

Gesture, Movement and the Keyboard Performer

Creating a somatic approach to learning, practice and performance

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By

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Creating a somatic approach to learning, practice and performance

Purpose of this Project

As performing musicians, we must engage our bodies fully to execute music at our instrument. Specifically, at the keyboard, how we use our bodies to create music at a non-ergonomic instrument presents a significant challenge. The legato school of organ playing, the basis of most organ training, which taught that knees and heels are generally kept together and our bodies remain quite still, did not encourage freedom of movement and appropriate gesture. This project will examine movement elements of past and present organ pedagogy, explore the Feldenkrais Method and Body Mapping approaches to movement, and present an application of gesture and movement for the keyboard musician based on a somatic approach.

Background

In the late nineteenth and early twentieth century, the default touch in organ playing was a seamless legato. One champion of this style of playing was the French organist Marcel Dupré (1886-1971), who edited the Bach organ works complete with legato style fingering and pedaling. This legato style was passed on through his many students, becoming standard in the United States through method books such as Method of Organ Playing by Harold Gleason, organ professor at Eastman School of Music 1921-1955. As mentioned earlier, the knees and heels together approach was the standard in the legato school of organ playing. Meant to serve as a way to measure

intervals in the pedal, this locked approach to pedaling created tension throughout the body and made fluid gesture and movement more difficult.

As research and scholarship turned to historical models in the second half of the twentieth century, awareness grew that how we move on the bench greatly affects the musical outcome. In reading descriptions of early keyboard technique by Diruta, we learn that the arm leads the hand, indicating directional freedom of movement. Additionally, Diruta states there must be a very small gesture from the first point of contact on the key until it is released. Therefore, there is movement begun by the arm and followed by the hand and fingers to achieve movement from one key to the next. The shape, or gesture, of the movement is dictated by the music itself.

To help musicians better understand their bodies and how to use them to best advantage at the keyboard, study of techniques such as Body Mapping and Feldenkrais Method is invaluable. While the goal of both somatic approaches is to create more freedom in movement through better breathing, posture and movement itself, the approach of each is unique. The goal is somatic education, listening to our bodies as we learn, or as Feldenkrais states, "Awareness Through Movement."

Specific Aims and Hypothesis

The goal of this project is to gain better understanding of how to use our bodies at the keyboard throughout the entire learning process. Too often musicians focus on learning the notes first with a plan to "add" the musical and physical elements later. With a more somatic approach to learning, practicing and performing, we can achieve a more

musical result with a deeper somatic awareness from the very beginning and ultimately greater ease at the keyboard.

Research

Interviews and lessons

The impetus for this project and related research came from my work as a doctoral student with Dr. Roberta Gary, professor of organ and Certified Andover Educator (Body Mapping is based on the Alexander technique). Having chosen the College-Conservatory of Music specifically because of Dr. Gary's training and experience in somatic education was purposeful. In my first year, I took two quarters of independent study with Professor Gary which we titled "Movement at the Organ." The core of those quarters of study are the nucleus of this project and have led to my continued interest in the Feldenkrais Method, Body Mapping, and Bones for Life.

As is evident when watching the interview with Dr. Gary, we had agreed upon a list of questions and the general flow of the conversation, knowing there would be areas explored we might not have anticipated and that we would be flexible with each other as the topics expanded or unexpected ideas or thoughts were introduced. Though I anticipated the need to edit the video due to content, the interview is presented without any cuts, save for a battery change by the videographer. The conversation was natural, engaging and entertaining so that what you see in the one hour video is exactly how the interview transpired. In the appendix, I provide some documentation that I feel is helpful for viewers of the video such as Dr. Gary's practice guide and all of the Zen sayings quoted throughout the entire project.

Likewise, the subsequent lesson is shown in its entirety with only one technical edit when we received a five minute warning from the videographer. As with the interview, the lesson also assists the viewer in practical and real-life application on the concepts of somatic education. As will be further explored in the research study, a goal of this project is to integrate the concepts of somatic education into all levels of our work as musicians and as human beings.

The second interview is with Cynthia Allen, Feldenkrais Method practitioner and Bones for Life Teacher/Trainer. As a non-musician and having been trained in a different area of somatic education, the interview and lesson with her is a wonderful juxtaposition to Professor Gary's. Just as Schenker said, "Always the same, but not in the same way," so could be said about these various approaches to movement at the keyboard. The goal is the same, ease at the keyboard, but the approach is unique and I would also add, ever evolving.

Ms. Allen's movement lesson with me at the organ is particularly interesting in that much of the work she did was away from the organ. This is much like a Feldenkrais lesson which would be taught at her studio, with the obvious difference playing before, during and after the movement lesson. Though not a musician, her observations were significant and would pinpoint areas in the body that needed attention. In the first section of the Widor I played, she commented on the fact I was favoring my right rocker, somewhat required in that particular portion. Later, while off the bench, was when that particular issue was dealt with, not immediately at the bench as one might expect.

This approach is an excellent model for musicians, student and teacher alike, to not immediately jump into "fixing" a perceived problem, but to look at the person or

musician as a whole over a longer period of time to assess the best approach to the issue. For me as the student in this situation, dealing first with the foot and leg movement side to side, then addressing better use of my rockers as part of the larger movement of feet, legs, and pelvis, I had a better concept of how all those parts might work well together. When I returned to the bench, I was immediately able to feel a difference, even in the way I was contacting the bench itself.

Research Studies

I conducted three classes with a total of 13 students participating. The first class was held at Christ Church Cathedral, Louisville, Kentucky, the second at Susquehanna University, Selinsgrove, Pennsylvania, and the last one at The University of Cincinnati, College-Conservatory of Music. Each class began by all participants playing a hymn of my choosing followed by a three minute organ piece of their choosing.

Following a short break, I led the class in the following somatic exercises based on my research and reading. Full descriptions of 2-5 are in the Appendix.

1. A Zen saying with time for participants to comment. "We learn something by doing it, there is no other way." John Holt from Zen Calendar
2. A focus exercise from "The Now Habit" by Neil Fiore. This is a 2-3 minute exercise which assists the participant to work in what Dr. Fiore calls "The Flow State."
3. Bounce on heels from Bones for Life I
4. Mapping the rockers from Body Mapping
5. Mapping the arm from Body Mapping
6. "The Clock Face" from Feldenkrais Method (see appendix page 13)

After these processes (Feldenkrais term for such exercises) were completed, the participants again played the same hymn and piece and discussed any

differences they noticed after bringing awareness to their body movements. While everyone made a comment that they were aware of something different, the most interesting comments during the classes were from those watching. However, one participant in particular had comments about her own playing that were insightful. After playing for the second time, she said:

“I get really nervous when I play. So the first time I played I didn’t feel like I was actually here. Sometimes in an effort to block out nerves I block out any physical sensations. So then to bring physical sensation back and to be thinking about where I am in contact with the bench and keyboard is frightening. But at the same time it allows me to be more ready to recover from the mistakes that happened. It is a very different experience having a physical connection to the music. I felt like I noticed more.”

There was a one-page follow up questionnaire sent to all the students three days following the class. Often in somatic education, more is revealed after some time passes and the mind begins to be more aware of what the body has learned and is doing. Therefore, the follow-up questionnaire was more beneficial than collecting data onsite. All of the student's responses are in the Appendix.

Project Materials

The videos from the entire project are hosted on YouTube and linked to my personal webpage robertbozeman.com. It was my desire from the beginning of the project to have the full interviews and lessons as the core of my research, therefore I have presented them in their entirety. I envision that these will remain on my site and that I will add to these over the years with other interviews and lessons.

Additionally, I think there would be great value in creating shorter clips of these interviews and lessons with the purpose of focusing on one idea, concept or

problem as well as the added benefit of attracting someone to the project who finds the longer videos daunting.

Funding

The research portion of this project was funded by a generous grant from The University of Cincinnati University Research Council in the form of their Summer Graduate Fellowship. This grant allowed me to focus full-time, 40 hours per week, on this project during July and August 2012 as well as supporting necessary travel and related expenses.

As this project involved human subjects (interviews and class studies), I was required to request approval by the UC Institutional Review Board (IRV). Their approval was granted on September 13, 2012 and a copy of that letter is found in the Appendix on page 38.

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Zen sayings used in this project

- “We learn something by doing it. There is no other way.” John Holt
- “The way is near at hand, but people always go far away looking for it.” Zen
- “Knowledge is learning something every day.
Wisdom is letting go of something every day.” Zen
- “Mistakes are the portals of discovery.” James Joyce
- “Perfect does not mean perfect actions in a perfect world,
but appropriate actions in an imperfect one.” R. H. Blyth
- “When you get there, there isn't any there there.” Gertrude Stein
- “A man should look for what is, and not what he thinks should be.” Albert Einstein

How to practice/How we learn Roberta Gary

The New Shorter Oxford English Dictionary defines “practice” as “Repeated exercise in or performance of an activity so as to acquire or maintain proficiency in it”. I might also define it as “changing *not-knowing* to *knowing*”, or “teaching yourself to learn”.

I Use all the elements of good technique all the time while practicing.

Sitting on the rockers; support comes from there
The head leads the body; the arm leads the hand
Putting the keys down; releasing the keys (“touch”)
Moving with ease to the next note
Staying in good contact with the keys

II The three levels of practicing: 1. working it out
2. putting it together
3. polishing and performing

Level One (the most important level!)

Learn to see everything on the page.

Importance of the **quality** of each note.
Find the easiest way, the simplest part, to get started.
Let it be easy and comfortable.
Learn to “stop in place” when unsure.
Recognize the combination of kinesthetic and cognitive learning.
Don’t use too many repetitions—trust the body—the learning occurs later.
Don’t always start at the beginning!
Enter necessary fingering/pedaling/division of hands as you find them.
Choose the appropriate working tempo.
Don’t practice with the metronome!
“Correcting mistakes” is NOT practicing.

Level Two

Equalizing the sections of the music
Designing a practice session, based on remembering previous sessions
Creativity vs. predictable routine
Practice several pieces at each session, not just one.
The concept of “the conductor” becomes important.

Level Three

Practice performing—going straight through.
Learning to set the tempo
Recording yourself to hear what you really sound like
Practice pieces on different levels in the same session.
Your “conductor” directs the performance.
Script used for leading research studies

Script used for leading research studies

1. Sharing a Zen saying and asking for participants to comment. Not all participants need to comment. "We learn something by doing it. There is no other way." Zen.
2. A focus exercise from "The Now Habit" by Neil Fiore. This is a 2-3 minute exercise which assists the participant to work in what Dr. Fiore calls "The Flow State"
3. Bounce on heels: Standing, participants pay attention to alignment of the spine and organize knees into a state of readiness (not rigid or locked). We lift both heels slightly (1/2 inch to 1 inch) then fall down on them. While doing this we say "pum, pum."
4. Mapping the rockers. We bring attention to where we are sitting first by coming to the edge of our chairs. Notice where your body contacts the chair. Rock slowly left to right and begin to find the bottom of the pelvis or the sit bones. We call these "rockers." They are round bones at the bottom of the pelvis. When we are seated, they support our weight on the chair. Now slowly rock front to back and begin to experience the feeling in your low back as you rock back (S curve lessons) and when you rock forward. Rock back and allow your weight to go to your tail bone (doesn't feel great). What happens with your neck when you rock back? What happens to your alignment when you rock back then slowly rock forward? Allow yourself to rock forward to the point that you almost rise from the chair, then come back. Where do you bend? This should occur at the front of the pelvis. Rock forward again and place more weight on your feet but do not yet stand. What happened to your head and alignment? Stand up, then sit back down, slowly! Are you able to immediately find your rockers as you sit? When do they release the chair when you stand? Does your alignment remain as you sit and stand? Notice how quickly you find your rockers now as when you first began.
5. Mapping the arm. Using the attached sequence.
6. A Feldenkrais exercise called "The Clock Face." Participants map their sit bones, now called rockers, then imagine they are sitting on a clock face. I then ask them to rock to 12 then back to center; to 3 then back to center; 6 then back to center, 9 then back to center. They then explore the distance between 12-3, 3-6, 6-9 and 9-12, each in a smooth motion. I invite them to explore on their own larger distances while keeping their movements smooth. Continuing with this idea, we rock from various numbers such as 1-7, 4-7, 3-12, etc. Repeat this portion slower and faster. Participants then choose their own numbers and experience their own movements based on individual choice. This particular process is one of the most basic but important process in the Feldenkrais method. For organists, it is vital to being grounded on the bench and establishing balance on the bench as organists do not have their feet on the ground while playing, but are suspended above the pedals.

Focus Exercise from “The Now Habit”¹

FOCUSING EXERCISE

Start by sitting upright in your chair with your feet flat on the floor, with your hands on your thighs. Focus your attention on your breathing. If you’ve been stressed you may discover that your breathing is constricted. Breathe deeply, holding your breath for a moment, and then exhale slowly and completely. Do this three times, counting each time you exhale. With each exhalation imagine that you are letting go of any remaining tension and that you are deciding to drift to a different level of mind.

Now focus your attention on the feeling of the chair against your back, buttocks, and legs. Float down into the chair. Let it support you, as you release any unnecessary muscle tension. You can now let go of those muscles. Shift your attention to the floor, and let it support your feet. Now let go of those muscles. As you let go, continue to exhale away any remaining tension. Just let go and allow your body to give you the gift of relaxation and support.

During the next few moments, there is nothing much for your conscious mind to do except to be curious and allow your subconscious mind to provide your body with deeper and deeper relaxation with each phrase.

Now, notice how heavy your eyelids are beginning to feel. And as you experience them getting heavier and

¹ Neil Fiore, *The Now Habit* (New York: Putnam, 1989), 144-146
Robert L. Bozeman

heavier, let them float softly closed over your eyes. Or you can try to keep them open, and find that it takes so much effort to try that it's much more comfortable to let them float down of their own accord. As your eyes close, allow relaxation to flow down over your entire body.

Letting go of the past. With your next three slow, deep breaths, tell yourself to let go of all thoughts and images about work from the past. Let go of what you've just been doing—driving in heavy traffic, making a telephone call, cleaning the house. Let go of thoughts about what you've been telling yourself you should or shouldn't have done. You may even want to let go of your old self-image—your former sense of identity and its limitations on your potential.

Letting go of the future. And with your next three slow, deep breaths, let go of what you anticipate happening in the “future”—a constructed concept of a time that really doesn't exist. Let go of all thoughts and images of future work and deadlines—freeing more energy for focusing in the present.

Centering in the present. With your next three slow, deep breaths, notice—just notice—that it really doesn't take much energy to just *be* in the present. Let go of trying to be in any particular time, and let go of striving to be any particular way. Just allow yourself to notice the sensations of being where you are now. Choose to be in this situation, allowing the wisdom of your body and inner mind to give you the just right level of energy and relaxation to be here, doing whatever you choose to do in this moment.

You can now find yourself at a deeper level of relaxa-

tion where you can give yourself any positive suggestion you wish. With your next three slow, deep breaths, you can begin to link the power of the right and left hemispheres of your brain, reaching the flow state under your conscious control.

After taking about a minute to complete the first part in twelve breaths, use any one of the following conclusions to complete your focusing on a specific issue.

To overcome procrastination and stimulate interest in starting work, count up from 1 to 3, and say to yourself:

With each breath I become more alert, curious, and interested in how rapidly I'll be going beyond discomfort and worry to starting with purpose and commitment in just a few seconds of clock time—1. Becoming more and more alert and ready to begin as I tap into the inner wisdom of my mind and many alternative solutions—2. Coming all the way up to full alertness, operating at a genius level with the support of my entire brain and my creative faculty, ready and eager to begin—3.

Track 2 S1D1
BOUNCING ON HEELS – PULSATIONS BUILD BONE (PROCESS #2)

So come and **stand up**. Some of you can stand behind the chair. Just take all the space. Not in a line. Just take the space around. And for people who have equilibrium issues you can very well hold on the back of the chair. Very good.

We are doing something very simple. **We lift both heels. And fall down on them.** We lift them, like half an inch, not much. Just lift them a little bit and create that impact, that shake that happens, that awakens something in ourselves. This is like feeding the bones. Sending the blood there.

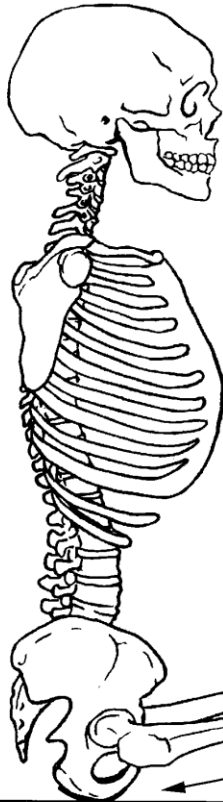
Let's do it in the pace of heartbeat. That is more relevant. Like *[Pum, pum...Pum, pum...Pum, pum x 13]*

Okay. **Just take a moment to see how you are standing.** And maybe, already it trains the body to compose itself a little bit more logical, sensible, a little easier. Maybe?

Now let's see how we can guarantee that the alignment will be fluid and in continuation so that the impact of heightened pressure will not be stuck in a compressed neck is too curved in or in the lumber.

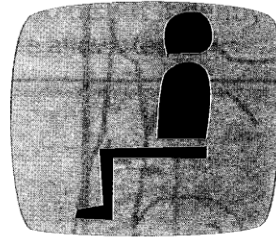
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Mapping the rockers³



Your middle is equipped with lovely rockers called sitting bones by some (or sit bones, or sitz bones, after the German), to give you stability and mobility both at once. Notice that the rockers are not separate bones, but rather the base of the two pelvic bones.

*We don't sit
on our legs!*



Many wind players rock on these rockers as they play chamber music, forward and back, side to side, from one to the other. Movement at the rockers is elegant, expressive, and supportive of your instrument and your breathing.

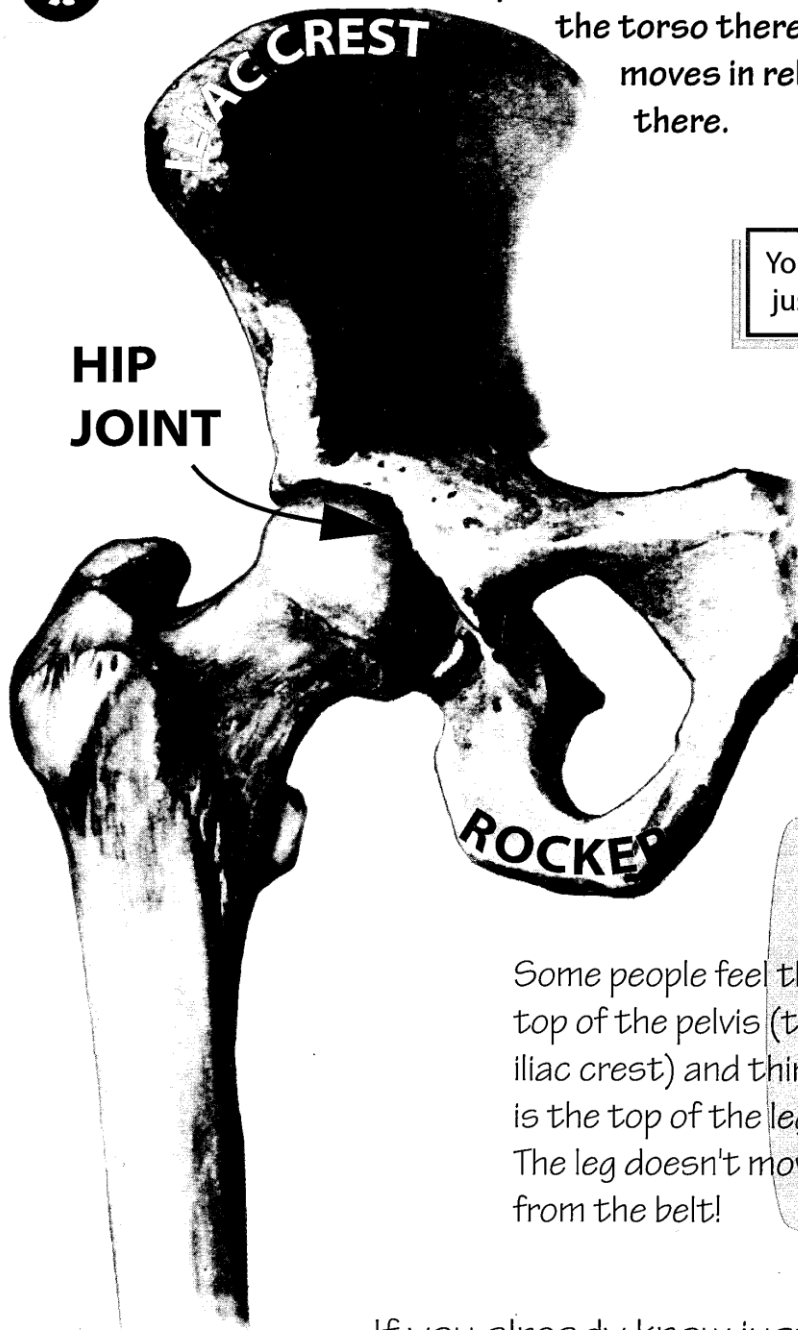
*We sit on our rockers,
which are angled like the
rockers of a rocking chair,
for maximum stability.*

If you use your rockers for stability and mobility,
brag about it!

³ Barbara Conable, *What Every Musician Need to Know about the Body: The Application of Body Mapping to Music* (Portland: Andover Press, 2000), 22,24, 25, 27, and 29.



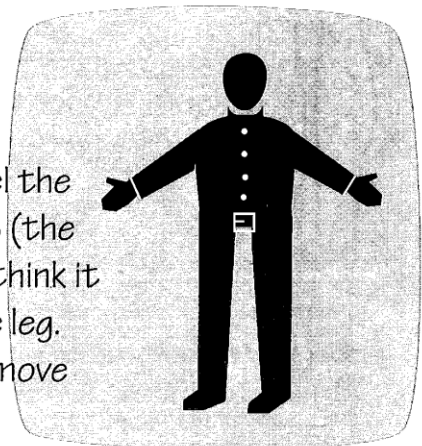
You can learn *exactly* where your thigh bones meet your pelvis! The leg moves in relation to the torso there, and the torso moves in relation to the leg there.



Your leg joins your pelvis just above your rockers.

Not higher!

Some people feel the top of the pelvis (the iliac crest) and think it is the top of the leg. The leg doesn't move from the belt!

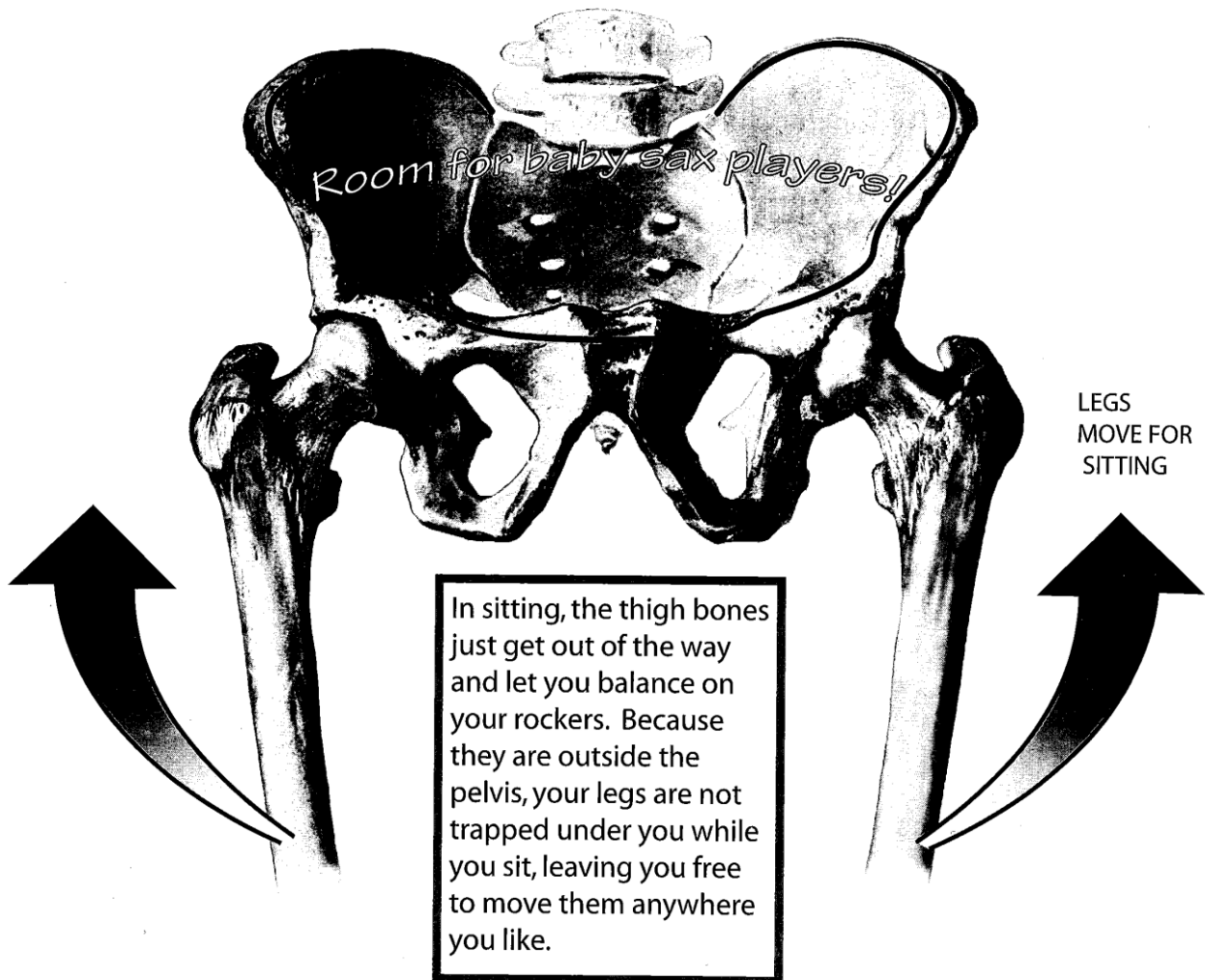


If you already know just *exactly* where your thigh bones meet your pelvis, ***consider yourself a lucky person!***

You can learn just where your thigh bone meets your pelvis on the outside of your pelvic bones!



Your thigh bones meet your pelvis on the outside of the pelvis. Looking at the inside of the pelvis you'd never know there were legs.

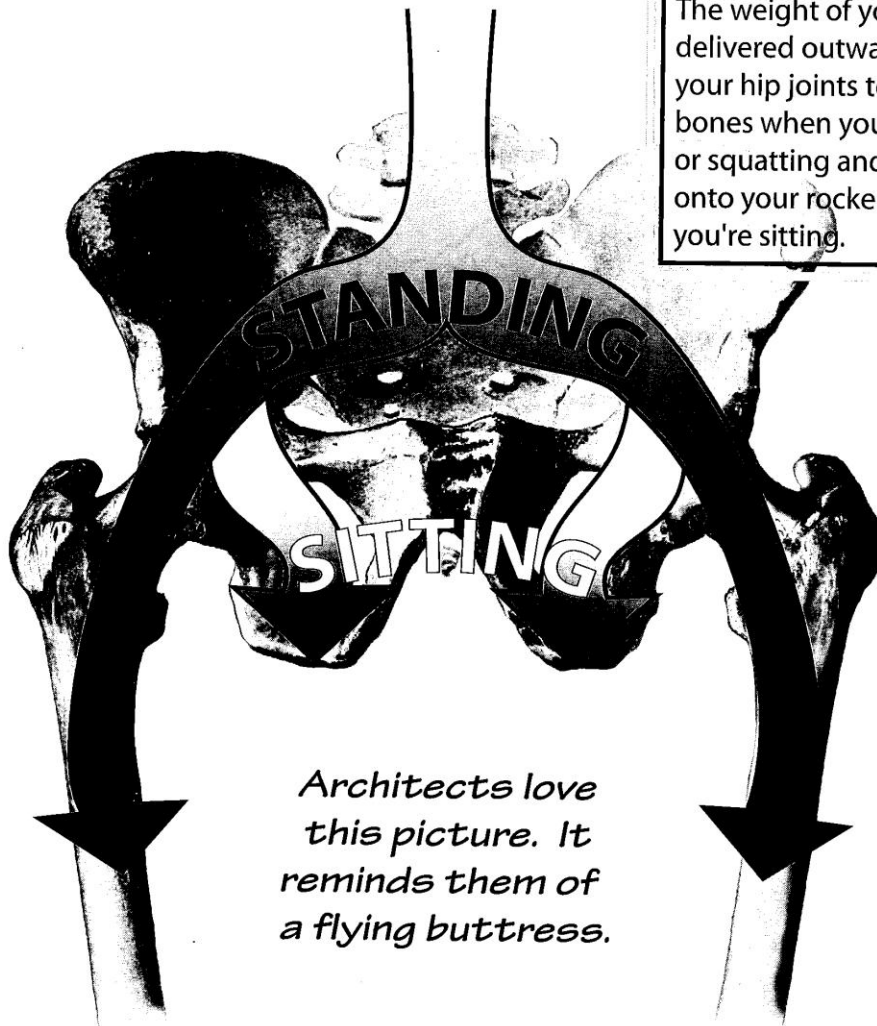


If you already really, truly know where your thigh bones meet your pelvis on the outside of your pelvic bones, **hold a press conference!**

You can learn to allow your torso's weight to be delivered through your bony structure into your legs when you're standing and into your chair when you're sitting.



The weight of your torso is delivered outward through your hip joints to the thigh bones when you're standing or squatting and downward onto your rockers when you're sitting.



Architects love this picture. It reminds them of a flying buttress.

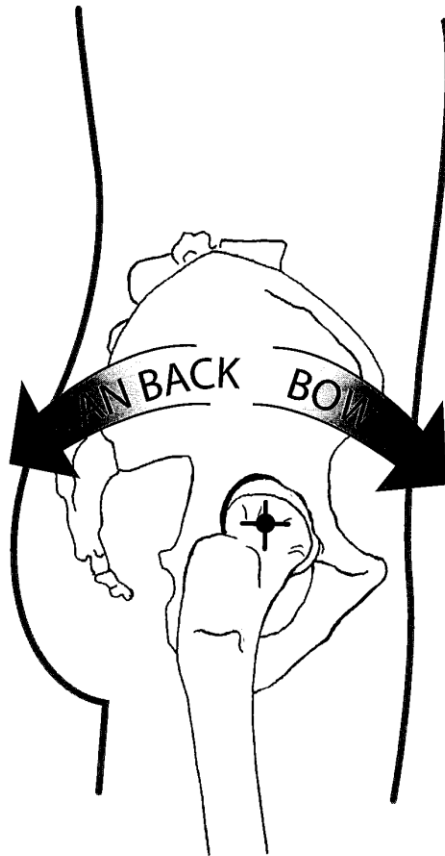
You can learn all about your flying butt(ress)!

If you already allow your torso's weight to be delivered through your bony structure into your legs when you're standing and into your chair when you're sitting, breathe a sigh of relief. **You're grounded and will never feel like you have to hold yourself up.**

Your torso moves forward and back at these joints in playing.

At your hip joints!

Not at your waist



Like bowing to an enthusiastic audience!

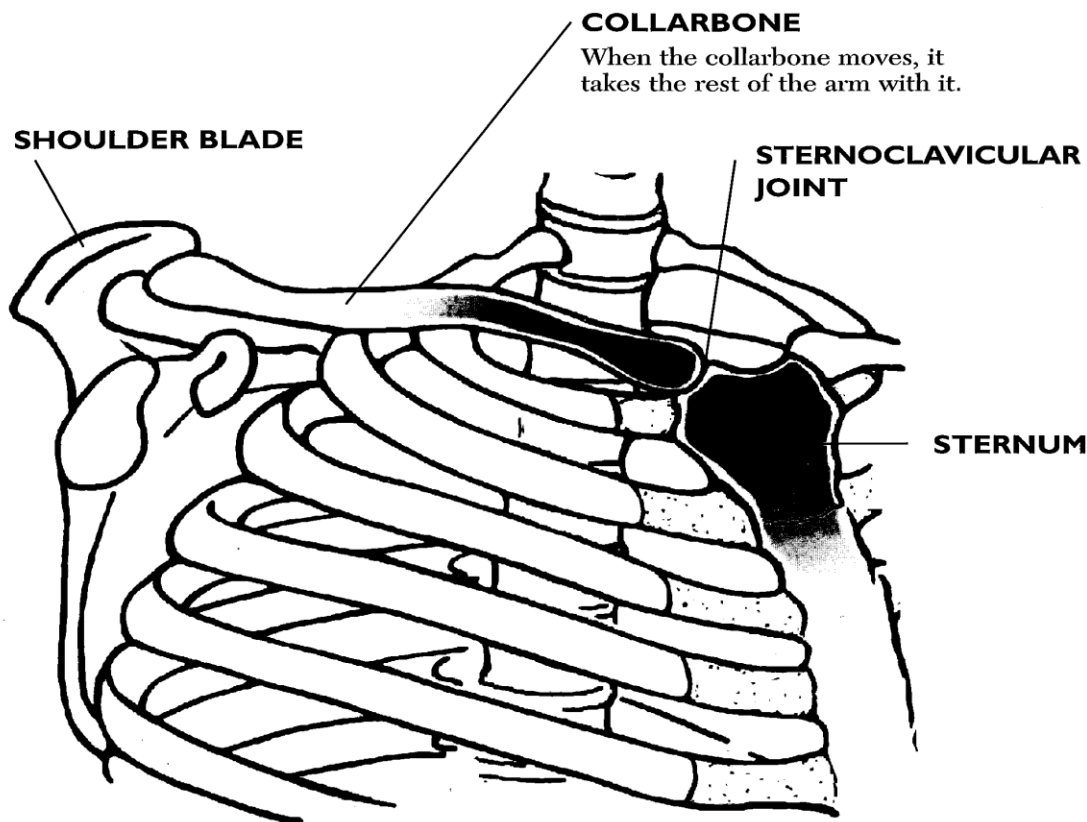
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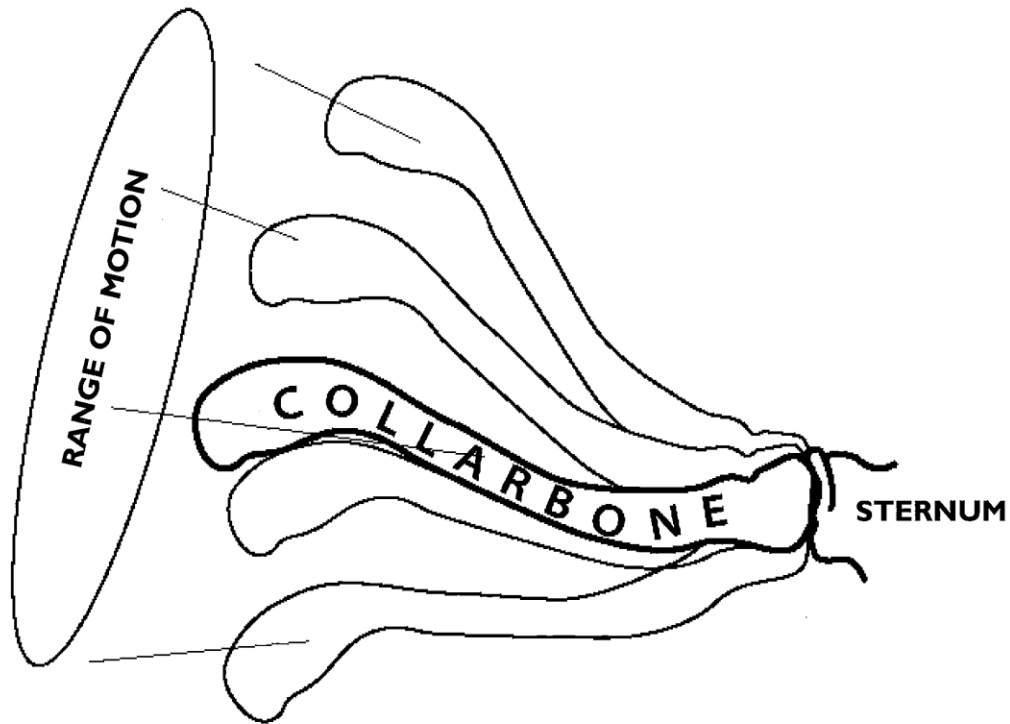
THE STERNOCLAVICULAR JOINT

The sternoclavicular joint connects the breastbone (sternum) to the collarbone (clavicle). It is the joint that connects the arm structure to the rest of the skeleton. The sternoclavicular joint permits the collarbone to move in three ways. It can move up and down, forward and back, and it can rotate.

To locate your sternoclavicular joints, place the fingertips of your right hand on your right collarbone and the fingertips of your left hand on your left collarbone. Explore the length of your collarbones with your fingertips, and then let the fingertips move along the length of the collarbone toward the breastbone. When the fingers reach the end of the collarbone, you feel a bony lump and just beyond it is the sternoclavicular joint.



⁴ Thomas Mark, *What Every Pianist Needs to Know About the Body* (Chicago: Gia, 2003) 71, 72, 76, 78, 81, and 82.



The collarbone pivots at the sternum.

To appreciate the movement that occurs at the sternoclavicular joint, keep your fingers on the joints and move your collarbones up and down, forward and back. Move them in big circles. Move them as far as you can in all directions while registering with your finger how much motion occurs at the joint. Take a few moments several times a day to explore the range of motion possible for the collarbone. Attend to the way the entire arm moves with the collarbone. Do this regularly until free movement at the sternoclavicular joint has become automatic. People who have been in the habit of keeping the joint fixed may think that not much motion is possible, and when they

first try to move their collarbones, the movements are tiny. Let your collarbone move as far up and down and forward and back as possible. More mobility is available than many people realize.

To become aware of the rotational movement of the collarbone, place the fingers of your left hand at the sternoclavicular joint of the right arm. Hold your right arm bent with your thumb pointing up, in the hitchhiking position, and then turn your entire arm so that the thumb points straight down to the floor. As you do this, your left hand can feel the slight rotation of the collarbone at the sternoclavicular joint.



The movements at the sternoclavicular joint are likely to be somewhat larger for organists than for pianists. For organists who must move from one keyboard to another, free movement at the sternoclavicular joint and the resulting mobility of the shoulder blade and collarbone must be learned and clearly understood. Organists who do not understand this mobility, when required to reach to an upper keyboard, will usually “reach out” with the arms and neck, while at the same time rounding the upper back and rocking back onto the tailbone. This places unwanted tension throughout the back and arm structure, inhibits free playing, and ultimately causes pain.

Free and easy movement at the sternoclavicular joint is also required when both hands are playing in the high range of the keyboards (as in the Widor Toccata V), and when the hands are on separate manuals, especially when the left hand is higher than the right, or the right hand is lower than the left.



THE SHOULDER JOINT

The second joint of the arm, the glenohumeral joint, does have a common name: the shoulder joint. The shoulder joint is not the joint that connects the arm to the body. Thinking of it that way encourages the mismapping called the shoulder-arm split. Nor does the shoulder joint connect the arm to the shoulder, as if the shoulder were a distinct part of the body separate from the arm. The shoulder joint connects two parts of the arm. When the shoulder blade and collarbone move up, down, forward, and back, the shoulder joint also moves. That is, the entire joint moves as part of the arm structure. The shoulder joint is not a fixed place from which the arm moves, it is part of the arm.

The shoulder joint is our most mobile joint. Not only does it permit three kinds of movement—up and down, back and forth, and rotational (the hip joint also permits these three kinds of movement)—it also has a greater range of motion than any other joint. Unfortunately, many pianists hold their shoulder joints fixed and stiff, to the detriment of their playing. Possibly their way of moving is influenced by the common description of the shoulder joint as a “ball and socket.” The humerus does end in a ball. If the ball were surrounded by a socket of bone, motion at the shoulder joint would indeed be limited, the way movement of a light bulb in its socket is limited. But that is not the arrangement we have.

Pianists need to be aware of the shoulder joint, because many pianistic motions require freedom of this joint. Moving the hands to the extremes of the keyboard is an obvious example of movement at the shoulder joint. An example that may not be so obvious is the movement of the hand in and out of the black key area. As a matter of anatomy, when the hand moves into and out of the black key area, movement must occur at the shoulder joint (unless the pianist performs in-and-out movements by moving the entire body forward and back—a poor solution). If the pianist does not map in-and-out movements with awareness that they require freedom at the shoulder joint, the movements may be stiff or may not occur. This happens for some pianists who do not consciously map in-and-out movements at all. It may also happen for some who think of in-and-out motions as initiated from the

forearm, if they forget that the place where they think of “initiation” and the joint where the movement occurs are not the same.

Many pianists hold their shoulder joints tightly and the movements that would make their playing easier do not occur. It helps to think of the shoulder joint being free—move the upper arm back and forth, up and down, experience how mobile the shoulder joint is—and then bring that sensation of freedom to the piano. Suddenly the playing is better because the upper arm movements that permit more perfect hand placement on each note are being allowed to happen. Most people need to spend some time deliberately mapping the movements of the shoulder joint to develop greater freedom.

I have claimed that pianists move too little at the shoulder joint, but, paradoxically, they also move too much. That is, the movement that does occur in the shoulder area is confined to the shoulder joint instead of being appropriately distributed between the shoulder joint and the sternoclavicular joint, as it would be if the arm structure were truly coordinated. The shoulder joint does too much, the sternoclavicular joint too little.

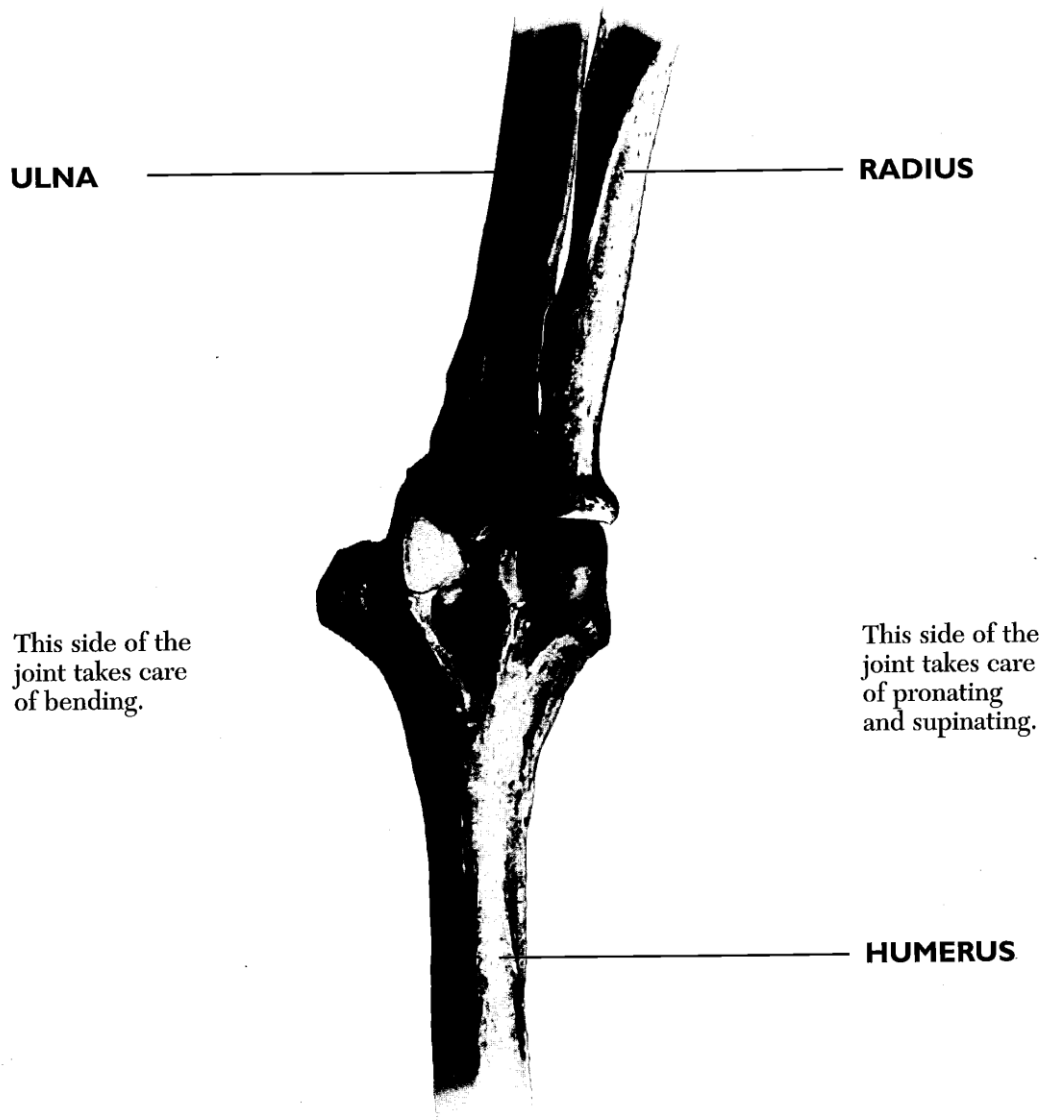
Besides moving up and down, forward and back, the humerus can rotate at the shoulder joint. Pianists need to include this movement in their map of the shoulder joint movements. The pianist who does not map rotation at the shoulder joint may move the upper arm bone toward and away from the body when rotation would be more efficient. Pianists who cultivate one of the techniques based on forearm rotation need to know about rotation at the shoulder joint also, since some motions taught as forearm



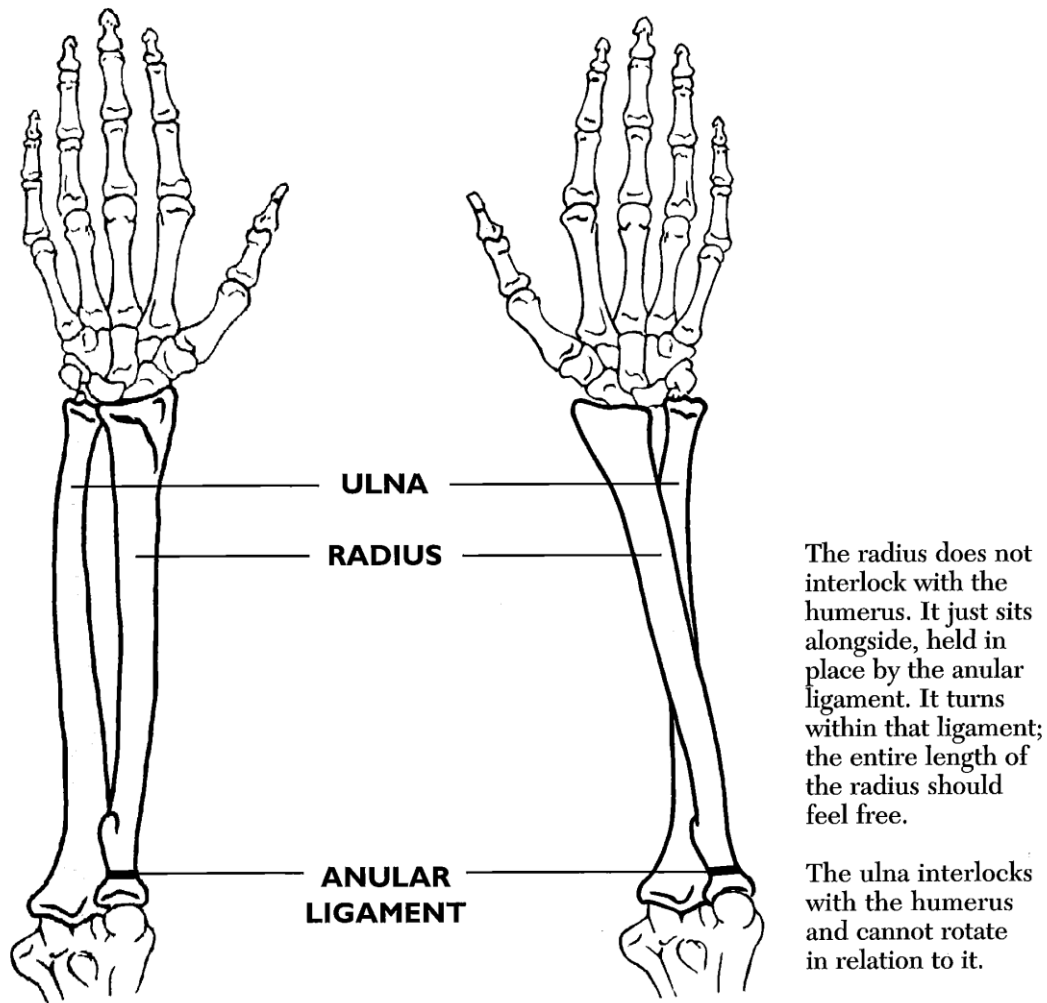
Free movement at the shoulder joint is necessary for organists, not only to move in and out of the black notes, but to move freely from one keyboard to another.

Sit at the organ and practice moving in and out of the black notes, feeling the movement that occurs at the shoulder joint. Then practice making the same movements moving from one keyboard to another. The movements will be larger, but they are the same movements.

THE ELBOW JOINT (RIGHT ARM, PALM UP)



Hold your right hand out in front of you, palm up, and look at your elbow. If you could see the bones of your elbow joint, this is what you would see.



RIGHT HAND, PALM UP

The ulna and radius are parallel.

RIGHT HAND, PALM DOWN

The ulna and radius are crossed.

The radius does not interlock with the humerus. It just sits alongside, held in place by the anular ligament. It turns within that ligament; the entire length of the radius should feel free.

The ulna interlocks with the humerus and cannot rotate in relation to it.

If you discovered that the ulna remains stationary when the forearm rotates, congratulations! The radius is the bone that moves. You can verify this as follows: look at the bony lump above your wrist, behind your

fifth finger. That is the end of the ulna. Starting there, you can walk the fingers of the other hand along the ulna to the elbow (you can feel the ulna, just below the skin, along its entire length). Spread your fingertips

Participant Intake Form Results

Did your teacher use a method book in your training?

1	2	3	4	5	6	7	8	9	10	11	12	13
Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N
Stainer	Gleason	Brock	Brock	Johnson	Leupold	Ritchie/ Stauffer	Ritchie/ Stauffer	Peeters		Gleason	Ritchie/ Stauffer	

Did you first learn pedaling with the knees/heels together?

1	2	3	4	5	6	7	8	9	10	11	12	13
N	Y	Y	N	N	Y	Y	Y	Y	N	Y	N	Y

Do you still use knees/heels together?

1	2	3	4	5	6	7	8	9	10	11	12	13
Y	N	N	N	N	N	Y	Y	Y	N	N	N	N

What type of pedaling do you use for music before 1800:

All toes =T Toes and heels=TH

1	2	3	4	5	6	7	8	9	10	11	12	13
TH	T	T	T	T	T	T	T	T	T	T	T	T

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What type of touch do you use for music before 1800:

Legato=L Ordinary touch=OT

1	2	3	4	5	6	7	8	9	10	11	12	13
OT	OT	OT	OT	OT	L	OT	OT	L	OT	OT	OT	OT

Was gesture or movement incorporated into your learning process during your training?

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N

If yes, indicate the following: Beginning=B Only after all notes were learned=L

At the final stages of learning/memorizing=F7

1	2	3	4	5	6	7	8	9	10	11	12	13
		F	B	BLF	BLF	BLF	BLF	L	B		B	

Have you ever studied or participated in the following:

	1	2	3	4	5	6	7	8	9	10	11	12	13
Alexander			✓	✓		✓		✓			✓	✓	✓
Body Mapping			✓									✓	
Feldenkrais													✓
Bones for Life												✓	

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Do you regularly exercise or meditate?

	1	2	3	4	5	6	7	8	9	10	11	12	13
Y/N	N	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y
Yoga													
Running/cardio				✓	✓			✓	✓	✓	✓	✓	✓
Weight training													
Pilates													
Other			Biking		✓			Swim- ming					
Meditate				✓									✓

Do you use a warm-up exercise or centering exercise before practicing?

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	N	Y	N	N	N	N	N	N	N	N	Y

Do you use a warm-up exercise or centering exercise before performing?

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	N	Y	N	N	N	N	Y	N	N	N	Y

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Have you experienced any sort of injury due to playing a keyboard instrument?

	1	2	3	4	5	6	7	8	9	10	11	12	13
Y/N	N	Y	N	Y	N	N	N	N	Y	N	N	Y	N
Piano				✓									
Organ		✓							✓			✓	
Harpsichord													

What type of injury?

	1	2	3	4	5	6	7	8	9	10	11	12	13
Tendonitis		✓		✓					✓				
Carpal tunnel		✓											
Back pain		✓											
Arm pain		✓											
Neck pain		✓											
Shoulder pain		✓										✓	
Hip pain													
Leg pain													

Research Questionnaire
Follow-up questions 2-3 days after
Listed by research participant number

As a result of the movement lessons, what is the most interesting awareness, sensation or curiosity you have?

- 1. I was quite sore the next day-like I had spent a whole day gardening.**
- 2. I definitely need to explore and experiment with bench height, how I'm sitting, changing position as necessary depending on the phrase.**
- 3. Studying with Roberta Gary, these are all aspects that I have already address in my playing. It's always nice to have a reminder, however, and I quickly discovered through Saturday's class that I'm not always as aware as I can be while playing. It was a great help.**
- 4. The most interesting curiosity was that of feeling the whole body working together. At the wedding that I played on Saturday after the workshop and playing on Sunday's service, I felt freer in the arms and legs.**
- 5. More exercises to "free" the part required to play the organ. Other techniques that involve movement.**
- 6. I am much more aware of the tension I create when playing, which I will now be working on relaxing while playing. I also noticed how certain smaller motions can make a bigger difference while playing.**
- 7. I would like to further explore the rocker motion in my pieces, especially ones that are fast and involve quick pedaling.**
- 8. It was interesting to consider the rotation of the arm bones.**
- 9. The most interesting part to me was awareness of the tension in the arms when placed from directly below instead of bringing from the center of the body.**
- 10. Understanding how the limbs are carried/used in playing and how they greatly affect the quality of playing. Such as bringing the hand up near the body, opening the ribs as the hands are placed on the keyboard.**
- 11. I feel more at ease and more aware of body motion when seated at the console. I feel a better sense of relaxation as well.**
- 12. I am noticing movement and posture more in myself and in others.**
- 13. I became aware of the fact that I spend much of my time at the keyboard telling my body what to do – "you have to play that note...you have to get that piston in time...you're not moving fast enough." It was a simultaneously frightening and freeing sensation to experiment with trusting physical instincts and looking to my body for guidance and feedback.**

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Please describe 2-4 specific changes you notice in your body.

- 1. I may have been sitting straighter, although not sure. The following morning my shoulder joints were not cracking as loudly as usual as I tried to get out of bed.**
- 2. Better overall balance in the hip/back area, relaxing the legs for more expressive pedal playing. Arm placement and awareness of upper body motion (is better) also.**
- 3. I became more aware of the rockers and my ability to shift weight on command. I also discovered I am much more comfortable when sitting taller.**
- 4. I felt a better sensation of where my rockers were. At the organ, I could feel myself using the rockers to have a relaxed feeling of the music. My arms and hands were freer to execute the phrases of the music. I was also more aware of my neck and face while directing the choir during the anthem from the organ.**
- 5. I'm more aware of my rockers. My arms are more free. Because of the freeing of my arms, my touch is much improved.**
- 6. I noticed I was not letting my body move enough which caused my body to fight itself while trying to move smoothly from one phrase to another. I learned what motions were more natural and when I applied them to my piece I noticed my body was able to connect movements faster and easier.**
- 7. Feels more open. Arm rotates more easily (I allow it to move more). More relaxed overall.**
- 8. I noticed that as I freed my upper body, my feet were more free. When you approach the keyboard from an open position, there was less tension. I felt more relaxed.**
- 9. Ease of movement when playing on the pedal, especially shifting my weight on my "rockers," and range of movement of the arm in playing the melody.**
- 10. More fluidity in my wrists by illustrating the melody. Engaging/being more aware of moving by using the rockers.**
- 11. My shoulders and neck seem to be in the readjustment phases of trying to find a point of relaxation. This has been an issue for me in the past, but I am now learning to pay closer attention to it.**
- 12. I have tried to use better posture in everyday activities. Greater awareness of body position and any tensions present.**
- 13. Feeling support from the sit bones while on the bench allows me to feel a release in my hip joints – I feel I am better able to move out from the hip rather than leading only with the feet while holding the upper leg still. Similarly, feeling that my body was supporting my arms let my upper arms move out more freely from my body. Letting my arms leave my sides makes it easier to breathe deeply.**

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Did your playing improve in any way from beginning to end?

	1	2	3	4	5	6	7	8	9	10	11	12	13
Quality of performance		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
Comfort and ease in playing		✓	✓	✓	✓	✓	✓	✓	✓		✓		
Easier transition in one or more difficult places			✓	✓	✓	✓			✓	✓	✓	✓	✓
Your own enjoyment of the piece and playing		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓

Additional comments:

- 1. (the following day) I had “one of those days”...so wasn’t paying a lot of attention to (my) body.**
- 11. For both pieces, the hymn and “Fanfare,” I missed several notes, but I would attribute that to lack of concentration. I did feel more at ease physically, however.**

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If there anything else you would like to say about your experience in class including any suggestions for the principal investigator, Robert L. Bozeman?

- 1. The class was enlightening, and I can see that work of this type may well benefit me in my playing.**
- 2. Excellent presentation of the material, which was very new for at least half the class.**
- 3. I thought this class very well encapsulated raising awareness in the participants' playing, even just for a few hours.**
- 4. The awareness and visual exercises were very useful in identifying the parts of my body that work together to play the organ and the piano. I learned ways to work with my piano students so that they are aware of relaxed movements in playing the piano.**
- 5. I've really noticed an immediate change in my playing and approach to playing the organ.**
- 6. N/A**
- 7. It was very insightful and has given me many new aspects of motion to think about and integrate while playing. My participation has been a benefit to my playing!**
- 8. N/A**
- 9. I found awareness of the body movement interesting and helpful in my organ technique as well as my piano technique.**
- 10. N/A**
- 11. I thoroughly enjoyed the relaxation component of the class. It really encouraged me to incorporate a different, calming mental approach to performance preparation.**
- 12. Since the meditation exercise, I have been thinking more about mindfulness overall, as a way to focus and relieve stress and non-pertinent thoughts. I think this is/will be useful if I can continue to use/develop this trait. I never considered the motion of moving my hand up from my center onto the keyboard. I think this movement helps set up a more helpful position and movement in the arm and elbow.**
- 13. In most "masterclass" settings, all the work is done at the keyboard; often suggestions given focus on minutia of interpretation or fingering. This class took the opposite approach. It was revealing to see how drastically playing changed after work *away* from the keyboard that focused on the *whole* body and mind.**

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Based on your experience in this class, would you consider the following?

	1	2	3	4	5	6	7	8	9	10	11	12	13
Attending a somatic based learning class/workshop	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A different approach to pedal technique	✓	✓	✓	✓	✓	✓	N	✓	✓	✓	✓	✓	✓
A different approach to touch or manual technique	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note from PI: Participant 7 already uses all toes, was not trained in knees/heels together, and from my observation uses kinesthetic approach to pedaling.

INSTITUTIONAL REVIEW BOARD PROTOCOL APPROVAL NOTIFICATION
FOR STUDIES GRANTED EXPEDITED APPROVAL

PRINCIPAL INVESTIGATOR: Robert Bozeman, DMA Candidate

PROTOCOL: IRB #12-01-13-03E – Gesture, Movement and the Performing Musician

Includes informed consent Yes
Includes recruitment Yes
Informed consent requirement waived No
Survey materials constitute abbreviated consent No
Includes HIPAA Waiver No


Sponsor: Investigator Initiated

FWA #: 00003152

DATE: September 13, 2012

The approval for this research activity expires on: September 13, 2013

1. The federal regulations at 45 CFR 46.110 which allow for the expedited review procedure, require that the IRB adopt a method for keeping all members advised of research proposals which have been approved under this procedure. The full Board will be notified of the expedited approval status of your study at its next convened meeting. You will be notified in writing in the event the Board disagrees with this expedited approval decision.
2. For adverse event reporting requirements, please refer to UC Policy II.02.
3. The period of approval of this research project is stated above. In order for a project to continue with IRB approval beyond the expiration date, a progress report form must be filed with the Institutional Review Board on at least an annual basis, and sometimes more frequently at the discretion of the Board.
4. There may be no change or addition to the project, or changes of the investigators involved, without prior approval of the IRB.
5. You are required to modify this study, subject to IRB approval, if subsequent information regarding any drug, device or procedure utilized in the study is received from the manufacturer or any other reliable source that could reasonably increase or alter potential harm to subjects. The informed consent statement must be modified to include this new information or an addendum must be prepared as a means to assure subject notification. In cases where the subject has completed the study, the modification or addendum is only necessary if the additional information received could impact the subjects in the future.



Chairperson (or Designee), Institutional Review Board

*The attached consent is stamped with the period of IRB approval. Please copy this ICS document and use for all subjects entered into the study.

Please note: This approval is through the U.C. IRB only. You may be responsible for reporting to other regulatory officials (e.g., VA Research and Development Office, UC Health- University Hospital). Please check with your Institution and Department to ensure you have met all reporting requirements.

Statement regarding International Conference on Harmonisation and Good Clinical Practices

The University of Cincinnati Institutional Review Board is duly constituted (fulfilling FDA requirements for diversity), has written procedures for initial and continuing review of research studies; prepares written minutes of convened meetings, and retains records pertaining to the review and approval process; all in compliance with requirements defined in 21 CFR Parts 50, 56 and 312 Code of Federal Regulations. This institution is in compliance with the ICH GCP as they correspond to FDA/DHHS regulations.