

HONING THE PIANISTIC SELF-IMAGE

SKELLETAL-BASED PIANO TECHNIQUE



A L A N F R A S E R

***Honing the Pianistic Self-Image* is the companion volume and sequel to *The Craft of Piano Playing*, first published in 2003 and now in a new, revised 2nd Edition (Scarecrow Press 2010). Here's what the experts have to say about Alan Fraser's original landmark publication:**

"... the most detailed and intensive study of the subject since Otto Ortmann's seminal work, *The Physiological Mechanics of Pianoforte Technique*, first published in 1929 but now sadly out of print."

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ISSTIP Journal

“All serious piano students should acquire this book which is well-devised, carefully structured, and always laced with humour on this very serious topic...”

EPTA Journal, UK

Also by Alan Fraser:

- *The Craft of Piano Playing, 2nd, Revised Edition*
- *The Craft of Piano Playing DVD*
- *A Study Guide to The Craft of Piano Playing*

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HONING THE PIANISTIC SELF-IMAGE

Skeletal-Based Piano Technique

Alan Fraser

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AUTHOR'S NOTES

These essays outline the development of a piano technique beyond the foundation levels laid out in *The Craft of Piano Playing*. They deal with sensations of internal physical experience that are often subtle, not easily defined, and not easy to describe. It's not a book of 'quick fix' technical tips, but rather a delving into the complex issues of internal physical consciousness and its educative capacities in piano playing.

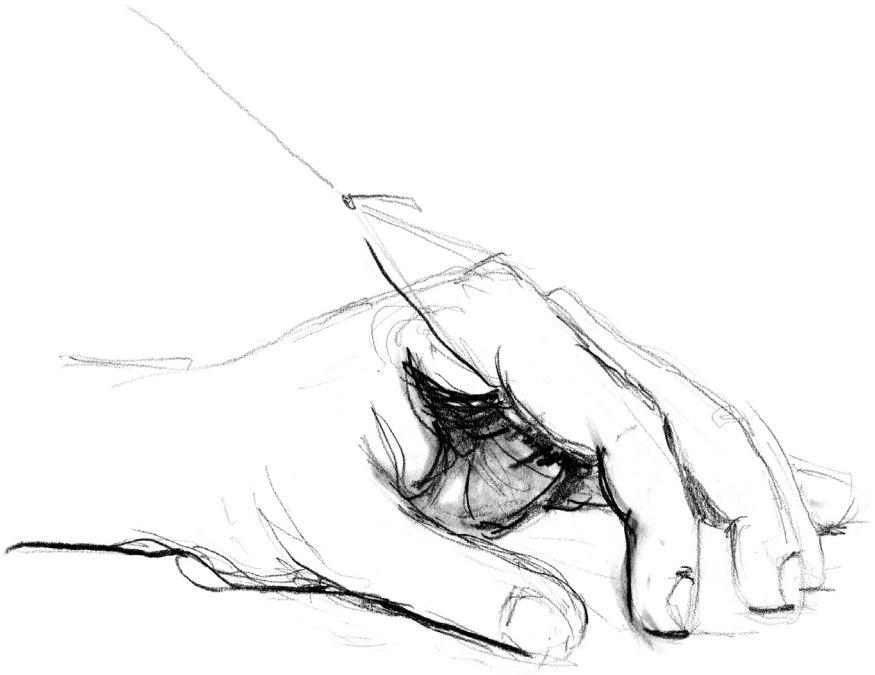
The chapters are experiential, food for your own kinesthetic learning process, not mere information. Digest this material slowly. Don't do more than one *Awareness Through Movement*[™] (ATM) lesson a day: give yourself time to savour and understand each one, time for the learning to sink in and and evolve.

Don't just read the lessons. Do them.

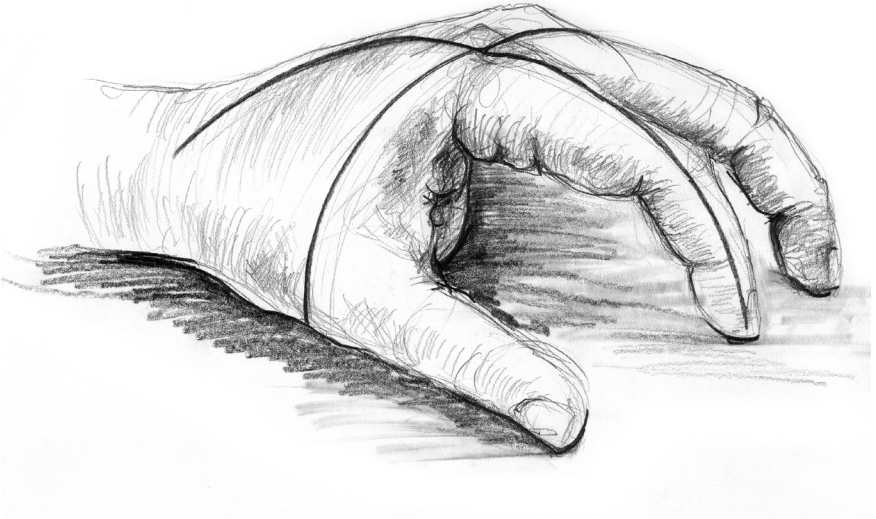
Awareness Through Movement lessons are best done with verbal instruction. It is difficult to maintain your attention while constantly referring to the printed page, so you may want to dictate the lessons into a recording device and follow them this way. If you do them while reading from the book, take special care to maintain the directed attention that makes the lessons effective.

Acknowledging the legacy even in disagreement

Although I sometimes may seem to disagree with the ideas of several renowned pianist-pedagogues, I acknowledge and indeed revere the great contribution each one of them has made to piano. These musings of mine seek not to disparage their work but rather to create a spirit of dialogue and ongoing mutual investigation which hopefully will lead to a better understanding of piano technique for all.



Frontispiece: a sense of moveability



1 THE PIANISTIC SELF-IMAGE

Each of us approaches piano playing with a set of learned habits and responses: the way we think and feel about music, and the way we move our bodies to express that at the piano. This I call the pianistic self-image.

This image has several components:

- The **physical** – the way each pianist’s hands move that has both individual traits and recognizable patterns common to many. It is a vocabulary not only of movement choreographies, but also the internal physical organizations¹ that give rise to them.
- The **musical** – our musical-aural vocabulary: all the sounds, expressions, emotions and colours we believe ourselves capable of producing at the piano.
- The **emotional** – how one is as one plays: are you detached, or so involved that you drown in the experience, or perhaps treading that fine line where perception is engaged but not overwhelmed?

Symbiosis of the musical and physical self-images

To widen our palette of expressive sonorities, we need a corresponding development in our physical capability. But it can also work the other way: improving physical technique can enhance our knowledge of the sounds the piano can produce. There’s a

1.1 See chapter 2, page 19: “Physical organization: a specific pattern of perceptions, muscular contractions and relaxations, bone alignments and thoughts that is unique for each and every act we conceive and then do.”

symbiotic relationship between physical technique and musicianship, and improvement in either realm both requires, and grows out of, a change in the pianistic self-image.

To hone is to repair, to refine, to realize...

Some pianists may seem to possess supreme musical and physical gifts, but there is always room for improvement. It's often the greatest artists who are most humble in their self-assessment, most arduous in their search for even higher levels of perfection. They show us the way: to hone the self-image we need to repair the 'broken pieces,' refine the ones that work well, and also fill in parts of the image we may not even have known existed.

Building on the foundation to create a transformation

This book builds on the fundamental elements of the pianistic self-image first outlined in *The Craft of Piano Playing*,² refining them and offering further tools to develop your own solutions to technical and musical problems. It aims, by giving you a tangible experience of the tremendous potency hidden within your hand and body, to create a true breakthrough in your playing.

Reduce effort to increase learning

Many of the exercises presented here produce astonishingly powerful changes without requiring great 'effort.' These changes take place in the brain itself, evoked by signals from the sensory and motor nerves. Grosser efforts don't have the same effect because the electrical impulses are too strong and inexact. Reducing effort 'makes room' for us to notice details of kinesthetic sensation and so offers a neuromuscular education quite unlike that of normal exercising. Only the enrichment of sensation produced by this reduced effort evokes the changes in brain patterning that are the classic trademark of the Feldenkrais Method.

^{1,2} Fraser, Alan, *The Craft of Piano Playing*, Scarecrow Press, Lanham, MD, 2003.

Ruthy Alon, a student of Moshe Feldenkrais for many years, tape-recorded a series of *Awareness Through Movement* (ATM) lessons called *The Grammar of Spontaneity*, a classic in the field that empowers the student to discover his or her own spontaneity by the simple means of learning optimal movement patterns and dispensing with more limited or erroneous ones. This book aims to be a sort of pianistic *Grammar of Spontaneity*.

Spontaneity: the gestalt of many complex elements in a unified simplicity

The complicated process of piano playing should be experienced as easy. In the heightened state of awareness of musical performance many complex actions are synthesized, leading spontaneity to appear: the sophisticated simplicity of a unified expression. If any part of the physical mechanism functions below par, this gestalt is less likely to appear.

The keystone of the hand's arch needs support from the whole body

In modern piano playing, the physical weak link in the chain is most often the metacarpal-phalangeal joint (the knuckle joining finger to hand), which tends to collapse due to over-relaxation. Arm weight and whole body organization get a lot of attention these days, but the hand-finger is the crucial unit that connects arm and body to the instrument, and it too must be in top form. *The Craft of Piano Playing* already examined this in detail, but here we'll delve even further into the complex play of forces and actions needed for a hand to be fully potent on the keyboard. And we'll also expand our view outward to include the whole body – skeletal in the hand works best when it happens in the rest of you as well.

The exercises presented here take your hand through some rather unusual movements, contortions, sensory experiences – all designed to expand the number of 'movement templates' it possesses, to improve its sense of self. Which exercises you find easy, which ones are unfamiliar territory, depends on how you relate physically to the piano right now. What are your present

strengths? What's missing in your own physical organization? What new moves could your hand learn to serve music better? How could you improve the quality of movements you already know?

Plan of action

Part I first looks at enhancing hand function largely in the context of *unstable equilibrium*. This idea links activities as disparate as:

1. standing on the keyboard,
2. 'floating' hummingbird-style above the keyboard,
3. combining these two in a "skeletally conscious" mode of playing,
4. evolving that synthesis into 'hooking' the key à la Marie Jaëll,³
5. using your fingers as levers,
6. reinstating a sense of arm weight,
7. using the fingers and thumb as struts rather than pylons, and finally
8. a synthesis where the hand possesses all these as potential resources, yet is not limited by any of them.

Then we take a fresh look at several traditional concepts, including:

- fixation (Arnold Schultz)
- rotation (Dorothy Taubman)
- falling from a height into the key (Heinrich Neuhaus)
- and relaxation (just about everybody).

Part II is about integration, linking this new hand functionality to a potent whole body organization, and also discussing what it's ultimately all about, listening.

^{1,3} Renowned pianist, composer, and pedagogue Marie Trautmann-Jaëll (1846 - 1925) was a student and assistant to Liszt from 1883-86. She wrote 11 books on piano technique.

The primacy of listening

Intelligent involvement of the ear gives our physical organization much finer levels of sophistication than a primary focus on the physical ever could, just as a well-developed peripheral vision can pick details up that a direct look would fail to perceive. Paying full attention to the physical actually blunts our musical perception. Only when listening has pride of place does musical execution reach its highest possible level, rightfully allowing musical thought and feeling to guide what we do physically. Physical exercises should educate our senses to better serve our musical ends – the exercise is never an end in itself.

Contradictory points of view

Given the physical complexity of playing the piano, inevitably there are myriad conflicting points of view as to what constitutes ‘correct’ technique. How often have we read that a low wrist is the best, only to hear someone else say a high wrist is better, or something in between? These points of view seem to assume that one pianistic self-image is better than another. I try instead to discern the valuable parts of different, even conflicting self-images, and then to work out which ‘building blocks’ would best be added in each instance to render the self-image more complete.

Low wrist, high wrist, medium wrist... each of these conclusions was drawn from a valid subjective experience, based on what felt right to a certain player in a particular situation – which may or may not feel right for you. Each originated in a certain pianistic self-image, a certain organization of one’s body and movement as it relates to piano playing, and each one of them has its value and validity – map these onto yourself to acquire new ability, but don’t do so blindly: keep checking to see if it fits.

What is your own repertoire of keyboard movements, your particular technical style? In what direction could you adjust your technique to create a new opening, enhance your sense of physical freedom and capability? Do you need to firm up your hand or free it up? Read the book evaluating each new exercise

in terms of your own specific needs: does it offer you a new ability, or could it possibly be counterproductive, reinforcing an organization that limits your possibilities? For example, I have often weaned a student from an emasculating, incorrect use of arm weight technique, but I have just as often used that very technique to free an arm frozen in immobility. It all depends on the starting point.

You will be confused

You will definitely experience confusion at some points in this investigation. In fact, if you don't, you're probably not reading the book properly. Honing a pianistic self-image partly involves deconstructing the one you already possess. 'Hard-wired' habits need to become a little more 'soft-wired' – the neurological circuits of habitual action need to become more amenable to change. When you experience confusion, welcome it as a part of the process – even when it is disturbing, take it as a necessary step in new learning.

Differing needs in different situations

No two self-images are alike, and each self-image can change from day to day and even minute to minute. To really understand piano technique, we need to know the needs of any particular self-image in any given pianistic situation. We pianists need as many different ways of touching the key as we need varieties of sound in our playing. So don't be surprised when you run into conflicting advice in this book.

I will tell you to consolidate a fixed hand structure only to dispense with it later; to curl your fingers mildly (establishing a firm, flexible, structural contact with the key), or extremely (articulating a brilliant staccatissimo), only to dispense with all that and flatten your fingers for juicier sound, or lift them quickly straight back for another type of staccato. You should learn all of these. None of them purports to be the answer; each one is ideal for a certain musical effect. Each aims to educate your reflexes to a greater overall self-knowledge and capability.

The human movement machine & its miraculous cybernetic sensing control system

Cultivating such a fecund and even confusing variety of touch strategies fits the nature of that quirky, complicated mechanism, the human body. Humankind may have sent rockets into outer space, but we have yet to create a machine that even remotely approaches the sophistication of animal locomotion. A machine's moving parts resemble the bones of a skeleton, in that they transmit kinetic energy through a series of levers to an object. But the engine that produces the force is also built of fixed moving parts. Cables and ropes may resemble muscle, but they are inert. They don't pull, something pulls on them.

In no machine is the force-generating material plastic⁴ the way muscles are. (Exception: exploding gas in a compression chamber is plastic – but hardly resembles a muscle!). Only in animal locomotion does the power generator for movement (the muscles) envelope each and every moving part (the bones). Furthermore the electrical control system (the sensory and motor nerves) is embedded in the power generator itself (the muscles). None of this is the case for any machine, although movement sensors now at least attempt to emulate the sensory nerves.

The nerve-embedded muscles that move our bone-levers offer us an incredibly sophisticated and precise means of controlling our movements, far superior to anything engineers and physicists have yet developed. Although any single muscle fiber can only be either 100% contracted or 100% relaxed, every muscle has thousands of fibers, and the possibilities for fine tuning the strength of a contraction by the exact number of fibers firing are virtually endless.

Feldenkrais Method

Moshe Feldenkrais was an engineer and a physicist, whose understanding of the body as an ultra-sophisticated system for generating movement perhaps helped him discover how to fine-

¹⁴ Plasticity - malleability: the property of being physically malleable; the property of something that can be worked or hammered or shaped without breaking.

tune its electrical control system – the nervous system. He found that by directing one’s awareness to the detailed sensations of any movement, one could enrich the kinesthetic ‘picture’ of the movement in the brain, offering it the opportunity to reorganize and improve its efficiency – to learn to do it better. He also realized the skeleton is the ideal bearer and transmitter of force in the body. The more the alignments and relationships of skeletal structure are clearly represented in the brain, the more our bones bear the stresses of movement, relieving our muscles of the need to hold. They become free to generate movement – a clearly preferable state of affairs.

Thus movement itself, done very subtly and with specifically directed sensory awareness, becomes the ideal means of sensing the skeletal structure that exists to serve movement. We empower skeletal structure when we bring it into our awareness: when it becomes functional we’ve brought it into Being. Thus wise we ‘create’ ourselves just as Scriabin said he created the world through the act of perceiving it.

WHOLE BODY ATM 1 (1.1) *SENSE YOUR SKELETON*⁵

Step 1: As you turn a page of this book, can you sense, internally, the bone of your right fingers as something different from the flesh that surrounds it? Or do you rather experience your fingers or your hand as a generic entity? Rest your right hand on a surface – can you begin to feel it internally – where exactly is each of your metacarpal bones

^{1.5} By the way, Feldenkrais coined the term ATM long before the banks took it over. These are not ‘Automated Teller Machine’ lessons!

for instance? Most of us (including myself when I first tried it) fail abysmally at this. But notice what happens if you try even simply to pretend that you can indeed sense those bones. If you take some time to go inside yourself and imagine, in as much detail as possible, where each of those bones might be, the sensation of your hand will change: your internal representation of it will already improve. Try changing the resting point of your right hand, bringing it somewhere closer to or perhaps further away from your body, where the rest of your arm could relax more, reducing its effort and allowing you to feel more accurately.

And notice what the rest of your body does to help you sense your hand better. Do you shift your sitting position, swaying your torso to a point where your arm hangs more freely so you can sense your hand more finely?

Do this on the right side only

By the way, if you restrict this ‘sensory fine-tuning’ to one side of your body, you’ll later be able to compare the changes in sensation with your other side, which has stayed the same. So do all this on your right side only.

Step 2: Try to sense other parts of your body on the right side. Where can you clearly discriminate the difference in feeling between bone and flesh? For most of us our sitz bones (the ischia that press into the surface of your chair as you sit) will be easiest. Or your ribs and spine that press against the chair back as you lean on it, the ulna of your forearm as it lies on the armrest of your chair, or your elbow if you happen to be leaning on that. Can you feel those bones?

Step 3: Take a moment to tune into your right ribs pressed against the chair back. Does this side feel different from the left? Can you distinguish individual ribs? Can you feel the difference in sensation between your muscles pressing the

chair back and your ribs pressing the chair back through the muscles that surround them? How about the vertebrae of your spine?

Step 4: Return to your sitz bones. Shift forward on your seat so you are sitting erect, no longer leaning on the chair back. Find your 'neutral,' where you feel truly erect, leaning neither slightly forward nor back. Are you more comfortable or less so like this?

In the seminars I give, most people are more comfortable leaning against the chair back than they are sitting up. But what does this say about our physical organization? The spine is designed to soar upward in the field of gravity, not struggling against it but harmonizing with it to create a free-floating verticality. Why are we so out of practice in sitting straight that we are more comfortable leaning back in our chairs and decoupling the whole process? Why do we strain to become erect instead of arriving there gracefully, elegantly? What can we do to improve the situation?

Step 5: As you sit in your habitual way, can you sense your right buttocks and right upper thigh muscles pressing the chair? As you lean forward on your chair, how does that sensation change? How about the impression of your right sitz bone filtering through those muscles? Does one sitz bone bear more weight than the other, or is it equally distributed? If you were to rock your pelvis slightly forward and back, can you feel the point of pressure on your right sitz bone change? Make your right sitz bone an artist's brush and use it to paint the chair. How much detail of perception can you bring to this? Rock back and forth several times, taking care each time to do it even more gently, more slowly, and notice how you begin to perceive specific sensations on the right side that escaped your attention before. Notice what parts of your body relax to help you better feel that brush painting its lines...

Step 6: Rest for a moment, but don't lean back again - stay in your erect 'neutral'. Is neutral the same as before, or has it shifted? After this one-minute investigation, are you sitting differently? Are you more erect, or more hunched? More forward? More back? More to the left or right? More or less bent to one side? Is your head directly over your sitz bones now, or behind or in front of them? Is your neck longer? Shorter? None of these changes is necessarily better or worse - each change that you notice enriches your kinesthetic picture of yourself, and is a stimulus to learning. The important thing is to detect it.

What other differences can you perceive? And perhaps most important, are you now more comfortable sitting upright than you were at first?

If you did become more comfortable, you honed your 'sitting self-image.' The sensations you attended to 'fed' your brain, allowing it to recalibrate how much each muscle must contract to help your torso feel as if it's soaring in gravity. These recalibrations took place outside of your awareness, and yet you did evoke them - by directing your awareness in a specific way.

Step 7: If you still feel you haven't experienced a noticeable effect from these investigations (or any at all!), go back and try the previous steps again, still paying attention exclusively to your right side, but this time delve into even more detail as you take note of your sensory experience. Despite the busy age we live in, try to take ten minutes for this instead of two. Give yourself some 'quality time,' the chance to really become familiar with sensory enrichment - it's one of our basic tools for honing the self-image.

Sensory-motor learning

ATM lessons activate a crucial internal process: sensory-motor learning. Your sensory nerves are constantly sending thousands of messages to the brain. Based on this sensory information, the brain decides exactly how it will control the muscles, and sends the appropriate impulses to them through the motor nerves. The resulting movements generate a new wave of sensory impulses to be received by the brain, and so the circle continues. This cycle of kinesthetic perception and activation is called the *sensory-motor feedback loop*.

Directing our attention to details of kinesthetic perception enhances sensory-motor learning. When the internal representation (the kinesthetic self-image) improves, the motor cortex can implement more exact, efficient movement patterns. This brings us to a more sophisticated level of control, and also leads to a profound reduction and re-equilibration of overall muscle tonus, eliminating many tension-derived aches and pains and facilitating more effective, elegant movement.

The hidden weakness in building up strength

Sensory-motor learning is very different from ‘working out,’ ‘training,’ or other forms of physical development. Muscle strengthening tends to maintain inefficient, tension-inhibited movement habits instead of achieving this re-organization. For example lower back pain is often ascribed to weakness in the lower back muscles – but it’s usually the opposite. The muscles work too hard, chronically contracting and pulling the spine out of alignment. The result: weakness and pain – when the vertebrae no longer pile up naturally on one another the spine loses its inherent structural power.

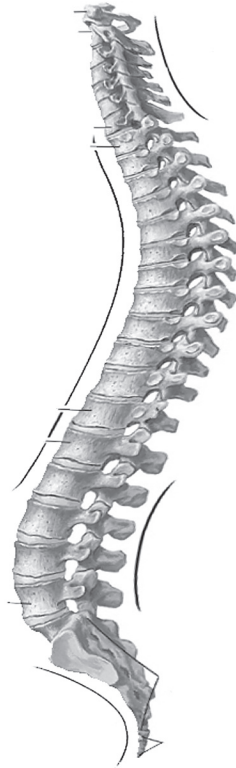


Illustration 1.1 – Spine out of alignment

Because the torso's full weight is no longer lined up over the skeleton, other muscles must also work more to hold the body upright.

This double burden drastically reduces the muscles' ability to do their proper work: activating movement. Their wrong work renders them ineffective and so the person feels weak – but attempts to strengthen muscles may only reinforce the incorrect action.

The power of structure

These muscles don't need to strengthen, they need to *learn*. Teaching them to de-contract, lengthen, relax and leave off their misguided and detrimental efforts allows the bones to regain their normal alignment.



Illustration 1.2 – Spine in alignment

The result is a tremendous sense of potency and physical power, ironically because the muscles are working much less. The bones have returned to their proper work, bearing the weight of the body in the gravitational field.⁶ Strengthening muscles here may

only reinforce weakness. Improving *function* leads to potency – function derived from right skeletal relationships. Muscles must ‘decouple’ from their incorrect work to discover this more effective way of guiding movement.

The Feldenkrais Method teaches our neuromotor system structurally derived functionality, and this book will teach you the same at the piano.

Many of classical piano’s relaxation movements inadvertently bring bones out of alignment, thereby damping their power instead of enhancing it. In Feldenkrais Method, relaxation is not an end in itself but merely a learning tool in the rediscovery of a more potent skeletal structure. It allows the hand’s bones to find a better alignment, improving its sense of power and mobility by altering the very source of that potency. The resulting recalibration of the neuro-sensory-motor system refines pianistic movement habits, empowering the entire playing mechanism.

Paradoxically, when I brought one of my students to this state of skeletal potency in her hand for the first time, she exclaimed, “I feel so muscular!” But her sense of power arose from a newfound skeletal integrity rather than from muscular strength.

As you were reading the previous pages, did you continue to attend to the physical sensations of sitting? Or did you ‘go back to sleep’? The sensations of this introductory ATM are the very ones that can educate your musculature to leave off its wrong work and restore your skeleton to its rightfully deserved prominence. Think about this and repeat the first part of ATM 1.1 once more, before going on to...

Step 8: Sit at the piano, and keeping your attention on the imprint of your right sitz bone on the chair, play something. Keep aware of your sitz bone, while trying to vary your finger touch so that you feel in turn:

^{1.6} See chapter 45, *Making Peace with Gravity*.

- a skin-to-key contact
- a flesh-to-key contact or
- a bone-to-key contact.

Which of these touches helps you feel better a connection all the way through your skeletal frame from finger tip to where you sit?

Step 9: Try now to ‘mirror’ your fingertips and your right sitz bone in your perception. Make their contact to their respective surfaces identical. Try to feel a ‘3-point stance’ consisting of your right sitz bone plus two fingers of your right hand. Later on, try a ‘4-point stance’, both sitz bones and one finger from each hand, or both sitz bones and two fingers from one hand. And make up your own variations...

The non-habitual in language and practice

Traditional ATM lessons aim to improve such simple actions as sitting, standing or walking by first ‘liquefying’ them. My ‘piano ATM’s’ try to do something similar for our piano playing movements. They bring you as much as possible to a *tabula rasa* so you can perceive which of your movement habits are effective and which are working against you. Stepping outside the habitual helps us inform and refine the everyday movement patterns already firmly ‘wired in’ to our brains.

An action must be learned before it can be improved

Sitting, standing, walking are actions we already know. However, some of the most basic actions in piano playing, such as walking on the keyboard (true legato) are absent from the techniques of many pianists! An action must be learned before it can be improved. That’s why many *Craft of Piano Playing* exercises are much more vigorous than the typical gentle Feldenkrais lesson. They aim to wake up the playing mechanism, to teach certain fundamental movements.

Unavowed dreams

Feldenkrais's poignant definition of health: "being able to fulfill your unavowed dreams." For Moshe, health was so much more than the absence of sickness – a state where vitality, creativity and learning flourish. The subtle, classically Feldenkrais-style exercises offered here lead to a more complete kinesthetic self-image, and cultivate pianistic health. Their ultimate aim: to help you fulfill your unavowed pianistic dreams...

The first time I heard Rachmaninoff's monumental 2nd Sonata, I was sitting on stage in Toronto's Massey Hall and Horowitz was performing it. "That's my kind of music," said I to myself, "but I'll never have the technique to play it." A long, arduous path of neuro-physical refinement of all the processes of piano playing finally allowed me to fulfill my unavowed dream – and I wish you, dear reader, the same kind of breakthrough – for you to finally master that one work you have always loved so much yet never dared dream you might actually play. The path is not easy, but I know it's possible.

2 THE ADVANTAGES OF A PHYSICAL APPROACH

I once had a student whose weakness in her physical organization prevented her from getting the required sound in the opening Promenade of Mussorgsky's *Pictures at an Exhibition*. Her hand wasn't standing well on the board, and her arm position wasn't helping matters either.



The image shows a musical score for the first four measures of the opening of Mussorgsky's *Pictures at an Exhibition*, Promenade I. The score is written for piano and consists of two staves: a treble clef staff and a bass clef staff. The key signature is one flat (B-flat). The first measure is in 5/4 time, the second in 6/4, the third in 5/4, and the fourth in 6/4. The first measure starts with a forte (*f*) dynamic. The melody in the treble staff is a series of eighth and quarter notes, while the bass staff provides a steady accompaniment of quarter notes.

Musical Example 2.1

Mussorgsky, *Pictures at an Exhibition*, Promenade I: mm. 1-4

I showed her the required feeling of skeletal integrity in her hand, and then I held her arm and guided it in space, empowering her hand to make those chords powerful, open, free and stable instead of cramped. Quite suddenly her sound improved dramatically, becoming healthy and resonant, but most fascinating of all, acquiring dignity and magnificence: the character and emotional tone were now correct. How did that happen?

I could have asked her to imagine that dignity and magnificence and to try to bring that character to her sound, and perhaps, after much struggle, searching and failed attempts she may have succeeded more or less. But by showing her the physical organization involved, I got her to succeed 100% immediately. Why?

Every sound, every emotional colour produced by a pianist has a corresponding physical organization. If your body is organized to do A, you are not likely to get B, C or D as a result of your action. By physical organization I mean a specific pattern of perceptions, muscular contractions and relaxations, bone alignments and thoughts that is unique for each and every act we conceive and then do.

The systematization of an art involves specifying the physical organizations involved, learning their nature and learning how to communicate them. Every student of medicine learns anatomy from a textbook and needs not repeat the work of the many scientific pioneers who first made those discoveries. But piano teachers often demand a certain sound or emotional tone from the student but leave them more or less to their own devices when it comes to producing it. Or we demonstrate the way we think it should be played, then ask them to do the same - to learn by imitation. We may have learned instinctively, and may be more able to demonstrate than to explain what we actually did. We are basically asking them to re-invent the wheel, which leaves pedagogy in a kind of hit or miss situation.

If I understand my own physical organization and can guide the student physically in recreating it, I have much more chance of empowering that student to succeed musically. Why should I leave my student to find her own way? I can speed up her learning process dramatically by guiding her in the physical alignments and muscular impulses needed to make a piano behave in a specific fashion. Working in this way she develops a whole repertoire of ways to touch the keyboard and discovers the entire scope of the piano's tonal palette, much of which was likely unknown to her.

Physically guiding a student actually takes imitation a crucial step further. I am now communicating my internal process to her: she senses what I am doing internally to produce the external result. Having experienced it through me, she still has to recreate that inner process on her own, but recording the experiential template kinesthetically helps her succeed much sooner. And

this is not imitation so much as a response to a learning process. I don't turn her into a robot following my guidance automatically; I awaken her physical mechanism to its potential for effective movement – she is 'learning how to learn.'¹

But if I speak only about the physical, again I mislead her and create a wrong impression of artistic work. She then believes that piano playing consists of holding your hand a certain way, moving the fingers like so, feeling effort in this or that part of your arm. No, the learned physical organizations always serve a musical purpose, in this case the stately dignity and alive magnificence of Mussorgsky's Promenade. Her physical experience must always be linked to the artistic image that's primary in her mind. At the end of this long apprenticeship, the physical organizations will be learned so well that she thinks no more about them: she simply uses them automatically to fulfill her artistic intentions. Her 'miraculous cybernetic sensing control mechanism' is being put to its good and proper use.

Natural vs. artistic expression

Learning to speak is a natural process. Children don't go to a special school to learn how to pronounce each word. They get informal coaching from family and friends, but mainly they just pick up language from their surroundings. On the other hand, an actor takes lessons in diction, voice projection and voice production, oration, declamation, elocution, breathing and posture, the better to know the specific physical sensations associated with each expression, with every nuance of emotional tone. He learns his craft: the logical extension and enhancement of natural abilities.

An old London stage veteran rehearses in his studio. A friend arrives; the actor delivers an oration that literally has his friend in tears, but the instant it's over the actor says in a completely normal, conversational tone, "Not bad, eh? Would you like it again?" He delivers the same lines with the same power and emotional impact, then again immediately returns to his everyday

²¹ One of Moshe Feldenkrais's definitions of his method.

demeanour. It is his craft, his job. His art is to create specific emotional tones and impressions, and his voice and his body are the tools he uses to achieve this. Classical pianists too are obliged not just to play 'naturally' but to explore and develop all the expressive capacities of their art, to master them.

Each musical composition has an innate content that requires optimal physical organization for its full expression. Stray from that organization and you disturb the musical content. The best ear in the world will not give you the result if your physical movement isn't serving it totally. Furthermore, attention to the physical can guide your musicality, teaching you and enlightening you, as long as it is aligned to your ear. An educated kinesthetic sense can feed your ear just as an educated ear feeds your kinesthetic sense. If this were not so, then how could I take a student's arm and transform her playing from wooden and lifeless to magic, without ever having said a word? I do try to explain it in words – the mystified young woman should at least have some chance of understanding what is going on! But the essential communication is musical, and the medium is kinesthetic: neuro-musculo-skeletal system to neuro-musculo-skeletal system.

The more we pianists understand the exact physical organization we use to produce each type of sound, the more command we have over our means of expression, and the more fluent we become in our pianistic/musical language. The more I show my students physically how to do what we are doing, the more they can do what... the composer wanted.

Emotions, muscle tonus and musical tone

The ultimate goal of this process: the body is so well-organized its muscle tonus reflects the actual character of the emotion, and this in turn is translated cleanly into the piano sound. When the body is freed from all interference (parasitic contraction²), what you feel emotionally will indeed translate directly into the tone of the music you make.

²² Contractions that serve no useful purpose.

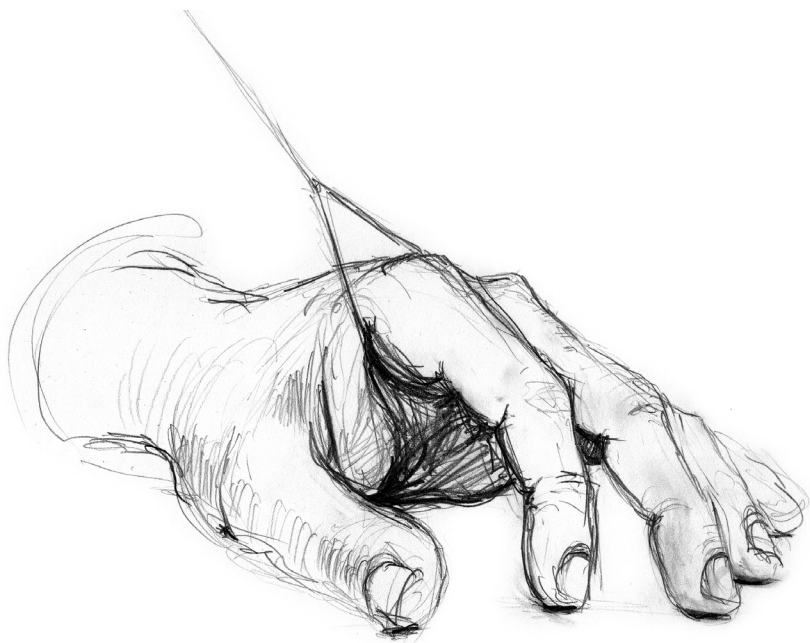
The physical – a potential distraction

The physical organizations discussed throughout this book should always be at the service of your ear. Investigate the physical, yes, but then constantly return to the basic musical goals of phrase, rhythm, sound quality and emotional expression. In your playing, cast 95% of your attention on your musical goals; reserve only that last 5% to ensure that your new physical-functional self-image now continues to serve your musical purpose.

Attending to the physical is not the same as making music. I have fallen into the dangerous illusion that it is more times than I care to either recall or admit! Don't do it! Don't become so fascinated with the physical that you neglect your real job: making music.

II

THE 'INNERLY-MOVING' HAND PLATFORM



3 STABLE & UNSTABLE EQUILIBRIUM

Moshe Feldenkrais in his book, ABC of Judo (Paris, 1938):

“In physics we distinguish between two sorts of equilibrium: stable and unstable. In stable equilibrium the body’s center of gravity is at the lowest point possible. A stick or a human lying on her back are typical examples.

‘In unstable equilibrium the center of gravity is elevated but the vertical passes through it and through the point at which the body presses the floor. This equilibrium is easily disturbed; then the body falls to lie on the floor. A vertical stick or a standing human are in unstable equilibrium. All other positions of the human or the stick (except lying horizontally) lack equilibrium. The movement of the human body in walking is a series of losses of equilibrium, the loss re-established by the action of the legs and aided as well by appropriate movements of the torso, arms and head. Advancing the right foot to take a step, the body’s center of gravity is displaced forward and a little to the right: those who are not used to walking (the convalescent who has spent a long time in bed, for instance) have difficulty finding the exact point and the coordination of the muscles necessary to re-establish the equilibrium lost by the step forward.

‘Obviously this phenomenon is just as real for strong people as for others. I would even say that it is ‘more true’ for strong people than others because, in matters of equilibrium, the one who is quick and supple is much more gifted by nature than the colossus; in any case, we can assert without fear of contradiction that

in matters of equilibrium, 'force' in the current meaning of the word does not enter at all.

'On this simple scientific fact rests the entire technique of Judo. ["and of piano technique as well," adds this author]. It is the perfect familiarity with equilibrium, how to upset it and regain it that allows the judoka to throw his adversary so easily without the 'use of force' in the common meaning of this expression ["and that allows the pianist limitless command over his or her instrument," adds this author].

*'To illustrate this truth, it suffices to imagine how easily one could topple the strongest man in the world – if he has his ankles tied together. Unstable equilibrium has the tendency to revert to stable equilibrium once it is unbalanced. After a certain point, no force in the world will help a falling person regain his balance.'*³¹

And now, take a moment to imagine – what sort of piano technique could we develop if we based it on this fundamental principle? How would a hand behave if it knew how to stand on the finger in a state of unstable equilibrium?

T'ai Chi vs. normal walking, stable vs. unstable equilibrium

In T'ai Chi walking we sink our center of gravity² to increase stability; in *The Craft of Piano Playing* we did the pianistic equivalent, pressing our hand structure into the keyboard to sense its wonderful stability and skeletal power.

But normal human walking is more upright than Tai Chi walking, and as the above quote shows, more complex as well – and though a hand that is 'more upright' (closer to unstable equilibrium) may be trickier to handle, it will be more moveable too.

³¹ Moshe Feldenkrais, *ABC de JUDO*, Paris, 1938, pp. 5-6

³² "Sinking the center of gravity" refers more to sensing the force of gravity on one's body than actually lowering it, which might lead to collapse (the same problem that arises with the hand). But the legs are bent in T'ai Chi creating a stable structure different from the verticality of the full upright stance.

Although Neuhaus used to press in on his students' hands to make them find their arch structure right quick, if you exert pressure on your own arch as you play, you may drastically inhibit its free moveability, tending to deform the very structure you are trying to maintain.

Cultivate Feldenkrais's sense of unstable equilibrium in your hand as it stands on each finger in turn, and you'll have all the structural integrity of T'ai Chi walking plus more moveability...

As we examine various types of pianistic walking, keep in mind that all of them lead towards being able to keep your hand as close as possible to unstable equilibrium in every pianistic situation. As you go through these exercises, keep asking yourself, "And how might this way of playing relate to unstable equilibrium? What could I do right now to maintain it in my hand?"

4 A FUNCTIONAL APPROACH TO PIANISTIC STANDING

I had an adult beginner whose hand somehow looked slightly ‘traumatized’ physically. Its shape was normal, yet its physical quality tight, held, fixated. The form was fine, the function obviously far from okay. To give his hand a sense of security and freedom, I didn’t need to improve its structure but did need to address its inner function.

When a baby learns to stand and walk, the whole skeleton must first learn to bear the weight of the body while erect in the field of gravity. When not rushed, babies learn to do this easily and elegantly – any strain or stiffness in the body as they stand for the first time quickly gives way to fluidity and flexibility through all the joints. The baby remains moveable in its erect position.

However many parents encourage their babies to walk too soon. The baby’s body remains stiff. The spine is subject to forces it’s simply not ready to bear. A permanent kind of ‘held-ness’ develops. The baby is under a constant slight trauma – my student’s hand reminded me of that.

It seemed he had been brought to ‘pianistic walking’ prematurely – but his hand was physically mature, fully developed. I needed to develop the walking function on the keyboard.

Follow this lesson now yourself – take your hand through this remedial exercise to sense in yourself what you may later offer your students.