THE DEVELOPMENT OF THE PIANOFORTE
TECHNIC FROM HAYDN TO LISZT

BY

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Haydn to Liszt.

Technic, in general, refers to that which belongs to the mechanical side of the arts; in music, the training of the player's fingers to perform difficult passages accurately. The early art of piano-forte playing consisted largely in combining the especial characteristics of the older key-board instruments—the clavichord and the harpsichord. The clavier had a delicate, tremulous tone, produced by metal pins striking the strings and causing them to vibrate. The notes might be varied in force and also in pitch by increasing or relaxing the pressure on the key. Delicate effects and deep expression could be conveyed. The greatest drawback, however, was the fact that the tone did not carry except to two or three hearers, so attenuated was its quality. The other instrument, the harpsichord owed its invention directly to the organ. The tone was produced by a quill plucking the string, and was of a sparkling quality especially suited to staccato passages. All the dynamic changes, as forte and piano, were made by mechanical appliances as on the organ instead of by a varying pressure on the keys.

For this reason, the technic of the piano-forte advanced slowly as it went hand-in-hand with the development of the instrument. When only the three long fingers were used a
gliding technic was aimed at and this Italian method was well suited to the clavier. With the harpsichord, a crisper touch was necessary, even in legato playing, in order that the quill would pluck again.

In Bach's time, technic began to change; the fingers were no longer held out flat, but curved. He individualized the clavier and was the first to use the thumb freely and to pass it under as a connecting link in scale passages.

With Haydn and Mozart, the founders of the lyrical clavier style we come to the modern history of instrumental music. The clavier had become very popular and its mechanism was being constantly improved. All traces of the first real piano-forte, so-called because it could be played piano as well as forte, which was invented by Cristofori, an Italian, in 1711, seem to have been lost at this time. His instrument, a sort of hammer-clavier, though it had a primitive technic, yet was nearer the modern system than anything previous had been. Silberman and Stein, working later at a more favorable time, receive more credit. Many piano factories were being established at this time. "Factories alone, however, would never have brought about the final victory of the piano if there had been no virtuosi to play it. Clementi in England, Mozart in Germany and Austria, were the workers who won the decisive triumph of the piano". 

The piano soon began to acquire especial ornaments of its own and in Haydn's famous variations in F minor, the ar-

#Bie, p. 134.
peggio figure in the major part of the theme implies gradation of tone as an essential feature and this is one of the earliest compositions that could not be played with any degree of success on the harpsichord. On the other hand, Mozart's fantasia in G minor has no effect impossible on the harpsichord and even some of the early Beethoven works have not.

The music of both Haydn and Mozart makes little demand on the technic of the modern pianist. The melodies are simple, advancing in single tones, sometimes thirds, and emphasized by accent marks. Note the examples from Mozart of a right and left hand development of the same melody. Observe especially, the simplicity of the accompaniment figure and the fact that it all lies easily within the compass of the five fingers; the notes included are d to a, then e to a.

Neither Haydn nor Mozart had any conception of carrying a melody as Chopin does in the G minor Ballade, for instance, nor did the piano of their time warrant it, as such an effect would have been impossible without pedals. Haydn and Mozart allow the melody to progress filled with accompaniment figures of arpeggios, built on chord formations, turns, trills, octave melodies, or the so called "doublings". They ornament, but never obscure it; this may be seen by comparing the Haydn and Mozart variations with the 33 variations of Beethoven, Op. 120, or those of any later composer.

Haydn really made little advance in clavier-music as his best works are for the orchestra. He made the most of the clavier however, in contrasting it with the strings by means of these.

arpeggio chords and octave melodies. Many of these, at that time forbidden "doublings" of the melody, long ago "permitted" however, show him to have been something of an innovator.

Mozart's variations are very like Haydn's, a little more flowing perhaps and giving a greater chance for virtuosity. Yet to the modern pianist they should not offer much difficulty because the technical passages are founded almost entirely on scales and broken chords. Fantasia, No. 2 in C minor, written in the latter half of Mozart's life shows many of these rippling scale passages and pearling figures, with velocity, lightness and precision. The hand is freer too, and rushes more broadly up and down the keyboard; the episodes are not so stiff and show more invention. The compass is sometimes over three octaves. (The Mozart piano had a total range of five octaves). In this fantasia we notice many short notes, 32 nds and 64ths; trills; turns, generally written like grace notes, crossing of the left hand over the right and occasional passages of staccato runs. Great variety of tone is indicated, piano-forte, and pianissimo, but the time is always exact. The arpeggios are played without any of the free roll such as would be used by the modern pianist. Mozart never allowed the course of the left hand to be disturbed even by a "tempo rubato". His emphatic views on this point are seen when he says of Nanette Stein's playing, "She will never attain the most essential and the most difficult and the one absolutely necessary thing in music; that is, tempo".

Clementi was the founder of the so-called English school
of piano-forte playing. The difference between that and the Vienna school of Mozart was perhaps due largely to the different make of pianos. The Viennese pianos had an easy mechanism best suited to a rapid style and the execution of arpeggios. The English pianos preferred by Clementi, had a deeper fall and more sonorous tone and were better adapted to larger forms and brilliant execution. The "Gradus ad Parnassum" of Clementi is the best known of all his works, as it is universally used for teaching. Rubenstein calls it, even today, the surest road to virtuosity. Clementi was a natural teacher and his book was largely made up of exercises for individual pupils to suit the especial needs of their hands. These he was later persuaded to publish. Each study serves a purpose. "The entire piano-forte technic of that period, so materially extended by himself, is represented therein by eminently practical studies. The fingers are made independent of each other, their equalization in strength and endurance promoted, and both hands trained in runs of thirds and sixths, in rolling and undulating passages, in broken chords and in octave playing." 

Clementi aimed to have ten evenly balanced fingers, with an equality of tone and it was he who first started the system of strengthening the weak fingers of the hand by holding down the strong ones and playing with the others.

One of the greatest things Clementi did for piano technic was to introduce modern fingering. He did away with the old rule of not putting the thumb or the fifth finger on black keys and in many of the exercises, chromatics are intro-

#Weitzman, p. 95
duced with the evident purpose of using these fingers. Instead of always using the thumb in a prominent place with a heavy tone as it is easiest to do, he would put it under in the most difficult places in scale passages. On the other hand, he strengthened the fourth and fifth fingers by using them on accented tones.

Here, before going on to Beethoven, three exponents of the Clementi school may be mentioned who greatly influenced later writers; Dussek, Field and Mayer. J. L. Dussek (1760 - 1811), is a forerunner of Schubert, and is important not alone from a technical point of view but from that of true art. He is noteworthy as the first musician to compose altogether for the piano alone, and has been called an anticipation of Chopin in that he made the poetry of the piano a life-work. He was very fond of the pedal and in his works we find it for the first time carefully used. He was one of the first to use syncopations effectively. His works "formed on their appearance the study of all ambitious piano-forte players." One of the best sonatas is Op. 70, "Le retour a Paris", in A♭. The pianoforte setting of the same is richer and fuller than that of any of his predecessors; chords in the compass of a ninth or tenth are frequently employed for either hand and enharmonics are applied in various passages".

John Field, (1783 - 1837 fills a place in the development of piano-playing because of his influence on later writers, #Weitzman, p. 99.
especially Chopin. Everything before this had been a sonate or some regular form, showing some inventive and technical interest. Field, in the Nocturne, a sort of a musical poem, introduced an entirely new form in which feeling and melody exclusively prevailed and he cleared the way for all subsequent works or irregular form appearing as "Impromptus", "Ballades", and "Songs without Words". Field was a pupil of Clementi and always played with the same quiet hands, but with a noticeably unpretentious singing style. He adopted an original fingering, especially suited to the binding of tones which he taught to his pupils. In this, as well as in the harplike quality of the chords and the widespread arpeggios of his accompaniment figures, and the freedom allowed in playing, for instance, in Nocturne II, which is marked "Moderato e molto espressivo", Chopin's works show his influence.

Chas. Mayer (1802 - 62), a gifted pupil of Field's, still shows the effect of Clementi's school in his smooth fluent playing. He published many piano works among them several groups of brilliant etudes, which have come to occupy an established position in piano playing. The technic while not as showy as that in the exercises of Clementi, is equally difficult because of the demand on the strength and endurance of the hand. The arpeggios are all on chord formations, but with skips of the 5 ths, 6 ths, and even octaves between the notes, the fingering is difficult as a good stretch of the hand is necessary for smoothness and fluency in playing. No. 2, 3, 4, Op. 119 are especially good for the left hand
while 8, 9, 11 are equally fine for the right because of the long stretches and octave chords alternating with the middle fingers playing. These Etudes are made still more difficult to play well because of the many dynamic and the constant use of the pedals, which necessitates bringing out the melody and expression while playing at the same time, the difficult accompaniments.

Ludwig van Beethoven (1770 – 1827), as the founder of the dramatic school marks a transition between two periods, though he is often called the last of the Vienna school too, because some of his works especially the early ones, show the influence of Mozart. Beethoven, however, brings an entirely new quality to music in the development of great musical ideas from simple motives. These he develops for the piano with orchestral effects hitherto unknown on the instruments. Great contrasts and sonorous effects are obtained in his works by the use of sweeping octaves, strong basses and heavy chords. Rhythm is always predominant. Some of the later works, as Op. 111, contain passages almost too large for the piano of that time in their use of dynamic force and the extreme compass of the octave passages.

Contemporary with Beethoven was Franz Schubert (1797 – 1828), who did more for the spirit of piano technic than the form as the following quotation may explain; "Let not him who has not delicate fingers touch Schubert. To play him means to have a dainty touch. The Key-board appears immaterialized; only so much of the mechanism seems to remain as is necessary to render living the conception of this beauty. #

Bie, p. 226.
Many of the highly original musical ideas of Schubert were used by later composers; the Schubert Songs were first made popular in Germany by Liszt in his piano transcriptions and the Dances as arranged in the "Soirees de Vienne".

After Beethoven, arose a school of artists who brought the technic of the piano up to such a point that the works of Chopin and Liszt are a natural outcome. J. N. Hummel (1778 - 1837), the first of these and a contemporary of Beethoven marks the culmination of the Viennese school of Mozart, though he was also a pupil of Clementi, Hummel was a great theoretician and his "Pianoforte-Method", published 1838, and containing many rules of technic, fingering and execution which though almost obsolete now were at that time distinctly original. In the examples of this book Hummel introduced many novelties in sound effects and composition which have proven of more value than the rules. His piano works also show many new and interestingly difficult passages, as well as the general trend of the fashionable music of the time, as seen in the striving for effectiveness in the heavy chords, chromatic runs, modulations, passages, of thirds and closing bravura runs.

John Baptiste Cramer (1771 - 1858) a genius of technic and Clementi's most zealous pupil will always hold a place in piano and literature for his splendid "Etudes", which are fine studies without titles each one of great musical as well as technical value. Cramer like all musicians of the older school was very particular about the position of the player's body, that he should sit exactly before the middle of the
piano. The hand also was to be held perfectly quiet and level with the wrists; the fingers alone were allowed to move. Like Clementi, he often held a coin on the back of the hand in practising. With several other musicians he was interested in the "chiroplast", a mechanical device to hold the hands in practising.

Ignaz Moscheles (1794 - 1870), another very audacious and brilliant musician of this time leaves also some fine piano-forte compositions. "To his finest works, belongs the "Studies", for the higher finish of already advanced pianists, consisting of twenty-four compositions, provided with fingering and explanatory notes. Op. 95, nine character studies, and Op. 11, four concert Etudes, with such titles as Zorn, Widerspruch, Versohnung, show the attempt of the composer to imbue his creations with distinct meaning and in this he met with better success than any of his predecessors. Moscheles also attained, by the frequent but well calculated use of the pedal (which Hummel quite neglected), and by the greater strength and diversity of touch, effects unknown to the master just names. We must therefore regard him as one of the most influential amplifiers of the art of piano forte playing".

Moscheles, in 1837, ventured to introduce piano music without an orchestra, but a singer was generally employed to fill in the gap. The serious nature of a concert was as yet little understood.

Carl Maria von Weber (1786 - 1826). "The development
of modern piano-forte technic, the wider extension of the chords and the more sonorous passages, we owe after Moscheles in no small way to C. M. von Weber". His technical ideas turned toward sonority, rather than elegance or velocity. He was a splendid performer and made great demands on his instrument to obtain certain effects. As much as any man of the time he helped to increase the admiration for Beethoven's works. Weber is especially remembered today because of the variations on operatic airs and popular national dances.

Carl Czerny (1791 - 1857), who belongs to the brilliant school of pianoforte playing of the later Viennese period, was the great man of practice. He had a science of mechanism in which he had all the fingers well trained and under perfect control, so that the acquired ease and facility of technic could be applied to music. Without his work an advance to Chopin or Liszt (who was a pupil of his) could hardly have been possible. A glance at his piano compositions will show that he left nothing undone that would perfect technic in any way. (1) Velocity, Op. 299, 40 exercises, (2) embellishments, op. 355, 70 ex., (3) left hand, op. 399, 10 ex., (4) school of virtuosity, op. 365, (5) art of fingering op. 740, 50 ex., (6) also Etudes in thirds and for the left hand alone. In his book, the "Art of Execution", the explanation of how different composers should be played is very interesting. Clementi "with a steady hand, firm touch and tone, distinct and flowing execution, precise declamation; Cramer and Dussek

#weitzman, p. 139.
without glaring effects, with gentle legato and due use of the pedal, clearly, staccato, with spirit and vigour; Beethoven and Ries characteristically, passionately, melodiously, with a view to the tout ensemble; Hummel, Meyerbeer, and Moscheles brilliantly, rapidly and gracefully, with definition in the proper parts, and intelligent but elegant declamation. Thalberg, Liszt and Chopin, the great innovators form a class apart."

Adolf Henselt, a highly accomplished virtuoso marks the last of the brilliant school and is best known for the Concert Etudes, which are very musical as well as showy. The use of extended rapid arpeggio figures, and difficult rhythm makes them very hard to play with the smooth fluency and lightness necessary to make them effective. Many new and novel effects are introduced and the titles of his compositions show him to have a tendency toward the romantic school.

Friedrich Kalkbrenner (1784 – 1849), like the other men of his time was a great virtuoso. He was much interested in the chiroplast or hand-guide, and apparatus for holding the fingers while practising and was one of the first men to conceive the idea of strengthening the fingers, by holding down four fingers and exercising one. "He became the head of the modern French school, whose foremost precept in playing was to avoid all exercise of the arm and to concentrate the entire entire strength in the fingers, which are to be equally developed in both hands. He not only required passages in thirds and sixths to be executed by the right or left hand, but added to #Bie, p.217.
the same higher octave of the lower tone; he introduced effective double and triple trills, and was the first to write extended compositions for the left hand alone which he played with finished ease.


Sigismund Thalberg, was a brilliant performer whose playing made his works popular during his lifetime. Their chief characteristic is a stencil-like melody, played with the thumb of the right and left hands alternately, the other fingers executing arpeggios covering the entire keyboard. This wide-spreading, harp-like accompaniment to a melody of medium pitch was later used most effectively by Liszt.

F. F. Chopin (1809 - 1849), wrote chiefly for the piano alone, and was the first man to put the instrument on a sure and independent footing. Chopin was the first musician to institute concert evenings, consisting wholly of piano music. He realized as none of his predecessors had done the artistic value of the evanescent tone of the piano which was at first considered its greatest defect. The pedal he used with a new and altogether charming effect, by means of it holding the parts of the music together. "The fingering also he regulates for himself. For the sake of a better execution he never objects to put his thumb on a black key, or to let longer fingers pass over the shorter without using the thumb. In his Etudes he has expressly written marks for many such naturalistic
fingerings. It is this method of fingering and arranging his compositions that makes them seem to favour the weakness of the human hand; everything lies conveniently to the fingers. While his music calls for a good technic, yet it is rather the individualized fingers of Bach than the ten equally developed fingers of Clementi. By this Bach-like method of carrying or developing a melody with any fingering, as Bach does in the fugues, he enlarges the capacity of the two hands infinitely and the richness, volume, intensity, melody and invention which he has thus attained, has made the piano like a small orchestra.

In Chopin we have the perfection of the Etude form. It first sprang into favour which the preceding school of technists and was entirely different from anything previous to this time as the contrapuntal, thematic or leit-motif. Bach partly used the idea when he treated the motive contrapuntally, by imitation, in all the fingers from an artistic standpoint; Chopin and his predecessors treated it according to the mechanical possibilities. It is essentially a short form; the tune is condensed in the technical motive, but all the heights and depths of an emotion are touched with a sparkling brilliancy. It is interesting to compare the way in which Chopin develops into elegant little pieces the same technical ideas seen in Clementi's book of exercises. Chopin's "black key" Etude, Op. 10, No. 5, No. 7, rapidly repeated notes, No. 8 in F minor, sweeping arpeggios, No. 11, widespread, arpeggio chords, No. 10, in legato sixths, Op. 25, No. 2, cantabile, singing legato, No. 6, in thirds, and No. 10 in octaves, all

#Bie, p. 203, ff.
have technical counterpoints in Clementi. Chopin realized in the Etudes the possibilities of the broken chord, arpeggios, finger-changing, scales, seventh chords and octaves and presented them not in the manner of Clementi, but with an inseparable musical spirit, which makes us realize that all the greatest, most intangible, and most permanent pieces in music are built on the simplest chord forms. Bie says of Chopin and Schumann, they cannot think technic without feeling character. "This technical setting of the form, and the technical expression pass over entirely into the consciousness of the time and create new works in chamber music, opera, and orchestra." #

Franz Liszt (1811 - 1886), marks the culmination of piano art. On his instrument he ventured to "give sound to unheard of: leaps, which none before him had ventured to make, "disinjunctions" which no one had hitherto thought could be acoustically united; deep tremolos of fifths, the utmost possible use of the seven octaves in chords set sharply over one another, resolutions of tied notes in octaves with harmonies thrown in, and employment of the interval of the tenth to increase the fulness of tone color, the naturalistic use of the tremulo and glissando, and above all a perfect systematization of the method of interesting the hands, to bring out colour, power and a fulness of orchestral chord-power never hitherto practised". In the transcriptions, Liszt has arranged many melodies from earlier composers most effectively for the piano. In these he has introduced the

#Bie, p. 205.

/Bie, p. 283.
three systems of notes, by which he attains many splendid
effects. The pedal is used by Liszt to hold tones while the
hands are set free to play something else. By this means
and also by careful fingering Liszt has broadened and en-
larged the piano to almost the capacity of the orchestra.
"Scales struck by one finger, trills played with changing
fingers, strenuous parallel octave passages, heavy fingering
in order to bring out parts which otherwise glide too lightly—
everywhere there is an attempt to grasp the effect of the
moment. And thence arises a soul-giving power even down to
the most trifling passing note, until the man and the play-
ing are one". #

#Bie, p. 286.

The following examples which are appended have been
chosen from the actual piano works of a few representative
composers in an attempt to show by actual illustrations how
gradual and how complete was the development of piano-forte
technic. To understand this more clearly imagine Haydn or
Mozart confronted with a very technical passage from Liszt;
they would almost think they didn't have fingers enough, so
great was the change from the music of their time to that of
the present.
BIBLIOGRAPHY.


Beethoven.

Op. 10 No. 6

"Black key"

Vivace, brillante

Op. 10, No. 1

Vivace

Allegro con brio

Allegretto

Chopin

Etude - Op. 10, No. 2

Allegro - sembre legato.

Op. 111

"Piano"
Andante F minor: Variations

1. Octave melody (bass)
2. Crossing hands
3. Tied note (bass)
Gradus ad Parnassum.
Rondo C major

Compare these accompaniment figures in bass with Chopin.

Waltz.

Ballade G minor.

Nocturne II - moderato e molto espressivo.

Respirando.

Ped.
See Ricordanza - Etude 15 for an extended passage from the top of the keyboard.