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PART I — THE FOREGROUND PHYSICAL CRAFTSMANSHIP AT THE PIANO

SECTION I - GETTING STARTED

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PREFACE TO THE 2ND EDITION

“If you understood everything you have written your own book, I should come and bow down to you and beg you to teach me. But you do not understand either what you read or what you write... Of course, no book can give real preparation. What a man knows well, that is his preparation.”

- G. I. Gurdjieff in Ouspensky’s *In Search of the Miraculous*

I wrote this book out of my own experience—of my own developing piano technique, of the input from my esteemed mentors, and perhaps most importantly of my work with my own students that clarified just how to achieve my aim. This was not to say anything particularly new about piano technique, but to *find a way of saying it that was not open to misinterpretation*. Many pedagogues say many wonderful things about how to play the piano, but when their words are taken the wrong way, all their fine efforts are often for naught. This book was my first attempt to redress that problem.

Since I published the book in 2003 and produced the DVD version in 2006, something happened to me that relates to the above quote—a process of integration. Not that I hadn’t understood what I was writing back then, but my playing reflects and expresses what I wrote much more now than it did then. One reason for this is my submerging myself again in the actual experiential process of the Feldenkrais Method after several years’ hiatus. Another was my extreme good fortune in acquiring the 1942 New York Steinway B that once belonged to Mme. Wanda Landowska—an extraordinary instrument that demands of me, much more than any other instrument ever has, to *do as I say*, to finally fully integrate in my own playing all the aspects of technique that I have been trying to describe. It simply doesn’t tolerate being touched with any less refinement. A third reason was my return to working with Kemal Gekich and reopening our mutual investigation that had lain dormant for some years. We have both evolved in the interim, we both have new discoveries to share, and a few of these I have included in this second edition.

I have also pared down my language, trying to highlight the ideas in bolder relief by reducing the verbiage surrounding them. This unfortunately hasn’t made the book any slimmer, but I do think in many places it has made it

more readable. The second edition also reflects a shift in my understanding of hand structure and function towards Thomas Mark's fifth finger orientation of the hand.¹ In the first edition I encourage the cultivation of ulnar deviation; now I don't dismiss it completely but do discuss its inherent structural weakness and the advantages of reducing ulnar deviation to empower the hand. Vis-à-vis the hand's basic position on key, I bring the fifth finger knuckle into greater structural prominence, Seymour Fink² providing the other key inspiration for this shift. I also include a new chapter on *Arm Rhythm*—a glaring omission from the first edition.

The relevant chapters in this second edition are linked to their corresponding section of the DVD, facilitating easy reference between the book, where there is space for more detailed explanations, and the DVD which often provides a more graphic and palpable depiction of the problem at hand and its solution. For a more complete concordance between the book and DVD versions of *Craft* as well as thematic links to my second book, *Honing the Pianistic Self Image*, please refer to the *Study Guide to The Craft of Piano Playing*, a one-semester plan dividing the book's material into 13 sections (one per week). The Study Guide basically follows the chronology of the book with one notable exception: as in the film, I reserve the *Maximal Finger Articulation* section for somewhere near the end, helping the student, after covering certain principles of musicianship at the piano, to return to a physical focus and hopefully incorporate her or his new musical understanding into the potent and complete functioning of the hand on key. Thus the Study Guide chapters run as follows:

- Week 1: Introduction to Some Key Concepts (Book, Section I)
- Week 2: Piano Technique and Movement (Section II)
- Week 3: Legato: The Physical Foundation of Piano Technique (Section III)
- Week 4: The Special Role of the Thumb (Section IV)
- Week 5: Octaves and Chords (Section VI)
- Week 6: The Role of the Arm (Section VII)
- Week 7: Rotation (Section VIII)
- Week 8: Natural Finger Shape & Some Other Touch Strategies (Section IX, X)
- Week 9: Musical Entasis – Rhythm (Section XI)

¹ Thomas Mark, *What Every Pianist Needs to Know About the Body*, GIA Publications, Chicago, 2003.

² Seymour Fink, *Mastering Piano Technique*, Amadeus Press, Pompton Plains, NJ, 1992.

Week 10: Musical Entasis – Phrasing (Section XII)

Week 11: Musical Entasis – Orchestration; Thematic Review (Section XIII)

Week 12: Maximal Articulation (Section V)

Week 13: Emotional & Spiritual Content in Piano Playing (Section XIV)

Those of you using *The Craft of Piano Playing* as a textbook are well-advised to follow this plan but the general reader should by no means feel bound to it; it is simply a guideline and need not be strictly adhered to.

To the acknowledgments from the First Edition which all still hold true I would add several new ones. Warm thanks to the late Carola Grindea and her daughter Nadia Lasserson for their continued and patient attempts to enlighten me on the subject of Arm Weight; their persistence finally paid off! Thanks as well to Seymour Fink whose book and film, *Mastering Piano Technique*, proved the impetus for many of the revisions in this Second Edition, and to Thomas Mark whose writings were also influential. Thanks to Kathleen Riley whose work with surface electromyography has corroborated many of my conclusions and extrapolated them to new levels of exactitude and effectiveness. Thanks to Katherine Faricy for her valuable and helpful criticisms. Thanks to my manager, Jovan Hadji-Djurich, whose help with sundry practical matters has been invaluable, and to Renée Camus at Scarecrow Press who pushed me to publish a second edition. Personal thanks to Zhelko Yakovlyevitch, James Lum and Rick Jones—they'll know why... Grateful thanks to Natasha Feurich, whose encouragement and support provided me with valuable impetus when I found it tough to get going, and an especially warm thanks to Anna Zenzius-Spengler, my 'sounding board' whose help, feedback, criticism and encouragement were invaluable in the further development of my ideas since this book was first published.

Finally I cannot fail to expand upon two expressions of gratitude that graced my original acknowledgments: to Phil Cohen and to Kemal Gekich, whose genius I am only now beginning fully to appreciate. Their continued dedication to their Art has extended its bounds further than has ever been reached before, and their ongoing search provides a wonderful creative stimulus to the many of us who are grateful to be within their sphere.

Alan Fraser, Novi Sad, December 2008



Skeletal alignment to empower hand function

1 INTRODUCTION

A new approach

This book presents a new approach to the art of piano playing aimed at extending the physical and musical capacities of pianists from the dedicated amateur to top-level professionals. In it I have taken principles of movement from Feldenkrais Method² and the Eastern martial arts and applied them to the dynamics of piano performance. My book's title pays homage to Heinrich Neuhaus, the celebrated Russian pianist-pedagogue. Published over fifty years ago, Neuhaus' monumental work *The Art of Piano Playing* still stands for many of us as the pianist's bible. Hopefully my work will lead pianists to greater success in implementing his precepts, by showing them more clearly *how*. By filling in a missing link between musical intention and physical execution, this book aims to advance the craft of piano playing.

The process of reforming pianistic habits by means of a written text is not easy, as each pianist presents a unique set of acquired skills and unresolved problems. However, this system of movement physics at the keyboard aims to be comprehensive enough that each pianist may find the way to a fluid, capable untangling of some of the piano's most notorious technical Gordian knots.

Natural, individual and systematic human activity

Moshe Feldenkrais, creator of the method out of which much of my theory arises, cites three successive stages of development in all human

¹ 1.1 Fedor Chaliapine, *Ma Vie, traduit du Russe par andre Pierre* (Paris: A. Michel, 1932); 155 (English translation mine).

² 1.2 See chapter 46, appendices I, II, III.

³ 1.3 Moshe Feldenkrais, *Awareness Through Movement* (New York: Harper & Row, 1972); 25-29.

activity: the natural, individual and methodical.³ All our natural activities such as running, jumping, walking or eating, are a common heritage: they function similarly in everyone. But occasionally an individual finds a special way of doing something, and if it is an improvement over the normal way, this tends to be adopted by those around him. Thus Australian aborigines throw boomerangs, the Japanese learn judo, and North Americans go snowboarding! In the third stage, somebody observes the specialized activity and systematizes it, so that the process is now carried out according to a specific method as the result of knowledge and instruction, and no longer instinctively.

In the history of the various trades and arts practiced in the civilized world, we can find these three stages almost without exception. In the dawn of humanity people produced wonderful drawings naturally, and Leonardo da Vinci employed elementary principles of perspective, but it was only in the nineteenth century that these were fully defined; since then they have been taught in every school of art.

The simpler and more common an action is, the later will be the development of the third stage. Accepted methods were developed for the weaving of carpets, mapmaking, geometry and mathematics thousands of years ago, yet walking, standing and other basic activities are only now, through systems such as the Alexander Technique and Feldenkrais Method, reaching the third, or systematic stage. Where then does piano playing stand in all this?

Reduced physical prowess has led to homogenized musical expression

A hundred years ago, all Russian conservatory students underwent an exceptionally rigorous technical regime. Rachmaninoff said that scales and arpeggios were the foundation of his technique and that all his life he practiced them religiously. When he graduated from Moscow Conservatory it is said that he could play any Hanon exercise at 220 quarter notes to the minute, transposed to any key! Modern pedagogy scoffs at the ‘mindless mechanical drill’ of that era, but now we seldom if ever see this kind of physical mastery. To reach the Olympics, an athlete needs to acquire both a set of increasingly refined physical skills and basic strength. And so do aspiring pianists.

Today our main focus tends to be on relaxation, indirect attack on the key for warm tone, and supple arm movements to avoid injury. Unfortunately, this can limit us to a narrower pianistic sound spectrum. A reduced variety

of dynamic and tonal range cannot do justice to our musical sophistication, and prevents the piano from doing what it alone can do so well—simulating the sound of an entire orchestra.

I suspect that even many advanced pianists now lack the sheer facility and the resulting power that our most illustrious forebears possessed, and this is one key reason why it is so often difficult to tell one pianist's playing from another's. The problem is not too much focus on technique, but too little. Of course I am not suggesting that the student go off and pump iron or do Charles Atlas exercises to develop bulging muscles. But when I show my students how to organize themselves physically to get good sound, their hand tends to tire very quickly. Their technique hasn't evolved to the point where it would make such great demands on their physical strength. They do not lack musicality, but their technical focus has not been far-reaching enough to manifest that musicality fully.

We have failed to preserve and pass on to following generations crucial knowledge about the most advanced aspects of piano technique. Although some artists have reached unimaginable heights, a full understanding of what they *did* has not yet been incorporated into piano method. Gone for the most part (with a few commendable exceptions) are the freedom and extravagance of expression, 'the grand manner' for which we admire the old boys such as Rachmaninoff, de Pachmann, Friedman, and of course, the one they called 'the last Romantic', Vladimir Horowitz.

These great pianists constituted the second, individual stage of development in piano playing. Each of them brought the art to a new level. Nobody can duplicate their talent, but certain aspects of how they were organized physically *can* be analyzed and systematized. I propose the creation of a new generation of Romantics through an intelligent reconstitution of piano technique in its highest form. A further reaching, more global systematization of piano method can lead to improved physical ability, in turn freeing musical individuality to express itself more fully. This book aims to restore both physical and creative power to the pianist.

Much has been done already to systematize piano playing, but up until now the focus has been more on musical than physical issues. This is not a bad thing; it is the natural way. We conceive a certain sound, phrasing, emotion, and rely to a large extent on an instinctive process somewhere in our sensory-motor system to transform our musical idea into sonic fact. However in the light of new insights into the physics of human movement, we can now educate that instinctive process by recognizing and defining the physical processes involved in implementing our musical intentions.

We cannot expect a revival of the Draconian regime of Moscow 100 years ago. Instead I offer a series of exercises designed to develop hand/arm structure and function both intellectually and physically. If we cannot return to the old, let us invent new paths to pianistic perfection.

Horowitz: a benchmark in ability

One of the prime forces driving me towards my discoveries was the playing of Vladimir Horowitz. It was not only the marvellous music he made but also the way he made it. There was something entirely different going on when he played. He existed in a different state, something akin to the trance state of meditation, but in which he was *doing* the most amazing and complex things. The meditator observes without doing; Horowitz seemed to observe the unfolding of a composition—as understood by his enchanted imagination—even while he was occupied with the myriad complexities involved in actually playing it!

Theoretically it should be possible to play as well as or even better than the master, but imitating him in any habitual way gives superficial results—you are more likely to produce a gross caricature of his mannerisms (many of which were unattractive in any case!) than the ineffable beauty he could create. If you want to approach what he *did*, you must first undertake a profound analysis of all the ingredients of his process, then attempt to acquire them. Our goal is not to play like Horowitz, but as capably as he did. These are two very different things!

Other movement disciplines feed view of piano technique

The more this analytical process encompasses, the better chance it has of bringing relevant new information into the picture—thus my 20-year studies of T'ai Chi Chuan and Feldenkrais Method. It was something about Horowitz's *quality* of movement that led me to consider movement in its own right. The principles I learned away from my instrument allowed me to return to the piano with new insights.

One practical aspect of Horowitz's meditative, trance-like level of awareness was his remarkable economy of movement. Many people thought he was very stiff, but that incredible variety and richness of sound he produced belies the impression. I believe that although he did not appear to move much, internally his movement was exceptionally free, exact and effective.

This quality is exactly what the T'ai Chi master possesses. Studying Feldenkrais Method and T'ai Chi Chuan has allowed me to learn the qualities of precise, effective, meditative movement, and to develop a series of keyboard exercises designed to enhance those qualities in our playing.

Back to movement basics for fundamental, global improvement

In many sports and martial arts, certain basic movements are practiced which later on become the building blocks for more complicated techniques. Moshe Feldenkrais took that process (creating exercises based on the component parts of a complex activity) one step further, returning to the individual components of generic human movements themselves—movements such as bending and straightening, standing, walking—to improve the whole action by fine-tuning each constituent part.

All parts of our body tend not to be equally well represented in the motor cortex, and these more poorly represented parts do not participate in movement as well as they could. Feldenkrais Method uses directed awareness of specific sensations to bring these parts back into full neuromuscular representation. This is one means by which we can refine the 'building blocks' of the most basic human movements, and bring a new ability and sophistication to the performance of more complex tasks.

In classical piano, the 'basic exercises' have always been scales, arpeggios, double notes and of course etudes. The exercises I present here aim to do for piano what Feldenkrais Method does for human movement. The plan: to examine every detail of the basic movements required to play piano, movements fundamentally defined by the requirements of music and sound, not only of scales and other traditional aspects of technique. The goal: by executing these basic movements with a new level of command, with an understanding that is not only intellectual but sensory—kinesthetic, physical, functional and practical—we bring a new level of physical skill to our playing.

Conscious analysis of normally automatic actions

Most of our actions are automatic, and necessarily so—the thinking mind simply cannot work quickly enough to keep tabs on everything proficiently. If I drove a car trying to observe and analyze every move I made, I would crash in no time. Yet to improve movement patterns learned long ago, or

even while learning a new movement, I must undertake exactly that process of ‘disassembly’ and observation. If I do so intelligently, when I again put the action on automatic pilot I will have a new ability, elegance and ease of execution—a new functionality.

Primary focus on the physical

Some colleagues claim that this book focuses too much on the physical, giving short shrift to musical and philosophical aspects of piano playing. But in my experience, sensing with increased awareness how I produce a sound physically, leads me to perceive that sound with much greater accuracy, and ultimately to consider musical and philosophical aspects of my playing in a new light as well. In any case the starting point of my approach, which I call the background, *is* character, emotional content, the message the composer felt and wanted to convey. Only from this do I proceed to its musical means of expression, the middleground. Yet sooner or later in my work (and more often sooner than later!) I end up back at the foreground, the physical means to achieve musical goals, simply because we don’t know enough about the physical realities of keyboard practice! Only the most talented of us can rely on an instinctive process of finding the best physical way. For many of us, starting from the physical can become an effective way to move towards more profound music making.

So this book does concern itself primarily with the foreground, and with good reason. I have tried to create movement patterns that activate a physical organization most useful to the pianist, and then relate these to elements of musicianship—in fact, to synthesize musical and physical issues. I aim to help both pianists who need remedial work in basic strength at the keyboard and those who seek a new dimension of musical understanding and a new path for the development of pianistic skills. I do my best to maintain an eminently practical orientation, avoiding as much as possible the time-consuming presentation of theoretical detail and instead guiding the student through an experiential process.

I have tried my best to transmit this knowledge in the spirit of service—service not so much to you personally, dear reader, as to music itself. I invite you to give your utmost in concentration and dedication, with a true intention to serve something higher. If you succeed in staying with me as I guide you through these investigative processes, we can look forward to a breakthrough in your ability at the piano.

11 PHYSICAL LEGATO IS THE FOUNDATION OF PIANO TECHNIQUE

(DVD 2-iii)

Application 3 (10.3)

LEGATO III: ‘WALKING’ ON THE KEYBOARD

(DVD 2-iii)

Discrimination of functions

Try to maintain this sense of power and stability as we now introduce a new element, a discrimination of functions. While one finger maintains the stability it acquired in fingerstands, its neighbour will begin to move to take a step, snaking out to feel the key antenna-like, as your legs did in T'ai Chi walking.

Step 1: Play one note. The finger that plays it becomes your *yang*, your foundation, your support. Your next finger, because it is *yin*, can feel its note, gauge the key exactly, even feel the very weight of the hammer as you might measure the weight of a book by holding it at arm's length and jogging it up and down gently.

Step 2: Only when your *yin* finger has adequately felt its key does it play the next note while your *yang* finger *does not release the first note*. The moment when two keys are depressed is crucial. Here the two fingers exchange their *yin* and *yang* functions just as your legs did, while both maintain a perfect stance—total contact with the keybed. This means that for a moment you feel as if you have two *yang* fingers—you are already leaning healthily into your *yin* finger but have not yet begun to release your weight from the initial *yang* finger. This sense of walking, of shifting your weight so to speak, from the bottom of one key to the bottom of the next, allows you to connect your two

fingers on the keyboard.

A very slight adjustment of your wrist facilitates this. Don't actively move your wrist so much, but simply let it follow your hand through its slight shift in position from one note to the next.

This procedure is called overholding, and there is a crucial musical as well as physical reason for doing it. As I mentioned earlier, singers can join a series of melodic tones seamlessly.

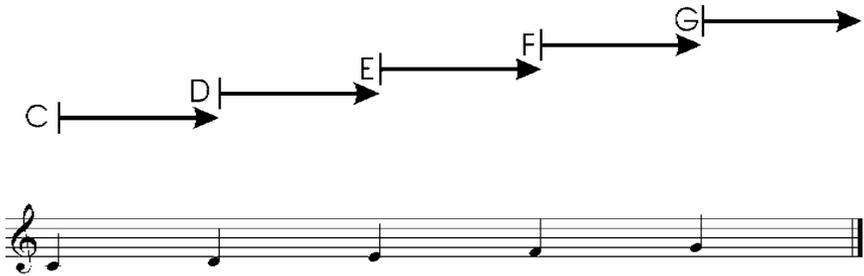


Illustration 11.1: Graph of vocalist's melodic line

The piano, however is a percussive instrument. Sound is produced by felt-covered hammers hitting strings. Thus if we merely try to reproduce this seamless joining, the sound of each hammer's impact will break the smooth line. When you overhold notes, there is a moment during each melodic change when two notes are sounding simultaneously, even if they are dissonant next-door neighbours.

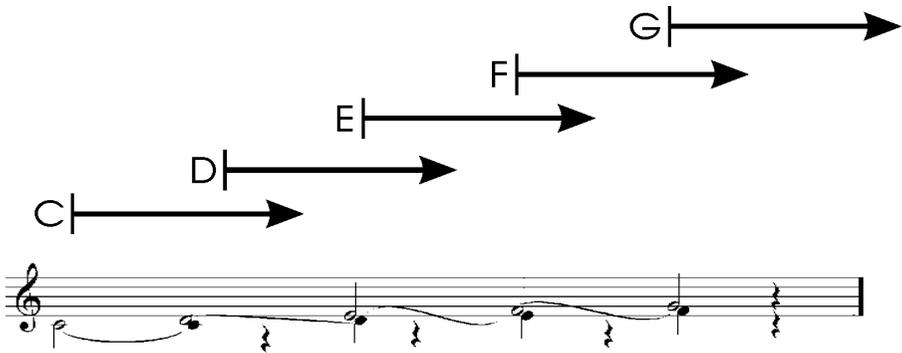


Illustration 11.2: Graph of pianist's melodic line

This blends the notes in our ear and masks the percussive effect. Blending the notes more than they ‘should’ be counteracts the percussive attack, and somehow our brain computes all that to produce the impression of a smooth line.

When you first try this, the more you overhold (the further you extend each line in the graph to the right), the easier it is to get the hang of it, and the clearer the aural result. Be sure not to make an individual wrist movement on each note — this would increase dramatically the risk of a ‘bump’, a shock that would again break the melodic line. The chain of small wrist adjustments should in the end resemble a smooth, subtle gliding arm movement through a whole group of notes.

Just as in walking you securely shift your weight from one leg to the other, here as well there is at no moment any loss of structure or support: in no way is your *ability* ever impaired. Not only does one fingertip connect to the other through the keyboard: your metacarpal-phalangeal finger joints, your top knuckles are also joined, creating a tetrahedral structure whose four corners are the two fingertips and two knuckles.

This is crucial, that legato is felt not just at the fingertips but across the metacarpal-phalangeal joints.



Illustration 11.3: Legato at the midpoint: the tetrahedral structure of two yang fingers

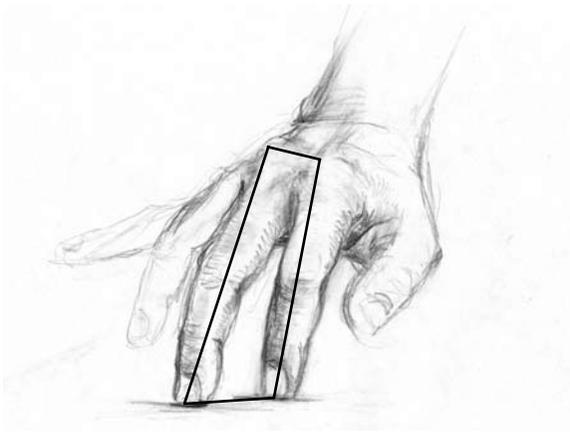


Illustration 11.4: Sensation of the tetrahedron maintained in curved-finger legato

When we walk on the street, we do not move from one foot to the other with a hop but with a sure stride. It is surprising how far we can stray from this sureness of step in our legato touch on the keyboard!

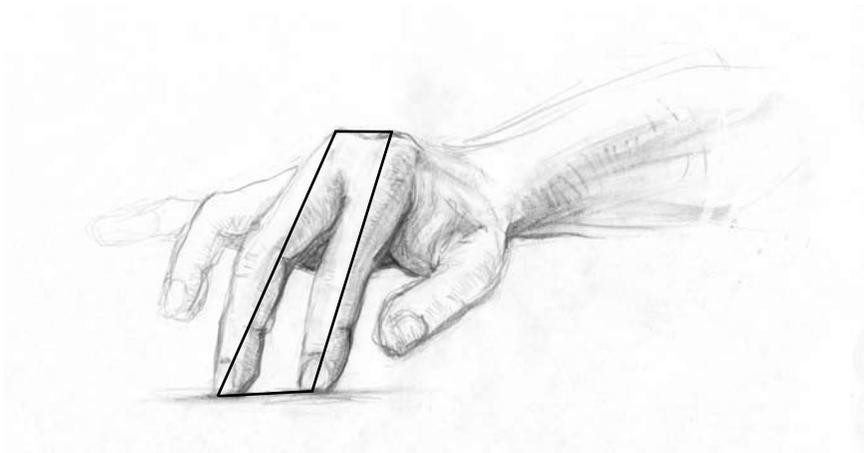


Illustration 11.5: The inner feeling of the curved finger tetrahedron

Illustration 11.5 visually enhances the structural security of the legato tetrahedron compared to the other fingers. Try ‘deforming’ your hand like this: although you may not succeed, the effort will help you discover the potent inner feeling of this functional differentiation.

14 THUMB PUSHUPS: THE HAND AS SUSPENSION SPRING

(DVD 3-v, vi, vii)

The transition from thumb function in grasping to its role in playing piano is not so simple. How can your thumb express its natural strength when it cannot grasp but must stand alone on the keyboard, relatively independent from the rest of the hand? The series of exercises I call thumb pushups explores the development of thumb strength and function where we need it—in playing.

Application 7 (14.1)

THUMB I: THUMB PUSHUPS

(DVD 3-v, vi, vii)

Do you remember how your thumb tended to collapse in application 10.2, pushing against the wall? Let's return to this problem and try in a more detailed way to resolve it once and for all.

Step 1: Return to the wall and press into it quite firmly with your thumb alone. What did your fingers do? Most likely they curled naturally rather than straightening out. Continue to press with your thumb while beginning slowly to straighten your fingers and curl them, continually monitoring the changes in the stresses on your thumb. Does the alignment of its joints want to shift as you flex and extend your fingers? Do you feel certain muscles in your thumb reducing or increasing their work as your fingers change position? Explore all the possibilities of finger shape, flex them into a fist, then leave them loosely curled, then

straighten them again, then back to neutral... Paint as rich and varied a picture as you can of all the ways your thumb reacts or responds to these changes in effort and position elsewhere. Finally, take a rest...

Step 2: Return to the wall, press in with your thumb, leave your fingers comfortably curled, and begin to move your arm to the left and right. What does your thumb do? Do you hold it stiffly in position or do you allow it gently to curl and uncurl? If you held it in one shape, reduce the strength of your pressing until your thumb begins to fold gently as your arm moves to the inside, straightening again as it moves to the outside. Monitor in detail: which joint uncurls or curls first, the distal-medial joint or the medial-metacarpal joint? What is the coordination between them? This way you can discover where the structural-functional strengths and weaknesses of your thumb are.

Each time you move to the inside, let your thumb curl more and more until it collapses and 'lies' on the wall, first its distal phalange... and return to standing... then roll all the way onto your medial phalange... and return to standing... Monitor the way you come back up to stand on your thumb again. How much muscular effort do you use? To what degree is your standing based on the strength of our thumb's skeletal alignment alone?

Step 3: Now put your thumb on a key, then 'standing' on it, stretch your four fingers, lifting them as high as you can. Point them to the ceiling, all the while letting a considerable, even close to unbearable amount of weight press down through the thumb into the key. Here the continuous pressure of your arm exerted on your thumb and hand imitates the weight of your body on your hands and arms in real pushups.

*Remember, if you have any concerns at all about tendonitis, **go gently here. Proceed with caution!** Perhaps start by imitating your weight when you were just a baby, then proceeding to when you were five, ten, fifteen years old.*

20 FORTISSIMO OCTAVES

(DVD 4-v, vi)

Application 16 (20.1)

OCTAVES IV: **SHAKE THE PIANO**

(DVD 4-vi)

Drawing fingers together to consolidate hand strength

Step 1: Place your flattened four fingers with their tips bunched together on a flat surface with your thumb stretched out to octave width pointing inasmuch as it can in a direction opposite to your fingers. Press the surface quite firmly while drawing your fingers and thumb towards each other. Your fingers are flat or even hyper-extended. If you continue this motion it becomes the tissue paper picking up motion: your fingers form a bird beak; your wrist comes straight up while your elbow falls slightly forward and in.

Step 2: Remember this move as you place your hands on an octave. Grab a white key octave and literally try to shake the piano, letting your elbow continue to relax and fall in. Watch out: stiffening your elbow will only weaken your structure, inhibiting your hand's ability to grip. Keep your elbow loose, because here you need all the hand strength and structural viability you can get!

Can you really make the piano move on its casters? Many of my smaller students end up shaking themselves more than the piano at first, but all eventually get the hang of it to some extent. It is not so important for you to actually move the instrument.

The crucial thing is how you mobilize your whole physical self in *trying* to move it.

Here your metacarpal-phalangeal joints should rise always. Banging results from instability of structure, which in turn stems from lack of activity. This exercise aims to increase hand activity and thus actually *generate* stability. This variation on the basic grasping motion of the hand demonstrates the structural security and control needed to get an octave that sounds big but not banged.

Application 17 (20.2)

GRASPING IV: SOFTEN FOR GREATER POWER

Towards healthy rather than aggressive power—natural grasping

Let's return to grasping once again.

Grab onto any object and really grasp it with all your might. In lessons I offer students my own arm for this purpose; in fact I encourage them to try and *break* my arm. But often their initial efforts are so feeble that I will wonderingly ask if a mosquito has landed on my arm! Find a partner and practice on their arm. When you have accustomed yourself to grasping firmly, pull your partner's arm towards you while they resist your efforts. Again try not to stiffen your elbow but have the power come from your fingers *and* from higher up your arm. Paradoxically, the softer you are, the less you stiffen, the greater effect your muscular power can have.

Instantly you get a clear, graphic experience of the grasping function, and of your own eminent capability. Do you see that you really can grab, with real power! Now let's examine how this sense of healthy rather than brute power can help us at the keyboard.

Hand activation—for a free, soft forearm

I showed grasping to one student who then asked, "When I try to play loud fast octaves my forearm gets sore. How can I play them without hurting myself?" I had just given the answer experientially; but now some

explanation was needed. I reiterated that when your hand is not active, its structure tends to weaken. As a result your forearm muscles stiffen, compensating for the lack of stability and power in your hand. However this is counterproductive effort on their part: originating from a state of weakness, this stiffening already puts you behind the eight ball in terms of movement. This effort of your forearm is one of compensation, of fixation rather than of real action.

Hand activation—generates structural integrity

The most important aspect of the finger-hand grasping technique is that it activates. Muscular activity is implemented before you have committed yourself to a certain fixed hand structure, before the note is even played. Thus activity not only generates movement, it also creates the conditions for good structure. The muscular activity is cause rather than effect, generation rather than compensation. The more internally active the hand, the better your sound will be and the more moveable your arm muscles remain. Note that external arm movements are a completely different matter; they can actually interfere with this process, and thus for the most part should be minimized.

Hand activation—sidesteps danger of tendonitis

Activation on time creates an ideal situation where even while we increase the power of our sound we are also drastically reducing the chances of hurting ourselves. Many students trying for Horowitz's big sound have overstrained and only acquired a case of tendonitis for their troubles. Here we provide a way for one's sound to evolve and grow without the danger of adverse side effects.

Still clear as mud? Let's try a further exercise.

Application 18 (20.3)

OCTAVES V: FREELY VIBRATING OCTAVES (DVD 4-v)

Whip your hand back over your shoulder

Step 1: Rest your hand on key, your thumb and fifth finger outlining an octave. Now, without playing anything, suddenly whip

your hand straight up and back, leaving it somewhere above your shoulder. Perhaps you could pretend you harbour an intense dislike for your teacher, who just happens to be looking over your shoulder (we certainly hope you only *pretend* to do this). Whip your hand back so suddenly that you by-accident-on-purpose smack him or her one in the face! Notice that if you leave your wrist loose as you do this, it naturally cocks itself—your hand flies further back than your arm. The further your hand cocks back the more your fingers will naturally curl.



Illustration 20.1: Natural finger curve as the arm whips back

Step 2: Do the same, but see if you can surreptitiously have your octave sound while your hand is on its way out. Practice this a few more times, not of course with your teacher-target really there... (unless...)

Step 3: The same, but instead of starting from on key, begin with your hand somewhere up near your shoulder. From that position play the same octave *staccatissimo* and return instantly to somewhere near your shoulder. It's the same whipping motion, but beginning from the hand's loosely pulled back position and returning to it. The movement should be lightning fast so that it looks like your hand never leaves the shoulder area. *Keep your hand and wrist loose!*

51 THE FELDENKRAIS - HOROWITZ CONNECTION

Let's digress for a moment to acquaint ourselves with two key men whose discoveries in their respective fields eventually led me to write this book.

Moshe Feldenkrais

So strong in his youth that he could grasp a vertical pole and hold his whole body out from it horizontally. He mastered judo to the point of winning the European judo championship in the 1930s and founded the Judo Club of France. His keenly inquiring mind formulated a body of knowledge derived not only from theory but also from the tangible experience of a man endowed with exceptional ability. Even while working at the Joliot-Curie laboratories in the forefront of nuclear physics research, he was also learning so much about psychology, neurophysiology, and other health-related disciplines that later on the London School of Medicine invited him to enter directly into the *third* year of their degree program!

Feldenkrais declined and, as he said much later, it was lucky he did. Had he gone the normal route, it is unlikely that he would even have *conceived*, much less accepted, his radically new ideas on human functioning. He himself said that for the first 25 years of his investigations, much of the time he wondered if he was crazy!

Genesis of a method

The genesis of Feldenkrais' method was a knee injury sustained playing soccer (or as the Europeans call it, football). When the doctors gave him only a 50 percent chance of walking after the proposed operation, he preferred to attempt a cure on his own. He lay in his hospital bed and experimented with micro-movements, experiments educated by his experience in judo, medicine, cybernetics, mechanical and electrical engineering, physics, and

also by observing the sequences the babies in the pediatrics ward followed in learning movement. He taught himself to walk again and in the process developed an extraordinary system for accessing the power of the central nervous system to improve human functioning. Through exploration of 1) the nature of movement in general, and 2) every component or degree of each specific movement in question, students of his method arrive at a more elegant, effective and capable use of self.

Moshe Feldenkrais was already in his late 70s when he came to America and began training new generations of Feldenkrais practitioners. The videos of these trainings show him walking in a somewhat careful yet extremely well organized fashion. The x-rays showed that it was a miracle he was walking at all!

Vladimir Horowitz

Feldenkrais and Horowitz. Both Ukrainian Jews, born within a year of each other (Horowitz in Berdichev, Feldenkrais in Slavuta) at the turn of the century, and each in his own way a master of movement. Horowitz in his late 70s was still performing miracles at the keyboard with most of the power of his younger years and with ever-increasing finesse and subtlety, even as his walking came more and more to resemble Moshe's: the cautious yet enlightened locomotion of old age.

His posture reflects quality of movement

Once I showed the video *Horowitz in Moscow* to two of my Feldenkrais trainers, men who had worked with Dr. Feldenkrais himself. Their reaction was, 'Look, he moves like Moshe!' The same walking, but more important, the same eagle-like poised, exact turning of the head. Maximally efficient, minimal movement yet completely free. The head angled slightly forward yet floating. Not hanging down heavy but rather as if suspended from a thread. A head can only turn like that when it rests on top of a spine that soars up straight and long, not held up with excess muscular tension but freely standing there in gravity, 'buoying'.

This state can only occur when there is an optimal balance of muscle tonus throughout the body. Effort is minimal because there is a minimum of the unnecessary habitual muscular contractions against which the body

52 FLAT FINGERS

Is the intention to curl still present or completely absent in a flat finger attack?

At a certain point after watching a Horowitz video my curiosity was piqued; I started experimenting and for the first time found a way to play with my own fingers totally flat. The new tonal possibilities I discovered were gratifying to say the least. From my diary, 1997:

The quest to unravel the mysteries of Horowitz's ravishing technique continues. . . . The other day it was flat fingers: I have noticed how in between movements of a work he would sometimes put his fingers flat on the keys with his palms all the way down on the wood below the keys. This form of the hand, if used to produce sound, fuses the three finger phalanges so they function as one big one, maximizing 'juiciness'. It is the very opposite of the curled finger. I'm beginning to think that the value of curling the fingers lies mainly in the stimulus to functionality inherent therein. The basic motion of the finger is to curl, to grasp. But the force generated by a curling-grasping impulse can be transmitted even if there is no visible curling movement! Once this fact is 'grasped' by the mind and the reflexes, once this function is active and no longer subject to laziness and sleep and this has become the rule rather than the exception, then the function can be activated no matter what the finger's position.

Capable karate chops

Then we are left simply with the question of what position produces what type of sound. The flat-fingered, super-low hand provides several exciting new sound possibilities. When done maximally, it even provides a way to 'karate chop' with integrity!

*Application 73 (52.1)***STRUCTURAL FUNCTION XI:****FLAT FINGERS TO INCREASE CONTACT WITH THE KEY**

Step 1: Flip your wrist all the way back so the fingers point as much as they can toward the ceiling. Then lower only the pinky to horizontal, and point it forward as much as possible. Leave the rest of your hand pointing up. This brings your fingers, hand and arm into an arrangement of more or less right angles.

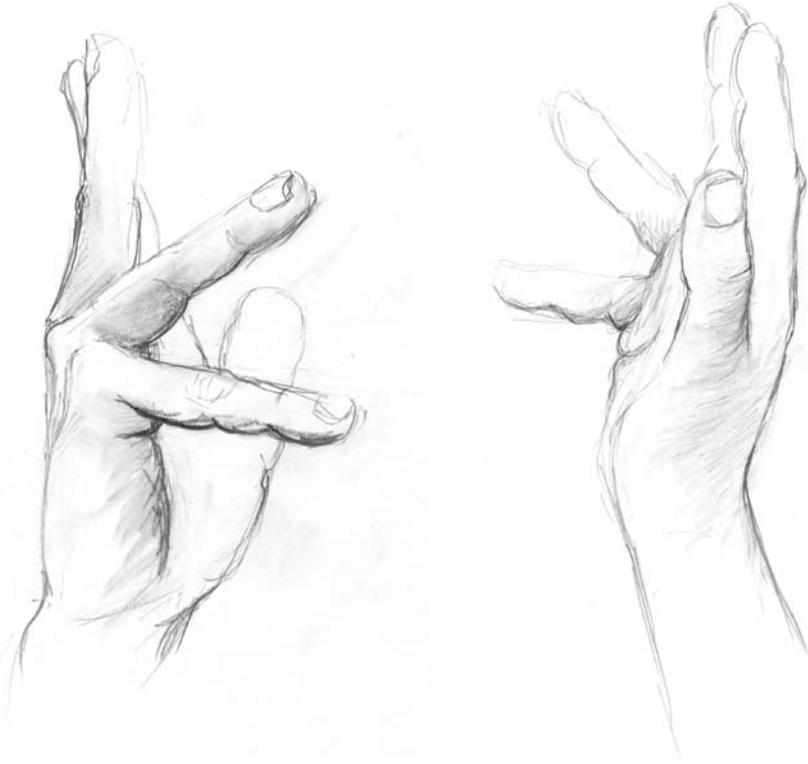


Illustration 52.1: The fifth as a horizontal keyboard hook

Step 2: Now, keeping your hand vertical and your pinky horizontal, lower your whole arm as a unit, as if you want to push your palm somewhere underneath the piano near the keyboard. Your pinky, as if by chance, catches the key as a hook would.

56 HIERARCHY OF RHYTHMIC VALUES IS A PRACTICAL REALITY

'In the beginning was Rhythm.'

- Ferruccio Busoni

The starting point for our physical approach, hand structure and function in legato, provided us with a foundation. Our musical discussion also needs a foundation, and this is best rhythm. Rhythmic pulse suffuses music; when it is absent, music's features, flesh and blood—melody and harmony—have no skeleton upon which to hang.

Rhythm is not metronomic

(DVD 7-ii)

The metronome would seem to give us something fundamental to healthy rhythm: absolute evenness of attacks in time. But remember, this is only an indication, not the end product. It may sound strange to say, but one fundamental quality of rhythm is that it is not metronomic.

Healthy rhythm will always *diverge* from metronomic regularity for two key reasons:

- 1) the nature of phrase breath (to be discussed in section XI) and
- 2) the discrimination of levels of rhythmic hierarchy: the difference between strong and weak beats.

If you have the type of metronome that can click strong and weak beats, set it now to let's say, three-quarter time, one strong and two weak beats. At this point you may be surprised to hear me assert that your metronome is no longer rhythmically accurate!

Your metronome is now *distorting* a bar of three-quarter time into mechanical regularity—but *real* three quarter time is not like that! In a rhythmic bar of three-quarter, the second beat will generally come infinitesimally before the metronome, the third beat ever so slightly behind

it. This is an example of *aural entasis*,¹ and any good musician is doing it constantly (although perhaps not consciously), no matter what the time signature. This is one of the key elements giving music its human, speaking quality. This also separates real music from the mindless mechanics of electronic drum machines and all the other horrors of ‘techno’ pop.

In other words, hierarchy of rhythmic structure is not something that only music theorists should worry about—it most definitely manifests in reality! Downbeats and upbeats are not the same and should never be played as such, not only in terms of dynamic differentiation *but of their placement in time*. Although this applies to all time signatures, perhaps waltz time affords us the best chance to grasp this idea.

The three beats of a waltz are by nature unequal (DVD 7-iii)

There is a practical reason why each beat in a measure of waltz time is unique and dissimilar. There must always a slight pause between beats two and three, because the dancers need a moment of suspension to help them slide through beat three, then swoop still further on down through beat one and on up to the next moment of poise.

There is nothing worse than three beats in a bar completely undifferentiated. The listener can no longer hear properly, because there is no basis for discrimination. As well, these rhythmic discriminations form the basis of control for the performer. Both player and listener must feel that sense of lifting the dancers and whirling them around the floor. Three must always lead into and through one. There must always be that rhythmic *élan*—if you’re just typing notes you’re wasting your time (and mine!).

The pulse that locomotes your dancers is not created by dynamic accent so much as by a feeling of push. Try pushing someone, literally placing your hands on their shoulder or back or chest and giving them a gentle but firm shove on each downbeat. It is not a rough push but it lets the person being pushed know in no uncertain terms that *this* is the movement the music is generating. Now try and play, lending this feeling of push to each downbeat. This can be done in any meter, not only in waltz time. Notice that the feeling of push can be drastically improved through a slight waiting

^{56.1} See chapter 3, *Background, Middleground and Foreground: A Plan for Work*.

59 CREATIVE WORK WITH THE METRONOME: MELODIC INFLECTION

(DVD 7-1)

Chopin described rubato as the left hand keeping time while the right hand played freely. This description has the seed of truth in it, but also has led to much confusion. For one thing, it seems impossible! How can the hands stay together if one is in time but the other is not? The method of metronome practice described below may shed light on the matter. The structure of the soloist's opening theme from Rachmaninoff's Second Concerto first movement offers an ideal opportunity to investigate not rubato but melodic inflection.

Here we will apply the basic principle of musical declamation mentioned earlier: long notes longer (played slightly slower than notated), short notes shorter (played a little more quickly). Remember, this musical practice need not be done in a gross way. Lengthening or shortening by only a few microseconds may be enough to create the effect of aural entasis we seek.

Slower tempo lends tragic emotional tone to Rachmaninoff's Second Concerto, first movement

Rachmaninoff marks the tempo of this movement Moderato, with the half note equal to sixty-six. Most pianists take a faster tempo, perhaps following Rachmaninoff's lead: both his own recordings have significantly faster tempi. However these performances were recorded in the days when you could only fit four minutes on a record side, and the recording engineers forced Rachmaninoff to quicken many of his tempi to fit a certain section of music onto one acetate! So much for the relevance of the documentary evidence...

His original tempo indication allows a much more expressive reading: the movement's tragic overtones begin to emerge. A quicker tempo destroys all possibility of the tragedy unfolding. At one point in the film *Richter: Enigma*, the tolling of massive Russian church bells segues into the opening chords

of this concerto—I can think of no better example of the monumental, tragic emotional impact of this music than Richter’s performance here.

Moderato

Orch.

Pno.

Example 59.1: Rachmaninoff: Concerto #2 in C minor, 1st mt., mm. 11-14

Note that at the movement’s climax, the beginning of the recapitulation, Rachmaninoff marks a new tempo, *Maestoso (alla marcia)*. Again, the tendency is to follow the *alla marcia* and play it in a vigorous march tempo, ignoring the fact that *Maestoso* would indicate an even slower tempo than the opening. Rachmaninoff clearly intended a tragic march, with dark, almost funereal overtones.

Maestoso (Alla marcia)

Orch.

Pno.

Example 59.2: Rachmaninoff: Concerto #2 in C minor, 1st mt., mm. 245-248

In one lesson I was using the metronome to steady a student's vacillating tempo, but we quickly noticed that if the melody was played keeping in time with the machine, it lost all its poetry. Here was an opportunity to use the metronome not dogmatically but in a way that would heighten musical effect. This next exercise can be done without the left hand's accompanying figuration—just work with the melody alone.

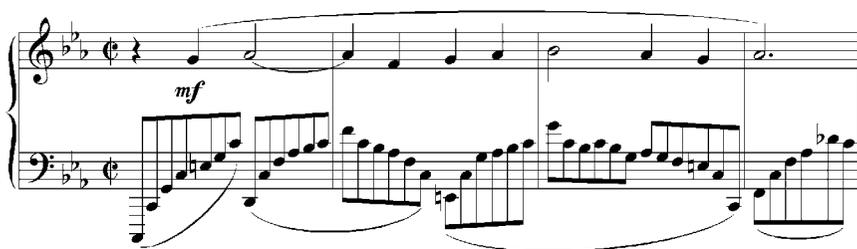
Application 79 (59.1)

**PHRASING II: THE METRONOME & FLEXIBILITY
IN PHRASING**

(DVD 7-v)

Ahead of or behind the beat but always tied to it

Step 1: At measure 55 the soloist finally takes over from the orchestral melody.



Example 59.3: Rachmaninoff: Concerto #2 in C minor, 1st mv., mm. 55-58

When rising from G to A flat, the temptation is to delay the A flat, thereby making it more 'expressive'. However by doing this we lengthen the initial eighth note G, going against our basic principle of long notes longer, short notes shorter, and bogging the melody down. Things very quickly become heavy and long-winded if you keep up this type of inflective strategy. Instead, move *through* the G, bowing *up* into the long note A flat, giving it some impetus and allowing it to soar. Quite simply, if you wait between G and A flat, you kill the A flat.

You can shorten G either by delaying its attack or even by allowing A flat to sound *before* the downbeat has arrived. Standard conservatory training most certainly forbids this type of freedom, but isn't this exactly what Chopin describes? We are trying to develop a rational set of rhythmic strategies that when employed will lead to an intelligent, noble rubato—one that deepens not cheapens expression.

Step 2: Following along this train of thought, at measure 56, try delaying the quarter notes F-G-A flat. In other words, lengthen the note A flat (measures 55-56); heighten its singing expressive quality by extending it, drawing it out. Don't worry about the metronome—after the downbeat of measure 56, waaaaait almost until the halfbeat ticks before playing the note F. When you finally allow yourself to play that F, swoop up; begin to make up the lost time by moving the rising line forward. Thus although the note G will still sound after the metronome's halfbeat tick, it is already closer in time to the beat, and by the time you arrive at the half note B flat you will be back in time, or again even slightly ahead.

Step 3: Now again lengthen the long note: draw out the half note B flat (measure 57) and delay the sounding of the A flat quarter note until after the metronome's halfbeat clicks. Speed up the quarters notes A flat-G to arrive on time or even a little early at the A flat whole note (measure 58).

Unfortunately it takes several paragraphs to describe in words what takes only a few seconds to occur in time. Perhaps a visual image can show more effectively the proportional distortions involved in this type of aural entasis. In the following graph the metronome clicks are marked at regular intervals while the notes are displaced either to the right or left depending on their relation to the beat. Notice how clearly the visual displacements allow you to 'see' the phrase shape that you are trying to create. Your eyes can literally 'feel' the breathing of the phrase, its ebb and flow.



Example 59.4: Rachmaninoff Concerto #2 in C minor, 1st mt., mm. 55-58—melodic departures from metronomic regularity to breathe life into phrase

Be careful; overdoing this type of shaping can very easily lead to musical disaster. In this graph I have heightened the proportional differences to make them clearly visible, but in actual time your departure from the beat might be less blatant. It's all a question of degree and of taste—what effect do you want to create? Are you in total command of all the resources needed to create it?

Once you've gotten the hang of it, continue to inflect the whole theme following this rubato strategy, at first still using the metronome as your accompaniment. Then turn it off and reinstate your left hand. Why not leave the machine on? Although Chopin said the left hand keeps time, in practice not even your left hand should keep absolutely metronomic time. It stays a lot *closer* to the beat than your right hand does, but not entirely in sync with it. Your left hand does keep time but in a flexible, human way.

Do you find the complaint rising within you that this amount of detailed work kills artistic or emotional spontaneity? It's a valid concern, but here we are working to *lend integrity to your spontaneity*, allowing you to enhance expression by following rather than contravening the basic rules of declamation. There is a whole magnificent world of spontaneity awaiting you in the *degree* to which you delay a note or flow through it. There are literally thousands of ways to do it that don't go against basic laws! Learn those laws, observe them, learn to use them to your advantage. This can become a wonderful stimulus to artistic maturation! Even spontaneity can be educated, and so it needs to be.

Mozart's Sonata in B flat major K.333, 2nd movement

No human language is spoken in a monotone, and this type of melodic inflection is universal—applying not only to Romantic repertoire but to the Classical and Baroque as well.

63 ORCHESTRATION: THE HEART OF THE PIANIST'S ART

We should be orchestrating at the piano all the time. Everything we have discussed so far aims to empower our orchestrations: to make them clearer, more graphic, more dramatic, more effective, more colourful. Orchestration and tone colour have cropped up at many points in our discussion already. Look back, for instance, to chapter 37, *Using the Yin/Yang Finger Phenomenon in Orchestration*, chapter 38, *Natural Finger Shape and Tonus in Chords*. This subject is so vast that an entire volume would be required to do it justice. Here we must be content to consider a few key points—the challenge is yours to explore and expand on these in your own playing.

Application 83 (63.1)

ORCHESTRATION III: ACCOMPANIMENT'S LEAD ROLE IN CREATING OVERALL DYNAMIC LEVELS

As noted in chapter 55, in Rachmaninoff's 2nd Piano Concerto the pianist first appears as accompanist, spinning out turbulent bass arpeggiated figuration for a full 46 measures before finally emerging as soloist. (refer back to example 55.1, page xx) Many pianists use this as an opportunity to warm the fingers up and acclimatize oneself to the instrument and the whole situation before the 'real work' begins, and their accompaniment remains largely inaudible. But I suspect Rachmaninoff had something different and far more potent in mind.

That accompaniment figure begins two measures before the orchestra entrance, and is marked *ff*. If you work extremely hard to make every single

note of each pattern speak **ff**, the effect is electrifying. Try overholding each entire group of notes, or as many of them as you can, to discover which ones were ‘slipping through your fingers’ and not really sounding fully.¹ Make these two measures a call to arms, a challenge to the orchestra members to give their all, and when their melody enters, keep trying to overpower them with your sound. A torrent of tone should be gushing out of your piano, galvanizing the orchestra to an evermore intense, white hot emotional, dramatic and tragic first theme. Done well this sets the tone for a wonderful performance of the entire concerto.

Rachmaninoff’s accompaniments are often much more than mere background; his Etude-Tableau Op. 39 #5 offers another opportunity to explore this idea.

Step 1: From measure 18 onwards the melody often sounds in full four-note chords or octaves. For an orchestral sound, don’t do normal top note voicing but play all four parts of the chord as if each is a lead melodic voice. Again, application 59.2 offers a physical solution to this.

*Example 63.1: Rachmaninoff: Etude Tableau in E flat minor,
Op. 39 #5, mm. 18-20*

Step 2: When we reach **ff**, let the repeated chords come up in dynamic level. We modify our normal practice of subduing the accompaniment, because this would rob us of **ff**. We cannot crescendo in the melody itself because we have already been trying for as full, singing sound as is humanly possible. Thus it

^{63.1} If you find you don’t have the strength to do this, go to the following application (63.2) to develop it.

falls to the accompaniment to create the crescendo by swelling up until at the peak of the crescendo it almost (but not quite!) drowns out our lead voice(s).

Example 63.2: Rachmaninoff: Etude Tableau, Op. 39 #5, mm. 22-24

Generally, in any dynamic from *mp* to *ff* your melody should remain in the area of a full-throated *forte*. It is through your accompaniment that you have tremendous leeway in creating the impression of changing dynamic levels—anywhere from *ppp*, *p*, *mp*, *mf* and *f* through to *ff* and *fff*. This of course all depends on your absolute control of dynamic differentiation, which in turn depends on your physical and aural capability—we'll be sending you back to section one before you know it!

A few further pointers

Step 3: When we reach the second theme at measure 26, remember again: no rubato in the left hand figuration. Instead flow naturally through the tied notes, joining measures together instead of cutting them.

Example 63.3: Rachmaninoff: Etude Tableau, Op. 39 #5, mm. 26-27

64 EMOTIONAL CONTENT IN BACH'S COUNTERPOINT? YOU BET!

Bach Prelude in B minor, WTC Book I

Counterpoint: the art of inflecting voices through articulation and stress so that they sound as independent entities engaged in conversation. If this exquisite prelude is played all legato, the interplay of the voices is lost in a wash of tone—it may sound beautiful but the essence of the contrapuntal writing has been lost. It is written in the style of a trio sonata, two upper voices in quasi-canonic writing accompanied by an obligato bass.



Example 64.1: Bach: Prelude in B minor, WTC Book I, mm. 1-5

Our first preparatory work involves playing the right hand part with two hands.

Do not neglect subsidiary voices

In fugue playing we are taught to bring out the subject and subjugate all the other voices. This strategy, if overdone, in no way fulfils the requirements for contrapuntal playing. Often in a fugue performance each recurrence of the subject comes booming out while all other details of counterpoint are lost in a wash of background colour. Maximum voice differentiation works beautifully in the voicing discussed in chapter xx, *Using the Yin/Yang Phenomenon in Orches-*

tration. But it not only fails to fulfil the obligations of the contrapuntist but actually works in direct opposition to the realization of contrapuntal goals.

The word counterpoint comes from the Latin *punctus contra punctus*, literally “point against point” or “note against note”, which in practical terms means “melodic line against melodic line.” If all subsidiary parts are relegated to a subservient role they cannot fulfil their contrapuntal function. They no longer sound ‘against’ the main melodic strand. As we will see here, a melodic line has structure. Inflection of that structure in performance will make it speak, and as each line is speaking in a different way at any given point in time, the contrast between their respective structures will allow us to hear them as individual entities. But for this interaction to happen we must hear the structural aspects of *each* melodic part, not only the main one. This requires an interpretive strategy quite different from simply bringing out the main voice.

Inflecting melodic structure makes it speak

We practice each individual voice of a fugue separately not simply to learn the notes, but to uncover and imbibe the essence of its melodic structure. In this practice we must evaluate the function of each and every note in the melody. There is no such thing as a neutral note! A note can receive a stress (either preparing or articulating a dissonance, strong rhythmic pulse or a syncopation), or not (as when resolving into a consonance or flowing through to the next articulated note), but unstressed notes are never merely neutral. They each bear a specific weight in relation to the notes around them.

It even speaks with emotion!

The next miracle in all this: when you begin to invest in a series of melodic notes their full structural values, lo and behold they begin to acquire expressive power! You did not think at all about expression, and yet here is a melody now sounding with emotional power! How can this be? Very simple: that’s the way the composer planned it. Did you really think that Baroque music was dry and intellectual? Far from it—there is as much passion to be found in Bach as in Beethoven, Chopin, Liszt or Rachmaninoff, because Bach was just as passionate a human being. Just because his passion takes a different musical form in music doesn’t make it any less potent. His music, just like theirs, arose primarily from feeling and not just from mind.