Internal oblique often mimicked, or worked with, transversus, while external oblique tended to have more of a postural function. Rectus abdominis appeared to be only minimally involved in breath management for speaking and singing.

Similar observations were made in a 1989 study on "Abdominal Muscle Activity during Classical Singing."⁹ However, as only surface electrodes were used, observations were limited to regional activity. Twenty years later, in a 2012 study, researchers focused on baseline muscle thickness and recruitment patterns of transversus and internal oblique during phonation in a range of vocal qualities. Although greater changes in millimeter thickness were observed in internal oblique, transversus was "recruited preferentially and significantly in most vocal qualities tested."¹⁰



Figure 4.2. Abdominal muscles via ultrasound imaging, left side. Photo by Gerard Reidy.

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Another observation made in London and subsequently supported by a larger 2010 study at the University Queensland, Brisbane, Australia, was that each subject had a unique "ab print," or basic neuromuscular pattern that could be seen regardless of the vocal task or physical position.¹¹ This seemed to suggest that breathing strategies might be more similar than different from one physicality to another, which would help to explain the multitasking capabilities of many skilled actors and music theater performers. Actors are trained to use voice safely and effectively in virtually any physical position, moving or still, and voice "use" may range from quiet speaking to singing to screaming to wailing to laughing hysterically to simulating a character with vocal injuries. Likewise, music theater performers must dance as well as sing, speak, and act in a wide range of physical positions.

Physical Position and Vocal Pitch

Early in my Fitzmaurice Voicework® training (voice/movement for actors), I discovered that high pitches were easy to access in rounded positions, for example, modified yoga plough and shoulder stand, and that low sounds were wonderfully accessible in arches, for example, sphinx and cobra. This was splendid information for teaching actors, who often think they have a limited pitch range and then discover quite the opposite very quickly. However, again I was not sure why this was so, even after consulting a range of voice experts. Then Kenneth Tom (b. 1954) suggested, "When one is in a sphinx or cobra, the spinal hyperextension itself creates a tracheal pull, which lowers the larynx. In a plough, or any posture where the cervical/thoracic spine is in strong spinal flexion, there is far less tracheal pull, making it easier to use upper strap muscles and CT [cricothyroid] to increase vocal fold length/ stiffness."¹²

The trachea (windpipe) exerts a pulling force on the larynx. This force is often called the *tracheal pull*. It increases if the diaphragm descends, as for inhalation.¹³ Tracheal pull has been investigated in several studies with singers, and a new study focusing on professional actors is currently in progress.¹⁴ Tom goes on to say, "[In addition], the laryngeal position in the postures you mentioned is affected by gravity. So in the plough or shoulder stand, you have *both* spinal flexion and gravity making it easier

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Figure 4.3. Modified plough. Photo by Ty Turner.



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Figure 4.4. Modified cobra. Photo by Ty Turner.

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for the larynx to move superiorly; in cobra or sphinx, you have both (hyper) extension and gravity facilitating downward (inferiorly) pull on the larynx."¹⁵ Regardless of physical position, a wide range of pitches is accessible to most performers. However, when vocal extremities are unfamiliar, rounded and arched positions can open up unexpected possibilities.

The Gyro Connection

At my first Gyrotonic lesson, I was struck by the relation of Gyro exercises to other rounding and opening movements that I use and teach daily. Although I was not free to use voice at that initial session, I experimented later with similar movements, allowing the voice to play as it would. High notes emanated from the rounding and low sounds from the opening, and a full pitch range was available in either shape.

If you watch a Gyrokinesis® class or Gyrotonic video, you will notice the smooth, beautiful transitions from arching to curling to arching to curling. And those movements are initiated and guided by pelvic floor and low abdominal actions that relate easily to breath management, or "support," for voicing. \blacklozenge

Ruth Sapsford (b. 1935), senior researcher at University of Queensland, Brisbane, speaks of the relation of pelvic floor muscles to the abdominals: "It is not possible to activate pelvic floor muscles (PFM) in singing and dancing, whether they are providing organ support or continence, without activation of the abdominal muscles."¹⁶ She goes on to say elsewhere, "A very gentle PFM contraction will predominantly recruit transversus abdominis, but when greater effort is made with the PFM contraction, internal oblique will be recruited as well, and if a very strong effort is made the external obliques will be activated too."¹⁷

Hence, the muscles used to guide the spiraling movements of Gyrotonic and Gyrokinesis are the same muscles we use to facilitate voice and the exploration of a wide pitch range! Practical research may serve to further clarify the high/low pitch phenomenon as it relates to physical position, and projects including this topic are underway in Australia and the United States.¹⁸

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INTEGRATING VOICE AND MOVEMENT

When Pilates is taught as a separate course in a performing arts curriculum, communication among voice and movement specialists can be a critical factor in the practical success of the program. Movement and voice need to be related and integrated for the student; otherwise confusion reigns and benefits dissipate. Students hesitate to contradict their teachers, yet teachers will seem to contradict one another unless technical differences and appropriate modifications have been discussed in advance. Integration can be brilliantly facilitated by using movementbased exercises in the voice class, and there is outstanding precedent for such integration.

Fitzmaurice Voicework, for example, uses modified yoga postures to deepen the breath and facilitate both resonance and emotional response. In a 2000 article for the *Voice and Speech Review*, Ruth Rootberg (b. 1951) describes her application of Laban/Bartenieff principles to a Linklater vocal warm-up.¹⁹ Actor-director James Harrison (b. 1990), from Tasmania, Australia, integrates singing, speaking, and extended vocal sounds with the Japanese martial art kendo. The Alexander Technique has a unique place in the training of performers, and singers especially benefit from the gentle, physical efficiency of that work. *D*

A particularly valuable way to work on songs, monologues, and scenes is to "physicalize" them—allowing movement to happen as it will, rather than planning it or trying to do what seems logical. The body is smart, and giving it a chance to "speak" on a regular basis can be both freeing and enlightening.



Figure 4.5. Sitting suburi, from kendo. Photo by Alyd Turner.

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Breathing Strategies

Pilates training can enhance the study of anatomy and physiology and supports the actor/singer's work on balance and centering. Perceived conflicts emerge, however, as we look for consistency among physical "truths," especially in the sensitive and critical area of breathing. Integral to Pilates movement is a type of breathing that seems alien to good voice use. Pilates teachers often demonstrate and encourage an audible inhalation and forced and audible exhalation. Breathing is centered in the chest, with no abdominal release, and anterior expansion of the lower ribs is strongly discouraged. As singers and actors, we have learned a very different physicality, and our use of breath is intimate to our craft.

In her classic text *Dynamics of the Singing Voice* (1982), Meribeth Dayme (b. 1938) says, "During inspiration the lungs expand by means of enlargement of every dimension of the thorax."²⁰ In the same author's *Handbook of the Singing Voice* (2000), she also writes the following: "The breath is silent rather than gasping or gulped and full movement of the diaphragm and the back portion of the lower ribs is possible. . . . Raising the shoulders to inhale and pushing them down to exhale [is a common problem]. This usually occurs because there is no movement in the lower back and abdomen."²¹

Pilates training opens the back and side portions of the ribs and develops awareness and strength in that part of the body. At the same time, it permits little movement in the abdomen. Jennie Morton (b. 1970), osteopath, dancer, and voice professional, says, "Dancers have historically been taught to brace the abdominal muscles inwards as a blanket strategy for stabilizing the core; however, we now know that this tends to create rigidity rather than dynamic stability, and also impairs optimal breath mechanics."²²

Lateral movement of the ribs is often new to singers and therefore an added benefit of Pilates training. Actors, on the other hand, experience lateral breathing as they learn to work with as little rigidity as possible so that the whole torso is free to respond to impulse, action, and imagination.

For both singers and actors, a lifted sternum is ideal for vocal production. When the sternum is high, the anterior portion of the lower ribs and cartilage is free to expand. When, as in Pilates training, the lower

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ribs are tucked, or closed, the sternum cannot be high, and the singer/ actor feels restricted. The height of the sternum not only affects the performer's breathing and vocal sound but also changes the position of the shoulders, which round slightly when the sternum is lowered, thus diminishing the performer's apparent confidence and openness.

The Pilates method of breathing is described as the "cleansing breath," in that it "emphasizes the importance of keeping the blood-stream pure . . . [with] full forced exhalations followed by a complete inflation of the lungs" to oxygenate the blood and eliminate noxious gases.²³ Another explanation of the audibility in the method is that it makes people aware of their breathing.²⁴ Although these are valid perspectives, they reflect a world of movement without voice. Dancers seldom speak or sing as they move, except in music theater, and a frequent problem for dancers who study singing is the physical conflict they encounter around breathing.

A young Pilates teacher came to me some time ago as a student. She is a dancer, a member of an excellent professional company, and a talented actress who was advised to study voice because she was straining and going up in pitch when she had to speak loudly. After a bit of discussion about alignment and breathing, I worked with her on a mat using basic Fitzmaurice "Destructuring" positions. These are modified yoga postures that open the entire torso to breathing in a very unstructured way and make it virtually impossible not to let go of abdominal holding. In our initial conversation I had observed a thin voice that lacked richness and color. With the work on the mat the voice changed immediately, and she was amazed at the depth, power, and fullness of her sound. In order to access and develop the actor's vocal potential and range, the abdominal muscles must be freed and the ribs uncensored.

My personal solution to the breathing conflict in Pilates training is to release the abdominal muscles more or less, depending on the exercise, and inhale silently. I believe we can adapt singer-friendly breathing patterns to the smooth, controlled nature of Pilates movements without losing the tone, sleekness, and poise that are the trademarks of a Pilates practitioner.

Gyro also teaches an audible inhalation to accompany some movements. Other breathing patterns are relatively close to what we would do automatically as professional voice users. However, it is good to remember that inhalation for singing and speaking is usually quick,

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efficient, and silent, whereas movement modalities, including Pilates and Gyro, often lengthen the inhalation.²⁵

Alignment, Balance, and the Neutral Pelvis

When Pilates principles are included in the voice or voice/movement class, they can serve to connect and support other aspects of the work. For example, in actor training, we speak of working from center, or from a place of balance. Eli Simon (b. 1957), former chair and head of acting at the University of California, Irvine, called it a "ready position."²⁶ In the context of readiness, or the actor/singer's "neutral," Pilates can be particularly useful. We want the actor to understand her or his own body as thoroughly as possible, to be aware of habitual use and able to let go of habits that are not efficient. We're looking for a clean slate, physically and vocally, so that the freedom to do *anything*, in terms of character and style, can come out of the physical efficiency of that neutral.

The Pilates concept of the neutral pelvis is especially applicable to readiness. Finding that position of the spine, lying down, sitting, or

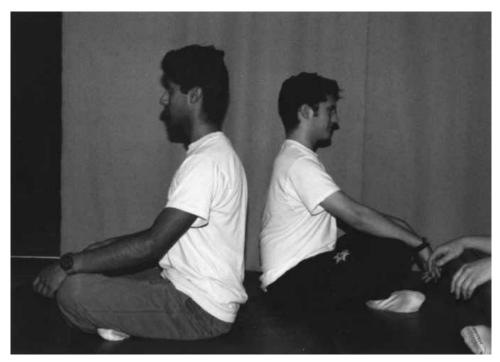


Figure 4.6. Engage pelvic floor. Photo by Ty Turner.

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standing, in which we maintain the natural curve in the lower (lumbar) spine, neither arching nor tucking the pelvis, makes for safe and efficient use of the body and releases abdominal holding that can inhibit the freedom to breathe deeply. One quick way to help students find a ready position is to ask them to stand with their feet parallel and rise to their toes by lifting from the pelvis.²⁷ They should focus on a low physical center and come down gently without rocking back to their heels. Even in a sitting position, engaging the pelvic floor can do wonders for the actor's balance, alignment, and energy.

The pelvic floor is comprised of a sling of muscles that lie at the lower opening of the pelvis (also known as the pelvic outlet), running between the pubic bones and the tailbone and sitting bones. If you think of where the two pubic bones meet at the pubic symphysis as your first point of reference, then the tailbone and the two sitting bones as three



Figure 4.7. Side stretches. Photo by Shea Smith.

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further points, you can envisage a diamond shape drawn between them. Imagine gently bringing those points together, or toward one another. You've engaged the pelvic floor—as well as the transversus abdominis muscle—and you're probably sitting a little higher.²⁸

Other Pilates-based exercises relate directly to opening the breath and releasing the body to speak and sing. For example, side stretches done on the Reformer or in the course of a mat class can free the rib area laterally and contribute to flexibility in a part of the body we often hold rigid. Upper body exercises also teach excellent use of muscles beneath the shoulder blades, thus releasing the trapezius and freeing the head, neck, and shoulders for vocal production.

Singing and Speaking from the Whole Person

In the introduction to her last book, *From Word to Play:* A *Handbook for Directors*, Cicely Berry (1926–2018) writes, "I think we should never forget that language, wherever it originated, started as noises expressing a need, a feeling, an intent, whether of anger or frustration or desire, to another living being, and that noise, that sound, that rhythm, came from the body as a whole."²⁹



Figure 4.8. Macbeth, New York Classical Theatre, 2017. Photo by Miranda Arden.

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At acting and voice juries we frequently hear the comment "He's speaking from the neck up," or "She's singing from the neck up." Translated: The voice seems disconnected from the body, both in sound and in its relation to the moment. Pilates and other movement-related methods can help us connect the voice to the body, and as we produce sound through movement, we tap into emotions we might never experience otherwise.

Thus, we begin to act and sing with the whole person, and our performances become infinitely more interesting. I do not suggest that we must move in order to sing or speak well—rather that the experience of integrating voice and movement can take us to a different level of awareness and performance energy, even when we are still.

FINDING THE RIGHT TEACHER

Finding the right Pilates teacher is similar to finding the right voice teacher, in that you are looking for a knowledgeable person who understands your goals and can help you to reach them. In addition, you want a teacher with whom you have a rapport, as that interactive quality has the power to facilitate learning.

Training and Performance Backgrounds

Pilates and Gyro trainers tend to be dancer/choreographers and sometimes physiotherapists, especially in the United Kingdom and Australia, with a wide range of performance backgrounds. Teacher bios frequently mention injuries or other physical concerns that influenced their decision to train in Pilates, Gyro, or other movement modalities.

As singers and actors, we often come to movement training with somewhat different goals from dancers, so the wider view of an experienced teacher can be particularly helpful. Individual lessons become more expensive as you go up the training ranks, but specificity, attention to detail and the potential for relating across disciplines can be worth the cost. Even among master teachers, knowledge of vocal anatomy and vocal production will be rare, just as knowledge of dance anatomy and dance techniques will be rare among voice specialists.

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Classes versus Individual Sessions

Pilates mat classes and Gyrokinesis might be compared to group work in singing. Classes are often stimulating, and a good teacher will provide as much individual attention as possible. Private lessons, however, are the place to focus on individual concerns and to work with the equipment, which is excellent and effective! If you are fortunate enough to have lessons in a separate space, rather than in a lab situation where individual and group work occurs simultaneously, you may be able to experiment with voice in the presence of your trainer. That can be the best of all possible worlds, as vocal sounds then become part of the physical actions.

FINAL THOUGHTS

Throughout this chapter I have suggested *integrating*, rather than separating, voice and movement. Actors and singers need to walk and talk at the same time, sing and dance in extraordinary settings, and acknowledge voice as an essential part of the body. One of the liveliest, smartest, and most inspiring ways to resolve technical conflicts is for performance specialists to work together, to do one another's work honestly, openly, and with some regularity. Norman Spivey (b. 1960) and Mary Saunders Barton (b. 1945) have set a brilliant example for us all in the cross-training of classical and music theater performers.³⁰ That same quality of collaboration and cross-training can exist between pedagogues in voice and movement. For several years, I had the privilege of working regularly with a movement specialist who was also a dancer, choreographer, and director. I still use—personally and with my students—exercises that I learned in our one-on-one sessions of sharing, discussing, clarifying, and discovering.

NOTES

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