

Neuhaus, Heinrich. 2008. "On Technique." In *The Art of Piano Playing*, 82– 140. London: Kahn and Averill.

Notas prévias:

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Organização da paginação: topo da página, entre parêntesis retos.

Notas de rodapé numeradas sequencialmente e no final do texto.

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Chapter IV On Technique

1. General Considerations

In this chapter I shall attempt to say something not about what must be done but about *how* one must do what is known as artistic piano playing. That, incidentally, is what technique is about. I repeat once more: the clearer what is to be done, the clearer, too, how it must be done. The objective is already an indication of the means of attaining it. This is the secret of the technique of truly great pianists: they embody Michelangelo's words: *La mano che ubbidisce al intelletto* (the hand which obeys the intellect). This is why I insist that musical development should come before technical development or should at least go hand in hand.

Technique cannot be created in a vacuum just as you cannot create a form devoid of any content. Such a "form" is equal to zero and does not, in fact, exist. The most simple, laconic and sensible description of artistic technique was formulated by Alexander Blok. "In order to create a work of art", he says, "one must know how to." Therein lies the similarity between a good engineer, airman, artist, doctor, scientist: all of them "know how to". [Nota 1](#) knew how to fly over the North Pole in the same manner in which Shostakovich knows how to write a symphony. And it is of this know - how, of how to play the piano that I want to speak.

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I have already said that a performance consists, roughly speaking, of three elements: first, the work performed (the music), secondly the performer, and thirdly the instrument. We shall for the time being leave aside the first (the music) and concentrate our attention on the remaining two: the pianist and the piano. A few points I mentioned already in the previous chapters, but I shall examine the whole question in greater detail here. Let me deal first of all with a few simple principles.

1. To acquire a technique which enables you to perform all the existing piano literature, it is essential to use all the anatomical possibilities of movement with which man has been endowed, beginning with the hardly perceptible movement of the last joint of a finger, the whole finger, the hand, the forearm, arm and shoulder and even the back, in fact the whole of the upper part of the body, i.e. beginning with one point of support - the fingertips on the keyboard, and ending with another point of support on the chair. This would appear to be

axiomatic. Yet I can prove that very many pianists do not make full use of all the possibilities that our body provides. Feet, too, have a work to perform since they press the pedal. A mature pianist knows full well which of the power installations built into his body he should use and when, and which to disconnect and why. One who is not mature either brings out his heavy artillery to shoot sparrows or uses a toy pistol against a battery of guns.

2. To play the piano is easy. I mean the physical process, and not the summit of pianistic art. It is obvious that to play the piano very well is just as difficult as to do anything else very well, for instance to pull teeth or macadam a road. Let me cite two simple facts to prove that playing is easy: first, the keys move extremely easily, slightly more weight than that of a matchbox will suffice to make a string vibrate; for the finger this is an insignificant effort. Secondly, by raising the hand not more than twenty to twenty-five centimetres above the keyboard and from that height (h) dropping a finger or several fingers on to the key (or keys) with the "pure weight" of the hand without any pressure, but also without any holding back, *come corpo morto cadde* (as a dead body falls) as Dante puts it, you get the maximum volume of sound, the dynamic ceiling of the piano.

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Knowing how easy it is to play, i.e. how easy it is to obtain the softest and the loudest tone and to determine the lowest and highest limit of actual piano dynamics, we can also immediately say what, in piano playing, is the most difficult (again only from the purely physical point of view): the most difficult is to play very long, very loud and very fast. [Nota 2](#) Between these two limits (I have already said that I like to establish the beginning and the end of any phenomenon) lies, in fact, the whole technique of the piano considered from the point of view of physical motion.

3. I should like to draw attention to the following exercise (B sharp can also be replaced by B natural):

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 30. Está presente um conjunto de nove notas, na clave de sol, sem indicação de tonalidade e sem indicação de compasso. Todas as notas encontram-se ligadas por uma ligadura e cada nota tem a indicação de staccato: mi na primeira linha, fá sustenido no primeiro espaço, sol sustenido na segunda linha, lá sustenido no segundo espaço, si sustenido na terceira linha, lá no segundo espaço, sol na segunda linha, fá no primeiro espaço e mi na primeira linha.



I could refrain from adding anything to this and leave everyone to ponder this small well-known piano formula, the far-reaching nature of which reveals its genius. But I must still add a few words.

These five notes: E, F sharp, G sharp, A sharp, B sharp, are the contents of Chopin's first lesson in piano playing. Perhaps not the first he actually gave, but the first from the point of view of systematic teaching.

In time, by no means immediately, I came to the conclusion that it is with these five notes that one must begin the whole methodology and heuristic of piano playing, of learning the piano, that they are its cornerstone, its Columbus' egg, the seed of wheat which yields a thousandfold harvest. This small formula is truly weightier than many heavy tomes. What is it in this formula that so attracts me?

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Chopin, as we know, used to place the pupil's hand on these five notes which represent the most convenient, the most natural, the most relaxed position of the hand and fingers on the keyboard, since the shorter fingers - the thumb and little finger - are on the white keys which are lower and the longer fingers (second, third and fourth) are on the black keys which are higher. You cannot find anything more natural on the keyboard than this position. Anyone can see how much less convenient is the position of the five fingers on only the white keys: C, D, E, F, G.

Chopin made his pupil play these five notes in turn not legato (which could have caused a certain tenseness or stiffness with an inexperienced beginner) but as a light portamento, using the wrist, so as to feel in every point complete freedom and flexibility. Thanks to this simple exercise the beginner immediately makes friends with the instrument, and feels that the piano and keyboard are not an alien, dangerous and even hostile machine but a familiar, friendly being ready to meet you if you treat it lovingly and freely, and yearning for the closeness of the human hand as the flower yearns for the approach of the bee, ready to yield all its pollen.

But instead of this, how many hundreds and thousands of pitiful beginners - and during how many years - when brought by their teachers into contact with the keyboard for the first time tried to turn their living hand with its nerves, muscles, flexible joints and pulsating blood, into a piece of wood with curved hooks, to extract with these hooks such offensive combinations of sound as for instance:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 31. Está presente uma pauta com mais do que um ritmo, na clave de sol, sem indicação de tonalidade e sem indicação de compasso, apresenta mais do que uma voz, terminando com uma barra dupla. As notas superiores apresentam um ritmo diferente das notas inferiores. As notas e ritmo superior são: pausa de colcheia e três colcheias (ré no primeiro espaço inferior), pausa de colcheia e três colcheias (mi na primeira linha), pausa de colcheia e três colcheias (fá no primeiro espaço). As notas e ritmo inferiores são: dó na primeira linha inferior em semibreve, ligada para a semibreve seguinte, dó na primeira linha inferior e ré no primeiro espaço inferior, ligadas para as semibreves seguintes dó na primeira linha inferior, ré no primeiro espaço inferior e mi na primeira linha.



In truth, there is no better way of educating the ear than to accustom a child from the beginning to such delightful consonances as:

Nota de revisor: a seguir apresenta-se um excerto de uma partitura musical onde está presente uma pauta na clave de sol, sem indicação de tonalidade e sem indicação de compasso. Apresenta mais do que uma voz.

As primeiras três notas são três semibreves: dó na primeira linha inferior, mi na primeira linha e sol na segunda linha.

As segundas notas são duas semibreves: ré no primeiro espaço inferior e fá no primeiro espaço



From here the path to formalism is short and straight, but of this our venerable ancestors were apparently entirely unaware. And the exasperated piano bares its decaying teeth at the poor neophyte and emits a barking sound!

[86]

As we know from Mikuli, [Nota 3](#) Chopin used to suggest to his pupils that they should first play scales with many black keys (the most convenient to start with is the B major for the right hand and the D flat major for the left) and only then, gradually decreasing the number of black keys, come to the most difficult scale of all, that of C major. This is the reasoning of a realist, a practitioner, one who knows his stuff not from hearsay, but from inside, from its very substance. And in spite of the fact that this composer, pianist and teacher of genius, Chopin, lived so long ago, after his time (to say nothing of what went on before him!) hundreds and thousands of exercises, études and educational pieces have been written in that beloved C major with an obvious disregard for the other tonalities with many sharps and flats.

Except for an excessive love of ivory and a contempt for ebony it would be difficult to find an explanation for this one-sided approach. Please do not think that I am so naïve as to ignore the logic of the circle around which our scales are built and the centre of which is C. I merely stress that the theory of piano playing which deals with the hand and its physiology is distinct from the theory of music. Chopin, as a teacher of the piano, was a dialectician, whereas the authors of educational compositions were schematists, not to say scholasters.

4. The piano is a mechanism, a complex and delicate one to boot, and man's work at the piano is to a certain extent also mechanical, if only because he has to make his body conform to the mechanism. When producing a sound on the piano the energy of the hand (of the finger, forearm, the whole arm, etc.) is transformed into the energy of the sound. The energy of the blow which the key receives is determined by the force - F - which we apply to the hand and the

height - h - to which the hand is raised before being lowered on to the key. The speed of the hand at the moment when it strikes the key (v) varies depending on the value of F and h . It is precisely this figure (v) and the mass (m) of the body (finger, hand, arm, etc.) striking the key that determines the energy which acts on the key.

Many of my pupils have so thoroughly mastered the practical meaning of these values that sometimes I need merely make a brief observation: too much v ! and the pupil immediately decreases the speed at which the hand drops on to the piano and the tone is fuller and softer.

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Or else I say: not enough F ! and the pupil immediately understands that the tone was not sufficiently deep and compact because he deprived his hand of part of its natural weight, he so to speak stopped that weight falling before the hand had touched the keyboard. [Nota 4](#)

But I have already spoken about this in the chapter on tone. I believe that the practical significance of the symbols " m ", " v ", " h " and " F " is so simple and clear that there is no need to dwell on it further. But as a matter of fact I shall have to come back to it later.

Some may ask me: What is the point of all this mathematical stuff in conjunction with music? Surely, this can all be explained in a less dry and cerebral manner. Here is my answer: I have already said that the better a pianist knows [Nota 5](#) the three components mentioned earlier (namely: first the music, secondly himself and thirdly the piano), the greater the guarantee that he will be a master of his art, and not an amateur. And the greater his ability to formulate his knowledge with precision in statements even remotely akin to mathematics and that have the force of law, the more profound, sound and fruitful will his knowledge be.

And do not let this worry those who hold the "mystery" of art so dear: the mystery of art remains unfathomed, retaining all its force and scope, just as in life. But one should not see the "unfathomable" where common sense, against which we all of us sin so much, can perfectly well understand all there is to understand. And that there is *in principle* nothing that is unfathomable is now known to every child.

2. Confidence as a Basis for Freedom

I have already said in the chapter on rhythm what I mean by "freedom". We all know that freedom is a recognized need.

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Hence the immediate conclusion: freedom is the antithesis of arbitrariness, the enemy of anarchy, just as the ancient Greeks held cosmos to be the enemy of chaos and just as order is the enemy of disorder, etc., etc.

Those who have not learned to think dialectically and have not had sufficient experience in their working life, frequently confuse these two concepts: freedom and arbitrariness which, in actual fact, are contradictory. This position retains its full significance and is applicable (even indispensable!) to any activity, including that of acquiring an artistic piano technique.

Since confidence is the prerequisite of freedom, it is confidence that one should stubbornly strive for, first of all. Many inexperienced players suffer from an inherent timidity, a sort of "pianophobia" which manifests itself thus: they frequently play wrong notes, make many unnecessary movements, are often stiff, do not know how to use the natural weight of the hand and arm (they hold their arm "suspended" in mid-air), in short, they show all the signs of insecurity with its unpleasant consequences. And although it may seem that this insecurity is purely physical, a question of mobility, you can take it from me it is always first of all psychological: either purely musical or a component of the player's character (shyness, indecision, vagueness, everything that makes it so easy to tell the humble from the impudent). None in whom these faults are deep-rooted can be taught to play the piano well with the help only of technical skill, however good and appropriate. If such a person must become a pianist, it is essential to influence not only his physical but also his psychological make-up, in other words, to re-educate him as far as this is possible.

I confess that in the many years when I worked with very indifferent pupils (of my own free will, incidentally) and suffered a great deal from it, I comforted myself with the thought that though I would never teach them to play well, that I would never make pianists out of them, I would still, by means of music, by injecting into them the bacillus of art, drag them some way up into the realm of spiritual culture and would help them to develop their best spiritual qualities. . . . This is not being quixotic; with very few exceptions I did manage to achieve something. . . .

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It is clear from the previous chapters, especially Chapter I, that I suggest, in all difficult cases, to strive first of all to improve and develop the ear and the musical faculties, the faculty to imagine, to represent, i.e. the artistic ability, in short the intellectual qualities of the pupil. Deficiencies of instinct (i.e. of talent) must be made good by reason. I know of no other way. But if the technical education, the training of the fingers, hand, arm, the whole locomotor mechanism lags behind the spiritual education, we may find that we have trained not a performer but at best a musicologist, a theoretician (one who is able to talk correctly but who is not able to demonstrate).

In short, the greater the musical confidence, the less the technical insecurity. I would not mention these truisms were it not that even today, and frequently, I still meet certain teachers and their pupils who believe that by mere swotting, cramming, by endless training of the mechanism without any musical training and, what is even more important, without constant spiritual development, it is possible to achieve good results and to learn to play well.

No, my friends, you cannot.

Present-day technology is striving to turn the machine into a human being (through the number and variety of operations it can perform), but it is sinful and stupid to turn man into a machine. True, for the last thirty years this deplorable tendency has been on the wane. The principles of Soviet educational methods, which are also applied to piano teaching, are gaining ground increasingly within the teaching profession.

For the highest example of the type of teaching method I have mentioned - the complete coordination of musical and instrumental teaching (with the former

prevailing) - we have to go back to the great Bach. All his Inventions, small Preludes or Fugues, the Anna Magdalena Book and even the "Forty-Eight" and the Art of the Fugue were intended in equal measure for *teaching* music and the *playing* of music as well as for the creative study of music, the study of its very nature, which probes the musical cosmos and fashions the inexhaustible wealth of "tonal ore" concealed in our musical universe.

Sometimes the inability or ignorance of a pupil prompted Bach to compose for him there and then an Invention or a Prelude which in his professional modesty he considered mere teaching aids, but which, thanks to his genius, became works of art.

[90]

A golden age! How great the downward path of teaching aids (exercises) from the Bach Inventions to the exercises of Hanon, Pischna, etc. True, the Brahms exercises, even the Philippe Method in which each purely technical problem is accompanied by relevant examples from musical literature, are a new advance in piano teaching aids. The trend goes from the Bach Inventions through a number of Etudes by Clementi and Cramer to those of Chopin, Liszt, Scriabin, Rachmaninov and Debussy.

It must be thoroughly understood that Bach's method consisted of combining the technically useful (from the locomotor point of view) with the musically beautiful, and that he managed to reduce to practically nil the antagonism between the dry as dust exercise and the musical composition. I do not doubt for a single moment that Bach gave his pupils all the technical, or, more accurately, the instrumental and anatomical advice they needed (position of the fingers, which fingers to use, position of the hand, how much force to use, tempo, etc., etc.), advice which, in most cases, has not come down to us. But there can be no doubt, also, that he gave that advice without reducing music and piano playing to a mere handicraft. To catch up with Bach and to surpass him, is that not a worthy task for Soviet musical education? [Nota 6](#)

To come back to the question of acquiring sureness let me say that the old principle of *langsam und stark* (slowly and with force) when applied to technique not only has not lost its meaning but has, perhaps, acquired new significance since the growing demands which composers, and consequently also performers, make on the piano's volume of tone (think of Rachmaninov's Third Concerto, the Second Sonata by Szymanowski, Reger's Variations on a Theme by Bach, etc., etc., *ad infinitum*), make these "exercises in force" most essential.

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Only it should not be forgotten, as is the case with some young pianists, that the principle "slowly and loud" (or, if possible, "fast and loud") is only one of many true principles of technical work. When it becomes a monopoly, or when it has priority over all others, the pianist and his playing inevitably grow dull and stupid. But that it is essential is borne out by fact. As a child and as a young man, Emil Gilels did a great deal of technical work this way. The result, as everyone knows, is brilliant. I would find it hard to name another pianist whose tone is so rich in noble "metal", twenty carat gold, that "metal" which we find in the voices of the greatest singers (Caruso, Gigli, Chaliapin). I have noticed that

every great virtuoso - I mean particularly the virtuoso who plays in large halls with very large audiences - at some time or other in his youth was extremely fond of banging and thumping; the future great virtuoso sowing his wild oats, as it were. Richter, too, used to thump away when he began his concert career, and Vladimir Horowitz, when he was seventeen or eighteen used to bang so mercilessly that it was almost impossible to listen to him in a room. [Nota 7](#) True, Gilels never banged, but at that age he was very fond of playing very fast and very loud, and it was only beyond these prominent (though, it is true, captivating) qualities that one could make out the shape of the wonderful artist and virtuoso to be, the Gilels as we know him. I think that I did not point out in vain that the hardest, purely pianistic, task is to play very long, very loud and very fast. The true spontaneous virtuoso instinctively throws himself into this difficulty at an early age, and overcomes it successfully. It requires daring, persistence, temperament, passion, energy, quick thinking; and that, precisely, is talent or the essential elements of talent. That is why we too frequently hear a young virtuoso destined to become a great pianist, exaggerate his tempo and his strength.

Of course this fault is to be found also in young people who are not destined to have such a brilliant future. But they frequently get stuck at this point while the very gifted get over it quickly.

And so the slogan: playing should be intense, strong, loud, deep and precise, is right. And in working this way the following rules should be observed: make sure that the hand and arm, from the wrist to the shoulder, are completely relaxed, that there is no contraction, no "freezing" or stiffening anywhere, that none of the potential flexibility is lost, and at the same time remain perfectly still, making only those movements which are absolutely essential.

[92]

Le stricte nécessaire which is the complete embodiment of the principle of economy, is one of the most important principles of any kind of work and particularly in psycho-physical work. Then: use pressure only when the simple weight of the inert mass is insufficient to produce the desired volume of tone; understand that the greater the height (h) from which the note is played (i.e. the key or keys), the less pressure or effort is needed, dwindling down to nought. And conversely, the less the factor h (its minimum is easily determined: it is the height from which a key is brought from the level of the keyboard, the hammers being at rest, to the position when the key "touches the key-bed" and the hammer is raised so that the finger is already in contact with the key surface before actually depressing it) the more pressure (i.e. F) is required to produce a strong tone. It is equally easy to determine minimum " v " (speed of pressure) of a key to achieve the very first appearance of tone. I have already mentioned this in the chapter on tone but to be systematical I must come back to this important question. The simplest experiment which anyone who is neither a musician nor a pianist can try will show that if you depress a key too slowly—as if it were not the first link of a transmission system but some resistant mass similar to uncooked dough or soft wax—there will be no sound because the hammer will not have received sufficient impetus and though it rises it will not hit the string, which will remain silent. If you depress the key ever so slightly faster you will achieve that first tone which I find so important, and at the same time

you will find the exact minimum of "v" required to produce it. It is also not difficult to determine the upper limit of "h" (if one is not absolutely stone deaf, which a pianist is hardly likely to be). By gradually increasing "h" you will inevitably reach the limit when the gradually increasing volume of tone will become its own antithesis: thumping. Now try, with "m" unchanged, to decrease "v" (being guided, naturally, by your ear) and you will get, almost "next-door" to the thumping, an excellent "metallic" tone. That is your upper limit of "F".

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Similarly, always guided by your ear, you can determine the limits of "F", its maximum and minimum essential in each particular case, and continuing the experiment you will find that "h" and "F" are mutually replaceable; for instance, you can get practically the same "v" (with a slight but important difference in the timbre) using a minimum "A" but a very high "F" (simply by holding the hand practically over the key surface and striking the note or chord very rapidly) or with a high "h" and a low "F" (the hand falls on the keyboard from a great height but with much less speed).

For the third time I see before me an imaginary opponent who, this time with irritation in his voice, asks what is the purpose of all this pseudo-scientific abracadabra flavoured with algebra. Since this opponent is so far only imaginary, i.e. invented by myself, I will not hesitate to be rude and shall simply break off this pointless argument.

3. The Locomotor System

This is precisely the point where, in connection with force, sureness, etc., a few words should be said about hands and fingers, these living creatures who carry out the pianist's will and are the direct creators of piano playing.

We are all of us constantly saying how essential so-called "finger strength" is for the pianist. This idea needs to be closely examined in order to avoid possible errors.

What we frequently and mistakenly call "finger strength" is in actual fact only the ability of the fingers and hand to support any kind of load. Anyone conversant with anatomy and physiology will tell you that the strength of the fingers, properly speaking, is negligible compared to the force which the pianist is able to develop at the piano in case of need. This is not the place to examine this complex anatomical and physiological process although it is certainly not devoid of interest. Personally, whenever I have to speak of the locomotor system, I do so in metaphors, similes, comparisons, and every kind of symbolism which is a tremendous help to the pupil not only in sorting out his mistakes and insufficiencies, but also in correcting them.

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I suggest that we consider the fingers not only as the independent living mechanisms that they ought to be, particularly for *jeu perlé*, *p* "non legato", etc., and all cases requiring clarity, precision, evenness, smoothness without much volume of sound, or cantilena requiring rich singing tone and when, because of the absolute legato, the hand cannot leave the keyboard for an instant; in other words, when we need maximum swing for the finger (with the whole hand

helping, of course) since the "A" produced by raising the whole hand above the keyboard is precluded because of the absolute legato. All this, and much else (I am not going to give a full list of instances; anyone who is so inclined can do it at his leisure) is the realm of the finger as such, i.e. of the finger from the wrist to the fingertip (the "fingerballs" on the keyboard). The weight of the whole hand and arm will naturally be governed by dynamic requirements and will vary from the minimum to a very considerable weight for playing a melody *f* ("with a full voice"). [Nota 8](#)

But fingers also have entirely different tasks to perform. If we need a very great volume of sound requiring maximum force (sometimes, as I mentioned, the whole body takes part, including its point of support on the chair. Some very temperamental pianists, for instance Artur Rubinstein, go one better and jump up and down on the stool, turning the "point of support" into some sort of peculiar power generator), and so, if we need a great, an enormous volume of sound the fingers are transformed and from being independently active units they become strong supports capable of bearing any amount of weight; they become pillars, or rather arches under the dome of the hand, a dome which in principle can bear the full weight of our body, [Nota 9](#) and all that weight, that tremendous load, these finger-pillars must be able to bear! That is the main task of the fingers! It would of course be more correct to call them arches, but I want to call them pillars because it sounds better!

[95]

Unfortunately, one still comes across pianists, particularly lady pianists, who have no idea of weight, load, pressure, swing, and who, whatever the occasion, preferably play with dainty little fingers. Forgive my rudeness, but they remind me of *castrati* who sing only the highest notes. Whenever I happened to be, and specially to play, in their company, I would be reminded of Heine's verse:

*Dock die Kastraten klagten
Als ich die Stimm' erhob,
Sie klagten und sie sagten,
Ich sänge viel zu grob* [Nota 10](#)

I think it is worth while discussing the hand and fingers somewhat further. The mechanism of our hand and fingers is ideal as far as piano playing is concerned. (As a matter of fact it is silly even to talk about it. Everyone knows what the hand is and what it means to a human being. I only wrote about it because some people who play the piano seem completely unable to cope with their hands and have no idea of their worth.) I intend to sing many a madrigal to the hand and fingers.

One of the most legitimate demands made upon the pianist is evenness of tone. A good pianist must be able to play evenly anything and everything, from the simplest elements of technique —scales, arpeggios, every kind of passage, thirds, all double notes in general, octaves, up to and including the most complicated combinations of chords. Once upon a time it was thought, erroneously, that because one needs to be able to play evenly, the fingers, too, should be even. How this was to be achieved since Nature has made all five fingers different, remains a mystery. But if we put the question this way: any finger must be able to, and can, produce a tone of any given strength, everything becomes

perfectly clear, since it follows from this definition that all the fingers will be able to produce tone of equal strength.

The reader may be surprised that I should state so clumsily something so simple and understandable.

[96]

But even in my childhood and in my youth, I have heard it said among teachers, as well as pupils, what a pity it is that the thumb is placed so differently on the hand, that it is "so strong" whereas the fourth finger, for instance, is so weak, poor thing, squeezed between the third and fifth which, as a matter of fact, are also in an unfavourable situation; now the second, perhaps, is the one that is well off, and wouldn't it be wonderful if Nature had made all our fingers equal and similarly placed. How easy it would then be to play well!

There is hardly any need to show what nonsense these pious wishes are! A nice outlook for the pianist if this finger equalization were to take place.

This, precisely, is where our luck comes in, that we have five dissimilar fingers, and as a matter of fact not five but all ten since the "mirror" arrangement of the hands on the keyboard (which is similar to the simultaneous appearance in a fugue of the subject and of its inversion) gives us ten different individual positions. Suppose we had two left or two right hands; how much worse off we would be! What an experienced pianist values most of all, in his fingers, is that every one of them is an individual, that each one has certain individual functions which it performs preferably to others, but that every one of them is capable of replacing its fellow in case of need. The well-trained hand of a good pianist is an ideal community: each for all and all for each one; each one a separate individual, and all together—a united community, a single organism!

I do not want to run ahead, since it is my intention to speak about fingering when discussing the properties of the fingers in the second addendum to this chapter. I will merely give, as an example, two fingerings which clearly show the "polar" (opposite) nature of the fingers and their use:

Nota de revisor: a seguir apresenta-se a imagem de uma partitura musical correspondente ao exemplo 32. Estão presentes duas pautas na clave de sol e outra na clave de fá na quarta linha, na tonalidade: sol maior ou mi menor. Não existe indicação de compasso. Quantidade de compassos: dois e termina com barra dupla.

Primeira pauta

Compasso um: constituído por dois conjuntos de quatro colcheias, primeiro tempo são quatro colcheias com indicação de um número por cima de cada nota: ré na quarta linha (número um), ré no terceiro espaço superior (número cinco), dó sustenido na segunda linha superior (número quatro), dó natural na segunda linha superior (número cinco); o segundo tempo são quatro colcheias com indicação de um número por cima de cada nota: lá na primeira linha superior (número 4), fá na quinta linha (número três), mi bemol no quarto espaço, ré na quarta linha (número 1).

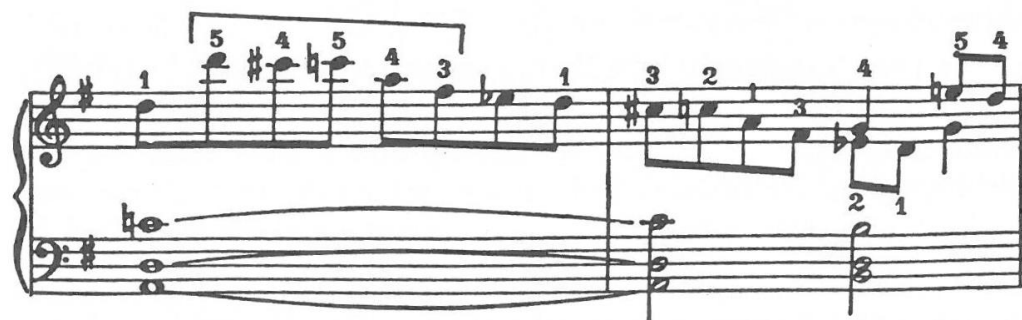
Compasso dois: constituído por dois tempos, primeiro são quatro colcheias: dó sustenido no terceiro espaço (número três), dó natural (número dois), lá no segundo espaço (número um) fá no primeiro espaço (número três). O segundo tempo é constituído por duas vozes: a voz superior é uma semínima sol

(número quatro) e duas colcheias mi natural no quarto espaço (número cinco) e ré na quarta linha (número 4); a voz inferior são suas colcheias mi bemol na primeira linha (número dois) e ré no primeiro espaço inferior (número um) e uma semínima sol na segunda linha.

Segunda pauta

Compasso um: constituído por três vozes apresentando apenas semibreves lá, ré e dó, todas estão ligadas para as primeiras mínimas do segundo compasso.

Compasso dois: constituído por três vozes e duas mínimas: lá, ré e dó; e a segunda mínima são si, ré e si.



[97]

This fingering is recommended by Hans von Bülow in his edition of Beethoven's works, and he calls it the "Chopin fingering", for indeed anyone looking at this passage (with the fingering 5, 4, 5, 4, 3, etc., as indicated) will immediately think of Chopin's passages using the top fingers (3, 4 and 5)—in particular of the Second Etude in A minor, op. 10—and hundreds of other cases. Of course it is perfectly possible and reasonable to use the following, pre-Chopin fingering particularly since this is Beethoven:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical que corresponde ao Ex. 33. A pauta é constituída por um compasso e meio, na clave de sol, na tonalidade: sol maior ou mi menor e sem indicação de compasso. Todas as notas são colcheias tendo a indicação numérica por cima de cada nota.

Primeiro compasso constituído por oito colcheias: ré na quarta linha (número um), ré no terceiro espaço superior (número cinco), dó sustenido na segunda linha superior (número quatro), dó natural na segunda linha superior (número três), lá na primeira linha superior (número um), fá na quinta linha (número um), mi bemol no quarto espaço (número dois) e ré na quarta linha (número um). O segundo compasso está incompleto e apresenta apenas quatro colcheias: dó sustenido no terceiro espaço (número três), dó natural no terceiro espaço (número dois), lá no segundo espaço (número um) e fá no primeiro espaço (número três).



But it is obvious to anyone that to play this bit with the Chopin fingering is convenient, natural and beautiful.

And here is the second (the "polar") example from Rachmaninov's Seventh Etude-tableau, op. 39 (with Rachmaninov's own fingering):

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 34. A pauta não tem indicação de compasso, na clave de fá na quarta linha tem tonalidade: mi bemol maior ou dó menor e não tem indicação de compasso.

Todas as notas são semicolcheias tendo a indicação numérica por cima de cada nota e todas com indicação de staccatto. O início começa com uma apoijatura de quatro semicolcheias ligadas para a primeira semicolcheia (sol, ré fá natural, lá natural).

Os quatro conjuntos de semicolcheias têm a indicação de sforzando.

Primeiro conjunto: lá bemol (número um), sol (número um), fá (número dois), mi (número três)

Segundo conjunto: ré (número um), dó (número um), si (número dois), lá (número três)

Terceiro conjunto: sol (número um), fá (número um), mi (número dois), ré (número três)

Quarto conjunto: dó (número um), si natural (número um), lá (número dois), sol (número três)



In the first example (No. 32) the passage requires that the "thin" fingers (or as I called them earlier, the "weak" fingers) be used; in the second (No. 34) the abrupt, heavy staccato requires the use of the "heavy" thumb (in this case it is truly heavy) as often as possible. The end of the Eighth Etude- tableau in D minor provides an even better illustration; it is a typical solo for the thumb of the left hand. I shall have to come back to this example later on.

Even these two simple examples are eloquent proof of the fact that each finger has its own individuality with its own properties. In class, I frequently refer to the thumb of the left hand as "the cellist" or "the French horn" since in the piano score it is constantly playing the part played by the cello or the horn in an orchestral score.

[98]

All that I still have to say about the nature of the fingers is closely connected with the principles of fingering that I intend to set out in the second addendum to this chapter.

I have deliberately refrained here from saying much about the arm—the forearm and upper arm—and have said even less about the "supinators" [Nota 11](#) and "pronators" [Nota 12](#) for which I have a hefty dislike, that is not so much for them as for the treatises or methods in which so much is written about them and which are of so little use to teachers and pupils alike. I already said earlier that the decisive moment in piano playing is the contact of the fingertip with the

key and the actual tonal picture, or to speak plainly, the music which this produces. I must state quite frankly that if I manage to achieve what I had in mind, if I can embody my "idea" in my performance, it is a matter of utter indifference to me to know how my elbow behaved at that time, what my good friends the supinators and pronators are doing or whether my pancreas has a part in my work or not. One must not think that this is mere dullness on my part. It is simply that the knowledge derived from studying supination and pronation—and this has been proved—is of no earthly help for the art of pianoforte playing and, what is more, is to be found almost always among those who lack that real knowledge with which this book deals and which does actually help to improve piano playing. If you do not believe my words, you will perhaps believe my deeds, I mean my pupils.

I think that the considerations connected with concepts borrowed from physics and mechanics will help an intelligent person to understand the role and purpose of the upper arm as well as of the elbow, etc., in other words, of the whole body, the ultimate purpose of which in this case is piano playing, good, correct piano playing.

4. On Freedom

I shall begin at the beginning. When I still taught very little gifted and sometimes entirely ungifted pupils, I soon noticed that their main locomotor fault was a terrible stiffness, a complete absence of freedom. No sooner did such a pupil sit down at the piano than he would turn to stone, wood, his joints would cease functioning: a normal child who could walk, run, jump, play ball, dance with perfect ease would suddenly be turned into stone.

[99]

The reasons are obvious: inability to cope with the task, fear of the instrument, utter unmusicality which bred a secret (and sometimes an overt) hatred of music lessons, notes, keys—everything. ... I was still very young and inexperienced when I taught such victims of compulsory musical education and God is my witness that I was of very little use to them, whereas they made me suffer acutely. I did not know at the time that, as I have learned since, a tunnel has to be dug at both ends, and in order to help the pupils acquire at least some sort of flexibility, I suggested some exercises similar to the following: with the wrist raised and the hand hanging loosely down play a note on the keyboard from above, gradually lowering the wrist as far down as possible, in a quick, measured movement, then raise it again above the keyboard until the finger can naturally no longer hold down the key and is carried away quickly and smoothly, together with the hand and wrist. This to be repeated many times with each finger. This is quite a good system in itself, and, of course, in time the pupil acquires flexibility; but the trouble is that this method is purely technical and I failed to give sufficient attention to methods and means that developed the pupil's intellectual faculties. Of course, I did give him some sort of a musical education since we studied easy pieces and I tried (with tremendous difficulty) to get him to give a decent "musical" rendering. But I think that perhaps during this work my pupil was more influenced by my howls of suffering than by my method which was still in its embryonic stage. In short, I was, in this case, a

conscious teacher of piano playing and only an instinctive, unorganized teacher of music. [Nota 13](#)

But I have already spoken on this subject. I only formulated my error because this same error is still perpetuated to this day by some insufficiently qualified teachers.

Subsequently, and even at the Moscow Conservatoire and at times even now, if a pupil did not have full control over his body, in other words when a pupil did not have sufficient freedom, I suggested the following exercises away from the piano: stand, letting one arm drop "lifelessly" like a dead weight alongside the body; let the other "active" hand pick it up by the fingertips gradually raising it as high as possible and having reached the highest point suddenly let go so that it should drop just *come corpo morto cadde* (as a dead body falls).

[100]

Would you believe it? This simplest of all exercises was at first beyond the possibilities of many of the frightened and cramped brigade. They just could not manage to disconnect completely the muscles of the arm which was to be the "dead body". It would come down half way but did not drop (probably because the other hand at the time was very active and thus influenced the first "contagiously").

I have several more exercises of this kind but I shall not mention them here since they partially coincide with exercises recommended in eurhythmies and I would therefore refer those interested to a teacher of eurhythmies or of the Dalcroze Method. They can tell and show them much more than I (besides which I find this awfully boring).

It is important, in order to have complete mastery over one's body—and the pianist needs this no less than the ballerina—to know "the beginning and the end" of any activity, "zero effort" (complete stillness) and "maximum effort" (what is known in machine design as theoretical maximum power), and not only to know, but of course to be able to use this in playing. And for this the virtuoso pianist must train by no means less than a prize-winning race horse. I deliberately repeat this well-known truth and I shall be repeating it again, should the occasion arise.

I sometimes tried, as I said earlier, by means of every kind of metaphor, simile, and comparison to help a pupil to understand what freedom is and to feel it. I compared the arm from shoulder to fingertip with a hanging bridge, one end of which is fixed to the shoulder joint and the other to the fingers on the keyboard. The bridge is flexible and resilient, whereas its supports are strong and firm (as soon as the hand and fingers are raised above the keyboard the image of the bridge is no longer accurate and it is better to think of a crane). This same bridge I sometimes made the pupil swing in every direction, to the left, right, up and down but always so that the finger resting on the key never left it for a single instant.

[101]

This simple experiment showed the pupil in practice how great can be the flexibility, resilience and freedom of movement of the whole arm, while the

fingertip rests on the keyboard with full confidence, accuracy and firmness. The finger, or rather its tip, must cling to the key, yet it should be understood that this does not require either much pressure or much force, but only as much weight as is necessary to hold the key down on the "key-bed". There is no doubt that this exercise is useful and, of course, not so much from the purely technical (locomotor) point of view, as from the point of view of understanding how the arm works. It is also a protest against the teaching of some old pedagogues according to which the ideal position of the hand on the keyboard is the one which allows a straight line to be drawn from the tip of the little finger to the elbow or above. Most harmful metaphysics! This is where one can see for oneself how senseless it is to apply "metaphysics" to each and every practical action. I maintain that the best position of the hand on the keyboard is one which can be altered with the maximum of ease and speed. Occasions might arise when the best position is the one where it is possible to draw a straight line from the little finger to the elbow, and that's all there is to it. Why then should this be the ideal?

As a matter of fact, think less about various positions and more about music, the rest will sort itself out, as Matvey, the valet in *Anna Karenina*, used to say. (But we, who have taught for so long and seen so much—meaning pupils—will keep on thinking about positions—or rather situations, and how to get out of them.)

Again and again I am tempted to repeat: *la souplesse avant tout*. From all I have said in the chapter on tone, the reader was able to see what importance I attach to legato playing; a real acoustical and physical legato or, to express it more precisely, playing in such a way that a note (key) is released only after the next one has been played and not an instant sooner. It is well known that Busoni rejected that kind of playing because he considered that legato on the piano was only imaginary due to the impermanent quality of the piano's tone. Legato is unthinkable without flexibility. What then is flexibility and how do we work at it?

[102]

So long as the pianist is playing such technical forms as trills, five-finger exercises and all their combinations on the same spot without moving the hand along the keyboard (what, in violin language, is called—in one position), the problem of flexibility hardly arises; the fingers must work well, the arm remain completely still and relaxed, that's all. But the moment we begin figurations, which require the thumb to pass under the hand or move away from it, in other words as soon as we transfer (move) the hand up and down the keyboard (that is to the right and left), the problem of flexibility is there. This flexibility is impossible without the forearm and shoulder (usually the former more than the latter) taking part. We see that already with a simple scale. I have known teachers who used to force their pupils when playing scales with the right hand downwards (i.e. from right to left) to hold the hand permanently sloping towards the index finger and the thumb. This was supposed to be convenient and beautiful. In actual fact, however, one cannot imagine anything more impractical. Or rather, this should be done only in a very few cases as an exception to the rule.

I suggest that anyone interested should play a scale first this way and then the proper way, which is the exact opposite; namely: as you approach the thumb (i.e. playing the fourth, third, second) the hand should be held sloping from the second to the fifth finger and in turning the thumb under, i.e. approaching the next position of three fingers in a row (third, second and first), the hand should describe a small arc over the thumb, a kind of loop, and at that moment, of course, the hand (more precisely, the line of the knuckles, "where the fingers start growing") slopes from the fifth towards the second finger (for an instant!) and the next instant it straightens out and the instant after it takes up once more the first position, sloping towards the fifth finger. [Nota 14](#) If you play a scale this way, loud and fast, the eye will plainly see the wavy line ~. This wave will be particularly large in a scale played on white keys only (the reader will understand why). [Nota 15](#)

[103]

What I am leading to is quite obvious: the concept of "turning the thumb under the hand" is replaced by the more viable and natural concept of bringing the hand over the thumb. And concentrating on the basic element of this movement we get the following exercise which I recommend very warmly:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 35.

Estão presentes duas pautas sem indicação de compasso, na clave de sol, sem indicação de tonalidade, todas as notas têm uma indicação numérica em cada nota.

Primeira pauta

Quatro semicolcheias: sol na segunda linha (número dois), fá no primeiro espaço (número um), mi na primeira linha (número três), fá no primeiro espaço (número um); seguido do sinal de repetição das quatro semicolcheias anteriores; quatro semicolcheias: ré na quarta linha (número dois), dó no terceiro espaço (número um), si na terceira linha (número quatro), dó no terceiro espaço (número um); seguido do sinal de repetição das quatro semicolcheias anteriores.

Segunda pauta

Apresenta uma semibreve: fá no primeiro espaço (número um), seguido de colcheias: sol na segunda linha (número dois), mi na primeira linha (número três), sol na segunda linha (número dois), mi na primeira linha (número três), sol na segunda linha (número dois), seguido do sinal de repetição de todos os tempos anteriores; após o sinal de repetição apresenta uma semibreve: dó no terceiro espaço (número um), seguido de colcheias: ré na quarta linha (número dois), si na terceira linha (número quatro), dó no terceiro espaço (número um), seguido de colcheias: ré na quarta linha (número dois), si na terceira linha (número quatro), dó no terceiro espaço (número um), seguido de colcheias: ré na quarta linha (número dois), si na terceira linha (número quatro), seguido do sinal de repetição de todos os tempos anteriores.

And so, here is one of the simplest examples of flexibility, that sister of freedom. It is easier to show what the mechanism of this flexibility consists of, taking as examples widely spaced passages when the forearm, the elbow and shoulders inevitably come into play in the movement of the hand from note to note (from one key to the next).

These are Chopin-type passages (there are thousands of them in Chopin), as for instance as distinct from Bach or Beethoven arpeggios.

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 37. Estão presentes duas pautas sem indicação de compasso, na clave de fá na quarta linha e na clave de sol.

Primeira pauta

A pauta na clave de fá apresenta dois sustenidos (fá e dó) e apresenta dois conjuntos compostos por seis semicolcheias: primeiro (si, fá, si, ré, si, fá); o segundo (si, sol, si, mi, si, sol), tendo a indicação de “and so on”.

Segunda pauta

A pauta na clave de sol não apresenta qualquer indicação na armação de clave, apresentando o seguinte ritmo: pausa se semicolcheia, seguido de três semicolcheias (dó na primeira linha inferior, sol na segunda linha e dó no terceiro espaço), quatro semicolcheias (mi no quarto espaço, dó no terceiro espaço, sol no primeiro espaço superior e dó na segunda linha superior); e uma semicolcheia; mi na terceira linha superior, tendo a indicação de “and so on”.



Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical que corresponde ao exemplo 38. Estão presentes duas pautas sem indicação de compasso, na clave de sol e na clave de fá na quarta linha.

Primeira pauta

A pauta na clave de sol apresenta um sustenido (fá) e tem a indicação por cima da pauta “J. S. Bach, Prelude in G major”.

Apresenta dois conjuntos compostos por seis semicolcheias:

Primeiro conjunto: sol na segunda linha, si na terceira linha, ré na quarta linha, sol no primeiro espaço superior, ré na quarta linha e si na terceira linha;

Segundo conjunto: ré na quarta linha, si na terceira linha, sol na segunda linha, si na terceira linha, sol na segunda linha e ré no primeiro espaço inferior.

Segunda pauta

A pauta na clave de fá na quarta linha apresenta quatro bemois (si, mi, lá, ré), está dividido em dois compassos e têm a indicação por cima da pauta “L. v. Beethoven, Sonata Op. 57”.

Primeiro compasso: dois conjuntos de quatro semicolcheias: fá, dó, lá, fá, dó, lá, fá e dó.

Segundo compasso: dois conjuntos de quatro semicolcheias: lá, fá, dó, lá, fá dó lá, e fá.



If we could make a slow-motion film of such a passage as the one in Example 40 being played (at the proper tempo) by an experienced pianist, we would see that the forearm is in constant and smooth motion, the wrist turns when and as needed, and thanks to this the fingers strike the keys they need and are always, at every instant, in the most favourable and convenient position for so doing. This position is taken care of by the whole of the "hinterland" beginning with those directly connected with the "frontline", that is: the hand, wrist and arm, and ending, as I have said more than once, with the back and the point of support of the body on the piano stool. But the first to take care of all this is our reason or rather our discernment. [Nota 16](#)

[105]

Strange as it may seem, pupils sometimes mistake the concept of "favourable position", "convenience", for the concept "inertia". These are not only two entirely different things, they are also contradictory. The attention required for ensuring well-ordered, organized playing, that same "reasoned playing" of which I keep on speaking, excludes both physical and spiritual inertia; this inertia is all the more inadmissible when practising technically difficult bits, for instance very fast leaps (such as in Scriabin's Sonata No. 5 or No. 8, the Second or Seventh of the Transcendental Studies by Liszt, etc.).

By "favourable position" I mean a dialectical concept which can also include, as one of the cases it covers, the concept of "extreme tension".

I derived great benefit in my youth from listening to my teacher, Leopold Godowsky, and watching him as he played at home, while I would sit not far from the piano. He was fond of playing at home his own most difficult arrangements of the Chopin etudes, Strauss waltzes, etc., which he seldom played in public. It was a delight to watch those small hands (he himself was short) that seemed chiselled out of marble and were incredibly beautiful (as a good thoroughbred racehorse is beautiful, or the body of a magnificent athlete) and see with what simplicity, lightness, ease, logic and, I would say, wisdom, they performed their super-acrobatic task. The main impression was that everything is terribly simple, natural, beautiful and completely effortless. But turn your gaze from his hands to his face, and you see the incredible concentration: eyes with lids lowered, the shape of the eyebrows, the forehead, reflect thought, enormous concentration—and nothing else! Then you see immediately what this apparent lightness, this ease, costs; what enormous spiritual energy is required to create it. This is where real technique comes from!

I confess that the delight and reverence which Godowsky's playing aroused in me was shared in equal measure by my ears and by my eyes.

To strive for the most favourable position of the fingers at every single moment is impossible without complete flexibility, and is achieved only through

foresight. Teachers are aware how frequently their pupils' faults are due solely to the fact that they are incapable of looking ahead, of anticipating, and are caught napping by events.

[106]

When the mistake has occurred the teacher must show the pupil that he was wise after the event and teach him to overcome this weakness. (Which of us has not had pupils who during their playing constantly—almost systematically—make mistakes and correct them, again make mistakes and again correct them. I used to tell them: Remember, a mistake not made is gold, a mistake made and corrected is copper, a mistake made and not corrected. ... I leave it to you. Of course I also gave them more serious advice, the main purpose of which was to ease the work, to divide it.)

Here is a simple example of how to develop foresight; I suggest to play a scale thus:

Nota de revisor: a seguir apresenta-se uma imagem de uma pauta sem indicação de compasso, na clave de sol e que corresponde ao exemplo 39. Cada nota tem uma indicação numérica que passarei a mencionar. Quatro colcheias: dó na primeira linha inferior (número um), ré no primeiro espaço inferior (número dois), apoiatura fá no primeiro espaço (número um), mi na primeira linha (número três), fá no primeiro espaço (número um), seguido de quatro colcheias: sol na segunda linha (número dois), lá no segundo espaço (número três), apoiatura dó no terceiro espaço (número um), si na terceira linha (número quatro), dó no terceiro espaço (número um), precedido de dias setas para o tempo seguinte, uma colcheia mi no quarto espaço (número dois), apoiatura dó no terceiro espaço (número um); seguido de quatro colcheias: ré na quarta linha (número dois), dó no terceiro espaço (número um), si na terceira linha (número quatro), apoiatura fá no primeiro espaço (número um), lá no segundo espaço (número três); seguido de quatro colcheias: sol na segunda linha (número dois), fá no primeiro espaço (número um), mi na primeira linha (número três), apoiatura dó na primeira linha inferior (número um), ré no primeiro espaço inferior (número dois) e uma semínima dó na primeira linha inferior (número um).



The aim is clear; since the difficulty of the scale lies mainly in the thumb (with inexperienced players it is wont to thump and destroy evenness) it is suggested that it be placed beforehand (gracenote) very lightly over the spot (key) which it must occupy in the near future, in other words that it be ready in good time (in actual fact this exercise, too, is more of an analytical than of a locomotor character).

So long as a pupil's playing is marked by "bursts" where smoothness is required, and angularity instead of flexibility, I am fond of inflicting on him exercises of the slow-motion film type. An excellent subject for such

experiments is Chopin's Third Prelude in G major op. 28 (but of course there are endless such possibilities).

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical que corresponde ao exemplo 40. Estão presentes duas pautas, compasso C cortado, na clave de sol e na clave de fá na quarta linha. Cada nota tem uma indicação numérica que passarei a mencionar. Apresenta apenas um compasso, tonalidade sol maior.

No início do compasso tem a indicação de “Vivace”.

Clave de sol

Pausa de semibreve.

Clave de Fá

Primeiro tempo quatro semicolcheias: sol (número cinco), ré (número dois) sol (número um), lá (número três);

Segundo tempo quatro semicolcheias: si (número dois), lá (número três e quatro), sol (número quatro e cinco), mi (número um); é dada a indicação por baixo do início do terceiro tempo “not so good”;

Terceiro tempo quatro semicolcheias: ré (número dois), dó (número três), si (número um), lá (número dois); quarto tempo quatro semicolcheias: sol (número três), lá (número dois), si (número um), ré (número três).

O compasso termina com barra dupla.

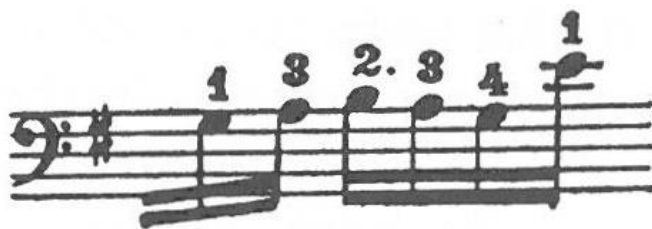


[107]

Many pupils find it difficult to play this complicated figure fast and evenly. Then I make the pupil play it very slowly, step by step, as it were, watching to ensure that the necessary movements of hand, wrist and forearm are carried out completely smoothly, gradually, without a single hitch, without the slightest jolt. But the main thing here is to prepare with foresight, i.e. with an accurate estimation (with "previously determined intent") the position of each finger on the key it next requires. The critical point of this figure is:

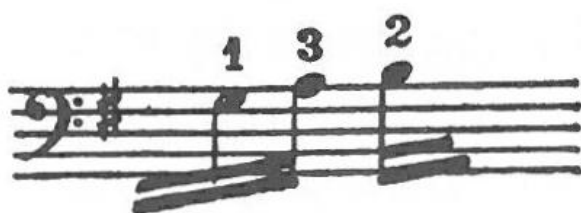
Nota de revisor: a seguir apresenta-se uma imagem de um excerto da partitura anterior na clave de fá na quarta linha e que corresponde ao exemplo 41. Cada nota tem uma indicação numérica na tonalidade sol maior, que passarei a mencionar.

Clave de Fá: apresenta seis colcheias: sol (número um), lá (número três), si (número dois), lá (número três), sol (número quatro), mi (número um).



The "improvident" pianist will, after the notes:

Nota de revisor: a seguir apresenta-se um excerto de uma partitura na clave de fá na quarta linha e que corresponde ao exemplo 42a. Cada nota tem uma indicação numérica na tonalidade sol maior, que passarei a mencionar, Clave de Fá: apresenta três colcheias: sol (número um), lá (número três), si (número dois).



leave his hand turned slightly to the left (outwards) since that was the previous position he needed and then, in a sudden spurt (there he goes, wise after the event!) change his position in order to send his thumb, which had just been busy with G, to the E it requires, and so you get your unevenness, angularity, instead of a well-rounded line—a zigzag, and instead of a curve—a sharp corner. The "provident" pianist will while playing the notes:

Nota de revisor: a seguir apresenta-se uma imagem de um excerto da partitura anterior na clave de fá na quarta linha na tonalidade sol maior. Este exemplo corresponde ao exemplo 42b.

Clave de Fá: apresenta cinco colcheias: sol, lá, si, lá, sol.



gradually turn his hand to the right (inwards), and will prepare the thumb in advance (he will space his thumb and fourth finger for the interval of the sixth) and quietly, supply and smoothly the thumb will take the required E.

When practising this exercise, which is again more useful from the analytical than the locomotor point of view (incidentally, I insist that this should be done many times and for a long time), attention is given mainly, as will be easily seen, to the work and movement of the hand (also the wrist and forearm, etc.) [Nota 17](#) in short to the "hinterland" near the "firing line" ("front"). In such playing the fingers are very quiet, they "lay" themselves on the keys without superfluous activity.

This is one of two main methods of mastering legato in passages. Another method, equally important but essentially contradictory, consists of playing the same figure from the Chopin G major Prelude with the hand (wrist and forearm) as still as possible, reducing movement to a minimum, in other words, trying as much as possible to do the whole work with the fingers which, in this case, must show maximum activity, liveliness and energy. A sequence of these two contrasting methods will guarantee the solution of the problem. And if you play this Prelude for a sufficiently long time ("repetition is the mother of learning") with these two (in principle contradictory) methods, bringing the tempo gradually to the speed required by Chopin and by the meaning of the work, you will yourself notice that what "comes out" is yet a third method which is a synthesis of two antagonistic principles, the unity of contrasts. It is at that precise moment that the problem is solved.

I dwelt at length on this question and went into the minutiae of all the stages of the work involved in this technical problem because I wanted to show that properly organized piano teaching which gives good results is inevitably based on the principles of materialistic dialectics.

A few words still need to be said in this section on flexibility about mastering large intervals, quick transfers of the hand, leaps and jumps. This is truly the realm of non-Euclidian geometry since, whatever Euclid may say, our first axiom states: the shortest distance between two points is a curve. The technically gifted pianists do this by instinct, but the less skilled, particularly those who are still scared of the keyboard are apt, over large distances, let us say: [Partitura musical]

Nota de revisor: apresenta duas notas musicais sem qualquer indicação. Assumindo que será clave de sol temos uma semínima dó na primeira linha inferior com uma ligadura para a semínima seguinte: mi na terceira linha superior.

to describe with the hand a broken line in the air instead of the natural curve:

[Notação musical] Nota de revisor: ligadura com um ponto

In the first case the hand carries out three movements: [Notação musical] Nota de revisor: Ligadura de traços retos

which is complicated and inconvenient. In the second case only one movement: [Notação musical]. Nota de revisor: ligadura com um ponto

[109]

But in the second case attention, intelligence, self-control are exercised much more intensely than in the first; it is not superfluous to repeat here this simple truth since it brings us to one of the fundamental formulae which determine good, skilful piano playing, as distinct from bad and unskilled. This formula is applicable to any psycho-physical work: mental tension is in inverse proportion to physical tension. (This formula — forgive the pompous expression— could already be deduced from my description of Godowsky's playing, but I nevertheless state it here because experience has taught me that, for some reason or other, the simplest, most lasting truths are particularly liable to be forgotten. This "formula" is as old as the hills, yet to this day many pianists are incapable of applying it in practice.)

The problem of flexibility is particularly important (because more difficult to solve) for pianists with small and hard hands. Large, supple hands, provided, of course, that they are governed by a well-organized head, find it much easier to acquire flexibility, freedom, *souplesse*. [Nota 18](#)

Small hands with a small stretch have quite obviously to make much greater use of wrist, forearm and shoulder, in fact the whole of the "hinterland", than large hands, particularly large hands with a large stretch. It's an ill wind...; sometimes this is just why gifted people with small and difficult hands have a better understanding of the nature of the piano and of their "pianistic" body, than the large-handed and broad-boned.

But the most difficult for small hands with a small stretch is to achieve freedom (and accuracy!) in heavy chord technique. I consider it a personal achievement, or rather not my own achievement but that of my hands, that they can easily perform such works as, for instance, Reger's "Variations on a Theme by Bach" and many others of that kind. [Nota 19](#) When a small hand which chords as [Partitura musical]

Nota de revisor: Exemplo a): acorde na clave de sol com as seguintes notas: sol na segunda linha, si bemol na terceira linha, mi bemol no quarto espaço, sol no primeiro espaço superior e si bemol no segundo espaço superior.

or

[Partitura musical], Nota de revisor: Exemplo b): acorde na clave de sol com as seguintes notas: fá no primeiro espaço, lá bemol no segundo espaço, si natural na terceira linha, ré na quarta linha e lá bemol na primeira linha superior.

he has a tremendous stretch between the fingers, and as for the head, well this hardly needs commenting upon.

[110]

can just about take four-part chords with a minor third between thumb and index finger, for instance [partitura musical] Nota de revisor: Acorde na clave de sol com as seguintes notas: fá no primeiro espaço, lá bemol no segundo espaço, dó no terceiro espaço e fá na quinta linha.

in the right hand and [partitura musical] Nota de revisor: Acorde na clave de fá na quarta linha com as seguintes notas: si, mi, sol sustenido e si

in the left, to say nothing of the practically unmanageable five-part chords such as [partitura musical] Nota de revisor: Acorde na clave de sol com as seguintes notas: sol na segunda linha, si bemol na terceira linha, dó no terceiro espaço, mi no quarto espaço e sol no primeiro espaço superior.

in the right hand and [partitura musical] Nota de revisor: Acorde na clave de fá na quarta linha com as seguintes notas: lá, dó, mi, fá sustenido e lá.

in the left, when such a hand has to play such chords with great force and in quick alternation, it is almost precluded from doing a free drop of the hand from a great height (*h!*), [Nota 20](#) first of all because only extreme closeness to the keyboard will guarantee accuracy, and secondly because the extreme tension of the muscles (extensor) which stretch the fingers to the utmost limit almost inevitably deprives the whole system, from shoulder to wrist, of the greater part of its freedom and natural weight.

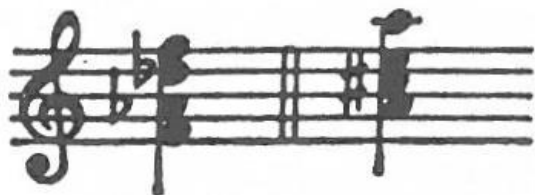
I must confess that with the hands I have, I was obliged to put in a great amount of work to acquire decent chord technique. In chords which are convenient for my hands, as for instance:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical com dois arpejos separados por uma barra dupla.

Acordes na clave de sol com as seguintes notas:

Primeiro arpejo: fá na primeira linha, lá bemol no segundo espaço, ré bemol na quarta linha, fá na quinta linha.

Segundo arpejo: lá no segundo espaço, dó sustenido no terceiro espaço, mi ni quarto espaço, lá na primeira linha superior.



Frequently (if this happens to be necessary and the music is full of enthusiasm and climax), without premeditation or qualms I raise my hands above my head (in general *quantum satis*, as much as I feel like). But when I have to take very difficult chords which require maximum extensor tension and where a millimetre is literally decisive as far as "clean" and "smudge" are concerned, "A" is partially replaced by "v" because the hand is forced to remain close to the keyboard. But not altogether. I have at times painstakingly worked in order to force the forearm and upper arm, in spite of the sensation of extreme tension in stretching, in spite of the great expenditure of strength caused by that stretch, to feel nevertheless detached from that stretch which is mainly the concern of the extensor and *interbone* muscles, in other words, to be independent and free as far as this is possible.

[111]

As you see, it is again just a matter of discerning practically the difference between the work of various muscles and their groups.

Of course a very small hand will never achieve that feeling of freedom (and of might!), I would say of "mightiness" and "power" which is inherent in large hands able without discomfort or effort to grasp the biggest multipart chords and which is, so to say, their birthright. (Imagine, for instance, Anton Rubinstein's lion's paws, or the enormous soft and powerful hands of Rachmaninov). Small hands in such cases will not be able to forego the subterfuges, the ability to manage in a difficult situation which they acquired over the years by dint of hard work and not without the help of the intellect. In short, they turn their drawbacks into advantages and that is, of course, victory of the spirit over the flesh and consequently particularly precious. But, nevertheless, they will never be able to compare fully with hands which do not need any subterfuge and which, acting by instinct, at once, like nature itself, subjugate the piano and reign over it unchallenged. I know I shall be damned for this discouraging statement, "all wrong from the psychological point of view". But in fact there is nothing discouraging in this. One must reason soberly and not dodge reality. I often preach to my pupils that one plays the piano first of all with the head and ear and only then with the hands, and that it is possible to play very well with "bad" hands and very badly with "good" hands. This is already a great consolation for those who need it. But then I add that exceptional, unique pianistic achievement

is possible only when there is full harmony between the pianist's spiritual and bodily faculties (i.e. when both his talent and his hands are exceptional). You have seen casts made of the hands of Liszt, Anton Rubinstein and others. Look at the hands of our contemporary, most powerful virtuoso pianists: Richter, Gilels, Horowitz... You will see immediately, at a glance, that these are hands that are particularly and exceptionally adapted to great piano playing. The origin of such hands is twofold: first, a person is born with talent and with excellent hands (and this, as we know, does not depend on us); secondly, being talented, that is, loving and wanting to play (and talent is, I repeat, a passion), the owner of such hands plays much, plays correctly, plays well and consequently develops in the best possible manner the wonderful hands Nature has given him (and that does not depend on us).

[112]

Thus the real pianist becomes what he is: if pianists with inconvenient hands cannot imitate him as far as the first point is concerned, let them imitate him in the second—good results will not be long in coming.

5. Elements of Piano Technique

Now a few words about the various aspects of piano technique. From the point of view of statistics or, if you will, of phenomenology, there are exactly as many technical problems as there is piano music. Not only each composer, but also the various periods of his work present entirely different pianistic problems arising not only out of their content, but also their form and pianistic writing (compare Beethoven's "Pathétique", op. 13 with the "Hammerklavier" op. 106, or Scriabin's Preludes out of op. 11 with his Tenth Sonata op. 70, or Chopin's Rondo in E flat major op. 16 with the Sonata in B minor op. 58, or with many of the études, etc.). But this observation which is, in substance, appropriate for the musician who carries in his head an enormous amount of music—sometimes almost the whole of the history of music, gradually collected—is of little concern to us in this specific case since it has hardly any bearing on the problem of a pianist's development, his growth, maturity and mastery. It is merely the result of his development as a whole. The gradual development of the musical and pianistic potential of a young pianist should, according to the over-whelming majority of teachers, be based on the gradually increasing musical and technical difficulties of pianoforte literature. Some teachers even consider that this gradualness is a decisive factor in a pupil's progress and should be strictly observed. For the musically average pupils who fill our numerous schools this is probably true. But in our conservatoires, and specially the Moscow Conservatoire and even in the Central School of Music attached to the Conservatoire and attended mainly by very gifted children, this rule of strict gradualness is, for obvious reasons, subject to considerable variations and is sometimes completely done away with. Or let us say: the laws of development and consequently of a certain accumulation of knowledge remain in force but are implemented quite differently from what teachers believe, who deal mainly with the average pupil.

[113]

What will you make of the following fact: one of my pupils, in the ninth class of the Central Musical School (Yuri Gutman, son of the well-known pianist, T. Gutman) played perfectly beautifully eight of Liszt's Transcendental Studies which are rightly considered as the summit of piano virtuosity and, incidentally, such extremely difficult ones as No. 2 in A minor, *Irrlichter*, *Wilde Jagd*, *Eroica*, he played in a manner that none of my finalists could equal. Yuri Muraviev, when he was sixteen played Scriabin's Fourth Sonata in a way which only a mature pianist, close to Scriabin's style and creative spirit could equal. It may be objected that these are exceptions, great gifts! Yes, they are exceptions as far as the great mass of pianists inhabiting the USSR is concerned, but within the precincts of the Moscow Conservatoire they are far from being as rare as all that.

Why do I say such well-known things? Only in order once more to dispute this time-worn teaching tendency to put all pupils in the same bag and lay down extremely rigid rules concerning the development of the pianist. If someone like Gutman were to be offered some special technical training, such training could embrace every aspect of technique that has evolved during the lifespan of pianoforte music, whereas an average pupil can be given only a limited and narrow selection.

And so, on the one hand, there are as many problems as there is music, and on the other hand—you can find in the most varied problems something common to all; the boundless wealth of form in the pianistic language can be reduced to its simplest elements till you get to the "fundamental nucleus", the "centre" of the whole phenomenon. And that is precisely the "nucleus" (from the point of view of the physical mechanical process) that I had in mind when speaking of the symbols "*m*", "*v*", "*h*", "*F*" or of Chopin's First Exercise. [Nota 21](#)

[114]

And so, for the sake of being systematic—which is by no means so important for the talented or even the technically skilful—or those gifted from the locomotor point of view—for the sake of the system, let us consider that on the way between that "original cell" of which I spoke earlier and the universal piano technique which all truly great pianists possess, there is, as one of the useful means of organizing pianistic work, that same system (or table) of various aspects of technique which is what I now intend to discuss.

These "aspects" of technique I frequently call, in class, "raw material", "preparations", "prefabricated parts" [Nota 22](#) of which in the long run the great edifice of piano playing as a whole is made up. These fundamental aspects—let us call them elements—are not so numerous and one is tempted to draw a comparison between Mendeleyev's periodic tables which contain only 102 elements in our infinite, unbelievably wealthy and varied material world and that small table of fundamental elements which make up the whole of the limitless variety and wealth of piano music, here considered from the technical point of view.

[115]

Have no fear—it is not my intention to treat you to a "periodic table" of the technical elements of piano playing; suffice it that I have already dished up

mechanical formulae for your benefit. But since a knowledge of the elements of technique is of very ancient and venerable origin and since here too, as indeed practically anywhere else, I do not intend to say anything new but only remind readers of what should not be forgotten, I shall take the liberty of giving this small "table".

As the *first element* I suggest we take the playing of one note. A pianist with an inquiring mind and a true thirst for knowledge cannot fail to be interested even in this amoeba of the piano- playing kingdom. As a proof that I am not alone to hold such views, I will tell you about an actor who in his early youth managed to have an audition with some very great actor. The young actor recited Hamlet's "To be or not to be", some poems by Pushkin, and some other pieces. The veteran actor said: "Yes. Very good, and now try to say 'Ah' seventeen times: an admiring 'Ah!', a questioning 'Ah', a threatening 'Ah', an astonished 'Ah', 'Ah' as a cry of pain, a joyful 'Ah', etc., etc." (Probably there are more than seventeen different "Ah's" in nature.) This is what I mean when I say that the playing on the piano of one single note with one finger is already a problem, and an interesting and an important problem from the point of view of knowledge and experience. [Nota 23](#)

Of course the interjection "Ah" has that advantage over a single musical sound, that it is already some sort of complete expression, it is already speech, whereas a single note is not yet music, musical language; music begins with at least two tones. The famous single G flat of the night watchman in the second act of *The Mastersingers* is music, and even the music of genius, but only because of what comes before and after it. If you were to imagine this G flat without "past" or "future", as a tone by itself, it would not be music. But on the piano it is possible to play a single note in so many different ways that this in itself is already an interesting technical problem.

[116]

Earlier, in the chapter on tone, I said that even on one single note it is possible to experiment the whole of the tremendous dynamic range of the piano. Moreover, it is possible to take that one note with different fingers, with and without the pedal. And in addition it can be played as a very long note and held until its complete extinction, then as a short note, and so on, to the very shortest note possible.

If the player has imagination, then in that one note he can (as Wagner did) express a variety of shades of feeling: tenderness, and daring, and anger, and Scriabin's *estatico* and loneliness, emptiness and much more, of course, by imagining that that sound had a "past" and has a "future". If you are a musician, and a pianist, and that means that you love the sound of the piano, then this messing about with a single sound, a beautiful piano sound, this listening to the wonderful trembling of the "silver" string, is already a great delight, you are already on the threshold of Art. [Nota 24](#) Even a child can become interested in this at first sight mechanical and unmusical problem, if you awaken in him—as I already said—the love of experiments, knowledge, setting him for the first time on the path to artistic technique.

The second element. After one note (key) come, naturally, two, three, four and then all five (all that the hand is blessed with!) and here we come to the Chopin formula, from which it is but a step to learning the extremely useful first

two studies in Clementi's "Gradus ad Parnassum". A manifold repetition of two notes produces a trill. I advise practising trills mainly by two contrasting methods (remember what I wrote on p. 108). The first method: play the trill with the fingers *only*, raising them from the hand, the arm remaining absolutely quiet and relaxed (no cramping, no hardening, no stiffening!). Play from *pp* to the *f* possible under the circumstances (without participation of arm, wrist, etc.) first slowly, and increasing speed to the maximum possible.

[117]

Play with all the fingers (1-2, 2-3, 3-4, 4-5 and also 1-3, 2-4, 3-5, 1-4, 3-1, 4-1, also 1-4, 3-2, etc.), play on white notes only, on black notes only, and on white and black. Play both slowly and fast. In non-legato raise the fingers over the keys—feeling their free but light swing. Play also (and that is perhaps the most difficult since it requires exceptional experience) without at all raising the fingers over the keys so that not even a cigarette paper or razor blade could be slipped between the fingertip and the key surface. Such a trill in some pieces (for instance Chopin Nocturnes, and a host of compositions by Debussy, Scriabin, Ravel, Szymanowski, etc.) sounds exceptionally beautiful (of course with the pedal!) and almost recalls the violin vibrato on one string. You will yourself understand the tremendous benefit—apart from learning to play the trill—of this type of work for the highly important sensory technique, for which it is so essential to master the minimum "h" which I mentioned above. The second method is the opposite of the one just described. It is the maximum use of rapid vibration of the wrist and forearm, possible thanks to our excellent bones—the radius and elbow—and their muscles. This method is particularly convenient when the trill must be loud, but also in other cases since it is always more natural and convenient than the first, which excludes participation of the arm and wrist and thus implies, from the natural point of view, a certain artificial "switching-off". (But the first method is still an irreplaceable means of developing the independence of the fingers; however, more about this later.) In actual playing, pianists will, of course, find the second method, or more accurately a synthesis of the first and second (with a certain hegemony of the second), the most convenient.

And here I draw your attention to the fundamental principle of solving a technical problem: thesis, antithesis, and synthesis.

The combinations of three and four notes [Nota 25](#) which have been used *ad nauseam* in classical piano methods (Lebert, Czerny, Schmidt, etc., etc.), I suggest we consider (and practise) on the one hand as a preparation for the five finger exercise and on the other as a component of the diatonic scale. I will not dwell on them specially since everything that can be said about them is better said with reference to the "complete formula", i.e. the five-finger formula. [Nota 26](#)

[118]

About evenness—and that, after all, is the main purpose of all five-finger exercises—I have already spoken and shall not repeat myself. The problem of developing finger independence, which is closely connected with that of evenness, is solved all the more successfully, the more attention the player will

pay to ensuring that the arm, quiet, loose and practically motionless, is supported by the fingers acting as props: with such playing the knuckles are naturally raised (specially where the fourth—the weakest finger—begins). The arc formed by the finger from its point of support on the key to its beginning on the hand, supports, just like in architecture, the whole load, the natural, free weight of the arm. [Nota 27](#) Such playing develops the muscles between the bones situated between hand and wrist and that is what gives the fingers maximum independence. If, however, finger figurations are played with a hard, contracted hand, the fingers derive no benefit whatsoever, the muscles between the bones cannot develop and as a result the hand and all its muscles will become tired and weak.

But all this is so old and well known that I shall draw the line here. Of course in many of our peripheral musical schools, children still stiffen and strain their wretched hands and painfully squeeze unpleasant sounds out of the instrument. Remember, friends, teachers and pupils, and take it from me: playing the piano is easy.

The third element I consider to be all manner of scales. The new factor in scales, compared with the previous element, consists of the fact that here the hand does not remain in one position as was the case up to now, but is carried to any distance up and down the keyboard (that is to the right and left). Of this carrying of the hand (turning under and turning over) as well as of studying scales I have already spoken and will not repeat what I said. To the exercise mentioned earlier (see Ex. 39) I would add the following:

[119]

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical sem indicação de compasso na clave de sol. Esta partitura corresponde ao exemplo 43.

Cada nota tem uma indicação numérica que passarei a mencionar. Todas as notas são colcheias: dó na primeira linha inferior (número um), mi na primeira linha (número três), fá no primeiro espaço (número um), si na terceira linha (número quatro), dó no terceiro espaço (número um), mi no quarto espaço (número três), fá na quinta linha (número um), si no segundo espaço superior (número quatro), dó na segunda linha superior (sem indicação numérica). No final a pauta tem a indicação de “and back”.



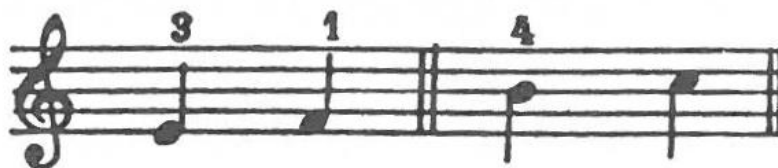
Here the problem of turning the thumb under or passing the whole hand over the thumb (or rather both together) is taken out of the general context of the practising of scales, the scale is differentiated and decomposed into two elements: on the one hand, "incomplete" five-finger positions:

Nota de revisor: a seguir apresenta-se uma imagem rítmica com indicação numérica em cada figura e corresponde ao exemplo 43a. Apresentam-se três colcheias com a indicação sequencial dos números, um, dois e três e têm a indicação de “and” e volta a apresentar três colcheias com a indicação sequencial dos números dois, três e quatro.



on the other—the passing under or over (change of position), change from one position to another. This exercise is also a transition from the scale to the arpeggio in its easiest form, since the positions:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 44. Estão presentes dois compassos na clave de sol, sem indicação de tonalidade, com indicação numérica em cada nota. Primeiro compasso: semínima mi na primeira linha (número três) e semínima fá no primeiro espaço (número um), barra dupla, semínima si na terceira linha (número quatro), semínima dó (sem indicação numérica), barra dupla.



are simpler than the more difficult: which demand a greater capacity of wrist rotation.

Nota de revisor: a seguir apresenta-se um excerto de uma partitura na clave de sol, sem indicação de tonalidade e de compasso. Tem indicação numérica nas duas últimas notas e todas as notas são colcheias: fá na primeira linha, lá no segundo espaço, dó no terceiro espaço, fá na quinta linha (número um) e lá na primeira linha superior (número dois). Esta imagem corresponde ao exemplo 45.



And so, quite naturally, we have come to *the fourth element*, the arpeggio (broken chord) in all its forms (triads and every possible chord of the seventh). So much has already been written about this and so many études composed on this theme that I shall hold my peace. I would only mention once more (and

probably not for the last time) flexibility and foresight and also complete evenness of movement if the arpeggio is in notes of equal value.

[120]

I can just mention, as an oddity, that some twenty-five or thirty times in my life, when I was young, I played every conceivable chord of the seventh built on one and the same note (let us say C): the result was the following pattern: [Nota 28](#)

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 46. Estão presentes duas pautas na clave de sol, compostas por arpejos, sem indicação de tonalidade, sem indicação de compasso e todas as notas são semínimas:

Primeira pauta

Primeira semínima: dó na primeira linha inferior, ré bemol no primeiro espaço inferior, fá bemol no primeiro espaço, lá bemol no segundo espaço. Segunda semínima: dó na primeira linha inferior, ré bemol no primeiro espaço inferior, fá natural no primeiro espaço, lá bemol no segundo espaço. Terceira semínima: dó na primeira linha inferior, ré bemol no primeiro espaço inferior, fá natural no primeiro espaço, lá natural no segundo espaço. Termina com barra dupla e estas três semínimas têm a indicação de “diminished second”.

Após a barra dupla apresenta seis arpejos de semínima e inicia com a indicação de “second”.

Primeira semínima: dó natural na primeira linha inferior, ré no primeiro espaço inferior, fá bemol no primeiro espaço, lá bemol no segundo espaço. Segunda semínima: dó na primeira linha inferior, ré no primeiro espaço inferior, fá natural no primeiro espaço, lá bemol no segundo espaço. Terceira semínima: dó na primeira linha inferior, ré no primeiro espaço inferior, fá natural no primeiro espaço, lá natural no segundo espaço. Quarta semínima: dó na primeira linha inferior, ré no primeiro espaço inferior, fá sustenido no primeiro espaço, lá bemol no segundo espaço. Quinta semínima: dó na primeira linha inferior, ré no primeiro espaço inferior, fá sustenido no primeiro espaço, lá natural no segundo espaço. Sexta semínima: dó na primeira linha inferior, ré no primeiro espaço inferior, fá sustenido no primeiro espaço, lá sustenido no segundo espaço.

Segunda pauta

Composta por sete semínimas, o compasso inicia com a indicação de “minor third”.

Primeira semínima: dó na primeira linha inferior, mi bemol na primeira linha, fá bemol no primeiro espaço, lá bemol no segundo espaço. Segunda semínima: dó na primeira linha inferior, mi bemol na primeira linha, fá natural no primeiro espaço, lá bemol no segundo espaço. Terceira semínima: dó na primeira linha inferior, mi bemol na primeira linha, fá natural no primeiro espaço, lá natural no segundo espaço; Quarta semínima: Dó na primeira linha inferior, mi bemol na primeira linha, sol na segunda linha, lá bemol no segundo espaço. Quinta semínima: dó na primeira linha inferior, mi bemol na primeira linha, si na segunda linha, lá natural no segundo espaço; Sexta semínima: dó na primeira linha inferior, mi bemol na primeira linha, sol na segunda linha, si bemol na terceira linha. Sétima semínima: dó na primeira linha inferior, mi bemol na primeira linha, sol sustenido na segunda linha, si bemol na terceira linha. Termina com a indicação de “and so on”.



Then followed, below, a major third, and so on until all possible chords of the seventh built on the same note were exhausted. The awesome number of chords of the seventh (33!) (and I naturally omitted the enharmonically identical ones) cools the inventive ardour, but one can, if one so wants, play passages which do not correspond to chord combinations but which constantly occur in music.

One should not be too enthusiastic over this catalogue of chords of the seventh, but the proof of the pudding is in the eating; to play them evenly at a fast tempo, up and down over three or four octaves is by no means easy, but a good pianist does not shirk difficult problems and gives them his attention when the occasion arises.

It is also necessary to work at other forms of chord passages, for the study of which an immeasurable number of studies and exercises has been written. One should not forget that, having begun the study of arpeggios, for instance, with the Czerny etude from the *School of Velocity* or the *Art of Finger Dexterity* it should be completed with Chopin's Etudes op. 10 (No. 1 in C major), or op. 25 (No. 24 in C minor), the F minor Etude by Liszt, from the Transcendental Studies—for the left hand—and other similar works including Scriabin, Rachmaninov, Debussy, Stravinsky (once more, I repeat, the beginning and the end!).

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 47. Está presente uma pauta na clave de sol, composta por três conjuntos de quatro semicolcheias, sem indicação de tonalidade e sem indicação de compasso.

Primeiro conjunto: quatro semicolcheias: dó na primeira linha inferior, mi na primeira linha, sol na segunda linha e dó no terceiro espaço.

Segundo conjunto: quatro semicolcheias: mi na primeira linha, sol na segunda linha, dó no terceiro espaço e mi no quarto espaço.

Terceiro conjunto: quatro semicolcheias: sol na segunda linha, dó no terceiro espaço, mi no quarto espaço e sol no primeiro espaço superior.



[121]

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 48. Esta compreende uma pauta na clave de sol,

composta por três conjuntos de quatro semicolcheias, tonalidade sol maior ou mi menor, compasso ternário:

Primeiro conjunto: quatro semicolcheias: sol na segunda linha, si na terceira linha, ré na quarta linha, sol no primeiro espaço superior.

Segundo conjunto: si no segundo espaço superior, ré no terceiro espaço superior, sol na quarta linha superior, ré no terceiro espaço superior.

Terceiro conjunto: si no segundo espaço superior, sol no primeiro espaço superior, ré na quarta linha, si na terceira linha.



Equally natural and indispensable is the progression of the scale from the simplest study to such compositions as the Chopin Prelude in B flat minor (No. 16) and a host of other similar works. A talented and dedicated pianist does not shirk or shelve such problems but tries to solve them in his early years.

The fifth element of technique I consider every kind of double note (as I already said, from the second to the octave, and for those who can manage—up to and including ninths and tenths). The most essential things concerning them I said already on pp. 77-79. But since the difference between double notes of different intervals is rather great and the ways of playing them differ considerably, I shall have to add a few words.

We are frequently faced, for instance in Liszt, with octave technique which holds considerable difficulties for many, particularly for pupils with very small hands. Apart from the danger mentioned earlier—the "sympathetic" fingers, and consequently inevitably smudged playing in a fast tempo or *f* or *ff*—small hands are particularly liable to stiffness of the wrist (as a result of the strain on the extensor muscles which easily turns into stiffness of the muscles of the forearm). What can one advise in such a case? First of all, be cunning as the fox, crafty as Ulysses, and try with small accurate movements, with the minimum of effort and strain and with maximum economy, which is the result of reasoning, to achieve the desired aim, and in particularly difficult cases at the beginning depart considerably from the required (assumed) degree of force and speed; think first of all only of accuracy and that everything should be done without any strain.

[122]

Thus I advised several girls with small hands who wanted at all costs to play the B minor Sonata by Liszt, to play the most difficult octave passages—particularly the passage after the exposition, which comes before the pedal on A (in the bass), before the second subject in D major—to play this for a long time not faster than "andante-andantino" and not louder than *mf*, but absolutely accurately and freely. This helped a certain basis was laid upon which one could build further. Afterwards I would allow them to play one bit of this difficult fragment faster and louder, then two bits and more, until they reached approximately the desired result (from the virtuoso point of view) for the whole of the passage.

I can give an example from my personal experience: my hands are not large and are fairly thin. Their only advantage is their good build, strong bone structure and a harmonious shape: when the fingers are stretched out and spread wide apart they form a semi-circle thanks to a fairly long fifth finger and the considerable stretch between thumb and index finger—which is useful for octaves. The stretch between the other fingers is far from sufficient; for instance I cannot take the chord [Partitura musical] Nota de revisor: a seguir apresenta-se um acorde na clave de sol: si bemol na terceira linha, dó no terceiro espaço, mi no quarto espaço sol no primeiro espaço superior e si bemol no segundo espaço superior.

together.

For a pianist who is a "materialist" this is sufficient reason not to seek "to apply his efforts" to a pianistic career; I myself frequently thought so. And chords such as [Partitura musical] Nota de revisor: a seguir apresenta-se um acorde em dois compassos separados por uma barra dupla, na clave de sol: Primeiro compasso: dó sustenido na primeira linha inferior, ré no primeiro espaço inferior, fá sustenido no primeiro espaço, lá no segundo espaço, dó sustenido na terceira linha. Segundo compasso: dó na primeira linha inferior, ré bemol no primeiro espaço inferior, fá no primeiro espaço, lá bemol no segundo espaço, dó na terceira linha.

I can play together only by using the thumb for the two lower notes [Partitura musical] Nota de revisor: a seguir apresenta-se uma pauta na clave de sol, com indicação numérica por baixo de cada nota: Primeira semínima: dó sustenido na primeira linha inferior, ré no primeiro espaço inferior (número um), seguido de um sinal de diminuição. Segunda semínima: dó na primeira linha inferior, ré bemol no primeiro espaço inferior (número um), seguido de um sinal de diminuição.

To play such chords with a normal fingering (i.e. using all five fingers) is out of the question as far as I'm concerned. Because of my thin hands and narrow bones I do not have the springiness of pianists with larger, more extended, supple and more fleshy arms (forearm and upper arm)—whom I never cease envying—and consequently such pieces as Rubinstein's C major Etude, many passages in Liszt (for instance, in the "Fantasia quasi una sonata" *After a reading of Dante*, or the quaver triplets in the Spanish Rhapsody—it is impossible to mention them all) are, for me, of very considerable difficulty.

[123]

Yet I studied all of them in my youth, including the "Campanella", the end of which:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical, onde se destacam duas pautas, compostas por um compasso, uma na clave de sol e outra na clave de fá na quarta linha, tonalidade si maior ou sol sustenido menor, compasso seis por oito. Esta partitura corresponde à primeira imagem do exemplo 49.

Primeira pauta: composta por dois conjuntos de seis semicolcheias cada, com duas vozes. Primeiro conjunto: seis semicolcheias ré na quarta linha e ré no terceiro espaço superior. Segundo conjunto: quatro semicolcheias ré na quarta

Segunda pauta: composta por duas pausas de colcheia, muda para a clave de sol, duas colcheias, ré no primeiro espaço inferior e ré na quarta linha, duas pausas de colcheia, muda para a clave de fá na quarta linha.



Primeira pauta: composta por dois conjuntos de seis semicolcheias cada, com duas vozes. Primeiro conjunto: quatro semicolcheias si na terceira linha e si no segundo espaço superior e duas semicolcheias lá no segundo espaço e lá na primeira linha superior. Segundo conjunto: duas semicolcheias sol na segunda linha e sol no primeiro espaço superior, duas semicolcheias fá sustenido duplo no primeiro espaço e fá sustenido duplo na quinta linha, duas semicolcheias sol na segunda linha e sol no primeiro espaço superior. Todo o compasso tem a indicação de oitava.

Segunda pauta: composta por três vozes. Colcheia sol e sol e pausa de colcheia; semicolcheia ré, si e ré; semicolcheia ré, si e ré; colcheia sol, si e ré; colcheia si e si e pausa de colcheia; semicolcheia ré, si e ré; semicolcheia ré, si e ré; colcheia sol, si e ré.



I found particularly difficult, and achieved a fully accomplished rendering of this bit only because I held my hand as near as possible to the keyboard, vibrating it but with mechanical accuracy, with a minimum "A", and listening with utmost care for accuracy, evenness and quality of tone. [Nota 29](#)

On such examples I mastered fully the rules of economy and proved to myself the truth of the adage that "necessity is the mother of invention". I need hardly say that this entailed protracted and stubborn labour (if a problem cannot be solved immediately it always requires lengthy training: this is well known), but I overcame the difficulty. I overcame it for three reasons: the principle of economy taken to its extreme limit i.e. heightened imagination, a stubborn wish to get results regardless of any obstacles, and dogged patience.

This, I believe, is the picture of any and every successful labour if a man is possessed of a true passion, of wish multiplied by will.

[124]

And for the sake of truth I must add that by no means have I always worked that way. I was frequently dull and indolent (I didn't feel like working—I was drawn to very different shores) and the result was what could be expected. There were times in my life when I worked simply stupidly and without will and alas, that would happen precisely when I consciously and deliberately turned away from music and music-making (luckily that happened fairly seldom) and set myself only technical virtuoso tasks (while my head was busy with entirely different and more interesting thoughts). Deliberately to turn oneself into a dullard without being one by nature cannot go unpunished. [Nota 30](#)

I must once more apologize for this excessively long story about myself; that is always somewhat indecent. But what can one do? I have already said that for a thinking man the pronoun "I" is one of the most interesting and reliable objects in his probing of the world of reality—and consequently needs to be reported on. Of course the description of my work on the "Campanella" cannot replace even ten minutes' demonstration on the piano, but I think the reader will understand me.

A few words more about octaves. The most important (this is already mentioned earlier) is to create a certain strong "hoop" or "semi-circle" from the tip of the little finger across the palm to the tip of the thumb, the wrist being maintained *absolutely essentially* in a dome-shaped position lower than the palm. This is far from easy for small hands and not at all difficult for large hands.

People with small hands—specially women—tend, when playing octaves—particularly *f*, involuntarily to raise their wrist higher than the palm and use it, instead of the "hoop" described earlier, as a support for the fingers playing the octaves. But then the middle fingers come too close to the keyboard with the resultant danger of "sympathetics" while the thumb and little finger (or if need be, the fourth) lose to a considerable extent their independence, their individuality, the "two-part" character of octaves becomes unattainable and the fingers become mere "pokers". It is not difficult to test the truth of this: I stubbornly insist that all female pupils with small hands should hold their wrist lower than the palm and that they should concentrate all support in the "hoop" and not in a raised wrist.

[125]

Sometimes it takes a long time until they master this position, but it can be mastered by anyone; this has been proved. The difference in tone—and that does matter!—between octaves played these two ways is also something anyone can hear.

In the correct position for playing octaves the palm and fingers form a rounded hollow. I repeat; a dome not too high, the highest point of which is not the wrist but the hand. [Nota 31](#)

Another observation which, as a matter of fact, refers not only to working at octaves but to any kind of technical work. As a rule difficulties are overcome by splitting up the work to be done, in other words by making the problem easier. This has been mentioned more than once already—if so-called intuition is not enough, then you have to use analysis and master the whole, one part at a time. With a certain amount of thought everything "difficult", complicated, unfamiliar, inaccessible, can be reduced to something much more easy simple, familiar, attainable. This is the fundamental method. But, I repeat, not the only one. Dialectic requires of us an anti-thesis to this thesis. And consequently it will be right if the player, having understood that by facilitating his task he is gradually approaching its solution, will also understand that by increasing the difficulties, so to speak, to the limits of "theoretical maximum power", by making the problem more complex, he will acquire the skills and the experience which will enable him to solve his problem completely. [Nota 32](#) But the first method is the rule, the standard; the second is the exception which confirms the rule. To use a metaphor from everyday life, the relationship between these two methods is more or less the same as that between a working day and days off.

How then does this theory appear as applied to the practice of octaves? Very simple. I suggest that a difficult octave be studied with the fifth finger alone, holding the thumb at the distance of an octave, above the keyboard, "in the air" (see Ex. 29).

[126]

If the player learns the octaves well with the fifth finger alone (if necessary, alternating with the fourth) and also plays them sufficiently often with the thumb alone (which is considerably easier) the execution of whole octaves will become infinitely easier for him. Let the reader think out his own variants of such work with respect to different technical difficulties.

The variety of ways in which octaves can be executed, as indeed any other of the aspects of technique, is very great and is governed by the musical content. I am, of course, speaking of musical literature as such, and not of exercises or etudes. Depending on the need, octaves are executed almost entirely with the fingers, only with the wrist, from the elbow (forearm only) and finally, with a very great *ff* martellato with the whole arm, which from fingertip to shoulder joint forms a strong, resilient but unbending pivot (excluding all movement of finger, wrist and elbow joint). This is so simple and well known that there is no point wasting more words on it. However, I often noticed that legato octaves (representing two parts comparable to an orchestral score where octaves are scored for 1st and 2nd violins), pupils play almost the same way as staccato octaves (but with the pedal), in other words by raising the whole hand

over the keyboard and using excessive "A" (for the sake of force) which, precisely in this case, is unnecessary. The simple weight "*m*" plus some pressure, if needed, with minimum "*h*" and full finger movement—that is the proper way of playing legato, melodic octaves. A pianist who knows what he wants to hear and is capable of listening to himself will easily find the proper physical actions.

If anyone were to ask me which of the schools of octaves (ghastly word!) I consider to be the best, I would say—all or none.

In my youth, if I did decide to tackle octaves, I would sometimes play Bach's Two-part Inventions doubled, i.e. in octaves. This was both difficult and interesting. But mainly I would play all the octave passages of all the pieces I knew (and there were many) and thus learned octaves "in general". For some reason this method, which has been practised by all the pianists who have achieved something, is looked down upon by some teachers. I don't understand why. Am I really going to "forget", to "lose sight of" Liszt's sonata "as a whole" if, on certain occasions, I practise only its octave passages, together with octave passages from other pieces which I am just as incapable of "forgetting" as a whole, as the Liszt sonata?

[127]

Will this really make me stupid, whereas I shall not become stupid from learning dozens of boring octave etudes which I shall never need, either on the concert platform or for my private delectation, while the octave passages from these beautiful compositions I need desperately? But I shall come back to this question at the end of the chapter.

As for the other more usual double notes—thirds, fourths, sixths, sevenths, ninths—I need only say that so much has been written about them and so much composed for their sake that I am reluctant even to start a conversation on the subject. To play scales in thirds or sixths (diatonic and chromatic scales, in major and minor thirds and sixths, taking into account the Godowsky exercises mentioned above) is, of course, an excellent thing. [Nota 33](#)

But if a pianist is interested in the problem of double notes not only as a performer but also as a teacher, he is bound to know the best examples of this type and learn them. Here is a short list of such examples (I refer only to artistic literature, ignoring this time the educational), Chopin, Etudes op. 10 Nos. 3, 7, 10 and op. 25 Nos. 6, 8, Posthumous Etude in D flat major, and a multitude of separate bits from such works (don't be shocked, dear friends and fellow teachers!) as the Second Ballade—from the following bit: to the end, such as the Coda from the Fourth Ballade; Schumann —Toccata op. 7 and a lot of places from all sorts of different compositions (for instance: the Ninth Variation from the "Etudes Symphoniques", No. 8 from *Kreisleriana*); Brahms— the "Variations on a Theme by Paganini" (the first two variations in the first volume and the first variation from the second volume), etc.; Liszt—Etude *Irrlichter*, numberless bits from various compositions, particularly arrangements and fantasies; Scriabin—Etudes op. 8 Nos. 6 and 10 and a number of Preludes as well as bits out of various compositions (for instance in the Ninth Sonata the fourth and third pages from the end); for those interested—three Etudes op. 65 (sevenths, fifths, ninths); Rachmaninov—Prelude in E flat minor, from op. 23,

Etudes op. 39, Nos. 3, 4, 8, etc.; Debussy—Etudes Nos. 2, 3, 4 from the First Book, etc.

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 50. Estão presentes duas pautas, compostas por um compasso, uma na clave de sol e a outra na clave de fá na quarta linha, tonalidade dó maior ou lá menor, compasso seis por oito.

Primeira pauta: composta por dois conjuntos de semicolcheias cada, com duas vozes. Primeiro conjunto: pausa de semicolcheia, duas semicolcheias dó na primeira linha inferior e fá no primeiro espaço, duas semicolcheias lá na segunda linha inferior e ré sustenido no primeiro espaço inferior; uma colcheia dó na primeira linha inferior e mi na primeira linha, as quatro semicolcheias estão ligadas por uma ligadura. Segundo conjunto: pausa de semicolcheia, duas semicolcheias ré natural no primeiro espaço inferior e si na terceira linha, duas semicolcheias si no segundo espaço inferior e sol sustenido na segunda linha; uma colcheia ré no primeiro espaço inferior e lá no segundo espaço, as quatro semicolcheias estão ligadas por uma ligadura.

Segunda pauta: composto por duas vozes. Colcheia lá e lá, duas colcheias ligadas por uma ligadura: primeira: lá e fá, segunda dó e mi; colcheia ré e fá; duas colcheias ligadas por uma ligadura: primeira: si e sol, segunda fá.



[128]

There I draw the line, probably to the great relief of the reader. Why did I give this brief catalogue of double notes which can easily cause bewilderment and even offence at the thought of all the marvellous compositions which are here considered from such a "prosaic", professional point of view? I do so in order to show yet again that the performing pianist is not only a musician, an artist, a poet, but also a workman at his lathe, a 100% professional, that his lathe is called a piano and that he must not only know what articles he can produce on this lathe, but must also be able to produce them and keep an account of them. And it is such an account of a certain kind of article (in this case, double notes) that I have given above. Take it from me, the brain of any experienced professional pianist can at a moment's notice produce such accounts referring to the whole of pianistic literature no less accurately than a good book-keeper in his own branch, and in so doing he does not lose a single ounce of his dignity as a musician, artist, poet, but acquires something else as a master-craftsman. And, anyway, what would be the sense of the centuries-old and still not-outworn division of the whole of our piano technique into elementary aspects, if these aspects did not exist in actual piano literature?

Speaking of octaves I am reminded of a poem by Pushkin in which the whole introduction is devoted to a discussion of the octave [Nota 34](#) and its

construction. This purely professional part of the poem has lost none of its poetic quality through describing the technique of versification.

[129]

Pushkin juggles with the octaves, setting himself the most difficult tasks and solving them as only a virtuoso can, to the utter delectation of the reader. I confess that no pianist yet has given me such delight with his octaves—not even Gilels in the Sixth Rhapsody—as Pushkin with his, in *The Little House in Kolomna*.

But let us look at the next aspect of technique.

The sixth element to be studied I consider to be the whole of the chord technique, in other words, three-, four- and five-note combinations played simultaneously with one hand. The most important thing in chords, as in thirds or sixths, is complete simultaneity, equality of all parts in some cases, and the ability in others to stress at will any one part by playing it with greater force. Here I would refer the reader to the basic exercises on p. 70. As always, success depends on complete freedom of the arm with complete concentration of the fingers (the soldiers at the front).

Pupils who are inclined to "labour" excessively at the piano should be reminded that the purely physical process of orderly and controlled piano playing consists of a constant alternation between effort and rest, tenseness and relaxation, more or less like the action of the heart (which beats without interruption from birth and even earlier, until death) or the action of the lungs in inspiration and expiration.

Diastole and systole—this is a very appropriate image for the piano. This is why experienced pianists can play ten hours a day or more without physical fatigue.

It is extremely important to observe this rule in playing chords since the tendency to overstrain—particularly for pianists with small hands—is here far greater than in passages of so-called "fight technique" (the reason being obvious). So many times I have had to show and explain to pupils that to take a series of chords legato (of course with the help of the pedal) does not require any hard work if one can only rest—even for a brief instant—on each chord, sort of "sit on a chair", feeling relaxed, completely free, conscious of the natural weight of the arm from the shoulder to the fingertips and skilfully and quickly, keeping close to the keyboard pass from one chord to the next. A good example on which one can learn to do this and understand once and for all what this is all about is the beginning of the exposition of Beethoven's Fifth Concerto (after the tutti).

[130]

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 51. São presentes duas pautas, compostas por dois compassos, uma na clave de sol e a outra na clave de fá na quarta linha, tonalidade mi bemol maior ou dó menor, compasso quaternário (C). Esta partitura corresponde à primeira imagem do exemplo 51.

Primeira pauta

Primeiro compasso: uma mínima (mi no quarto espaço, sol no primeiro espaço superior, si no segundo espaço superior e mi na terceira linha superior), todas ligadas para a colcheia do tempo seguinte (mi no quarto espaço, sol no primeiro espaço superior, si no segundo espaço superior e mi na terceira linha superior), três semicolcheias (fá no quarto espaço superior, mi na terceira linha superior, ré no terceiro espaço superior), ligadas até ao fim do compasso dois, duas colcheias (mi na terceira linha superior e fá no quarto espaço superior). Segundo compasso: composto por quatro semínimas: primeira semínima (sol no primeiro espaço superior, si no segundo espaço superior, mi na terceira linha superior, sol na quarta linha superior); segunda semínima (mi no quarto espaço, sol no primeiro espaço superior, si no segundo espaço superior, mi na terceira linha superior); terceira semínima (dó no terceiro espaço, mi no quarto espaço, lá na primeira linha superior, dó na segunda linha superior); quarta semínima (si na terceira linha, mi no quarto espaço, sol no primeiro espaço superior, si no segundo espaço superior).

Segunda pauta

Primeiro compasso: composto por quatro vozes. Semibreve (mi, sol, si, mi), ligadas para o a semínima do compasso seguinte. Segundo compasso: composto por quatro semínimas: primeira semínima (mi, sol, si, mi); segunda semínima (mi, sol, si, mi); terceira semínima (lá, dó, mi, lá); quarta semínima (mi, sol, si, mi). As últimas três semínimas encontram-se ligadas por uma ligadura.



Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical. Destacam-se duas pautas compostas por três compassos, uma na clave de sol e outra na clave de fá na quarta linha, tonalidade mi bemol maior ou dó menor, continuação dos compassos anteriores. Esta partitura corresponde à segunda imagem do exemplo 51.

Primeira pauta

Primeiro compasso: voz superior: mínima si no segundo espaço superior, ligada para a semínima si no segundo espaço superior e mais uma semínima lá na primeira linha superior, todo o compasso está ligado com uma ligadura; a voz inferior é composta por duas mínimas, a primeira: (si na terceira linha, ré na quarta linha e fá na quinta linha) e a segunda mínima (lá no segundo espaço e ré na quarta linha).

Segundo compasso: Voz superior: composta por oito colcheias: lá na primeira linha superior, sol no primeiro espaço superior, fá sustenido na quinta linha, sol no primeiro espaço superior, si no segundo espaço superior, lá na primeira linha superior, dó na segunda linha superior e dó no terceiro espaço), todas as colcheias estão ligadas por uma ligadura. A voz inferior é composta por uma

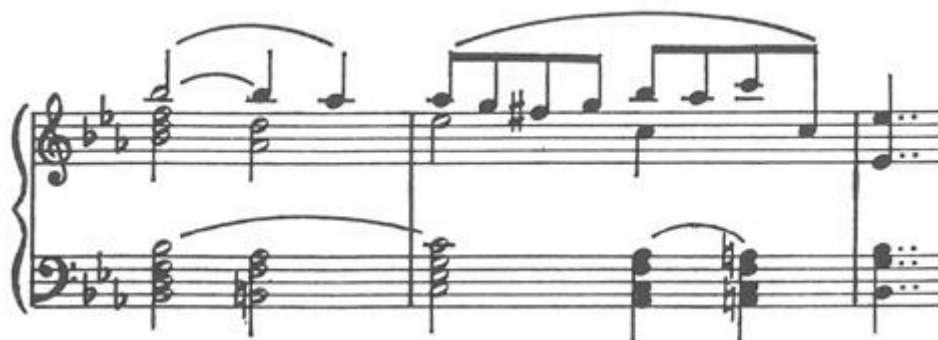
mínima mi no quarto espaço e uma semínima dó no terceiro espaço (nota: neste compasso falta um tempo).

Terceiro compasso: semínima com dois pontos: mi na primeira linha e mi no quarto espaço.

Segunda pauta

Primeiro compasso: composto por duas mínimas: primeira (si, ré, fá si); segunda (si natural, fá e lá), ligadas para a mínima do compasso seguinte.

Segundo compasso: composto por uma mínima (dó, mi, sol, dó), duas semínimas ligadas: primeira (lá, dó, fá e lá), segunda (lá natural, dó, fá, lá natural). Terceiro compasso: composto por uma semínima com dois pontos (si, sol, si).



Some pupils find this difficult and this is where a brief lecture on rest, the full weight of the arm with concentrated, "intelligent" fingers becomes appropriate, especially if supplemented by a demonstration.

Since very frequently—or, rather, almost always, a series of chords contains not only harmony but also a melody played by the fifth finger (as in the example above) this should be given special attention, the fifth finger should play clearly, it should sing, *en dehors* as Debussy frequently indicates.

A good pianist has a special sense—a feeling which is born in the ear and is transmitted to the hand—the "fifth-finger" sense. Be it in *p* or in *f* it never abandons him when he plays chords. Think of the Chopin Prelude in C minor, from op. 28, and hundreds, thousands of other cases.

[131]

It is particularly pupils with small hands who have to be reminded of the leading role of the fifth finger in chord playing. But actually, if the pupil is a musician and hears correctly, then not even the smallest hands can prevent him from producing the tones that are wanted. I have frequently noted this with great joy in class.

Chords that are neither legato nor staccato are relatively easier to play so long as the tempo is not too fast, for the hand can avail itself of a certain "A" which with a complete legato is reduced to a minimum (it is obvious that to take chords with the hand falling freely from above is easier than to take them practically crawling along the keyboard).

When first teaching chord sequences I would do the same as Chopin with his five-finger exercises. I would make my pupils play the chords slightly portamento but cantabile, in other words as they must be played in Chopin's marvellous Etude in A flat major (from the three posthumous études composed for the school of Moscheles and Fétis). [Nota 35](#)

Gradually one can tackle pieces (or exercises or études—but without getting carried away by them!) which require more *f* and greater velocity, for all this is more difficult and requires greater experience. [Nota 36](#)

Every time I try to give some "school advice" as I have just done, I cannot rid myself of a feeling of the futility of such an attempt—firstly, because our piano teaching has been codified into an excellent system (almost divided into courses); secondly, because the variety of learners and of their talents is so vast that however right all general statements may be, each case requires individual approach. In conclusion, I suggest that all those who are interested in the classification of the aspects of piano technique should draw up for themselves a brief catalogue, similar to the one I have given above, of the most characteristic (from the chord technique point of view) compositions or excerpts, in case they should be overcome by the sinful wish to practise specially "the chord as such" but within the context of real music, that is, living piano literature.

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As the seventh element one could consider the transfer of the hand over a large distance, so-called "jumps" and "leaps" (names which do not please me entirely). The main thing on the subject I have said already: the shortest path between two points on the keyboard is a curve. Accuracy depends on attention, watchfulness, will and training, and we can learn from the technique of sharpshooters. In both cases—shooting and "hitting" the right note—training and the whole psychological picture are very similar. Apart from attention, a feeling of complete freedom, a sensible economy of movement and the greatest demand on tone made by the ear, there is nothing one can advise. This last is particularly important since fast leaps of chords *f* are precisely that domain of piano playing where banging, thumping, and grating can easily occur. I have so many many times shown pupils, whenever these unpleasant complications occurred, that they can always be avoided; it is enough to make a small movement inwards with the fingers and sometimes the whole hand, towards oneself (only not outward, away from oneself!) and on no account to take the note—the key—sideways. However impetuous the leap, at the last moment the fingers come down on to the keyboard perpendicularly.

This perpendicular angle is so slight at a fast tempo that it is invisible to the naked eye, but it is there, it should be there and is achieved by precisely that slight grasping movement of the fingers to which I have just referred. When striking the key sideways, or away from you, the key hits the next key (or rather it touches the whole system of neighbouring keys). [Nota 37](#) That is precisely how you obtain a thump instead of a tone. It is easy to explain mechanically: part of the pianist's energy (force), instead of acting vertically on the key and the lever system it controls, is spent on a collision with the neighbouring key and not on raising the hammer which hits the string. Hence a brief formula. The more the thump, the less the tone. (Once, as a small boy, I saw a cat fall off the roof of our barn; she turned over in mid-air and, accurately poised, landed on all four paws unhurt.)

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Pianists please note.

It happens sometimes that the hand must descend rapidly on the keyboard and rise again, as an eagle dives for his prey, seizes it and soars away; if the hand were to fall lifelessly like a stone, it would get a painful blow, and the piano would howl with pain.

Believe it or not, these childish similes sometimes explained a great many things to the pupils, particularly since they were accompanied by illustrations on the piano.

Once, after a successful concert (it was in Saratov, I played the Scriabin concerto; I was in good form and was carried away, particularly since I knew the conductor needed a little help), a woman artist paid me a very nice compliment. She expressed admiration and added: "your hands hover over the piano like birds". I immediately remembered something Liszt used to say and which I had completely forgotten: *Die Hände müssen mehr schweben, als an den Tasten kleben* (The hands should hover over the keyboard, rather than stick to the keys). This excellent advice, delightfully expressed in rhyme, should be remembered when dealing with "leaps" and "jumps".

Why do I put them every time in inverted commas? I suggest we should speak of transferring, carrying, flying across, descending, etc., because leaping and jumping we do with our legs, and not with our arms, [Nota 38](#) or on horseback, but not astride the piano. Although we pianists cannot compete with singers as far as extravagance of language is concerned, yet even so we could do with some cleaning up of our terminology. Someone might object: "But you yourself keep using metaphors!". Yes, but they do not obscure the issue, but make it clearer. My pupils will confirm.

To conclude this point I would suggest that a list should be drawn up of particularly typical cases of "long-distance playing" (like a time-table of long-distance trains) and not just confined to the "Campanella".

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A must at the end of such a list is the famous passage from Liszt's *Don Juan* which, with the exception of the Pianola, probably nobody but Ginzburg ever played without a smudge. Here it is:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 52. Estão presentes duas pautas compostas por dois compassos, uma na clave de sol e outra na clave de fá na quarta linha, tonalidade lá maior ou fá sustenido menor, compasso dois por quatro.

Primeira pauta

Inicia-se com a indicação de oitava até à decima nona semicolcheia e começa com dois f e indicação de "con bravura".

Primeiro compasso: composto por doze semicolcheias, a primeira semicolcheia é composta por três notas (mi no quarto espaço, si no segundo espaço superior e mi na terceira linha superior), ré sustenido no terceiro espaço superior, mi na terceira linha superior, ré natural no terceiro espaço superior, mi na terceira linha superior, si no segundo espaço superior, mi na terceira linha superior, sol no primeiro espaço superior, mi na terceira linha superior, mi no quarto espaço, mi na terceira linha superior, ré na quarta linha.

Segundo compasso: composto por doze semicolcheias: mi na terceira linha superior, si na terceira linha, mi na terceira linha superior, sol na terceira linha,

mi na terceira linha superior, mi na primeira linha, mi na terceira linha superior, ré na quarta linha, mi na terceira linha superior, com indicação de oitava, si na terceira linha, mi na terceira linha superior com indicação de oitava, sol na segunda linha.

Segunda pauta

Primeiro compasso: composto por uma colcheia e dez semicolcheias, colcheia (sol, mi, si); semicolcheias: sol, si, sol, ré sol, mi, sol, sol, sol, si. Segundo compasso: composto por doze semicolcheias: sol, ré, sol, mi, sol, sol, sol, si, sol, ré, sol, mi.



The eighth element, the one dearest to my heart and the most wonderful in piano music is polyphony. I have already mentioned it previously, not only in the chapter on tone but also here, in the chapter on technique, when I explained my scheme of component "elements" in the section dealing with double notes and chords. Luckily in this eighth section there is no need to speak of exercises or études, since thanks to that great worker and teacher Johann Sebastian Bach (and of course not only him) they coincide with music itself in its best and purest form, with the most noble of arts. For it would not occur to anyone to attempt to master polyphony by playing Czerny's Fugue which, when it appeared, caused Schumann to exclaim "Good heavens, can it be that we can even expect an oratorio from Mr. Czerny?"

No. We will play Bach, Handel, fugues by Glazunov, Taneyev, Reger and others, but we will manage without Czerny's Fugue. We will begin the study of polyphony, as is proper, with the "Anna Magdalena" Book, the two-part Inventions [Nota 39](#): then we will go on to the three-part Inventions, on to the *Wohltemperiertes Klavier*, the Art of the Fugue and will probably end with the preludes and fugues of Shostakovich with which at the time of writing, far from everyone is acquainted, but which have already caused excitement among all good musicians for obvious reasons: not only because "Shostakovich is Shostakovich", but because in his Quintet op. 57 [Nota 40](#) (and also in other compositions) he gave us such a lofty example of the fugue that he is perhaps the only one to whom one might ascribe the slogan: "Catch up with Bach!".

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A couple of considerations on polyphony on the pianoforte. As we know, Bach wrote his Inventions as a means of teaching singing tone. But, however hard you try, the piano does not sing as we would like it to sing; the piano is short of breath, the piano suffers from pulmonary emphysema. What can we do?

This is my advice: play the E major Fugue from Book II of the *Wohltemperiertes Klavier* some twenty times running. This is a choral fugue. It could serve as a conclusion to the second part of Goethe's *Faust* (chorus mysticus). Suffer, yes, suffer anguish because the piano does not sound like a choir, because the fugue will sound dull, uninteresting, because the tones will die prematurely. Then try to play it faster than it should be played (belligerently, instead of mysteriously as is right) to prevent the tone from dying off; if you are a musician, the fugue will seem quite repulsive to you. Then get well and truly angry with old man Bach; say that this old wig-wearer did not know the first thing about the piano if he could write for that instrument a fugue that can only be performed on a harmonium or an organ, throw the music on the floor—then pick it up and start all over again.

Alas, this is no flight of the imagination. Something very similar happened to me (this was long ago) when I played on a dreadful upright one summer in the country not only this fugue but also many other very slow and cantabile preludes and fugues (for instance the very popular Prelude in G sharp minor from Book I). Now I no longer suffer or get angry, and not because I became less demanding of the piano (although of course we all get more tolerant with age), but because at that time I demanded the impossible, torturing both myself and the piano, and only *as a result of this* I achieved on it what is possible in terms of cantabile, enabling both myself and my hearers to delight in the piano works of Bach without any feeling of disappointment at the imperfections of the

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It was at that time that I thought of the following formula: "Only by demanding of the piano the impossible will you achieve on it what is possible". Thus, for instance, quartettists who have learned Beethoven's *Grosse Fuge* op. 133—a work which is practically impossible for the instruments—will play the remaining Beethoven quartets and indeed any quartet infinitely better. Perhaps it is this natural creative tendency of demanding the maximum which is the reason for the three versions (and particularly the second) of Liszt's famous *Douze Etudes d'Exécution transcendante*?

But as a matter of fact this is a well-known phenomenon and does not require further discussion. I just wanted yet again, and on the strength of my personal experience, to repeat that well-known truth that the study of polyphony is not only the best method of developing the spiritual qualities of the pianist, but also the purely instrumental, technical qualities, since nothing can teach cantabile playing on the piano as thoroughly as the multi-part texture of a slow work. Compare how much easier it is to play cantabile Tchaikovsky's *Chanson d'automne* or let us say, Chopin's Prelude in D flat major, than, for instance, the following:

Nota de revisor: a seguir apresenta-se uma imagem de uma partitura musical correspondente ao exemplo 53a. Destacam-se se duas pautas compostas por dois compassos completos e um incompleto, uma na clave de sol e outra na clave de fá na quarta linha, tonalidade mi bemol menor, compasso quaternário (C). O excerto apresentado corresponde a "J. S. Bach, Fugue in E flat minor":

Primeira pauta

Apresenta duas vozes.

Primeiro compasso: voz inferior: pausa de semínima, semínima, si no segundo espaço inferior, semínima com ponto mi na primeira linha e colcheia fá bemol no primeiro espaço. Voz superior: pausa de mínima, semínima si na terceira linha, semínima mi no quarto espaço. Esta nota encontra-se ligada para a primeira colcheia da voz superior do compasso dois.

Segundo compasso: voz inferior: quatro colcheias (mi na primeira linha, ré no primeiro espaço inferior, dó na primeira linha inferior, ré no primeiro espaço inferior), semínima mi na primeira linha, muda para a clave de fá e são duas colcheias lá e sol. Voz superior: quatro colcheias (mi no quarto espaço, fá bemol na quinta linha, mi no quarto espaço, ré na quarta linha), duas colcheias (dó no terceiro espaço, ré na quarta linha) semínima mi no quarto espaço.

Terceiro compasso: compasso incompleto, apresenta apenas uma colcheia lá no segundo espaço.

Segunda pauta

Apresenta apenas uma voz.

Primeiro compasso: semínima si, semínima com ponto mi e três colcheias: fá bemol, mi, ré.

Segundo compasso: duas colcheias dó e ré, uma semínima mi, duas colcheias lá e si, uma semínima dó. Terceiro compasso: compasso incompleto, apresenta duas vozes, uma semínima, ré e fá.

J. S. Bach, Fugue in E flat minor



Nota de revisor: a seguir apresenta-se um excerto de uma partitura musical onde estão presentes duas pautas, uma na clave de sol e outra na clave de fá na quarta linha, sem indicação de tonalidade e sem indicação de compasso.

Primeira pauta

Apresenta duas vozes com as seguintes notas: mi bemol na primeira linha e si bemol na terceira linha.

Segunda pauta

Apresenta duas vozes com as seguintes notas: mi bemol e si bemol.

Este exemplo corresponde ao exemplo 53b.



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Some might say: What is there to talk about? Everyone knows how much better, more beautiful, more cantabile is the effect of a one-part melody or a duet against the background of accompanying harmonies, particularly with the help of the pedal, than a strict polyphonic texture deprived of the support of a harmonic accompaniment or a pedal with its overtones. It is simply a case of different tonal problems. I am, of course, as aware of this as the next man. But what can I do if my stubborn desire, my "demand for the impossible" compel me, in the fugue referred to, to hear with my mind's ear a vocal part, a human voice just as in the *Chanson d'automne*, in spite of the completely different content of these compositions? I shall strive with all my might and in spite of all and every obstacle, to sing, sing, sing! Reaching for the impossible will achieve the possible!

I can imagine the ironic smile which this page would bring to the lips of Ferruccio Busoni who would not allow the vocal to mix with the purely instrumental. His idea to a certain extent was that when playing an instrument one should forget about singing since each instrument (and particularly the piano) has its own strictly defined characteristics, its own possibilities and demands which excellently match the music written for it and are entirely different from the characteristics and demands of the voice. Of course the proto-element of instrumental music is to be found in all the sounds of Nature, from the singing of the birds, the rustling of the forest, the gurgling of the brook, etc., to the fury of the stormy sea, the thundering of the avalanche and the howling of the hurricane and so on. But what can compare to the charm and expressivity of the human voice? To forget the voice of the human being, the proto-human sound, is impossible. It lives on in any and every music, like a hidden god, and everything stems from it and reverts to it.

I could add to this section hundreds of examples of the way polyphony is taught in our class, but I think it would be superfluous. [Nota 41](#) First, I have already said much (in the chapter on tone) about the many levels, perspective, and even about polyphony; secondly, so many good books have been written on the subject, well known to all musicians, that I can only refer back to them.

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I would still advise the reader to approach Kurt and Schweitzer, [Nota 42](#) the most thorough and profound Bach scholars along with our own Yavorsky, in a critical spirit. In spite of their tremendous positive contribution and the great depth to which they penetrated the subject, they are frequently guilty of formalistic thinking (particularly Kurt in his *Musikpsychologie*). But the reader will not find it difficult to sift the grain from the chaff.

The best performance of Bach I have ever heard, or rather the one I found most convincing and closest to my own conception was by Sviatoslav Richter. Busoni made an unforgettable impression on me in my youth, but I only heard him play his dazzling transcriptions. Unfortunately I never heard him play any Bach in the original. I assume I need not explain why I say this. I love what is truly authentic and not faked, although many performers are naturally attracted by transcriptions.

If I were to attempt to say as briefly as possible why polyphony is so dear to me (as well as the greatest polyphonist of all times—Bach) I would say: polyphony expresses in musical language the highest union of the personal and the general, of the individual and the masses, of Man and the Universe, and it expresses in sound everything philosophical, ethical and aesthetic that is contained in this union. It fortifies the heart and the mind. When I play Bach I am in harmony with the world and I bless it.

After this proto-element, or rather after my most beloved element polyphony, I have no wish to speak of any other elements whatsoever. Besides, the fundamental, simplest types of technique are exhausted. There is still a multitude of subtypes, complex compound types, "hybrids", etc., which abound in pianoforte music and which can be successfully classified, joined or differentiated. But is it really so essential that I should write a short report on the tremolo (of which Liszt was so fond and which Chopin so completely neglected), or on "stretches" or anything else, after all I have already said about economy, firmness, sureness, flexibility, freedom, the "horrible" symbols *m*, *v*, *h*, *F*? I think it would be unnecessary.

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Particularly since all this is as old as the hills. If some "pedagogical prosecutor"—there are such!—were to catch me out in plagiarism I should be extremely glad. [Nota 43](#) I tried to speak only of things that really exist, and they have always been talked about by people who have searched for and found the truth. If, however, to spite the "prosecutor", "counsel for the defence" were to find in my notes traces of something new, all right then, I am game, let there be something new. I am not in the least bit worried as to whether this is old or new; I know as an old teacher who deals with the young daily and who has brought up hundreds of pianists, that this is *necessary*. Which is why I write.

In the near future such writings will probably be unnecessary. There will be tape recordings of actual lessons with "leading Masters" and of course all sorts of others too. These tapes will be duplicated and sent out to musical schools and conservatoires in various towns, as in the case of films. I hope that very soon someone will think of it. It would be tremendously useful. On the other hand it would be a great thing to make tape recordings of lessons in schools in various peripheral towns, including the smallest ones and play them to us who work at the centre, so that we should have a good idea not only of what they are doing there, but also of how they are doing it. Of course such lessons, both here at the centre, and on the periphery, must be entirely natural, unpremeditated, unprepared and unarranged, otherwise they would be without value. One could, of course, arrange an ideal lesson, a model of the highest level, worthy of being copied which would contain, compressed into portable form, hundredweights of wisdom and usefulness.

But, forgive my lack of modesty, I think that some of my colleagues, as well as yours truly could give such a lesson without any "arrangement" or, as Anton Rubinstein used to say, "as God willed it".

I may be accused of having failed to deal with many important questions of technique in my brief analysis of its component elements. But in passing, in the chapter on the artistic image and the chapter on tone I have constantly referred to technical problems; it cannot be done otherwise, for in art, as in life,

everything is one, and all the aspects which we designate by different names are inextricably bound together.

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Moreover, I said from the start that it was not my intention to write a textbook on piano playing. [Nota 44](#) There are many textbooks, and very good ones too, from C. P. E. Bach to the *Notes on the Method of Teaching the Piano* published by the department for the theory and history of piano playing of the Moscow Conservatoire, (under the direction of A. A. Nikolayev). Unfortunately I am not very familiar with foreign publications on this subject. I merely wanted to pass on some thoughts and advice which occur to me daily in my work as teacher and performer, and to stress the more important aspects and principles. I repeat what I said earlier: the only exhaustive literary account of what goes on in class, in my personal work, at home and on the concert platform, would be a continuous diary, a daily record. But this I did not keep, for which I am truly sorry now, for every day brings something new and interesting in its own way. Man changes, much gets forgotten, including much that was valuable. The approach of old age and of that moment when one can say to oneself *finita la commedia* have prompted me to write these lines. On the other hand the legitimate requirement that all of us, professors in higher education establishments for the Arts, should study methodology, set out in some form or other our views on art and education and explain in words what we are doing, has served as a strong impetus.

Notas de rodapé

Nota 1 Famous Soviet airman of the 1930s, ed. [Voltar Notar 1](#)

Nota 2 I suggest that everyone should immediately draw up a mental list of passages from piano literature (and also studies) substantiating my statement. [Voltar Notar 2](#)

Nota 3 A pupil of Chopin who later edited Chopin's works, ed. [Voltar Nota 3](#)

Nota 4 There is a pianist who is an excellent musician and a master of his art, but I have one objection to make to his playing: *h* and *v* are exaggerated. [Voltar Nota 4](#)

Nota 5 Please remember once and for all that when I speak of the "knowledge" of an artist, I have always in mind an active force: understanding plus action. Or simpler still: acting correctly on the basis of correct thinking. [Voltar Nota 5](#)

Nota 6 If I were not afraid of making this chapter excessively long I would set down here some considerations as to why teaching of the Bach type is a thing of the past although it has lost none of its value. Let me give just two reasons: the gigantic development of music and of piano literature and its tremendous variety, similar to the variety of science. (Kant taught at the University of Königsberg all the sciences known at the time.) In a certain sense Bach developed virgin land. [Voltar Nota 6](#)

Nota 7 I am almost certain that Liszt, too, was guilty of this in his young days. Remember what Glinka said of him. [Voltar Nota 7](#)

Nota 8 In such cases many pianists (Rachmaninov) swing their hand, arm and shoulder not only in order to feel full freedom but also in order to get the maximum swing of hand and fingers in a strict legato. Artur Schnabel in such cases even used a vibrato of the hand as if the piano were a bowing instrument.

I consider this unnecessary since, as we all know, no amount of shaking the hand after a note has been played can have any effect on the sound.[Voltar Nota 8](#)

Nota 9 A pianist ought to be able to do the following gymnastic exercise: place his ten fingers on the floor and raise his body vertically. This is the full load which the fingers should be able to bear (these pillars, columns, arches, supporting a dome).[Voltar Nota 9](#)

Nota 10 Heinrich Heine: *Heimkehr aus der Fremde* (Yet the castrati complained / As soon as I raised my voice / They complained and they said / That I sang far too coarsely), ED.[Voltar Nota 10](#)

Nota 11 Muscles that turn the palm downwards, ED.[Voltar Nota 11](#)

Nota 12 Muscles that turn the palm upwards, ED.[Voltar Nota 12](#)

Nota 13 More accurately still: I taught freedom of physical movement but did not teach psychological, musical freedom. Inexperienced teacher that I was, this was a task still beyond my capabilities, and hence it was beyond the pupil's.[Voltar Nota 13](#)

Nota 14 How difficult it is to describe accurately this very simple process, and how easy it is to show it on the piano with just a few words of explanation![Voltar Nota 14](#)

Nota 15 The greater the volume of sound the more swing is required.[Voltar Nota 15](#)

Nota 16 Even this has to be said. I had a pupil once, a very practical and smart young man in everyday life, who always managed to get his way but who was rough and clumsy at the piano. I often asked him: How is it that you manage so well in your life and so badly at the piano? Then followed, of course, advice. But as far as "life" is concerned, it was he who gave me advice . . . which I did not follow.[Voltar Nota 16](#)

Nota 17 They can even be reasonably exaggerated.[Voltar Nota 17](#)

Nota 18 In this respect I know of no better hands than those of Sviatoslav Richter. He can easily take a twelfth, he can take in one go such.[Voltar Nota 18](#)

Nota 19 At the same time such compositions as, for instance, the Chopin concertos hold no physical difficulties for my hand.[Voltar Nota 19](#)

Nota 20 That same fall which, as I said earlier, produces a great volume of tone without any physical effort[Voltar Nota20](#)

Nota 21 The natural and justified desire to find a common denominator, the "original cell" of a complex phenomenon sometimes leads to amusing misunderstandings. Thus I sometimes heard teachers not unacquainted with questions of methodology say that "one should somehow be able to play a single note well, and then one can play everything well". If this isn't black magic, may I drop dead!

This is a case where an observation which is fundamentally correct led to completely erroneous conclusions. The converse statement is true: if a pianist is able to play everything very well, he will also be able to play a single note very well. This expresses the conviction that one single note is sufficient to distinguish a very good pianist from a bad one. Logically this is of course true; a block of marble differs from a mound of quicklime as a whole and in each of its molecules, but I doubt whether we need go deeper into such questions. I cannot help thinking of the mediaeval disputation concerning whether or not ten thousand angels could hold on the point of a needle. I took this erroneous

thinking as an example of the sort of thing I came up against in my travels through the Soviet Union and in my frequent meetings with teachers and pupils. These are some of the questions put to me after my talks and public lessons in some schools: How should one work at technique? How should one work at tone? In what class should one allow the pupil to use the pedal? Is it good when practising to sing everything one plays, specially melodic pieces? What should one work at more: heavy technique or light technique? How should one use the pedal? etc. etc. I can't go through the whole lot. But these are exceptions and oddities. I was often asked sensible and interesting questions which led to fruitful discussions.[Voltar Nota 21](#)

Nota 22 For instance while you are learning the E flat major scale it is a prefabricated part; when you play it, let us say, at the end of Beethoven's Fifth Piano Concerto, it is the finished article, because it is music.[Voltar Nota 22](#)

Nota 23 It need not at all be the same note (key); one could for instance alternate black keys with white, change the register, use the pedal or not, but the note should, in my opinion, be isolated from any context.[Voltar Nota 23](#)

Nota 24 Some may object: "Yes, that may be so, but only if you have a wonderful instrument. But where will the 'wonderful tone of the piano' come from, when one has so frequently to play on ghastly old upright pianos?" Those who say this don't know the piano. However horrible the original sound may be at first—the moment when the hammer hits the string, the rasping, jangling of loosened keys and other similar delights—what follows—the vibration of the string after it is hit—is good even on the most revolting instruments. Try it and see![Voltar Nota 24](#)

Nota 25 Of course we are so far dealing only with conjunct motion, degrees of a scale, not with chords (arpeggios).[Voltar Nota 25](#)

Nota 26 I recommend that each exercise be played every conceivable way: from *pp* to *ff*, from largo to presto, from legatissimo to staccato, etc.[Voltar Nota 26](#)

Nota 27 Of course in leaps and jumps the finger has quite a different task: that of grasping the right key in "mid-air" as it were.[Voltar Nota 27](#)

Nota 28 This is a corrective to the usual arpeggio pattern on a triad.[Voltar Nota 28](#)

Nota 29 Of course I sometimes also played this bit extremely slowly with the hand hanging freely down from the wrist (more "*h*"), in other words in a diametrically opposed manner.[Voltar Nota 29](#)

Nota 30 Incidentally this proves what actually does not require proof; that I am not a virtuoso pianist but simply a musician who knows the piano and can express himself on it.[Voltar Nota 30](#)

Nota 31 For more detail on this see Preface to this edition.[Voltar Nota 31](#)

Nota 32 I repeat my advice: dig the tunnel from both ends, never lose sight of the beginnings and the ends.[Voltar Nota 32](#)

Nota 33 The main thing in double notes is precision of sound, the proven simultaneous sounding of both notes. Then, as in all passages— evenness, smoothness, mastery of nuances, bringing out where necessary the upper or lower parts, etc.[Voltar Nota 33](#)

Nota 34 Meaning the poetic form: AB, AB, AB, CE[Voltar Nota 34](#)

Nota 35 Rimsky-Korsakov said of this composition: "here the very harmony sings".[Voltar Nota 35](#)

Nota 36 Anyway the best advice one can give someone who plays chords, is the advice of Liszt: Grab the chord, drawing the fingers slightly inwards towards the palm, and do not let them fall on the keys like lifeless pokers. [Voltar Nota 36](#)

Nota 37 Forgive this metaphorical expression. In actual fact a physical collision is impossible. I merely wanted to stress the wrong relation of the fingers to the keyboard when the key is approached sideways. [Voltar Nota 37](#)

Nota 38 But birds, angels and other feathered creatures have wings growing from the same place as our arms, so I consider it justified to talk of flying. [Voltar Nota 38](#)

Nota 39 One of my teaching "peculiarities" is the advice to replace a number of Czerny and Clementi études by a selection of "motor" preludes from the *Wohltemperiertes Klavier*. Here is this selection: Book I, Preludes Nos. 2, 3, 5, 6, 10, 11, 14, 15, 17, 19, 20, 21; Book II, Nos. 2, 5, 6, 8, 10, 15, 18, 21, 23. Only twenty-one preludes in all! Learn them—it will enable you to "save" yourself at least fifty highly useful études. I know that this advice will arouse a certain amount of displeasure in teaching circles; nevertheless I tender it. [Voltar Nota 39](#)

Nota 40 Composed in 1940, Ed. [Voltar Nota 40](#)

Nota 41 I would only say that I have especially often to remind pupils that suspensions (usually discords) which are so important in Bach, must be clearly audible. Also syncopation. [Voltar Nota 41](#)

Nota 42 Of Albert Schweitzer, another Albert, Einstein, said that he was one of the outstanding figures of our century. [Voltar Nota 42](#)

Nota 43 It would mean that I am not the only one who says so, many others say so: one head is good, two heads are better than one, but a thousand heads—that is excellent! [Voltar Nota 43](#)

Nota 44 Although, alas, there is more than enough purely technical material in my book! [Voltar Nota 44](#)