# **Revolutionary Étude**

Frederic Chopin (1810 - 1849) Opus 10 Nr. 12







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### Foreword

A meaningful discussion of practicing any musical instrument, in this case the piano, has to be based on how our conscious reflection interacts with our natural subconscious guidance system. Much of our existence as human beings is conducted by a nearly-magical, unconscious life force, which we cannot intellectually control according to our wishes. Our whole metabolism and, linked to it, the internal functions sustaining life in us, are beyond our conscious control. In addition, many of our body motions are seemingly automatic or at least perceived as such. Although some, like reflex motions, are built into our system, most of them have been conditioned or trained at some point or other during our growing up, but their control has sunk down into an abyss beyond our immediate control. How much of this is connected to consciousness per se, is a question difficult to answer conclusively. Just to contemplate memory as a mental function, in this context, is like opening a Pandora's Box of uncertainties. Thus, it depends on our definition of the subconscious or unconscious, the terminology of which is often clouded by ambiguity. Our comprehension and usage of these terms is generally vague and often questionable. To avoid inconsistencies we conveniently resort to another term, which is somewhat more encompassing, but also open to various interpretations. It is the magic term intuition which seems to cover nicely everything not clearly controlled or controllable through our intellect. However, with respect to our physical movements, we know that most of our daily motion patterns are automatic, although often stimulated by either external events or internal desires, most of which are beyond the control of our intellect.

It is always astounding to observe how the newly born search for and accomplish simple basic motions so essential for their healthy development. Just imagine the child in the crib trying to make the first attempts at moving arms and hands in the direction of something to be grasped. The process, as far as we can presently know, seems to be totally unconscious. The young child later attains the astonishing mastery of the spoken language without any obvious intentional effort or conscious intellectual interference! Perhaps one might even categorize this type of instinctive primeval learning as falling under the umbrella term intuition. In growing up, however, we human beings experience an increasing predominance of our consciousness over the natural subconscious portion within our operating system. Our intellectual awareness and the subsequent desire for control steadily move into the foreground, while our intuitive abilities, so dominant during childhood, recede or at least diminish in importance for the survival of the individual. In our time when thinking as such is seen as the main denominator of our existence, this overbearing power of the intellectual side of our existence is a not to be underestimated danger not only for the individual human being, but for our species in general. It is especially dangerous for the artist whose intuitive perception is seen as a central source of his creative existence.

There is no doubt that the artist is in need of a clear intellectual understanding of what he or she is trying to achieve. However, pure rational procedures may overpower the intuitive creative sources on which the artistic process has to rely on in order to be genuine. The essential balance necessary for any artistic process, the equilibrium between conscious control and intuitive stimulation might break down. It seems that the fate of any true artist is best symbolized by the proverbial oscillation between Scylla and Charybdis - an eternal dance between intellectual control and intuitive perception. To incessantly strive to balance these two characteristics in a harmonious way constitutes an often frustrating

task for the truly creative human being.

Approaching the Chopin Etudes with such an insight in mind requires therefore an acute awareness of the interdependence of the intuitive-musical and the rational-technical approaches. A concentrated perusal of the etudes by Chopin might reveal to us that there is a fusion of both elements. That the composer had created these etudes with a definite pedagogical aim in mind is obvious. Equally obvious is that he must have focused on these and other pedagogical principles when teaching in Paris. At the same time these etudes reveal themselves as *immortal* musical masterpieces that have an honorable place in concert programs all over the world. Only very few composers have achieved in their etudes such an incredibly harmonious fusion of pedagogical aims with musical visions. Carl Czerny, whose name is inextricably linked with the etude as a genre, certainly was not among them.

Any attempt to deal with the so-called technical side of the Chopin Etudes must therefore be guided by the conviction that in the final analysis the musical idea should be the main impulse generating the physical gestures necessary to create concomitant sound structures. This has to be kept in mind when tracing the multitude of intricate movement patterns in Chopin's pedagogical masterpieces.

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# Chapter 1

## **On Practising Motion Patterns in General**

In order to receive the maximum benefit from this immeasurable pedagogical treasure, some thoughts regarding practice procedures in general might be helpful. Since every human being constitutes a unique cosmos in itself, any approach to practicing will by necessity have to be a highly individual one. Nevertheless, valuable insights as to how we function mentally and physically have evolved during the history of mankind and are still emanating from our incessant yearning to know ever more about the enigmatic functioning of the brain. In recent times substantial scientific advances in the exploration of our physical and mental activities have drawn attention to the existence of vital interactions between various areas within our brain. This might also shed some light on the complexity of motions, when we are playing an instrument for instance, instigated by the desire to *hear and realize sounds* we expect or desire.

For example, it would be difficult to challenge the notion that practicing slowly is a most sensible way of approaching any task at hand which requires certain physical or even mental skills. However, questions quickly arise. Just imagine for instance a diver preparing himself for the Olympics. How is he or she going to practice his intended figuration flying through the air in perfect harmony with the laws of gravity? How should one gain the perfect control of these motions and their envisaged aesthetic beauty at the same time? Slow practice is simply impossible. The totality of the action cannot be broken down into smaller portions, although a theoretical analysis of a slow motion video of an action, that has already happened, can be a type of retroactive substitute, creating additional awareness of the motion process as such. It also might serve to *fire up* the imagination about the *feel for it*!

It is obvious that as to any action geared to master a musical instrument the situation is totally different from the mentioned sports event. When practicing the piano one might mention a generally accepted axiom, even if some questions could be raised as to its overall validity:

Difficult passages occurring in the piano literature, usually to be executed in fast tempo, should generally be practised first slowly with a subsequent step by step acceleration.

The question arises how this acceleration is to take place. There might be a number of valid answers. Considerable research has been done shedding some light on this matter. We now know for instance more about the power of our brain, how it is able to integrate small *bits* of physical processes under larger *headings*. This is not only valid for our sometimes surprisingly inefficient memory, but also for the functions of the brain that initiate physical motions.

The idea of our brain being just a superb computer, however, has lost a lot of credulity. The main characteristic of the computer is its ability to add up at an incredibly fast speed, tiny electrical impulses, commonly known as *bits*, thereby constructing complex larger units. However, it is not able to integrate functions in the same *intuitive* way our brain is able to do. If the brain wanted to compete with the computer on its level of expertise, the computer would find this only amusing; since, the brain is already *conking out* at a pace a computer would consider a snail's speed. The parable of the turtle and the hare comes to mind. Now - who is the turtle and who is the hare? It seems that the *turtle* has a marvellous capability encompassing the unit landscape and creating compact entities, while the *hare* is running around collecting myriads of *bits* and is still behind, if compared to the magic possibilities of our brain.

It is interesting to hear about new research, showing electrical functions within the brain located in definable areas. But that is not all! They also seem to depend on innumerable smaller function centres integrated into a whole network of neuron activities. This could be seen as a manifestation on a physical plane of the capability of our brain to integrate functions into larger, interconnected strata, which is different from the computer. Instead of looking forward to add up countless small bits and pieces in order to arrive at larger units, the brain seems not only to be able to integrate smaller units, but also to encompass a larger unit first and detail it afterwards. For our topic it seems thus meaningless to think that our brain as a kind of living computer.

One could speculate, that the comprehension of an *artistic totality* is more based on intuition while the *detailing* requires attention by the intellect: Imagination on one side, analytical thought on the other! It seems that according to the knowledge we have today, composers also operate within such a framework. Ludwig van Beethoven's way of composing is perhaps the most obvious example that comes to mind.

Taking all this into consideration, a bold, challenging statement is now made with respect to the absorption of a musical and technical entity on the piano. The intent is to provoke the reader's critical mind and solicit a response:

### PRACTISING IN A SLOW TEMPO MEANS PRACTICING SLOW MO-TIONS

### PRACTISING IN A FAST TEMPO MEANS PRACTICING FAST MOTIONS

Since the artistic totality is, among other ingredients, also determined by the tempo, it does not seem logical to practice a to be fast played, entity slow and - for that matter - a slow one fast. However, it goes without saying that difficult passages, usually to be executed in a quick speed, cannot be mastered immediately in the required tempo. But it is also well known that for the same musical figuration, the fast motion pattern is often

somewhat different from the slow one, since the motion pattern is also determined by that particular musical context.

It is possible to solve or circumvent such a complex problem. In the following an attempt is made to come to a sensible solution taking into consideration the above mentioned principles.

In addition to and based on a clear musical concept of the totality of the work to be studied - without which any activity at the keyboard would be meaningless as far as the final musical goal is concerned - two essential aspects should constitute the fundamentals of any practice at the piano:

# a) The mental image of the intent and aim of the motion as a kinaesthetic manifestation of the musical flow.

As mentioned in the foreword most of our conventional daily motions are executed unconsciously. They seem to be pre-programmed into our whole system through lifelong experiences: I want to grasp this pencil on the table. The intent is clear, the eyes are focused on the object, the most practical and economical motion is envisaged. My arm extends, my fingers grasp the object and the arm is retracted with it. We don't have to specifically *think* about such an action. How funny, if we all of a sudden would contemplate turning around and try to grasp the pencil by extending the arm backwards. Such an *unprepared* action would have to be consciously envisaged before it could be executed with some ease. It only would feel natural, if we would have *practiced* this particular procedure by establishing a new image of the anticipated action. And that would take considerable time for it to become as *automatic* as the one we are totally familiar with.

### b) The physical side of the muscle activities closely linked with the sensation and the incorporation of the motion patterns as such.

Theoretically, it seems possible to master the second aspect through pure mental imagery and a maximum of concentration in such a way that the image of the total motion pattern encompassing a whole entity and therefore conducive to the musical end result, is physically executed immediately in its perfect form. Hardly any pianist would have such a phenomenal ability at their disposal. It is said, that Walter Gieseking was one of them. Also excellent sight readers come to mind in this context. Through talent and often endless repetition of increasingly familiar figurations they have developed an arsenal of motions based on fast recognition of musical contexts. However, the power to more or less immediately instigate and control an array of continuously changing motion patterns on the keyboard, not only through pure imagination, but also through commensurate musical and emotional identification, is not easily granted by the gods, and then to *immortals* only. Thus we have to operate within an aura of normality and spend time and energy to physically practice the motions related to an envisaged musical end-result.

In this context it is important not to underestimate the infinite variety found in the physical and mental set-up of human beings. Whatever means one dares to suggest in order to solve perceived technical problems, the individuality of the human being has to

be taken into consideration first. There is always a natural idiosyncratic way for a pianist - and for that matter, any instrumentalist - to solve technical problems. Thus to rigidly follow a magic *good-for-all* system makes no sense. In addition, one has to consider the intricate relationship between the actual execution of any physical motion and its main instigator - the imagination – functioning via the mind (or being the mind – who really knows?), which in itself is grounded in the physical propensity of the brain. We also must not forget that motion without the concept of time and space is inconceivable. But how does one perceive time? Robert Jourdain claims that "our brain has no sense for time ..." and comes to the logical conclusion that we should " ... use the body well-developed kinaesthetic imagery ..." when dealing with the creation of musical sound in time<sup>1</sup>.

A mere mechanical realization of motions should not be the sole aim of any practice. Without a mental (and emotional!) guidance determined by the desired musical goal even the best mastery of any motion patterns will only result in *a space in an empty space*. This has to be taken into account when contemplating the suggestions that follow.

To put it somewhat simplistically - a myriad of possibilities can be scaled down to two basic approaches. The practising of a difficult passage or sometimes even a whole etude in its entirety can either be done slowly and step-wise accelerated, or a totally different approach is chosen. Instead of practicing in slow motion a long, complex chain of motion patterns, one could concentrate on shorter units or even very short *motion particles* to be practiced right away in the envisaged final tempo. (To satisfy logic one could even mention the ultimate short unit consisting only of two notes of a longer figuration). Of course, whatever portion selected should not only be musically meaningful, but should be felt as embedded in the emotional process related to the musical totality one is dealing with.

Basically it does not make any difference which instrument one plays. The principles of motion are the same. In his important treatise on *Principles of Violin Playing and Teaching* the world renowned pedagogue Ivan Galamian for instance emphasizes strongly, that the most important matter is not the physical motion per se, but the mental control over it<sup>2</sup>. Thus to conquer the right effective and effortless motion on the keyboard cannot be a final aim as such. It is a necessary procedure helping the player to arrive at a definite musical goal. Again, it is important that an emotional identification with the kinaesthetic of any motion on the keyboard should be part of the technical process, which only rarely should be separated from the musical goal. Thus any one-sided focus on mere technical motion patterns without a vision of a musical goal will do more harm than good.

The above envisaged small units can then be combined step by step into ever larger entities. It is interesting that Theodore Leschetitzky is reported to have suggested a similar process with respect to memorisation, by first learning one or two measures, then adding one or two more, and so on. This seems to be a logical procedure. The term *expansion method* might be appropriate here.

After setting and internalizing each selected entity thoroughly in slow motion, thus getting a firm grip on the mental and auditory image, the principle of mostly practicing in the required speed should be maintained throughout. Each unit is expected to be executed in a unified, continuous motion. If the fast practice does not yield immediate results, the internalization step has to be repeated and/or one has to step back practicing smaller units

<sup>&</sup>lt;sup>1</sup>Jourdain, Robert, *Music, the Brain and Ecstasy*, Harper Collins Publishers, New York, 1998.

<sup>&</sup>lt;sup>2</sup>Galamian, Ivan, Principles of Violin Playing and Teaching, Prentice Hall, Englewood, Cliffs, 1962

in tempo. The only functions that have to be practiced before proceeding in this way are the internalization of the motion pattern based on a mental image of the sound and its preliminary physical set-up in a slower tempo. The final adjustments towards the most harmonious motion fitting the technical challenge will be arrived at more or less intuitively during practicing. This is the only point which can in some ways be compared to the way children are learning to master any motion or gesture, whereas we as adults generally are operating under the preponderant function of our intellect.

It goes without saying that the whole process can only be successful, if a satisfactory fingering is established before-hand. Sometimes not enough attention is given to this important part of the practicing process. Different fingerings result in different motion patterns. Therefore it is very important to think carefully which possible fingering to choose, always having in mind the final musical aim. The usual understanding for example of not using the thumb on a black key has to be questioned within certain musical contexts. Thus a seemingly more complicated motion pattern might be the right choice, which of course is also determined by the physical propensity of the player. Thus different fingering might predetermine motion patterns quite substantially, as can be seen by comparing the following examples, seen in Example 1.1, a and b.



(A) Op.25 #2, mm. 1-3: Commonly used fingering for sideways motions



(B) Op.25 #2, mm. 1-3: Fingering chosen for continuous circular motions Example 1.1: Fingerings for Sideways and Circular motions

The commonly used fingering, as seen in Example 1.1A determines motion patterns

quite different from those growing out of the non-conventional fingering indicted in Example 1.1B. It limits the motion patterns to more or less localized finger actions, in this case the sideways motions of the thumb, while the latter results in continuous circular motions of the whole hand originating from a firm fulcrum at the shoulder. The choice of this fingering is based on the conviction that for expressive reasons even in the smallest finger motion a continuous stream of energy flow should be perceived as pulsing through the whole body, thus avoiding the often heard digital rattling. This would also be relevant for the very restricted motion pattern related to trills. The impetus and guidance for any, even the smallest motion on the keyboard has to come from the whole body via the fulcrum of the shoulder-arm unit. Recent research reveals some astonishing results as to the variable speeds of nerve impulses that activate motions are faster than those for finger motions<sup>3</sup>

It is essential that the nature of the physical gestures related to the various figurative patterns is understood. Only then can meaningful motion patterns be successfully integrated in the practice procedure. However, one should also be aware that motion patterns that are logical and effective in slow speed, might reveal themselves not as equally sufficient in a faster tempo. The shapes of integrated slower motions manifest themselves often in a circular design, which is transformed into more elliptical shapes with increasing speed. One pertinent example would be the playing of broken chords or arpeggios. Here of course it is assumed that flexible arm motions are guiding us through these patterns rather than localized finger actions from a fixed wrist.

In addition, one should recognize that during any action on the keyboard, continuous and thus uninterrupted motions are an essential precondition for transforming musical thoughts into sounds. Everything in this universe (in the macro- as well as in the microcosm) is in constant motion. A *standstill* or immobility would intercept the never ending stream of life and can thus only be paraphrased as constituting death. It is well known that at the lowest temperature in the universe motions of the basic atomic particles have completely ceased. There is no life whatsoever. This fact can be seen as a metaphor relating to motions of the body when playing the piano. If body motions on the keyboard are *blocked*, seemingly inexplicable musical *dead spots* are perceived, that considerably disturb the natural musical flow in time.

A fast upwards played scaled for example with a subsequent downward jump should not be seen as consisting of two separately instigated motions (an upward scale aimed at its last tone, then an interruption of the motion followed by a downward leap) but as one continuous motion changing direction in *free flight*, as it were (see Diagram 1.1).

A relevant practical example, from the literature, would be a right-hand passage taken from the last movement of the Fauré Piano Quartet op.15 mm.355-357, (see Example 1.2).

Many so-called technical problems encountered when playing the piano are caused by the fact that motion patterns often are punctuated by a strange and disturbing *discontinu*-

<sup>&</sup>lt;sup>3</sup>There are indications that the brain produces commands for arms faster than for fingers, that evolution has given priority to reaching over grasping. Researchers are flummoxed at how such disparate systems can work together so effectively. Finger errors often arrive from improper arm movements, and getting the two systems in sync can be terribly difficult. (see *Music, the Brain and Ecstasy (p.215) Robert Jourdan, Harper Collins Publishers, New York, 1997.*)



Diagram 1.1: Continuous Motion for a upward scale followed by a downwards leap



Example 1.2: Fauré op.15 mm.355-358

*ity.* As already mentioned, a continuum of motion, however, is a precondition for a natural rhythmical flow. Whoever has seen a slow motion film of any individual sports activities or the advanced art of Kung-Fu will understand that continuous motion patterns are natural components of any physical activity, be it walking or running, dancing or bicycling, and, for that matter, playing an instrument.

Although many pianists and pedagogues, among them Carl Czerny and Johann Baptist Cramer, had written etudes before, it was the ingenious Frédéric Chopin who created a compendium of the mastery of motions on the keyboard which deserves to be called *The Pianist's Breviary*. These Etudes were essentially based on and designed for the Erard or Pleyel grand pianos of Chopin's time, which incorporated the then new double escapement action. They were relatively easy to handle, since their keys had less weight and depth. These pianos also had a transparent, silvery sound. The pianist of today is confronted with much weightier *machines*, the handling of which requires more physical stamina. The Chopin Etudes are therefore indispensable for building a technical command within an extraordinary musical framework suitable for our modern instruments.

In contrast to the ubiquitous Czerny Etudes, that deal predominantly with finger technique, intended for the very light touch of the Viennese instruments of his time, the Chopin Etudes, aside from being genuine musical master works, focus on intricate, frequently rather complex motion patterns encompassing wide spaces on the keyboard. To conquer these extended spaces via a multitude of figurative patterns seems to be an important pedagogical aim of Chopin. His student Karol Mikuli reports that his teacher emphasized evenly flowing, lateral movements of the hand from the wrist in order to facilitate the mastery of these complex figurations<sup>4</sup>.

Since our modern pianos require considerable weight, usually about 50 grammes, to simply depress a key, one has to incorporate more arm motions as an important source of power, than was even necessary for the pianos of Chopin's time in order to achieve similar characteristic effects. Indeed, the training of multifaceted, flexible arm motions seems to have been Chopin's main didactic aim in designing the majority of his Etudes, although special attention is given in some to particular finger and specific wrist actions, for example in  $op.10 \ \#2$ ,  $op.25 \ \#6$ , and  $op.25 \ \#9$ . In addition, the wonderful musical quality of his etudes provides a strong inspirational stimulation for any player confronted with the considerable technical challenges found in these imaginative pieces. In any case, it is generally accepted that musical goal oriented practising provides the best results when trying to expand technical possibilities.

Depending on the physical propensity of the individual hand even the most extensive training of fingers will at some point reach a *dead end*. Continuous practising of Hanon or Czerny over years with the limited aim to strengthen finger muscles according to Czerny's vision of " ... little hammers striking into keys" might result in damaging injuries of the hand and lower arm including the dreaded Tendonitis. Furthermore, it is difficult and sometimes even impossible to fuse later on separately trained parts of the total playing mechanism into an integrated whole.

Based on a premise, accepted by most pedagogues, that the development of any piano technique should initially be centred on larger motions (the larger units: torso and arms), which are subsequently to be differentiated into smaller ones (the smaller units: hands and fingers), a reasonable approach to systematically work towards a high level of technical mastery could be to use the Chopin Etudes as a defined tool for such a process on a more advanced level. When adopting a practice schedule as discussed below, the focus would be on a logical path of development beginning with the upper torso, then shoulders, upper and lower arms, hands and fingers – progressively in that order.

Such an approach might be valuable when applied within the framework of a conventional four-year undergraduate performance program at universities. Students could progressively work through a limited schedule of specific Chopin Etudes as mentioned below, thereby exploring basic motion patterns without necessarily bringing these etudes up to a perfect performance standard. The modern examination systems expecting perfect performances of a few pieces every semester or so, are hindering rather than enhancing a natural growth of technical and musical abilities. These restrictive methods don't allow for an expansive growth of the musical personality, which has to be absolutely congruous with the technical advancement. In that sense it would be better to work through all the Chopin Etudes as *etudes* and selecting only a few as *concert pieces*, than to solely focus on two or three of the more *spectacular* ones, excluding all the others.

The rationale behind the following suggestions is that the development and expansion

<sup>&</sup>lt;sup>4</sup>Mikuli, Karol (Carl), Introduction to the complete Works for the Pianoforte by Frédéric Chopin G. Schirmer, New York, 1915.

of technical abilities using the Etudes by Chopin should begin with basic, quite often large motions and proceed successively to more and more complex ones, thereby undergoing a process of continuous differentiation. This seems to be in line with the general laws of nature as we see them manifested in the growth processes of living matter. In that sense one could even call the beginning of pianistic growth embryonic, encompassing all possible further developments in a *status nascendi*. It is extremely important for any pedagogue to see the technical and musical growth of his or her student as a process commensurate with the laws of nature. In this context it might be fitting to mention Hermann Hesse's dictum;

"  $\ldots\,$  according to which music – among all art forms – is the one closest to nature."

When studying Chopin Etudes in a systematic way it seems thus advisable to begin with Etudes which deal with basic larger arm motions like op.25 #4 or op.10 #9 for the left hand, and op. 25 #1, op.25 #3, or op.25 #12 for both hands. One of course assumes that the general playing level before tackling these etudes should have reached somewhat beyond the intermediate level. It is of course the responsibility of the teacher to assess whether the student is physically and psychologically advanced enough to tackle such a comprehensive task.

It is recommended to incorporate the use of the pedal from the beginning, since the characteristic *Chopinesque* sound cannot be achieved without a discerning use of the pedal. However, the often indiscriminate use of the pedal on our modern *dark sonority machines* is to be avoided, unless one fails to understand the difference between the characteristic sound patterns in Chopin's and Rachmaninoff's music. Chopin's own pedal indications sometimes have to be taken with a grain of salt. One should be aware that the dampers of the Erard and Pleyel pianos played by Chopin were softer and did not *cut off* the sound as effectively and abruptly as the bigger, heavier, and harder dampers of a modern grand piano. An additional factor is, as piano builders soon found out, that by changing the position of the dampers on the strings to a spot closest to the striking point of the hammers achieves a maximum of damping the sound. This is the ideal of our time. On Chopin's piano, however, a certain amount of *after sound* was perceived after the dampers had touched the strings. The difference between the sound with and without pedal was thus not as striking as on our modern instruments, and "*Chopin knows his piano like nobody else!*" <sup>5</sup>

In order to come close to the sound Chopin might have envisaged based on the pianos he was using, a sophisticated use of the pedal including the application of *half pedal* or *vibration pedal* is indicated for our modern instrument. It is absolutely necessary to be aware that *half pedaling* does not mean to move the foot half way down. Half pedaling refers to the partial lifting of the dampers from the string in a particular area of the pedal lever movement, which on a well regulated instrument is usually encompassing only 25% to 30% of the entire range of the possible movement of the foot. The same of course holds for the *vibration pedal*, which really should be called *half-pedal vibration*. It is actually surprising to hear that most of even advanced piano players have never given this enough thought. It must be noted with regret that the use of the pedal is rarely taught with the same intensity as scales, arpeggios and what have you! Here certainly would be the place to

<sup>&</sup>lt;sup>5</sup>...Chopin, der sein Instrument kennt wie keiner...Schumann, Robert, Gesammelte Schriften ber Musik and Musiker, Reclam Verlag, Leipzig, 1888.

remedy the situation. The Chopin Etudes provide ample opportunities to do so. To follow the composer's pedal indications *verbatim*, applying undifferentiated up-down motions of the foot without intelligently applied modifications is questionable and might even distort the effect Chopin might have envisaged.

To describe motions in general is comparable to representing a three-dimensional body in a two-dimensional plane. It also could be seen as the equivalent to explaining colours to a blind person. In the final analysis, motion can only be perceived in space and time. It must be seen rather than described in order to be completely understood. Even the best description might fail in this respect. The ideal of course would be to hear and see Chopin's own playing. Well – second best then is to film motions demonstrated by a person of our time. Fortunately our modern technical possibilities allow us to do that exactly.

(A) Movie A1

(B) Movie A2

Movie 1.1

Since its invention the medium of film or video has provided mankind with an extraordinary expansion of visual perception. Although musicians have been filmed in many ways and are often shown on television or video programs either in larger groups, in smaller ensembles, or as soloists. The rationale for this type of presentation is usually to provide opportunities for a visual perception directly related to the music as such. The potential existence of more than 500 TV programs for instance demonstrates the intense focus on the informative reporting of events, including musical ones, sometimes even with some room for analysis aimed at educational purposes.

Although educational music programs do exist, it is mainly in the field of individual sports activities that video cameras are used in order to analyze and understand body motions with the intention to maximize their efficiency. Today's competitive sports scene cannot be imagined without these analytical tools. Most Olympic champions of our time receive training and coaching based on awareness gained through such form of analysis.

The aspect of sportive *competitiveness* has been growing in the field of music too, although music by its very definition should never be seen as just another sport. Nevertheless, that should not exclude the possibility of analyzing the physical side of music making in each instrumental category (including the human voice) in order to understand how the body functions under various conditions related to sound production.

A certain visual focus on the essential motions as found in Chopin's etudes is therefore a supportive part of this study of motion patterns on the keyboard. About forty essential motion patterns of Chopin's etudes simultaneously filmed from three angles and recorded are provided in the text<sup>6</sup>.

are available in the text via coded keys. Obviously the filming from the sides was not problematic. However, since the shape of a grand piano blocks any satisfactory visual access from the front, the decision was made to use one of the best available, tough sensitive keyboards, thereby sacrificing some of the normally expected sound quality. Inherent difficulties like differences as to touch and dynamic possibilities as compared to the *normal* piano were considerable challenges to be overcome. The sound quality of even the best electronic keyboards is simply not comparable to a let's say – Imperial Bösendorfer Grand. It is therefore recommended to turn down the volume of the filmed examples.

However, this was considered acceptable in view of the specific visual aim of the study, which is intended as a virtual publication. It was thus possible to establish markers in the text of the study, which allow immediate access to specific portions of the film as related to any particular topic discussed and frequently linked to relevant notation examples in the text.

<sup>&</sup>lt;sup>6</sup>For access to the videos via the Adobe PDF Reader see Adobe website.

# Chapter 2

## The Two Essential Motion Patterns

Before any further discussion certain principles of motion must be defined based on the phenomenal kinaesthetic capacity of the human arm. With respect to movements on the keyboard from a kinaesthetic point of view, a justifiable postulate could be that the shortest way between two points is not a straight line, but a curve. (To envisage the Euclidian Geometry might be helpful for those who think more within the framework of usual geometrical parameters.) Furthermore, for encompassing wide spaces on the keyboard the most economic, efficient, precise and controllable movement seems to be the one where the motion of the arm precedes that of the hand, either vertically or laterally. Such kinaesthetic organisation enhances a natural intuitive command of the rhythm, which is determined by the timing and should be felt rather than calculated. Of course such a *rhythmical feeling* is originating in our breathing system and should be emanating via our arms into hands and fingers onto the keyboard. One maxim should be clear: Without natural motions there is no natural rhythm, the basic image of which could be the motion of a pendulum operating within the law of gravity. The inclusion of such basic principles in our motion on the keyboard is of major importance. A motion of this type could best be paraphrased as a swing stroke motion, although words are notoriously misleading. However, sometimes certain terms might be useful as *identifiers* of particular motion patterns.

Any reasonably advanced piano player of course uses quite an array of differentiated motion patterns on the keyboard including the often vertical finger, wrist or lower arm motions. These generally provide only limited efficiency, unless they are integrated with, or executed under the umbrella of one of the two most important motion patterns, without which Chopin Etudes could not be successfully executed. Without being exclusive one could focus on the following:

- (i) the *Swing Motion Pattern*, a term indicating a lateral swinging motion of the whole arm.
- (ii) the *Rotational Pattern*, a term indicating rotary motion of the lower arm, very often also linked to and guided by the upper arm.

It is important to realize that these two patterns frequently seem to *flow into each other like clouds*, one dominating over the other depending on the momentary figurative constellation. This is particularly obvious in some of the more complex Chopin Etudes like for example **op.25** #11 or **op.10** #12. (By way of definition it should be noted that the term *Swingstroke*, as used by pedagogues like Abbey Whiteside and others, would

only partially be identical with the meaning of the above mentioned comprehensive Swing Motion Pattern).

The kinaesthetic source of fast localized vibrations strokes as seen for instance in the left hand accompaniment figures in Schubert's Song *Der Erlkönig* is only seemingly located in the wrist and thus not a category by itself comparable to the two basic motion patterns mentioned. If it should be categorized at all (f.i. as *wrist actions* or *vibration* one should be aware that this type of action cannot function efficiently without being based on minute rotary motions and supported by relevant adjustments in the position of the upper arm.

In the following these basic motion patterns are discussed in detail, supported by relevant graphics and filmed examples, with the movie codes:

- A1/A2
- B1
- C1/C2
- D1/D2
- E1/E2
- F1/F2

First, a characteristic passage occurring in the Etude **op.25** #5 (mm.42-44) was chosen as a prototype for a basic swing motion pattern. It encompasses an extreme range of a natural bridging motion across a wide space of the keyboard. This allows for a clear visual demonstration:



Example 2.1: Op.25 #5, mm.42-44

The most important active instigator of such lateral motions is the upper arm via the elbow joint. This type of physical action should be the basis of all similar motions, whether large or small. The chosen example provides a very clear picture of this motion. (see movie A1 and A2 1.1). As mentioned before, the arms must be seen as an extension



Diagram 2.1: Arm and hand motion for Op.25 #5, mm.42-44 – see Example 2.1

of our breathing system. The preparation for any action is closely related to inhaling (increase of tension); the action itself represents the process of exhaling (relaxation). As an experiment one could vigorously (forte) or gently (piano) strike down onto a table top with a flattened hand. The lifting of the upper arm followed by the hand is linked to breathing in, the striking down (that is moving down the arm followed by the hand) is the process of exhaling. The whole action ends in total relaxation of the now deactivated muscles. The above discussed example from the Chopin Etudes follows the same pattern. As seen in the filmed demonstration, the upswing of the arm should be commensurate with and initiated by the inhaling, the downward motion being simultaneous with the exhaling. It might be quite helpful to specifically explore this when practising. For some it might be even revealing!

The arm should always move first ahead of the hand (in this case upwards away from the body) in the direction of the new position. The hand follows a line seemingly circumscribing a portion of a horizontally placed number eighth figure. While the hand is moving up and down along this imagined line in preparation for the stroke, the arm is already returning to its original position downwards close to the body. An attempt is made to approximately illustrate this particular motion from point  $\mathbf{A}$  (chord) to  $\mathbf{B}$  (single note) for the right hand (see Example 2.1: and Diagram 2.1). The lower curve of the diagram represents the arm (elbow) motion, the upper line the hand motion, which begins at the imagined **point x**, while the arm begins to return to its original position at the imagined **point y**. The human arm is designed in such a wonderful way that this complex double motion is part of our built-in movability and thus perfectly natural.

#### Movie 2.1: B

On a much smaller scale than demonstrated above, lateral motions of the hand, although basically following the motion pattern described, incorporate also some form of rotary motions. However, these are not originating from a fixed elbow joint. The reason of course is the juxtaposition of *round* hand with the *straight* keyboard. To carry owls to Athens: Since the keyboard does not change, the hand position has to be adjusted accordingly. The premise of course is a natural hand position as described above. Although seemingly *minimalistic*, it might be helpful to become physically aware of the possibility and necessity of extremely small adjustments of hand positions on the keyboard. Thus a simple alternating motion between the thumb and the fifth finger in a five-finger position is chosen as a kind of *prototype*. It should be executed in such a *swinging rotary motion*. The tip of the third finger could be seen as a kind of imagined fulcrum around which the hand swings in a rotary motion guided by the arm.

As seen graphically depicted in Diagram 2.2 the third finger of the right hand holds down the note **A** close in a comfortable position (3) in front of the black keys. Playing the note **F** (position a) the thumb glides off the key out/down to position b while the fifth finger is moving from position b' towards the striking position above the note **C** (position a'). In playing **C** in reversal of the motion the fifth finger also glides out/down, but not as much. The distance between a and b is much larger than between a' and b'. This simplified motion of course is to be modified with respect to any thinkable hand position, in particular incorporating black keys; see movie B 2.1 for left hand.



Diagram 2.2: Right hand pivoting around the 3rd finger (held down)

Movie 2.3: Movie D1/D2

Movie 2.4: (E1/E2)

As an additional example one could envisage an octave span  $(\mathbf{E}-\mathbf{E})$  with the second finger held down on a black key  $(\mathbf{A}b)$ . The basic motion stays the same. (See Movie 2.2 for movies C1 and C2).

It could be argued that by pulling the fingers into a straight alignment with the keys the swing-stroke pattern could be avoided and replaced by a mere finger stroke emanating from a fixed wrist, or lower arm rotation from the thumb to the fifth finger, or – for that matter – between any digits of the hand, emanating from a fixed elbow joint. This might be valid for extremely fast rotation strokes as seen in narrow spaced tremolos or trills, although it is sad to hear, how the latter frequently sound like machine gun fire rather than pulsating vibrations, as expected in the chain of trills of the slow movement of Beethoven's Emperor Concerto.

Nevertheless, the general observation is that the natural feeling for a continuous rhythmical flow of energy originating in the whole body and shaping a corresponding sequence of tones should never be inhibited. This of course rests very much on a fundamental understanding of piano technique as such. The ideas presented here are based on the principle of putting the fulcrum of any action as far back as possible towards larger units of the body.

If we now consider traditional pianistic figurations like broken chords or arpeggios, so abundant in the piano literature, it becomes clear that the basic motion pattern discussed above is an integral part of the technical side of the pianistic repertoire. Thus reference is made below to the broken chord figuration before dealing with the Etudes as such. An expanded pattern of that basic motion would be broken chord figurations as seen in the Examples 2.2A and 2.2B. The thumb in the upward direction and the fifth finger in the downward direction leave their respective keys after the stroke, while an imagined point on the wrist moves in elliptical curves. The continuous adjustment of the position of the hand is definitely guided by the upper arm. In a sideways upward (downward) moving broken chord the right hand sinks down into the thumb (5th finger) position, continues the sideways motion via the successive support of the inner fingers with a lower wrist and lifts itself towards the 5th finger (thumb). In this position of a four or five note broken chord figuration, the 5th finger (or thumb) acts as a pivot for the hand to return to the beginning of the next figuration. For the left hand the parameters change accordingly. (See Movie 2.3 for movie D1/D2 and Movie 2.4 for movies E1/E2 and Examples 2.2).



(B) Right hand, diminished c-minor, 5-note form, up and down.

Example 2.2: Example

The graphic depiction seen in Diagram 2.3 shows in detail a three-dimensional motion best understood when envisaging the relative positions of an imagined point on the wrist, which seems to glide in the depicted upward motion in a slightly concave bowl. In addition to the lateral motions one can perceive the directions down/out and up/in. All are actions integrated into one pattern. The imagined point on the wrist then seems to move in elliptical circles approximately in a plane angled 45 degrees towards the keyboard.

In figurations fitting within the span of the hand the Rotation-Pattern is seemingly activated via the lower arm, although a slight swing of the elbow indicates the active involvement of, and guidance by, the upper arm. The expansion from the five-finger position to an octave position as discussed above results in an increase of the basic swing motion. This expansion is best demonstrated by an intervallic pattern, played portato, beginning with a minor second and increasing step by step up to two octaves see Diagram 2.4. The compass of the motion is getting successively larger. The axle of a rotary motion of course shifts within the hand depending on which fingers are used. Generally speaking, its location is quite different in a rotation pattern executed by the fingers 3-5 as compared with a pattern executed by the thumb-2 finger. The most natural rotation of course occurs between the thumb and the 5th finger. However, bridging larger distances requires more



Diagram 2.3: Graphic depiction of Example 2.2A swing motion pattern upwards.

and more assistance of the upper arm for the rotation. It is as if the rotation pattern *opens* up and transforms itself increasingly into a swing motion pattern. The larger the span the more obvious is the fact that the motion of an imagined point on the wrist would be similar to a figure of the number 8 lying on its side within a plane slanted about 45 degrees towards the edge of the keyboard.

Again it would be possible to execute these motions from a fixed elbow joint creating an ever increasing *rainbow* curve. Whenever *touching ground* the motion inevitably has to come to a stop and must be initiated again for the next move. A natural pulsating rhythm as guaranteed by the swing stroke pattern would then be out of the question. Such an approach would be a clear example for the mentioned *discontinuity* of motions. It is obvious that with any increase in speed the size of the swing motion will become correspondingly smaller. Nevertheless, the basic motion, however minuscule, always exists as a natural ingredient of the functioning of the arms on the piano when *manipulating* the keyboard. See Figure 2.5 for movie F1. Movie 2.5: Movie F1

Movie 2.6: Movie F2



Diagram 2.4: Expansion from a minor second to a two-octave span

# Chapter 3

## Discussion of Specific Motion Patterns within a Framework of nine Categories encompassing all Etudes

One could try to roughly categorize the motion patterns as found in the Chopin etudes, although this might be considered being too theoretical or even artificial. But it might be helpful as a rough guideline, since many etudes incorporate more than one particular figuration. By drawing attention to characteristic motion patterns that might recur in a multitude of modifications, it might be possible to better elucidate Chopin's view on the technique of piano playing in general.

Cat.	Motions	Etudes
Ι	Small scale finger motions.	op.25 #2; op.10 #2
II	Simple three-dimensional	op.25 #4; op.10 #7; op.10 #3 (centre part)
	swing stroke motions	
III	Limited horizontal rotational	op.10 #5; op.10 #10; op.10 #9; op.25 #1
	arm motions	
IV	Rotational and extended horizontal	op.25 #12; op.10 #1
	arm motions	
V	Rotational and wide horizontal	op.25 #3; op.10 #11; op.25 #5; op.25 #9
	arm motions	
VI	Various types of integrated expansive	op.10 #4; op.10 #8; op.10 #12; op.25 #11
	motion patterns	
VII	Voicing and sound balance	op.10 #6; op.25 #7; op.10 #3; op.posth. #3
VIII	Special technical figurations	op.25 #6; op.25 #8; op.25 #10
IX	Special rhythmical problems	op.posth. #1; op.posth.#2

Thus the categorizations shown in Table 3.1 might be possible.

 Table 3.1:
 Possible Categories of Motions

The motions and example etudes are listed in Table 3.1. From the pedagogical point of view, it would be advantageous to begin studying the etudes by concentrating in the beginning on relative simple motion patterns, thus delineating step by step a path towards increasing complexity of subsequent etudes, in which very often more than one basic pattern can be distinguished. Frequently new compound patterns then evolve and their relationship to what could be called the basic motion patterns can be discovered and defined. Such an order, although numerically not complete, can be envisaged focusing one's study on the basic movement patterns found in each etude as demonstrated in the filmed examples.

Movie	Parts	Etudes	Comment
1	a/b	op.25 $\#5$	
2	a/b/c	op.10 $\#7$	
3	a/b/c	op.25 $\#4$	
4	a/b	op.10 #9	
5	a/b/c	op.25 $\#3$	
6	a	op.10 #3	(middle section)
7	a	op.10 #10	(l. hd. pattern)
8	a/b	op.10 $\#11$	
9	a/b	op.25 $\#1$	
10	a/b	op.25 $\#1$	(extended motion)
11	a/b/c	op.25 $\#12$	
12	a/b/c	op.10 #1	(r. hd. pattern)
13	a/b/c	op.25 $\#11$	(basic pattern)
14	a/b	op.10 $\#5$	
15	a/b	op.10 $\#5$	(extended rotation)
16	a-e	op.10 $\#10$	
17	a/b	op.25 #9	
18	a/b/c	op.25 $\#5$	(middle section)
19	a/b/c	op.10 #8	(basic pattern)
20	a-d	op.25 $\#2$	(upward motion)
21	a/b/c	op.25 $\#11$	(extended pattern)
22	a/b/c	op.10 $\#2$	(basic pattern)
23	a/b	op.25 $\#6$	(special fingering)
24	a/b	op.25 $\#8$	
25	a/b	op.10 $\#10$	
26	a	op.25 $\#7$	
27	a/b	op.10 #6	(right hand)
28	a/b	op.10 #6	$\hat{\mathbf{E}}$ (left hand)
29	a/b/c	op.10 $\#2$	(downward pattern)
30	a/b/c	op.10 $#4$	
31	a-d	op.10 $#4$	(combined pattern)
32	a/b/c	op.10 $\#5$	(extended rotation)
33	a/b/c	op.10 $\#7$	
34	a/b	op.10 $\#8$	
35	a/b/c	op.10 $\#10$	(extended rotation)
36	a/b/c	op.10 $\#12$	(basic pattern)
37	a/b/c	op.10 $\#12$	(extended pattern)
38	a/b	op.10 $\#12$	(special pattern)
39	a/b	op.25 $\#6$	(rotation pattern
40	a/b	op.25 $\#11$	(l. hd. pattern)
41	a/b	op.25 $\#11$	(complex pattern)
42	a/b	op.25 $\#11$	(integrated rotation)

Table 3.2: Etude excerpts shown in the movies in various etudes.

Although an arbitrary decision is made to follow the scheme set out in *categories* table 3.1, a complete list of all the accessible movies is available in table 3.2. Subsequently various suggestions how to practice the various motion patterns in what is thought to be a most effective way are made. It is also attempted to trace a certain evolution of motion patterns within the increasing complexity of the textures found in various etudes.

### Category I : Small scale finger motions

### Op.25 #2 (1830)

Here the pedagogical idea is the cultivation of the flexibility of the right hand and wrist within small motion patterns combined with the cross-rhythms provided by the left hand figurations. This etude can be seen as a preparatory study for the more complex etudes **op.10 #8** and **op.25 #11**. A special fingering lending itself to a maximum of rounded motions has been suggested in Example 1.1B. The usually suggested fingering could conceivably lead to a mechanical *digitalization* and thus not subtle enough to create the impression of feather light motions, which Chopin might have envisaged.

Based on that particular fingering, the right hand – determined by its relevant positions above the white and black keys – should be moving in small three-dimensional rotary patterns guided by the upper arm. At the same time the fingers operate with elastic pulling strokes, originating within a slightly curved hand position. When practising, singular fast finger strokes in slow tempo are indicated at first. Enough time should be left between the strokes for complete relaxation.

For further practise the expansion method mentioned on page 7 could be applied. A group of three eighth-notes should be seen as the smallest unit to be successively expanded into groups of six and twelve eight-notes see Example 3.1. Each group should be practised in a brisk tempo with subtle guidance by the arm as one motion unit; see Movie #20 A.20.

Finally one should arrive at larger, musically meaningful units. The motion pattern of the left hand should also be established separately and then fused with the one of the right hand. The contrasting pulsation between two eighth-note triplets in the right hand and the one quarter-note triplet in the left should be clearly perceivable.

Chopin's pedal markings are quite specific here and always related to important base step progressions, which he obviously wanted to be emphasized. Accentuated bass notes, like for instance in **mm.16/17** are to be marked and held somewhat longer without pedal. However, general discretionary use of pedal is possible and is of course a matter of taste.

With only one short passage  $(\mathbf{mm.43/44})$  in *forte piano* constitutes the overriding dynamics. Even the climactic chromatic passage  $(\mathbf{m.62})$  in not indicated as *forte*. Therefore the essential musical character of this etude might be seen in the analogy of a wind blowing across a vast plain.

### Op.10 #2 (1836)

This etude comprises two didactic aims: The agile crossing of fingers and the relaxation of the hand after each interval adding up acoustically to a chord. To accomplish this is quite a challenge on our modern piano. The danger of muscle freezing, tensions, pains, even tendonitis is real, in particular when practising is forced or over extended.

First one has to figure out logical fingerings fitted to the individual hand. Then very slow practice is indicated to set the positioning of the sixteen-note interval under the legato line (Chopin indicates six times *sempre legato*!). The interval should as much as possible be played in the direction of the general motion of the hand in that particular place. Sole *verticality* should be avoided. It can be assumed that the left hand staccato eighth notes are equivalent in length to the right hand intervals.

Similar procedures discussed for **op.25** #2 can be applied here, like the cultivation of the pulling finger stroke and the creation of successively larger practice units. In this case the smallest meaningful unit would be a group of four sixteen-notes, preferably not beginning with the chord, but with an anacrusis towards the chord. Special attention is required to control the fine readjustment of the hand into a relaxed natural position each time after having played a chord. This requires an extremely flexible wrist, a physiological necessity in order to avoid the frequently experienced tightening of muscles in the hand and lower arm. The relaxation must be especially trained playing the mentioned four note anacrusis towards the chord in relatively fast tempo, stopping and relaxing immediately for 1-2 seconds after the chord. This procedure can then be subsequently applied to larger units; see Movie #22 A.22. In **mm.32-34** minute rotary motions between fingers 4-5 (or 3-5) should be incorporated in order to avoid fatigue. Otherwise the hand might *freeze* and the control of the sound is lost; see Movie #29 A.29.

## Category II: Simple three-dimensional swing stroke motions

#### Op.25 #4 (1832-1834)

This etude is most important for establishing basic swing strokes of the left hand, for bridging spaces in a physically most balanced way and practising continuous fast staccato figurations that require defined relaxation strategies. This particular motion pattern is present in many left hand accompaniment figures. Because of its intrinsic pedagogical value this etude should be allotted a priority when studying Chopin Etudes, since it deals with a fundamental principle of lateral motion on the keyboard:

# Never leap towards a key, but always jump away from it towards the next position which in itself becomes a jumping point for the following position.

This means that the finger(s) have to be positioned on or slightly above the key(s) before being the motion activated. Subsequently the hand, following a sideways motion

of the arm, will initiate the stroke of the finger(s) by leaping into the new position above the next note(s) to be played. In this etude the reverse process into the opposite direction follows immediately, thus creating a kind of swinging motion of the arm as if moving within a shallow bowl. The hand opens itself each time towards the direction of the motion (see 3.3).



Image 3.1: Four snapshots of the author's hand during one of the motion patterns.

Image-1 (A) shows the position of the left hand at the starting point before the stroke of the 5th finger. The elbow is tilted away from the body and the thumb is positioned in front of the keyboard. Image-2 shows the position of the left hand just after the fifth finger stroke. The elbow swings towards the body and the hand opens up in preparation for the playing of the double stop. Image-3 shows the moment of playing the double stop. The wrist is at its lowest position and the elbow is beginning to move away from the body. Finally, Image-4 the hand is about to reach its original with the fifth finger above the note to be played. The thumb has moved away from the keyboard; see Movie #3 A.3.

Initially the scope of the movement should be rather exaggerated in order to train the agility of the upper arm in an integrated fashion. With increasing tempo the basic motion of course becomes smaller and smaller. However, in principle it always should be the underlying power source. When integrating a series of units in the required tempo, the hand should be dancing with elasticity from point to point like a ballet dancer. In many Waltzes and Mazurkas of Chopin this type of motion control will come in handy.

It is recommended to first practise the left hand in slow tempo, but with fast staccato strokes from the keys combined with exaggerated fast horizontal arm motions. This procedure is an excellent training for the muscles of the shoulder and upper arm and should be incorporated in the usual daily practice routing. The right hand then can be added step by step.

The movements of the right hand, although not exactly the same, should be rhythmically coordinated with those of the left hand as far as the direction and speed of the jumping motions off the keys are concerned. Principally one right hand stroke corresponds to two left hand strokes per beat and thus should have its own pulse. This can be easily established by practicing the basic motion patten in **mm. 1-8**. In **mm.9-18** the right hand should angle its weight with an additional rotary motion energetically down into the keys towards the fingers shaping the melodic contour, whilst the double stop interval is seemingly plucked out of the keys. The right hand virtually executes two types of strokes simultaneously: The right side moves downwards into the keys, the left side with the thumb upwards from the keys. The mastery of this particular rotary technique should be seen as part of the practice goals reflected in this etude. It points to the importance of transparent sound production in chords in general. It is obvious that a strong finger legato including even finger substitution is necessary here.

In m.19 and similar passages like mm.21/31/33/34/55/60 the body has to lean into the right hand full legato chords as an obvious contrast to the bouncing staccato ostinato of the left hand. Mere muscular pressure should be avoided.

The modifications of phasing, articulation, and accentuation in the right hand should be practised separately, since they are essential for the musical content of this etude, which otherwise could easily result in a tedious tour de force.

Chopin's pedal indications are quite to the point, but sometimes enigmatic (e.g. m.34) or idiosyncratic (e.g. mm.19/22). However, the composer very often uses pedal to underline important harmonic progressions (e.g. mm.34-35 or mm.52-53 e.a.). This seems to be an important trademark of his use of the pedal; see Movie #3 A.3.

### Op.10 #7 (1832)

This is one of the most important Etudes concentrating specifically on the development of arm/hand/finger control within a very limited framework. It is also dangerous, when practised the wrong way. Tendonitis can easily develop. On our modern instrument with the general key weight of 50 grammes finger action alone will not suffice to master this technical challenge. However, if used the right way, it provides an important training ground leading to the more complex motion patterns in other Chopin Etudes. As a specific challenge fast intervallic position changes of the right hand between the inner fingers (2\*3 or 2\*4) and 1\*5 fingers are trained here.

In order to achieve a maximum of benefit, the practice process must be rather systematic and has to proceed step by step.

a) Light sinking in stroke guided by the arm experiencing the minimum downward pressure of each double stop. Tempo should be extremely slow. Begin with difficult passages (f.i. mm.48-51). Each interval should be initially played with a definite portato stroke down in a moderate tempo. When lifting the hand from the keyboard the elbow should be slightly moved sideways away from the body and up. The hand thereby is suspended in a relaxed position. Before the down-stroke the elbow moves again towards the body, simultaneously lifting the hand into a striking position from above. The down-stroke lets the hand sink into the keyboard supported by firm fingers, thus achieving extreme relaxation in the arm more or less simultaneously with the stroke. The logical fingering would be  $2^*3$  ( $2^*4$ ) for the smaller and  $1^*5$  for the larger intervals.

b) The exchange of thumb and second finger on the lower notes of the intervals demands an important lateral position change of the hand to be consciously attended to: clear adjustment of hand position with minimal guidance by the elbow should be achieved. When playing 2\*3 or 2\*4 the thumb should be somewhat down in front of the keyboard. The sideways angle of the hand changes considerably, when 1\*5 is plated, in particular when thumb is on a black key.

c) The next practice step should be a double motion for the finger position  $2^{*3}$  (2\*4)

from the keys in and up, putting the hand in a nearly vertical hanging position, followed by 1\*5 out and down, arriving at a very low wrist position. When practising, the motions for this exercise should be exaggerated, since shoulder and upper arm muscles are to be trained here. Practicing should be at a very slow tempo with fast single motions, leaving time for relaxation between each stroke. Staccato, forte.

d) Continue with the same pattern, but the two motion patterns integrated into one, forte and piano alternating.

e) Establish musically meaningful small units and practice in tempo. Many ways of groupings could be envisaged, also determined by the overall harmonic structure.

f) Finally one has to focus on the additional challenge of this etude which is to play, in the right hand, the upper voice legato and the lower detached. The projection of the energy into the contour note also requires a subtle rotary action of the hand, similar to the motion for the right hand as discussed in **op.25** #4. The basic double motion, however, stays more or less the same though on a smaller scale; see Movie #2 A.2.

g) Last but not least considerable attention has to be given to the musical essence of the left hand figuration, especially as to phrasing and articulation. Like many other etudes dealing with technical challenges in one hand, the other is often an important carrier of the musical idea.

### Op.10 #3 (1832) – Middle Section B - mm.30-53:

Consisting of a striking contrast between lyrical and virtuosic elements, this etude in ABAÕ form addresses two different didactic aspects. The lyrical parts A and  $A^1(\mathbf{mm.1-21} \text{ and } \mathbf{mm.54-77})$  actually belong to category VII Voicing and Sound Balance and will be discussed there. The middle section B (after a short transition) has its proper place in category II, since beginning in **mm.32** motion patterns resembling and expanding those encountered in **op.10** #7 do occur. These technically challenging figurations can be practiced in a similar fashion.

The upper and lower contour notes of the double stop passages need to be emphasize (**mm.38-42**). Otherwise, the transparency of the sound spectrum would suffer. Mere *fingerwork* is not satisfactory. On the contrary, a flexible wrist and the guidance by the upper arm are indispensable. It is interesting that Chopin suggests a fingering for the left hand non-congruent with the one for the right hand. Since fingering is anyhow a highly individual matter, changes could certainly be envisaged *without penalty*. Thoughtful use of the pedal is of course expected.

In mm.46-53 one is then confronted with the problem of larger intervals and wide spaces to be covered by corresponding motions. Assuming a fingering of 5\*2/1\*3 for the right hand and 2\*5/3\*1 for the left the following motion pattern evolves: After sinking into the keys for the first interval of the group of two, the hands move (rotate) sideways towards the body via the pivotal inner fingers, guided by arm movements via the elbow. Subsequently the fingers strike the second interval, while the hand is lifted up and positioned above the next interval to be player. For the second group the motions are in the opposite direction.

To practise according to the *expansion method* (see page 7) might be very helpful in order to master this passage in ever increasing practice units. One could even imagine an additive method by beginning with the last units and adding the previous ones, thus each time increasing the practice unit by arriving in already practised territory. In the process of integration, the hands of course should never come to any stop on the apex of the motion. The results will be a continuous, physically congruent, swinging motion for both arms, instigated by the shoulder muscles; see Movie #6 A.6.

## Category III: Limited horizontal rotational arm motions

### Op.10 #5 (1830)

The eminent pianist Geörgy Sander mentions in his valuable book On Piano Playing that our body is constructed such that, when playing the piano, only rotary motions can be considered natural and efficient. Within this context the purely vertical movement of the fingers has to be seen as unnatural and is a process isolated from the totality of the playing mechanism. Not withstanding some more expanded and complex figurations, this etude explores rotary motions of the right hand in a relatively restricted and simple way. However, we know that in the normal hand position at the keyboard the complimentary bones of the lower arm (radius and ulna) are already in their maximum flexed position. Therefore the extended rotation of the hand with the thumb as an imagined pivot can only work by positioning the arm slightly away from the body, since a further rotation of the lower arm only from the elbow joint is anatomically impossible. The larger the intervals the more supportive upper arm motions come into play. It seems that playing with relative flat, but active fingers is advantageous for fast rotations, since a sort of *fly-wheel effect* is supporting the rotary motion; see Movie #14 A.14.

The basic technical approach should be light, the naturally curved hands flexibly hovering over the keys and thereby supporting the finger strokes by very fast rotary motions, each time adjusting the position of the hand over the various intervals. To be *locked in* at the elbow should be avoided by all means. The upper arm still guides all the motions, as small as they might be.

In order to accommodate the more extended hand positions, the expansion and contraction of the hand should be conscientiously practised, in particular in the measures **mm.21-26** and **mm.45-48**. A flexible wrist is an absolute necessity. Although Chopin's fingering is logical, some modifications for larger hands are thinkable, sometimes using the 4th instead of the 5th finger for certain octave spans; see Movie #15 A.15.

Chopin's differentiated pedal indication again show intelligence and didactic aim, although some modifications might be in order. For example, it would be helpful in a number of places, to support the legato slurs in the left hand with pedal, although Chopin did not indicate this as such. On the other hand, some pedal markings might sound too sumptuous on our modern instrument and could be modified (f.i. mm.45/46). Binding pedal can also be tastefully applied (f.i. mm.17/18; mm.21/22; mm.69/70; mm.73/74). Generally one should always keep in mind that the bass (often noted staccato with pedal) must have sonority and length, necessary for the particular *Chopinesque Flavour*.

In the *sempre legatissimo* mm.33-36 and 37-40 the motions specifically dealt with in op.25 #12 or op.10 #1 would be applicable. Since four measures are noted under one pedal the *legatissimo* of course is a character indicator. The passage should sound legatissimo, which is best achieved by playing with a flatter finger position very close to the keys. This touch is also very commendable in m.65.

The octave passage at the end is best *attacked* with vibration strokes from the wrist. This technical approach covering fast repetitive actions of the whole hand is more or less the only one which cannot be applied without a certain stiffness of muscles in the upper arm. This is particularly true when playing forte or fortissimo. However, by continuously changing the angle of the lower arm up and down towards the keyboard varied resources of muscle power come into play. Such passages in the piano literature like for instance the left hand octaves in the piano part of the song *Erlkönig* by Schubert or in the Polonaise op.53 by Chopin always constitute a technical challenge with respect to stamina.

For this particular octave passage it certainly would be advantageous to practice with the *expansion method* mentioned on page 7. For instance, one could expand the unit of the last two notes by adding successively more of the previous notes, creating ever increasing units each time played in tempo with one encompassing swing motion. The ideal solution would be the hands bouncing from key to key like a flat pebble thrown across the surface of a still lake. The fortissimo indication of course does not indicate that all notes should be played as loud as possible. The sum of all attacks per time unit should give the impression of a fortissimo. By playing this passage with additional dynamic flexibility one easily can avoid a noisy clatter of notes. It would be a shame to end this elegant etude with a sound resembling a crate of beer bottles rattling down a stairwell.

### Op.10 #10 (1829)

This complex Etude cultivates rotation strokes for the right hand. A basic cross rhythm in 12/8 - in right hand six and the left hand 4 pulses - permeates the various imaginative articulation patterns.

The rotary motions for the right hand are basically the same as in **op.10** #5. However, they are more complex because of the necessary touch control of the second finger in defining the sixth interval, which should be enunciated clearly all the time. Furthermore, the eight varied articulation patterns in the right hand envisaged by the composer require special attention under the *umbrella* of the inherent rotary movement patterns.

As a preliminary exercise it is recommended to first practise the basic rotation with octaves (1\*5) and thirds (1\*2) before amalgamating these motions into the total pattern. Then one could proceed according to the following way:

- 1. **mm.1-4**: the strongly accentuated 6ths are to be played with a rotary down stroke, the thumb note strongly connected by the indicated legato. Establish a definite cross rhythm with a clearly differentiated left hand figuration.
- 2. mm.5-8 change of accentuation, congruent with the 12/8 pulse.
- 3. mm.9-12: this pattern requires the right hand thumb played and held down, the
6th lifted out of the keys. The left hand is to be played in a non differentiated continuously swinging legatissimo.

- 4. **mm.13-16** 1/2: equal strokes for thumb and 6th in staccato. Flexible wrist action with minute hand position adjustments sideways.â
- 5. mm.17-20: 6th accentuated, but legatissimo in a kind of pedal haze.
- mm.21-281/2: like 3), but no quarter notes. The 6th to be lightly lifted out of the keys. Character change: *sotto voce*. This can be achieved by playing generally with flatter fingers.
- 7. **mm.29-32**: both hands have neutral figuration without any articulation or specific dynamics, possibly to be played in a light non legato touch.
- 8. **mm.33-42**: Varied interesting dynamic indications plus some *odd* accents must be tastefully attended to; see Movie #25 A.25.

In mm.43-48 the spatial expansion is not all that difficult to master, if a flexible arm guides the hand into the various positions. It has to be carefully choreographed, until the principle of the movement pattern is resting safely in the subconscious. This passage is best mastered with up and down motions according to possible subdivisions graphically indicated in mm 45/46 see Example 3.4.

The figurations of **mm.45-48** can be practised by grouping six eighth notes in one unit, beginning with the last 6th of **m.44**, thus having always an up-beat feeling. After having established all the positions safely, the 6-stroke groups should be amalgamated according to the *expansion method*. An additional option would be the one indicated in **m.46**, where groupings of two, three strokes and one stroke alternate. The special motion for the jumps in the left hand is best coordinated with the pattern depicted in **m.45** for the right hand.

Again the continuous change of position of the right hand should never be executed with a stiff octave position. The motions incorporating the expansions and contractions of the hand must be engrained in the subconscious, thus becoming more or less automatic. An additional possibility of practising could be to break the figuration into three-note patterns similar to those suggested for **op.25** #12. In any case, the injection of the strong power necessary for the required crescendo is only possible via a very flexible wrist. After the *internalization* of the movement pattern has been accomplished, the immediate switch to the fast tempo via the *expansion method* covering increasingly larger units should be made.

In the eight beginning measures of the etude the left hand has its own swing motion pattern. The staccato notes should be distinctly marked by jumping off the keys, while notes with longer duration must be played with a motion sinking down into the keys. The value of the half notes cannot always be taken literally. They should be held as long as feasible within the given context. The swing motion of course should be continuous, supported by the tied down middle finger; see Movie #35a A.35.

Aside from the various details it seems that the didactic aim of this etude is to provide enough material to train the integration of the non-congruent motion patterns of both hands. The pedal indications definitely reveal the composer's intention to have the staccato bass note ring through (as suggested in the first measure). For articulation and pedal the

composer often restricts himself to an initial indication, from which the intelligent player has to extrapolate how he would handle a possible continuation. The left hand has to be extremely flexible to delineate the various note durations properly in order to create an unimpeded easy flow of the accompaniment.

#### Op.10 #9 (1829)

This is one of the most relevant etudes for the left hand ever written. It provides a basic training ground for pianist to develop and master smooth lateral swing stroke motions. Compared with **op.10 #12** and **op.25 #4**, it is probably the most concentrated etude by Chopin specifically designed for the lateral motions of the left hand. Its challenge lies in a seamless coordination of rotation and sideways motions of the arm on a quite extended scale. The arm and hand should move like an integrated double-pendulum, swinging between the fifth finger and the thumb encompassing constantly changing distances, somewhat similar to those found in both hands in **op.25 #1**. The envisaged *legatissimo* is of course a general indication of character, since it could not be accomplished by a mere finger legato. However, it should sound like legatissimo! The idea is of course, to bridge the wide spans by gliding with rather flat fingers in sideways motions *over and along* the keys with pedal as indicated by the composer; see Movie #4 A.4

The simplified version of the motion pattern appearing in  $\mathbf{mm.27/28}$  should be intensely practised before dealing with the various versions of the basic half-bar patterns. The concept for a basic unit of two strokes should always be: Move *from* the contour finger (5th or thumb) *towards* the middle finger (Similar to **op.25** #**4**). This would be the smallest and most important unit to be practised and successively integrated, using the *expansion method*. For a six-note group a modification of Chopin's indicated fingering could be modified to 5\*3\*1\*4\*1\*3\*5, similar to the one in **m.18**.

Under m.14 (see example 3.5) the attempt is made to graphically depict the motions. The continuous ascending or descending lines, covering sixteenth notes each, indicate the larger swinging motions of the hand around the third finger towards the thumb or fifth finger, two or four while the dotted lines depict the smaller swinging motions between the thumb and fourth finger. The right hand portato notes should be played with larger arm motions sinking down into the keys with supportive fingers. The wrist should be in a state of firm elasticity. The result would be an expansive sound, a pleasant contrast to the murmuring left hand motion.

#### Op.25 #1 (1836)

This valuable *Harp-Etude* aims at the mastery of subtle sound control. It is quite a challenge on our modern piano to do justice to the traditional expectation that it should sound airy like an *Aeolian Harp*, a characterization Robert Schumann made with respect to this composition. The differentiated notation Chopin uses clearly reveals his intention, that the smaller notes should be played as *airy* as possible.

This etude provides ample opportunity to cultivate localized swing strokes from contour note to contour note. The basic motion pattern is swinging with congruent guiding down/up arm motions *from* the melody/bass note (5th fingers) *towards* the thumb position

and *from* the thumb position back *towards* the contour notes. The middle fingers should glide with ease past their positions with feather-light pulling strokes, thus realizing the composer's intentions. To achieve the necessary lightness of the thumb strokes, it is recommended to use indirect touch by gliding out from the key instead of simply striking the note from above.

The subtle change in direction within the six-note figure in the right hand requires a slight modification of the general motion pattern, which is otherwise *straight forward* in the left hand. This is really an extension of the basic motion pattern as seen in **op.25** #4 (see Example 3.3). The swing motion pattern now incorporates 3+3 sixteenth notes instead of 1+1 eight notes.

It is essential to have a firm hold-on grip on the fifth finger in both hands. In general it is recommended to set the basic motion for a number of different positions in slow tempo, then using the *expansion method* more or less in tempo. One should also practice right away with pedal in order to establish the envisioned transparent sound; see Movie #9 A.9

Special attention of course has to be given to the wide spaced melodic intervals, always moving the arm first towards the extended position, followed by the hand, the stroke being then instigated by an already returning arm in a downward motion *from* the key (e.g.  $\mathbf{mm.34/39}$ ); see Movie #10 A.10

Once larger units are established, the combination of phrasing, dynamic swells and pedal should be explored in two-bar units (or one bar units e.g. **mm.21-24**). Chopin's pedal markings should certainly be modified for our modern piano. Slow pedal changes and half pedal are to be used. However, it is paramount that very soon one should establish a strong image of the sound one wants to hear. Thus the smaller notes should nearly always be player pp. This Etude needs a strong interpretive imagination from the very beginning. A flexible physical motion is usually creating the right sound in this particular context.

It is interesting to note that the discovery of a basic motion pattern can be obfuscated by the presence of many (for that particular motion) *unessential* notes. When practising, it might be in some cases advantageous to incorporate these notes only at a later stage. This can be successfully applied here. A basic exercise could be to play only the contour notes in a freely from key to key swinging arm motion, in a fashion similar to **op.25** #4. Special care should be taken however, that during the sideways motion of the arm away from the body, the thumb glides off the key and the hand opens in the direction of the motion, preparing for the downward stroke on the next contour note. The same gliding off the key should happen for the fifth finger when the arm returns towards the body, albeit to a much lesser extent. When practising it might be helpful to expand these motions far beyond their normal range in order to establish the right kinaesthetic perception, which should thus become a part of the subconscious guidance system.

Again one could imagine or even feel the hand tracing the form of a horizontal number 8 approximately situated in a plane tilted 45 degrees towards the keyboard. This would be a perfect perception of the three-dimensional space so indispensable for the attainment of a superior technical mastery at the keyboard. The technical problems encountered when covering wide stretches at the keyboard can frequently be overcome by taking advantage of the total available space, which is never two-dimensional! Annoying *misses* will then usually disappear. At any rate, it is important to be conscious of the essential motion

pattern before one begins practising.

In Example 3.6 a rather primitive attempt is made to graphically insinuate the threedimensional motions of that imaginary point on the wrist for the right hand.

In addition the following sequence of six pictures covering the first six-note motion pattern of this etude can be seen in Image 3.2.



Image 3.2: The hand positions for the first 6-note pattern can be seen in these images.

Initially, the 5th finger is positioned to begin the motion and the thumbs hang free -Image (A). Image (B) depicts the elbow moving towards the body. The 3rd finger position and thumbs move up towards their positions on the keyboard. When the desired position is reached – Image (C) – the thumbs are reaching the keys and the elbows are closest to the body. In Image (D) the elbow begins to move away from the body and the hands open up towards the inner finger positions. Image (E) depicts passing the inner fingers towards the 5th finger position. Finally, at the end of the 6-note figuration, the 5th are already positioned for the next sequence – Image (F).

# Category IV: Rotational and extended arm motions.

### Op.25 #12 (1836)

This etude provides a focused practice terrain for physically non-congruent broken chords in both hands – an ideal Etude for cultivating basic swing stroke patterns. It also presents a wonderful opportunity to train the expansion and contraction of the hand. Invaluable for both hands, it can also be seen as a preparatory exercise for **op.10** #1 for the right hand. We find the most basic swing stroke pattern, which is best executed by a round down-up stroke with an upper arm guidance via the elbow. Within the here established general categories **op.25** #12 would be indispensable as a logical didactic approach to Chopin Etudes in general. It could be seen as the third important Etude to be worked on after **op.10** #7 and **op.25** #4, subsequently to be followed by **op.25** #1 and **op.10** #9.

The practising should therefore concentrate on the essence of that particular motion pattern, guided by a sideways motion of the arm, which in this case also includes a considerable portion of rotary motion of the hand. It is recommended that one measure of arpeggiated figures be divided into three broken chords upwards and three downwards (see Example 3.7.)

For a detailed study the following steps could be taken, first for each hand, then together:

- (a) Practice in one fast swing stroke each three note broken chord with sufficient relaxation time in between, up to the top note.
- (b) Do the same from the top note down to the bottom note.

These units are to be practised one after another with articulate finger strokes in fast speed, but slow tempo allowing for enough relaxation time in between each action.

An additional version could be to hold on to the fifth finger (or thumb) on the top note, while contracting the hand, bringing the thumb (fifth finger) close to its next position. This exchange of course is possible only through a continuous expansion and contraction of a most flexible hand, however, it might be advisable first to *physically* imagine and explore the important exchange of thumb and fifth finger on one key before speeding up the integration process; see Movie #11a A.11

- (c) Use the *expansion method* (see page 7) to combine more than one unit to be played in one sweep.
- (d) Amalgamate the ascending chain of broken chords into one major sweep from the bottom to the top; see Movie #11b A.11
- (e) Do the same with the descending pattern.
- (f) Practice the five top contour notes in one sweep (double swing stroke).
- (g) Integrate c), d), and e) in one big swing motion see Movie #11c A.11

In order to fully absorb the essential movement patterns exaggerated motions should be used when practising. These of course become smaller in a fast tempo. However, the use of extended motions not only trains the flexibility of the hand, but also largely influences the quality of the sound. Executing these figurations with a stiff octave position of the hand would only result in a noisy, rattling sound.

The top accents should be balanced against those at the bottom, which are usually played too loud, sounding too bulky. Although one pedal is indicated per measure, a half

pedal change on the top accent might provide more clarity for the descending passages. As mentioned before, on a Pleyel or Erard piano of Chopin's time, the clarity and transparency of such virtuosic passages are *quasi built-in*, while on our modern instrument special care has to be taken in that respect.

The inner melody notes in mm.7/8, 16-20, 24-28, etc. need to be emphasized. In spite of Chopin's accents in mm.45/46 the harmonic notes b, c, c-sharp and should also be prominent. Perhaps one could even consider allotting the accents to these important harmonic steps.

This etude could also be seen as a preliminary study for arpeggio practice, which requires similar contractions and expansions of the hands in order to arrive at a smooth flawless rendition. To practice single additive note progressions with increasing speed must be seen as an unsatisfactory effort, often counteracting the free mobility so necessary to cover larger spaces across the whole keyboard. Such an approach might even, if only inadvertently, engrain conditions hindering the development of flexible swing motions.

#### Op.10 #1 (1830)

If the basic motion pattern as discussed in **op.25** #12 has not been absorbed yet, this etude should be studied in the same systematic way for the right hand only. First one has to set the basic motion pattern up (down) for the fundamental four sixteenth-not group: Thumb (5th finger) down, hand tilted open, when playing second finger, move thumb away from keyboard, avoid undue stretching, up on 5th finger (thumb), then contract hand for new positioning; see Movie #12a A.12 Two, three, and four units can then be combined and practised, and subsequently integrated into encompassing up and down motions; see Movie #12b A.12 Always move upwards *from* the thumb and downwards *from* the 5th finger, never towards a contour position. Again, it is important that all motions are guided by the upper arm via the elbow; see Movie #12c A.12

Because of the span of a tenth the temptation exists to unduly extend the hand, trying to cover the wide span, instead of using lateral motions of the arm to put the fingers into the most favourable positions for playing. The natural contraction and expansion of the hand as discussed in the etude **op.25** #12 3.4, must be cultivated here also. Unnecessary tensions should be avoided at all cost, in order to avoid painful stiffness and possible injuries. It is important to establish definite relaxation points that are an indispensable part of the practice procedure.

For smaller, but flexible hands one could imagine some change of fingerings for at least two passages:  $\mathbf{m.34}$ : 5\*2\*1\*3\*5...;  $\mathbf{m.35}$ : A taken by the left hand, then 1\*2\*3\*2\*1...;  $\mathbf{m.36}$ : 4\*2\*1\*2\*4...;  $\mathbf{m.47}$ : 2\*1\*2\*5\*2...;  $\mathbf{m.48}$ : 5\*2\*1\*3\*5. (see Examples 3.8 A and B.)

With only one diminuendo ( $\mathbf{m.36}$ ) it is clear that forte is the dominating dynamic. However, a forte is not a fortissimo, and the latter is usually the basis of most performances. How often are the octaves in the left hand used to create a kind of thunder comparable to the sound of the biggest and loudest church bells, instead of representing a Chopinesque noblesse vigoureuse? One should boldly use a maximum of dynamic flexibility here. The ups and downs of the right hand figuration present enough possibilities for that.

### Category V:Rotational and wide horizontal arm motions

#### Op.25 #3 (1836)

In this etude we can explore for both hands physically congruent swing stroke motions with various modifications. The general concept is similar to the one found in **op.25** #1 3.3

The singular focus on one basic motion pattern provides an important opportunity to focus on bridging space with easily floating arm movements. The lateral motions of the arms towards the fifth finger and back to the starting point of the next figure are trained in contrary motion, but are anatomically parallel. The mode of practising is relatively simple.

In the beginning the hand should sink into the keys, then move across a supporting middle finger (either the second or the third) upwards and inwards, while the arm (elbow) at the same time moves away from the body. If the thumb is allowed to glide off its key down and out, the hand will open automatically towards the fifth finger in the direction of the motion. The stroke of the fifth finger should be a feather-like leap from its key upwards, initiating the circular motion of the hand back towards its original position, guided by the arm; see Movie #5 A.5. Stretching the hand excessively is to be avoided (compare the comments to the etude **op.10** #11) 3.5.

Some suggestions for practising:

- A) **mm.1-8** the tied down second finger in the right hand creates a double stop which should be audible when the pedal is lifted as indicated.
- B) **mm.9-16** shows the ornamented version of A) and requires similar attention for the 8th-notes within the 32nd-note figurations. That particular numerically wrong notation indicates of course the appearance of a double stop for a split second. Although no pedal is indicated, some might be added here and there (e.g. **m.16**).
- C) mm.29-36 accentuated version of A) requiring energetic strokes off the right hand 5th finger upwards from its key.
- D) mm.49-56 present strongly accentuated contour lines (forte, sfz). This is a very powerful transformation of the original A) version. It is recommended to mark the sfz-notes with a direct pedal. In order to produce a sound commensurate with the meaning of the sfz signs, the hand and fifth finger should energetically *snap off the key*. The fact, that in the mm.49-56 Chopin eliminated the dotted eight-note, previously permeating the piece, shows his sensitive awareness of the difference between the *leggiero* in the beginning and this with more energy loaded portion of the piece. He knew that the additional freedom of the motion allowed, by not having a middle finger *pinned down*, would be conducive to the projection of the energetic forte sound expected in this section.

Since the D-version of the basic motion pattern could be seen as a core figuration for this type of motion, it should be practised first. To set the motion, one might even break down the units into various components, like first playing the broken octave in the right hand, then adding to this the interval and finally playing the whole figure, also in rhythmical patterns. In the end all subsequent figures could be played in tempo separated by substantial *relaxation* pauses, through which the repositioning of the hand takes place in a slower motion.

The left hand motion has to expand extensively in **mm.60-63**. Finger legato is not possible. After gliding the thumb off the key, lift off the second finger, *fly* towards the bass note, which should be played already within the return motion. Extreme arm movements are necessary here in order to avoid *hacking* and maintain fluidity.

The *leggiero* as well as detailed pedal indications reveal Chopin's intention to have this etude generally played in a delicate and gentle way.

#### Op.10 #11 (1829)

The particular motion dealt with in this etude can be considered an expanded version of the upward moving three-note unit discussed in **op.25** #12. This time the arm motions are trained physiologically in a non-congruent fashion. (In this context let us remind ourselves that a two hand parallel scale is anatomically to be seen as a non-congruent, a scale in contrary motion as a congruent motion pattern). Both wrists will be in a relatively low position in the beginning of each figure and then move upwards and inwards guided by lateral swing motions of the arms. The hands are moving in a quasi-concave saucer towards the fifth finger (thumb). The right hand thumb (left hand fifth finger) glides off its respective key whilst the middle fingers act with definite finger pull motions, when the hand, guided by the upper arm via the elbow, passes across the figure; see Movie #8 A.8 It is essential that the circular motions of the arm are uninterrupted and continuous.

The fingers could even be more or less flat depending on each figuration. Forced stretching of the hand tightens the muscles and is detrimental to an elegant rendition of this precious musical jewel, the general dynamics of which is piano or even pianissimo with corresponding dolcissimos. The legato of course is defined by a hopefully intelligent use of the pedal. Chopin's pedal indications often seem to encompass specific groupings of sound patterns and should be followed as much as possible. It goes without saying that in passages without pedal indications every chord should be peddled accordingly. However, Chopin's pedal markings are somewhat enigmatic and incomplete (e.g. **mm.20-24**). Also, they often are too generous for our modern instrument. With an intelligent use of half pedal, the transparency obviously desired by the composer can be achieved quite well. He sometimes intends the main harmony (frequently marked with fzp) on the first beat of a measure to be of importance, while the rest of the bar is more colour and linear motion (e.g. **mm.1/2**). The staccato on first beats of course indicate an elastic, and sometimes energetic, lifting of the hand from the keys.

The melodic contour nevertheless has to be clearly shaped by the 5th finger of the right hand, to be perceived as legato as possible. In order to physically feel the required legato of the melodic line, it is suggested that the linear top contour notes be held as long as possible. The differentiated phrasing sometimes indicates upbeat structures (e.g. mm.17-21), sometimes not (e.g. mm.1-6). Anyway, it should be meticulously adhered to, since it is an important part of the musical expression.

The final jumps at the end (similar to those found in **op.25** #5 can safely be executed

by moving first the arm (elbow) in the direction towards the top note, followed by the hand, which strikes with a finger of choice in a round motion from above (see Example 2.1 and Diagram 2.1).

#### Op.25 #5 (1832-1834)

This etude, in ABA' form, is cultivating right hand flexibility with bouncing down/up strokes in various patterns, focusing on turning motions between the 2nd finger and thumb, and in the middle section, continuous alternation between single fingers and intervals.

The main section consists of a motion from above via the interval down towards the thumb and the subsequent lifting of the arm in order to initiate the next motion. By comparison with the basic motion pattern as discussed under **op.10** #7 3.2, the first figuration (**mm.1-28**) suggests more elaborate, circular up and down motions. Any simplistic two-dimensional movement originating solely in the elbow joint would impede a continuous energy flow between the strokes and often produces an undesirable sound. Such motions are simply not commensurate with the physical propensity of our arm; see Movie #1 A.1. The modified figuration with the second finger grace note before the beat (**mm.29-36**) of course requires slight modifications in the motion of the arm. The fulcrum, however, should always be the upper arm shoulder joint. This allows for a maximum of flexibility in the *elbow-lower arm-hand-finger* motion sequence. In **mm.36-41** a maximum of legato between the second finger and thumb must be aimed at.

The challenging passage **mm.42-44** has already been discussed above (see Example 2.1 and Diagram 2.1. It might be said in addition, that it is not absolutely necessary to use the fifth finger for the last note. Since the hand moves as an integrated entity the third finger offers itself as a much more logical and safe alternative.

In the middle section Chopin's didactic aim is the necessary opening of the right hand – in the ascending passage after the thumb is played and in the descending when the hand turns over the thumb. Arm guidance for the turning is essential for a smooth rendition of the sostenuto/leggiero/leggierissimo. Practice single units reflecting the various hand positions and amalgamate them successively. A break down into various 3-note units for practice purposes similar to the procedures seen in the discussion of **op.25** #12 3.4 might be helpful as graphically indicated in Example 3.9.

Try first to play without pedal for a maximum of legato feeling. However, pedal is part of the musical idea but various passages indicated without pedal sometimes seem to be curious and can only be understood by the sound quality of Chopin's piano. The best solution seems to be using the pedal with discretion in order to overall create a seamless legato. In the varied version **mm.81-97** the pulsation should shine through in order to make the cross-rhythm obvious. In **mm.87/88** special care should be taken to delineate the modifications of the inner melodic lines. Some stylistically adequate application of rubato might be applicable here.

The *recapitulation* in **mm.98-124** is similar to the beginning as far as the motion pattern is concerned. However, a strong finger grip is necessary for the chords. Depending on the instrument, one should create in the final e-major arpeggio an extremely transparent sound by emphasizing the intervals of the 3rd or 10th.

#### Op.25 #9 (1832-1834)

The nickname *Butterfly-Etude* for this charming piece is quite characteristic. The continuously *fluttering* motion of a fast interchange of legato to staccato in the right hand requires precision and lightness of the left. The left should already have been well trained by having practised similar motions in the etude **op.25** #4.

The fast exchange in the right hand between legato and staccato within four 16th notes is best achieved by playing the legato notes with a relative low wrist, which then is lifted slightly by a corresponding upward motion of the elbow towards the third 16th note from which the hand springs upwards. The following octave is then played with a bouncing wrist staccato with the hand subsequently sinking back towards its original lower position ready to begin the next unit of four 16th-notes. One should be aware that the two staccato octaves in the r.hd. figuration have to be approached differently. While the first is swiftly lifted out of the keys after the preceding legato, during which the hand is more or less down on the keys, the second is a single down/up bouncing wrist staccato stroke.

It is interesting to note that this is one of the few occasions within Chopin's whole etude oeuvre, where a distinct vertical wrist action is called for. (In this context it would be logical to also think of the Octave Etude **op.25** #10. However, its main concept is octaves in legato, not staccato – an often disregarded aspect).

It is suggested to work with a different grouping of four 16th notes, practising it with the three legato notes preceded (not followed) by the fast staccato octave. Such a practiceunit of seemingly unrelated four 16th notes would counteract *hick-ups* before each beat and strengthen the melodic flow in general. It is important not to undervalue the melodic function of the 8th note (thumb). During slow practice enough relaxation time should be allowed between each unit; see Movie #17a A.17. The original motion pattern is established, the *expansion method* (see page 7) could be applied in tempo; see Movie #17b A.17.

In the *appassionato* (**mm. 33-37**) one should aim for transparency rather than octave thunder, particularly in the bass. It goes without saying that Chopin's sound spectrum is not like Tchaikovsky's. It is also known that octaves generally have more projection, when the lower note is played softer than the upper. So discretion is advised.

For a smooth, leggiero legato effect a sophisticated pedal application is necessary. However, Chopin's pedal indications, as found in the Henle Edition, are again somewhat enigmatic: first none, then a selective few and finally an indication every half bar. As the case may be, the player if not satisfied, should not hesitate to modify them according to his own insight. In using the pedal, whether indicated by Chopin or not, one always should have in mind the sound characteristics of the instruments of his time. For example, it might be sometimes advantageous to replace the full pedal at the end (**mm.45-50**), intended to sustain the bass note over six measures, by a vibration pedal. This results in a similar sound effect as the application of full pedal would have created on a *Pleyel* or *Erard* grand piano of Chopin's time. Chopin might have thought of such diversifications if he would have known the sound propensities of our modern instruments. The use of the una corda pedal for the leggierissimo with diminuendo (**mm.46 ff**) is certainly justified, depending on the quality of the instrument.

# Category VI: Various types of expansive motion patterns.

Op.10 #4 (1832)

Besides **op.25** #11 this is the other *Grand Etude*, highly diversified as to figuration, phrasing and articulation and thus very suitable for the concert stage. It was Arthur Rubinstein's favourite encore piece! This etude should not be tackled before having studied intensely the various motion patterns in the etudes **op.10** #2, **op.10** #5, **op.10** #8, **op.25** #2, and **op.25** #12.

If one knows them, one will recognize here a number of familiar motion patterns that have to be amalgamated into a new entity. The swing motion pattern on a small scale would be applicable to the basic figuration of the etude. Previous study of **op.10** #2 would certainly help for the right hand passages **mm.25-33**.

A machine gun like finger rattling is often heard. How devastating to the artistic brilliancy of this piece! In addition there are a number of sections where rotation motions as discussed in the etude op.10 #5 are required. Subtleties like the melodious 8th notes in m.3 and m.7 are often neglected or totally disregarded. Chopin's highly differentiated texture demands more than just technical prowess.

After setting a reasonable fingering suitable for one's hands, the long lines of various figurations should be broken down into meaningful portions, thereby defining and internalizing the inherent motion patterns. A logical amalgamation of small parts into larger entities follows. Phrasing lines and numerous accents must be diligently observed and the occasional thumb on black keys should not be avoided. The major areas of interest would be:

- **m.1 etc.**: create practice units of four 16th notes according to the ascending motion pattern rather than the notation grouping
- m.2 etc.: use rotation as in op.10 #5 with the logical fingering of 1-2-1-5 instead of 1-3-2-5
- **m.3 etc.**: to be played with a generous sideways swing stroke with a strong emphasis on eighth note despite of the accent on the beat.
- **m.4**: use rotation with distinct down/up motion in order to avoid a rattling sound pattern.
- mm.5-7: although the figurations in the left hand are physically non-congruent to mm.1-3 they should be practices in the same way.
- mm.13-15 and mm.63-65: observe dynamic swells and a kind of subito piano on the beginning of each measure, which can be easily accomplished by energetically *bouncing* the last chord with a corresponding arm movement off the keys.
- mm.29-32: lift hand through minimal arm guidance from the last note of each four-16th-group in order to strike down on the next double stop.

- mm.35/36 and mm.39/40 etc.: a continuous use of fingering 1-2-1-5 allows for a comfortable rotation axis; see Movie #31 A.31.
- mm.48/49: the b-sharp could be taken with the right hand.
- mm.75/78: typical rotation pattern for both hands; see Movie #30 A.30.

Similar to **op.10** #8, **op.10** #12, and **op.25** #11 a healthy portion of physical and mental stamina is required to master this brilliant concert piece. There is always the danger of playing too loud. The best strategy is to save the *biggest cannons* for the end. Frequent relaxation points should be consciously planned and incorporated in the practice procedures, otherwise the inevitable fatigue of the finger muscles might create problems. In the final analysis the overall power for the tone production has to be provided by the shoulder and arm muscles. The fingers have a more supportive function, creating the crisp articulation of the texture rather than the tonal volume. The left hand could take over the quarter notes of the right in mm/27/28 This might be helpful for players with smaller hands enhancing a smooth ascent. A totally unconventional fingering is indicated in Example 3.10.

In the final section the reduction of the fff to a ff in **m.71** is to be observed. All in all, one should avoid raw thunder and play economically while respecting the dynamic markings. In the last four bars, of course, all the available dynamic stops come into play. Being bold might be a virtue here. Taking in the ascending line with the left hand the c-sharps on the beat allows for a maximum input of energy, see **Example 3.11**.

#### Op.10 #8 (1829)

The didactic aim of this etude lies in the variety of arpeggiated figurations. They demand very complex and thus challenging rotation motions based on wide-spread finger positions.

It is important to set the motion patterns in a way that arm motions supportive of the turning are cultivated resulting in a combination of swing strokes with various rotary motions. In the turning process the motion of the thumb is crucial for a smooth connection of the basic four-note units. Whilst the fingers (4-3-2 or 2-3-4) are playing the thumb should move in a curve closely in front of the keys before arriving at its new position. Thus the wrist moves in a shape similar to a concave bowl.

Several major points discussed under op.10 #4 (Section 3.6) are equally valid here. Similar to op.10 #1 and op.10 #12 Chopin writes characteristic accents on specific finger positions. He seems to expect a particular rhythmical poignancy. These accents of course could also be seen as merely didactic and thus helpful in the practising process. In the overall interpretation they don't deserve to be enunciated beyond an inherent musical pulsation. One also should not forget that in many etudes by Chopin the main musical interest is not found in the technically demanding part, usually placed in one hand, but rather in the musical substance of the complementing figurations of the other. Op.10 #8is a good example.

In mm.37/39 one should not desperately stretch the hand into a cramped position, but move to the 5th finger position by opening and turning the hand on the 2nd finger

towards it, guided by the arm. Certain figurations like  $\mathbf{mm.41-46}$  or  $\mathbf{57-60}$  need simple broken chord motions: Down (on 4th finger), moving via 3rd and 2nd up towards the thumb. Think again of a *shallow bowl motion*. Chopin phrasing supports this type of technical and musical approach, although in  $\mathbf{mm.41-46}$  it is important to meticulously observe the differentiated phrasing or groupings of the 16th notes. The varied phrasings in the passages  $\mathbf{mm.53-56}$  need particular attention as to the inherent motion patterns; see Movie #34 A.34.

Again, Chopin's pedal markings are somewhat inconsistent and can only be understood by having the sound spectrum of his piano in mind. One could hardly imagine this etude, non-withstanding some exceptions, being performed in general without pedal, as sometimes indicated, although it certainly would be meaningful to practice it in that way. Important rhythmical elements, like staccato bass notes or broken chords are clearly to be pedalled. It's obvious that Chopin wanted to emphasize certain important bass notes with pedal. In addition, however, an intelligent use of the pedal throughout seems warranted. Great artists, like for instance Alfred Cortot, usually don't hesitate to find their own idiosyncratic solutions to these real or perceived inconsistencies.

Smaller hands might encounter difficulties in mm.47-52. A seamless finger legato for the span of a sixth within the figure might not be possible, perhaps not even necessary in this fast tempo. Indeed, only a very large hand would not be strained beyond endurance. Instead, as in **op.10 #11** described, the hand should *hover* above the keys and glide in swing motion fashion across the space of the single figuration towards the fifth finger and back, while the fingers are active, striking the keys and articulating the figurations as a whole. See also the previous discussion of the broken chord pattern, see Examples 2.2A and 2.2B. For smaller, albeit flexible hands, changes of fingerings like those suggested for **mm.50-57** might facilitate the execution of some of these difficult motion patterns (see Example 3.12).

#### Op.10 #12 (1831)

Although considerably more difficult and extended than the etude op.25 #2, the socalled *Revolutionary Etude* can be seen at least in part as a complementary version for the left hand. The basic motion pattern is more complex but nevertheless similar. To have thoroughly practised the etudes op.10 #9 and op.25 #12 before would be helpful for dealing with some of the more challenging motion pattern present here (eg. mm.15/16).

In spite of the legato indication it is advisable to use a non-legato touch. This will be perceived as a legato in the required fast tempo and result in a *pearly* sound cascades. The aim should be to shape each of the groupings in one integrated motion guided by the arm, as delineated by the various phrasing lines and the commensurate dynamic indications.

It is particularly important to incorporate the often neglected *third dimension*, the horizontal motion into and out of the keyboard, which is particularly applicable in passages like those in **mm.9 ff**. The left hand should always move up/in towards the upper contour note and return down/out to its original position at the beginning of the figuration.

Each of the various motion patterns have first to be clearly defined as such and then specifically practised.

- mm.1-8, pattern #1: Here we find small scale turning patterns similar those found for the right hand in op.25 #2. There is also a similarity to the first ascending right hand passage in op.10 #4. Thus one could here also see the first four 16th notes as a self-contained motion pattern, to be practised in single sweeps and subsequently amalgamated in increasingly larger units. Again, the cultivation of the *third dimension* (in/out motion) is of great important. As to the meaning of the accents on every beat of the main motif please see comments: op.10 #8 3.6 and see Movie #36 A.36.
- 2. *mm.9-14*, *pattern #2*: The expanded turning pattern is similar to that of the right hand in the etude **op.10 #8**. It is important to practice separately the crest of the figuration 1-2-3-2-1 with an in/out movement of the hand.
- 3. mm.15/16, pattern #3: This is a technically very demanding passage. The two components (the broken octave and the broken chord) of the figure could be practised separately and then successively linked together. A maximum of arm guidance is necessary; see Movie #37 A.37.
- mm.25-26, pattern #4: The expanded rotation is similar to the one found in the Etude op.10 #5 for the right hand. Fast expansion and contraction of the hand is necessary. From a didactic point of view an alternate fingering (5-2-1-4-1-3-1-2) is possible.
- 5. mm.29-32, pattern #5: These broken chords in various constellations could be seen as a reversed motion pattern of those in mm.1-2. The same principles of practising would apply here. It is advantageous to take the thumb on the last note of each bar. The clarity of the figuration should not be *soaked* by too much pedal; see Movie #38 A.38.
- 6. mm.73/74, pattern #6: This small scale rotation pattern similar to that in mm.17/18. In this passage Chopin's own fingering should be observed. His few fingerings are logical and show his didactic intentions. Interestingly enough, there are no pedal indications at all. However, let us not forget the maxim: In the Classic style without pedal, but pedal added, when needed; in the Romantic style with pedal, but pedal subtracted when not needed. That should provide some guidance here. Pedal can be used, but as always with discretion.

The various characteristic indications, like *con forza, energico, appassionato* might tempt players to create thundering figurations in ff throughout. This should be avoided, since Chopin's ff indications appear only much later. Creating a transparent sound picture in a healthy forte range, supported by sophisticated voicing and sensitive pedaling, would allow for the important climaxes in fortissimo (mm.45/65/81) to have the necessary impact.

#### Op.25 #11 (1834)

This comprehensive *Concert Etude* of eighty three measures is the epitome of a grand display of extended swing strokes and rotary movement patterns, based on an admirable

compositional idea. In its mixture of rotary motions encompassing smaller as well as larger spaces this characteristically named *Winterwind-Etude* incorporates and summarises the most essential motion patterns specifically dealt with in **op.10** #8 and **op.10** #5. One might even say that this etude encompasses most of Chopin's common movement patterns in an extraordinary complex way.

It is worthwhile to contemplate the somewhat enigmatic interplay of rhythm and meter in this piece. Why is it not notated in 12/8? The indicated meter is 4/4 (alla breve), as unequivocally obvious in **mm.89-91**, as well as the introduction **mm.1-4**. Based on this fact one could well conclude that the sextuplets are to be perceived in a subdivision of 2 x 3 16th notes (version A) instead of the usual 3 x 2 (version B). The latter of course is rendered logical by the frequent 8th note triplets in the left hand, however, the usual way of playing ignores the ingenious rhythmical complexity the composer might have envisaged.

This of course cannot be proven and may well be an assumption. Nearly everyone prefers version B. It is also easier to realize. However, one should familiarize oneself with the non-conventional possibility none the less. A good practice example for this could be found in **mm.53-60**. For the performance one might even come to the conclusion that certain passages warrant one version, others the complementary one. Thus one certainly could counteract the danger of the continuous 12/8 pulsation becoming stereotype after a while. It is, however, nearly impossible to continuously maintain such a rhythmical extravagance. The ear automatically perceives a 12/8 pulsation anyway.

The fingering suggested by Chopin in for the main descending passages in the beginning as well as the contrary motion passages in **mm.61-64**, is not necessarily practical. It is advantageous to explore a continuous 5\*2/4\*1 pattern regardless of the fact that the 5th finger then has also to play also on black keys. In this way the rotation axle is not continuously shifted within the hand, but stays more in the middle of the hand; see Movie #13 A.13.

This fingering also organizes six 16th notes in two kinaesthetically perceivable and comfortable sextuplets, which might have been the composer's intention all along, since his time signature is 4/4 alla breve. The suggested fingering is very conducive to a smooth, rather elegant, execution of these passages, although tiny horizontal in/out position adjustments of the hand have to be made. see Movie #40a A.40. Small changes to the fingering pattern, however, are necessary each time when exiting the chain of four measures and turning into the next figuration, for example in **mm.8/9**. This should be no problem for an intelligent player.

The rotary motion pattern is obvious and often intertwined with arpeggio figurations. Some complex passages require a maximum of supportive arm motions and have to be practised assiduously. It is sometimes advisable to break the passages down into small units based on relevant hand positions as indicated in Example 3.13, also see Movie #21 A.21.

In some instances it makes sense to practice with solid intervals. For instance in **mm.81-84** one could break down the figuration into 2/5 fingered solid fifths or tritones and position them within the connecting 16th notes. This would train the proper expansion and contraction of the hand. Intelligent use of rhythmic subdivision is also helpful, when practising such chains of intricate figurations; see Movie #42 A.42.

Similar to the etude **op.10** #4 the physical and mental challenges are considerable here. In view of the fact that Chopin, except in the final section, is indicating only forte, never fortissimo or triple fortissimo, a dynamically economic approach is called for. In general one should be careful not to practice too much in the forte range. Perhaps it might be interesting to take a more philosophical stance and envisage a type of motion control closer to the Shiatsu idea. Thus in the process of studying moderation could be the basis for the overall dynamic shading and will hopefully result in an elegant rather than merely virtuosic rendition. Such a concept would also save energy for the demanding climax. In order to achieve a rhythmically convincing ending, one should begin the final a-minor scale immediately after the peddled final chord in **mm.95**. The second A of the scale appear thus on the second pulse of the bar and the top note on the first pulse of the following measure. It is of course necessary to prepare this brilliant outburst with a corresponding sostenuto in the previous two measures. The often added additional octave leading the scale into the highest register is an unnecessary virtuosic gesture.

## Category VII: Voicing and sound balance

#### Op.10 #6 (1830)

This etude in four parts writing provides possibilities for attaining a mastery of voicing in general and the tonal control of two voices in each hand, as well a sensitive shading of several layers of sound. The dynamic control of the voicing is of course determined by the harmonic progressions. The technical aspect thereby is the physical training of the interdependence of various parts of each hand.

Although Chopin indicated some basic fingering patterns, it is paramount to establish a logical fingering based on the particular propensity of the individual hands. For didactic reasons it is advantageous to practice first without pedal in order to foster a maximum of finger control for the requested *sempre legatissimo*, including finger-substitution, when reasonable. A mastery of this particular aspect is indispensable for the realization of the *con molto expressione*; see Movie #27 A.27 (right hand).

One has to take care that the hands stay flexible throughout, so that the chains of 16th notes are not frozen in a kind of digital progression, but can be shaped with an utmost dynamic subtleness. However, the outer fingers must stay somewhat firm on the contour notes of both hands. From this firm grounding the other lines flow in continuous small minimal motions emanating from quasi-suspended hands. The dynamic diversity required is immense. Long notes sometimes must be strongly emphasized, while surrounded by languid motions in pianissimo. The tied-over notes need even more dynamic attention. They indicate that the feeling of the melodic flow is based on an anacrusis towards the first 16th of each bar. Therefore a binding pedal should be applied on the last 16th note before each harmony change. This has the interpretive advantage that the notes tied over the bar-line receive an additional sound impulse, drawing the attention to the rhythmical character of the syncopation.

Special attention must be given to the harmonic progressions in the right hand in mm.17/19/21-40. To emphasize just the top contour is not enough. The inner voices

must be recognizable. A strong fourth finger is necessary here. In this section slow motion binding pedal for the melody and bass is called for see Movie #28 A.28 (left hand). The bass is always important in particular in the chromaticism of **mm.29-40**.

Finally, the very subtle dynamic indications must be seen as an important ingredient for an expressive performance and thus should be followed assiduously. Although the piece is often played too slowly, Chopin's metronome indication of 69 for a dotted quarter note seems rather fast for our modern instrument. One could envisage 56 as a meaningful compromise.

#### Op.25 #7 (1836)

The didactic aim in this etude is to balance two vocal lines (soprano & tenor) within continuous harmonic progressions of a chordal accompaniment. A specific challenge is the dynamic differentiation of the melody and accompaniment within the right hand. Again, a firm anchoring of the melody fingers on the keys is recommended, from which the continuous accompaniment intervals in the lower portion of the right hand lightly are moved into the keys by means of small rotary motions; see Movie #26 A.26.

It is obvious that the arm should be flexible and *minutely pulsate* on each 8th note thus initiating the mentioned rotation of the hand. If these accompaniment, figures originate from a stiff wrist the creation of the floating sound pattern suggested by the *pp* would not be possible. The singing line on top should be kept rather dominant, often by strongly emphasizing the longer lasting notes. In addition the sensitive application of agogic would be only natural. The melodious content in general should be shaped with extremely differentiated dynamics, in order to achieve a maximum of cantabile quality. The subtle tonal shading required needs a lot of thought and sensitivity. The left hand figuration should always have the character of an anacrusis (flowing forward to an arrival point).

To juxtapose both melodic lines well against each other, one could first practice them together without the harmonic support of the chordal structure, which can then be added later. One should avoid too much reliance on the pedal. The most effective pedaling seems to be a slow pedal change on each 8th note resulting in a kind of wave like motion of the foot. The pedal indications in **mm.29-36** of course are intended for a magic pp translucency and should be of course treated as such. Depending on the instrument the use of the una corda pedal in this passage might be a good idea in order to create a significant colour change.

The increasingly complex ornamental lines in the left should be clearly proportioned in the way the composer suggested (eg.  $\mathbf{mm.22/24/26}$ ). Even in the *free-wheeling*  $\mathbf{mm.27}$  & **52** some proportioning is advisable for practising, but should not be perceivable in a performance. All these passages have to be executed in the end with large encompassing motions originating in the whole body. The sound effect should be similar to that of a glissando. Any finger clatter would be detrimental to Chopin's intentions.

In the section from **mm.62-66** one should emphasize within the chords those notes important for the understanding of the harmonic progressions. To understand and clarify the linear concept within harmonic progressions is generally of great importance. (**N.B.** The bar numbers used are based on the real beginning of the piece in 3/4 time after the

53

improvisatory introduction.)

#### Op.10 #3 (1832) – Main section A - mm.1-15 and mm.54-77

Interpretive principles similar to op.25 #7 are valid here also. It seems particularly important in this etude to pay attention to the very specific details like phrasing, articulation, dynamics, pedal and agogic indications, as indicated profusely by the composer. They demand meticulous study and attention.

Differentiated four-part writing is prevailing and requires specific motion patterns, although the left hand part does not serve in a melodious, but rather a rhythmical function. In the right hand the melody fingers need to be supported by the arm weight for a maximum of legato, making the other portion of the hand nearly weightless to control the 16th note motion. There has to be a strong dynamic distinction (the melody more in the *mezzo forte* region, the sixteenth-notes however quite in *pianissimo*).

The pulsation in the left hand with the accents (possible fingering 5-1-2) should counterbalance the melodic quality in the right hand. In order to clarify the rhythmical character of the left hand figuration the usual global pedaling should be avoided and the pedal generally changed on each 8th note with a slow wave-like motion of the foot within the effective damper lifting zone. This would also enhance the rhythmical value of the syncopated note in the bass line.

In m.16 and m.69 a portato pedal on each sixteenth note can be effectively applied resulting in sonorous, nonpercussive steps. In order to avoid an unduly massive sound one should enhance the transparency of the right hand chords by tilting towards the fifth finger, thus emphasizing the upper register, and reduce the dynamic level for the left hand accordingly. In spite of the *con forza* indication Chopin would hardly intend a sound with a *Brahmsian* density.

In m.21 the transition to the contrasting middle section (discussed already in Subsection 3.2) begins. The challenge is to create this transformation in a nearly imperceptible way. It is emotional as well as technical and part of the educative essence of this etude.

#### Op.posth #3

This etude is specifically designed to train the independence of various portions of the right hand by simultaneous application of legato and staccato. This certainly could be a precursor for practising etudes like op.10 #2, op.10 #7, op.25 #6, op.25 #8, and op.25 #10. All of these etudes also require strong melodic power in the outer fingers and lightness of touch by the thumb and second finger. The necessary transparency of sound can only be attained by this particular mastery of touch differentiation. Therefore this etude is of great importance.

The technical approach is rather simple: To lean down into the fingers playing the legato line by tilting the hand in a slightly rotary fashion towards its right side, quasistanding on each finger, while at the same time playing the staccato notes *out of the keys* as a result of that tiny tilting motion. The fingers playing the legato line should feel like *walking* from note to note in a legatissimo. Of course, the right hand should be practised separately without pedal, the legato line preferably forte and the staccato piano.

It is important to devise a logical legato fingering according to the individual span of the hand including possible finger substitutions. A great pianist once said: *I rather break my fingers than take pedal*. We should not go to such an extreme in this etude, but come close to it when practising!

The pedal markings of Chopin again seem to be geared mainly to support the sonority of the bass notes. However, the sound of Chopin's piano again should be taken into consideration and additional differentiation attained. The sophisticated player will certainly make use of the half pedal or vibration pedal, as the situation requires.

The sparse dynamic indications are clear, but can be expanded in subtle ways according to personal preference. It is surprising that the composer, in this feather-like *quasi dolce* composition, ends after two specific diminuendos and an unusual descending crescendo (**m.69**) in a final fortissimo, as if he were saying: Enough of this fluttering around! "That's it!"

# Category VIII: Special technical figurations

#### Op.25 #6 (1832-1834)

Chopin's famous Double Third Etude is rightly considered a superb masterpiece of music. In any performance the obvious technical characteristics must be overshadowed by its inherent musical qualities. It goes without saying that the performer must already have a highly developed technique and digital provess to create a real artistic rendition. As mentioned before, the key pressure and key depth of the instruments in Chopin's time were much less than on our modern grand pianos. The general capacity of the finger muscles, however, has stayed more or less the same. This fact constitutes a particular challenge for the pianist not only in this etude, but also in many others. Avoiding the predictable tiring of those muscles is the special task here. All finger actions should originate from a flexible wrist, guided by tiny, but absolutely necessary three-dimensional movements of the arm, through which the energy for the tone production must flow.

Initially a light portato stroke from the right hand wrist in a slow tempo, as if aiming at a nearly expressionless touch, is recommended. This could be seen as a mental imprinting of the real action. It is also important to research and definitely establish fingerings fitting the individual hand. In the upward chromatic runs for instance the second finger could glide from the black key d-sharp (a-sharp) down and out to the white d-double sharp (adouble sharp); similarly in the downward motion the second finger could glide from the black key f-sharp (c-sharp) to the white key e-sharp (b-sharp). Although such a fingering was not envisaged by Chopin, it seems to work well, since it avoids the jumping of the thumb between two white keys; see Movie A.23 and Example 3.14.



(B) Op.25 #6, mm.57-58

Example 3.14: Fingerings for Sideways and Circular motions

Sometimes the fingering 2/4 on melodic peaks can be replaced by 2/5 (e.g. **m.11**). For some hands it could be also advantageous to use 1/3\*2/4\*1/3\*2/4 in **m.4** as an alternative fingering provided the hand is extremely flexible.

Rotation motion similar to the ones discussed in **op.10** #5 should be applied in **mm.27-34**. An upper arm guidance of the rotary motion is absolutely necessary to bridge the distance of a seventh. In order to create a mental awareness of the intricacies of these passages, one could practise them in various ways: First in broken 7ths  $(5^*1)^1$ , then with the upper third added  $(4/5^*1 \text{ or } 4/3^*1)$ , subsequently with the lower third  $(5^*2/1)$  and finally as written.

In **mm.29-34** one could, depending on the hand of the player, try to alternate fingerings for certain upper intervals (5/3 instead of 5/4). Any percussiveness in **mm.31-34** should be avoided, since the leggiero of **m.27** seems to be applicable still. Chopin's particular phrasing of course should not be overlooked; see Movie #39 A.39.

One should right away aim at a clear dominance of the upper voice by focusing the energy towards the right side of the hand. This will result in a radiant brightness of the sound later on, when played in a faster tempo. It would be wrong to practice a forced double third legato since; in the finally required tempo a non-legato touch is required anyway. Nevertheless, the focus on the upper voice requires the feeling of legato in the slow practice process. It might be advantageous to practise the upper voice legato/forte,

<sup>&</sup>lt;sup>1</sup>i.e. fingers 5 then 1

and the lower non-legato/piano with constant attention given to a flexible wrist combined with minute adjustments of the angle of the hand corresponding to the various positions on the keyboard.

Chopin's pedal markings should be followed with an awareness that they are intended for the pianos of the time. When nothing is indicated, as for example in m.9/10 or similar places, it seems advisable, in order to maintain a continuous sound pattern on our modern piano, to use legato pedal to connect each 8th note pulse (see Example 3.14A). The phrasing in the left hand should be clearly delineated.

#### Op.25 #8 (1832-1834)

Here the procedures discussed under **op.25** #6 are generally the same. Both etudes usually suffer technically and musically, when played too loud in practise as well as in performance (indeed, in the double third etude **op.25** #6 Chopin writes *sotto voce*!). Chopin's intention here is clearly indicated by the *molto legato* and *mezza voce*. Like in any other etude it is important to first internalize the total musical entity, before taking it apart for specialized practice.

Depending on the possible span of the hand it is recommended to play to top contour with a kind of strong pulling stroke affected by relatively flat fingers, supported by some arm weight projected into the contour keys. The thumb and second finger could be thought of playing lightly off the keys. There is some in/out and sideways motion with the thumb often gliding minutely out and off the keys. The general dynamic priority should be: Top contour #1, bass #2, inner sixth #3, and the broken harmony #4. This proportion should be established from the very beginning.

Thus one could specifically practice slowly the top contour forte/legato into the keys, with the lower portion pp/staccato out and up from the keys added, a procedure similar to the one suggested for **op.10** #2. This is achieved by slight rotary motions of the hand. Before beginning to practice, of course, the fingering have to be decided upon based on the particular physical propensity of the hand. One should envisage a clear position of the hand for each sixth with a minimum of muscle tension; see Movie #24 A.24.

Similar to the etude **op.25** #6, the gliding from black to white keys can be meaningful in the ascending chromatic passages, thus modifying somewhat Chopin's few fingerings. For an example see **m.32** (the last two sixths 2/4-2/5).

In the final challenging ascent it might be helpful to apply a wavelike up-and-down angling of the right hand during each one bar unit. Also a gentle lifting of the wrist during the first 6-note grouping and a corresponding downward motion during the following unit is a possibility. The crescendo towards the ff requires an increasingly rigid application of vibration strokes, since the power of the fingers is simply not enough. See also the discussion of the final passage of the etude **op.10** #5.

Chopin's pedal markings are mostly geared to the bass in support of the harmony. The same technical approach as discussed in **op.25** #4 for the left hand is valid here also: Always jump from the bass note towards the following note (this time a broken harmony), not the other way around. Although Chopin the *pedagogue* does not indicate any pedal for the **mm.13-18** and **mm.32-34**, some discretionary pedal dips or some half pedal might

be advisable here.

#### Op.25 #10 (1832-1834)

It seems that Chopin was tackling the problems of motion in thirds, sixths and octaves at the same time. This etude is a logical extension of the technical concepts found in **op.25** #6 and **op.25** #8. The additional challenge lies of course in the wider span of an octave and the implied difficulty of creating a legato, if not always physically, but then as an overall impression. This is often overlooked, when the unison octave passages are merely hammered out with commensurate wrist action as loud as possible. The sound spectrum, which Chopin might have envisaged, can only be created with the transparent sound of the pianos of Chopin's time in mind.

The Octave Etude is a mental and physical *tour de force* and requires an intelligent preparation of the necessary motion patterns. Although parallel unison octave motions are dominating, intricate contrary motions do occur and constitute special challenges (e.g.  $\mathbf{mm.23/24}$ ). It is scientifically proven that one and the same action of the keyboard will be energized by different muscle fibres or muscle groups when changing the angle of the hand up or down. This etude is ideal for practising a variety of angles of the hand towards the white and black keys. The position of the hand on the black keys of course will be higher and more inward (wrist raised), and on the white keys lower and more outward (wrist down). Without the assiduous cultivation of the *third dimension*, namely the movements into or out from the keyboard, the Octave Etude might become a *pièce de résistance*. In practising therefore one should consciously contemplate, set and physically feel each octave position.

The way of practising is similar to that for op.25 #6 and op.25 #8. It is recommended to first establish the voicing of four parallel lines by allotting different dynamic levels to each. The top melodic line of course should be played as legato as possible with the fourth and fifth fingers of the right hand. This can be applied mirrored in the lower bass line as well.

The notation clearly indicates that Chopin has legato in mind. Thus the principle of legato should not only govern the middle section. As a matter of fact, it could be seen as the dominant feature of the whole piece. For small hands it is difficult to play this etude on our modern piano in the legato fashion Chopin must have imagined. This is especially true in the middle section, which reveals the main pedagogical aim of this etude: A seamless legato even with finger substitution (e.g. **mm.35-37**). To achieve this to a maximum of perfection, one could practise first only the upper voice with the proposed fingering, and this in an elastic motion, swinging the weight of the arm from note to note. This motion could be described as *walking* on the keyboard. Although finger legato is of great importance, this section cannot be realized on our modern instruments properly without a discreet use of pedal. Thus this etude is also a training ground for slow half pedal changes, fostering a maximum of singing sound. The inner counter voice in mm.51-60 and mm.71-80 needs to be strongly emphasized, since the main octave line by its very existence will have enough melodic weight already. Intelligent voicing is very important to catch the lyrical character of this section. This general legato *feeling* should also be present as much as possible in the overall *con fuoco* character.

However, the greatest technical challenge is found in the main section and lies in the shaping of the *inner voice* or *inner harmony*(beginning in m.5), which has to be dynamically quite prominent and is in constant danger of being overwhelmed by the octaves. In order to project these notes properly, a kind of angle stroke downward (a sparingly used percussive approach to tone production) into the keyboard with stiff middle fingers is indicated here, followed by immediate relaxation. Finger action alone is simply insufficient. Project the inner notes ff and play the surrounding octaves softer by concentrating the energy of the stroke strongly in the (in that moment) rigid inner fingers of the hand. Playing the octave lines frequently in a range around mezzo-forte would help. It should be understood that forte or fortissimo does not mean that all notes should be forte or fortissimo. It is the character which is important, not the decibel level. In this context it is also significant how the use of pedal is integrated. It is suggested to use direct pedal, changing it on each harmonic interval, either for a half note or quarter note pulse, as the case may be; see Movie #25 A.25.

From a strong forte as envisaged in **m.23** the build-up to the triple fortissimo in **m.27** begins. A similar, now long range increase in intensity happens from **m.104** to the end with its *il piu forte possibile*. In these places a full octave sound with all four octave notes having the same loudness is in order.

It is regrettable that this etude often is *pounded* and *ploughed through* in a relentless *ff* with a stereotype staccato touch soaked in pedal. This approach makes no sense at all. Certainly it does not do justice to the clearly recognizable intentions of the composer.

# Category IX Special rhythmical problems

#### Op.posth. #1

The verbal expression three against four (or for that matter two against three) already indicates, that the slower pulsations is rhythmically subordinate to the faster: It is played against it. The rhythmical constellation of three against four is still perfectly perceivable with mathematical precision. It is worthwhile to sort out this problem systematically since the rhythmical cross pattern has to be kinaesthetically internalized, before it can be activated flawlessly. Exercises like clapping the rhythms with alternating hand strokes on any surface, or playing the pattern in one hand by alternating finger strokes might be extremely helpful. Thus it is possible in a slow tempo to be aware when exactly each note has to be played within the overall pulse. In a faster tempo one can subsequently realize, that the second triplet note has to be played shortly after the second eighth note, and the third triplet note shortly before the fourth eight note of the four note grouping (see Diagram 3.1).

Through a combination of mathematical understanding and intuitive perception a perfect rhythmical balance can be achieved. (Little verbal tricks, like **pass** the **bread** and **butter** might help too). With due respect to the rhythmical intricacies, the main musical challenge in this etude is really the shaping of melodic lines according to their intrinsic directions with special emphasis on ever pervading chromaticism. The cross rhythm of three against four actually is a secondary problem. It is therefore important to first practice the right hand for a maximum of expressive quality. The piece starts with a rest. This indicates a sub-grouping of six notes towards each first beat. A seamless legato has to be aimed at, combined with a clear physical delineation of the various figurative forms reflected in the right hand part. Without a flexible wrist this endless melody will never reach a cantabile character. The legato ostinato in the left hand is itself an etude for a smooth turning between the thumb and second finger. Again the rotary motion around the thumb must be guided by the upper arm.

Pedal should only be applied when both hands can create a nearly perfect legato interplay. However, Chopin's pedal markings, as usual, should be modified towards a half pedal sound without losing the bass tones. His pedal markings seem to point towards a *watery*, quasi-impressionistic character for this piece. In spite of the crescendi the overall dynamic concept should be *piano*. A subtle dynamic differentiation is necessary throughout.

#### Op.posth. #2

Aside from the obvious rhythmical formula *two against three* which should be easily attainable for any trained player, this etude contains more than that particular rhythmical challenge. A mastery of logical and convincing harmonic progressions, as well as an awareness of obvious or hidden melodic portions. Without a thorough harmonic analysis the player might be meandering more or less in the dark. An acute awareness of the harmonically important notes with the chords is an absolute necessity. A kind of Brahmsian linear thinking should dominate here. One must be able to *look into* the chords and should imagine three distinct parts rather than a nicely sounding phalanx of triads. This requires very subtle dynamic touch differentiations within each chord, the melodically and harmonically important notes of which must be perceivable in their functional importance. The constant appoggiaturas (Vorhalte!) in any of the three chordal voices are, as a matter of fact, the driving force of the piece in conjunction with the bass line.

The right hand should be practised separately until totally mastered. In order to do justice to the legato indications, one should keep the fingers of a very quiet right hand either in direct contact with or very close to the keys. The action should be a constant pulsation of the hand sinking down into the keys and lifting itself out of them as if pushed up by the keys themselves. This motion of course should be guided by the upper arm via the elbow joint. For the harmonically important notes within the chords the respective finger has to exert a special pressure, best by a pulling action in the moment of descent of the hand.

In the fusion with the left hand figuration the *two against three* pattern should be distinct but not dominating. With an intelligent application of the pedal, it is possible to play the left hand lower line, which has no legato indication, with light swinging portato strokes originating in the wrist. This emphasizes the rhythmic pulsation. One also should not overlook the details of the notation. Chopin is very specific: There is all of a sudden a tied-over note! What does it mean? Does it require finger substitution or just more pedal? The question *why* must consistently be asked, when trying to decipher notation.

The measures preceding the enharmonic change in **m.17** leading possibly to a pp section are best shaped with a slight ease in tempo. In this context one should be aware, that **m.16** is the only place, where the phrasing line is interrupted. Otherwise it encompasses the

whole piece, thus indicating a never interrupted flowing motion as an intended musical idea of the composer. However, exactly because of this characteristic, the danger of becoming stale exists, if rubato and agogic accents are not applied, however cautiously.

It is also necessary to emphasize contrasting melodic values within various chord progressions. Possibilities for that might be found in m.17 or m.21 - lower chordal voice; m.18 or m.22 - upper chordal voice; mm.25-28 - bass line. A possible dynamic build-up towards the remote key of a-minor (m.32) would require more rhythmic vigour in the bass line.

Since dynamic indicators are lacking, it is at the discretion of the performer to choose varied dynamic levels. General suggestions might include: Generally  $\mathbf{p}$ ,  $\mathbf{mm.17-24}$   $\mathbf{pp}$ ,  $\mathbf{mm.25-33}$  build-up to a  $\mathbf{f}$  climax, returning until  $\mathbf{m.41}$  to  $\mathbf{pp}$ . Constant dynamic flexibility within a generally accepted intensity level is of course a must. If the transfer of the harmonic insight into equivalent sounds is done with imagination, an enticing, constantly fluctuating colour scheme evolves. This constitutes the particular charm and challenge of this piece.



Example 3.1: Op.25 #2, mm. 1-2



# (A) Op.10 #2, m.4



(B) Op.10 #2, m.17

Example 3.2





The graphic indications represent the swinging motions happening between the strokes as described above.



Example 3.4: Op.10 #10, mm.45-46



Example 3.5: Op.10 #9, mm.13-15



Example 3.6: Op.25 #1, mm.39-40





The thick line in the diagram is to represent the general motion of the more or less expanded, but continuously contracting hand. The broken line symbolizes the maximum contraction towards the new position for either the thumb or the fifth finger and the then simultaneously expanding hand. However, one has to be aware that this is a continuous process, whereby the contraction seems to be somewhat slower than the expansion.



(B) Op.10 #1, mm.47-48

Example 3.8



Example 3.9: Op.25 #5, mm.53-54



Example 3.10: Op.10 #4, mm.27-28



Example 3.11: Op.10 #4, mm.79-82



Example 3.12: Op.10 #8, mm.50-57







Diagram 3.1: Diagram #8

# Post Scriptum

It is obvious that much more could be said about these musical and technical masterpieces, in particular with respect to more detailed suggestions related to interpretation. As the sub title of this "breviary" indicates, it was not the intention to focus on interpretation per se, but rather to trace essential, often not obvious motion patterns, describe their intrinsic kinaesthetic qualities and provide hands-on suggestions for practice procedures. However, some suggestions with respect to interpretation have been included. The addition of filmed demonstration examples was envisaged as a supportive visualisation of the most important motion patterns, found in Chopin's etudes. To put those visual examples in an existing text was the creative contribution to this study by the eminent computer specialist Professor Dr. Brian Wyvill, whose idea it was to use Latex to format the document into an interactive form.

It goes without saying, that every player will have to search for genuine personal solutions commensurate with his or her own physical constitution. It should be therefore clear, that the above thoughts on the Chopin Etudes should be seen as inspiration for thinking and exploring rather than as an apodictic wisdom. Anyway, the latter would only raise eyebrows of legitimate suspicion and doubt.

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# Appendices

# Appendix A

# Motion Patterns In the Etudes - the movies

The forty two movies containing representative motion patterns are featured below.

Movie A.1: Movie 1 a/b from Etude op.25 #5
Movie A.2: Movie 2 a/b/c from Etude op.10 #7

Movie A.3: Movie 3 a/b/c from Etude op.25 #4

Movie A.4: Movie 4 a/b from Etude op.10 #9

Movie A.5: Movie 5 a/b/c from Etude op.25 #3

Movie A.6: Movie 6 a from Etude op.10 #3 (middle section)

Movie A.7: Movie 7 a from Etude op.10#10

Movie A.8: Movie 8 a/b from Etude op.10 #11

Movie A.9: Movie 9 a/b from Etude op.25 #1

Movie A.10: Movie 10 a/b from Etude op.25 #1 (extended motion)

Movie A.11: Movie 11 a/b/c from Etude op.25 #12

Movie A.12: Movie 12 a/b/c from Etude op.10 #1 (r. hd. pattern)

Movie A.13: Movie 13 a/b/c from Etude op.25 #11

Movie A.14: Movie 14 a/b from Etude op.10 #5

Movie A.15: Movie 15 a/b from Etude op.10 #5 (extended rotation)

Movie A.16: Movie 16 a-e from Etude op.10 #10

Movie A.17: Movie 17 a/b from Etude op.25 #9

Movie A.18: Movie 18 a/b/c from Etude op.25 #5

Movie A.19: Movie 19 a/b/c from Etude op.10 #8

Movie A.20: Movie 20 a-d from Etude op.25#2

Movie A.21: Movie 21 a/b/c from Etude op.25 #11

Movie A.22: Movie 22 a/b/c from Etude op.10 #2

Movie A.23: Movie 23 a/b from Etude op.25#6

Movie A.24: Movie 24 a/b from Etude op.25 #8

Movie A.25: Movie 25 a/b from Etude op.10 #10

Movie A.26: Movie 26 a from Etude op.25#7

Movie A.27: Movie 27 a/b from Etude op.10 #6 (right hand)

Movie A.28: Movie 28 a/b from Etude op.10 #6 Ê (left hand)

Movie A.29: Movie 29 a/b/c from Etude op.10 #2

Movie A.30: Movie 30 a/b/c from Etude op.10 #4

Movie A.31: Movie 31 a-d from Etude op.10 #4 (combined pattern)

Movie A.32: Movie 32 a/b/c from Etude op.10 #5 (extended rotation)

Movie A.33: Movie 33 a/b/c from Etude op.10 #7

Movie A.34: Movie 34 a/b from Etude op.10#8

Movie A.35: Movie 35 a/b/c from Etude op.10 #10 (extending rotation)

Movie A.36: Movie 36 a/b/c from Etude op.10 #12 (extended pattern)

Movie A.37: Movie 37 a/b/c from Etude op.10 #12
Movie A.38: Movie 38 a/b from Etude op.10 #12 (special pattern)

Movie A.39: Movie 39 a/b from Etude op.25#6

Movie A.40: Movie 40 a/b from Etude op.25 #11

Movie A.41: Movie 41 a/b from Etude op.25 #11 (complex pattern)

Movie A.42: Movie 42 a/b from Etude op.25 #11 (integrated rotation)