ABSTRACT

The purpose of this study was to determine changes in approaches to teaching piano technique from 1800 to the present time in relation to (1) the development of the piano, (2) the evolvement of new literature, and (3) the professional development of piano instruction, with limitation to finger skills only.

A bibliography was compiled from card catalogs, abstracts of doctoral dissertations and master's theses, the Reader's Guide to Periodical Literature and the results of a survey of seventeen piano instructors. In addition to bibliographical material, representative compositions from each period were studied to determine changes in technique relating to the three factors stated in the purpose of this study.

The following are the conclusions based upon this study:

I. There has been a correlation between piano development and attitudes toward teaching of technique. Piano developments with corresponding changes in technique are: (A) evolvement of keyboard, (B) development of iron frame, (C) extension of keyboard, (D) invention of double-escapement mechanism, and (E) change from hard leather to soft felt on hammers.

II. The attitudes toward teaching technique have changed as a result of literature written for the piano. This literature is divided into two categories: (A) literature that required further development of the piano, and (B) literature written

to bring to realization the full potential of the existing instrument.

III. Pedagogy has acted as a developer, not innovator, of technique, but it has innovated new methods for accomplishing existing technique.

IV. This study shows that additional influence on teaching of technique has come from the performer, who has figured prominently in relation to all three factors investigated in this study.

On the basis of the findings of this study, recommendations for further study have been made.

A HISTORICAL STUDY OF THE CHANGES IN ATTITUDES TOWARD THE TEACHING OF PIANO TECHNIQUE FROM 1800 TO THE PRESENT TIME

By

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TABLE OF CONTENTS

CHAPTER V

CHAPTER VI

LIST OF MUSICAL EXAMPLES

LIST OF APPENDICES

CHAPTER I

BACKGROUND OF THE PROBLEM

Since the sixteenth century increasing interest in the keyboard instrument has been paralleled by an interest in realizing its potential. These interests were evidenced in the initial stages of an idiomatic style of writing for the instrument in the keyboard pieces of the 1500's. The development of keyboard interest has continued through each subsequent period to its unique individualized status of today. Many keyboard performers have sought to exhibit the capabilities of the instrument as well as their own technical ability. Some performers have taken time to write down their suggestions and ideas as to "how to play" the instrument. These ideas and suggestions later evolved into a methodology in a separate branch of pedagogy intended to perfect keyboard and, ultimately, pianistic abilities.

Since this development of keyboard interest has existed within a time when printing was available, and because a large part of the growth of this interest has been comparatively recent, many of the writings are still accessible for examination. Examples of such early writings are Il Transilvana (1597) of G. Diruta and the famous L'Art de Toucher le Clavecin (Paris 1717) of Francois Couperin. Other later significant contributions are Essay on the Fine Art of Playing Keyboard Instruments of Karl Philipp Emanuel Bach, The Interpretation of the Music of the XVIIth and XVIIIth Centuries of A. Dolmetsch and the four books of Tobias Matthay: The Act of Touch in All Its Diversity (1903); The Forearm Rotation Principle in Pianoforte

Playing (1912); Relaxation Studies in the Muscular Discrimination Required for Touch Agility and Expression in Pianoforte Playing (1908); and The Visible and Invisible in Pianoforte Technique (1925). Most of these works concern the technical skill of handling the instrument which for keyboard personnel falls under the one heading, "Technique."

The contributors of each period to the repertory knowledge of technique have sought not just to equal the technical demands of existing literature but to exceed them. One can then justifiably speculate as to whether music of composers such as Franz Liszt stemmed from musical concepts which "incidentally" utilized certain technical procedures, or whether the musical ideas were contrived to include the insertion of a recently acquired technical feat. The resolution of such speculation is not important to this study, but the situation upon which the speculation is based is pertinent as possibly having motivated expansion of keyboard technique. In the process of development of keyboard music and musicians, technical innovations resulting from various motivating factors have required either an expansion or a modification of existing technical abilities. In either case corresponding changes in pedagogical approaches have been needed.

SIGNIFICANCE OF A STUDY

The major accomplishment in playing any musical instrument is in the technique of handling the instrument. Teachers and performers have sought to utilize technical exercises that would accomplish the most in the least amount of time. Purposeless exercises waste valuable time for both the student and the performer. They contribute nothing to the learning process and in fact may be detrimental to proper technical development. A better understanding of how the relative values of the various kinds of piano technique have changed throughout the years of piano performance could greatly aid the

teacher in making suitable choices of technical exercises for music of both the past and the present. The significance of this study is that it deals strictly with these changes in technique and the approaches to the changes as revealed by historical research and evaluation of the actual piano literature of each century. It should serve to pinpoint for the teacher the pianistic demands of each century as well as the process of adding new technical approaches to meet these demands.

PURPOSE OF THE STUDY

The purpose of this study is (1) to determine changes in pedagogical approaches to the teaching of piano technique from 1800 to the present time and (2) to investigate these changes as they relate to these three factors:

1. The development of the piano and the corresponding understanding of its potential which opened new possibilities of pianistic sound requiring new types of technique.
2. The continuous evolvement of new literature for the piano necessitating different kinds of technique.
3. The professional development of piano instruction that resulted in a concern to improve methods of teaching technique.

LIMITATIONS

Many areas of technique, such as pedaling, are worthy of study, but this paper will be limited to a historical study of only the changes which have taken place in the finger skills of piano technique and the resulting changes of pedagogical approaches as they have direct bearing on the three motivating factors given in this paper.

SCOPE OF THE PROBLEM

Before one can discuss changes in technique or their pedagogical approaches, an existing premise must first be stated as a point of departure and as a point of reference for a more extensive appreciation of forthcoming changes. To satisfy this requirement a summary of approaches to keyboard practices of the 1700's will be presented. A study will then be made of changes in these approaches from the eighteenth century until the present time.

The specific finger mechanics with which the study will be concerned are:

1. Fingerings
2. Hand position
3. Principles of weight placed on fingers during execution of different passages
4. Approaches to relaxation of the fingers, wrists and arms
5. Basic technical pianistic skills considered necessary as indicated by the studies and drills used
6. Technical demands of material being performed, as indicated by a technical analysis of representative literature of each period

DEFINITION OF TERMS

For the purposes of this study, terms are defined as follows:

Change - evolvement of ways of manipulating a musical passage that could expand existing procedures for handling such a passage or could demand a completely new set of procedures.

Pedagogical approach - an instructive method for the mastery of any facet of pianistic technique.

Piano technique - for the purposes of this paper only, the finger skills of piano performance.

Finger skills - physical agility of the fingers and corresponding hand and arm weight.

METHODS OF COLLECTING DATA

The card catalog of the Michigan State University Library, abstracts of doctoral dissertations and masters' theses, and the Reader's Guide to Periodical Literature were searched for material pertinent to this study. A survey was taken (Appendix A) of seventeen piano teachers (Appendix B) as to valuable bibliographical material and to representative piano literature of each century to be studied. Schools represented in this survey in alphabetical order are as follows:

Boston University
Columbia Teachers College
Michigan State University
Northwestern University
North Texas State College
Oberlin College
Peabody Conservatory of Music
Texas Wesleyan College
University of North Carolina
University of Oklahoma
University of Southern California
University of Texas
Wichita University

As a result of this survey, suggested books not already in the bibliography were included and from each century representative compositions were analyzed for their technical demands. The attached bibliography and an analysis of the representative piano literature have served as sources for this study.

TREATMENT OF DATA

The bibliographical material was studied to determine background upon which the study could be based. Further research was

conducted to discover changes necessary in approaches to piano technique as these changes were related to the three factors stated in Purpose of the Study. Amplification of the material as it relates to these three factors is included under the separate chapters of the study. A representative composition from each century was analyzed for technical demands which were characteristic of that century, and which had not existed in the previous century. Some insight into technical approaches to these demands was determined by the fingerings indicated. Other sources of information are found in the studies and exercises recommended in each century.

ORDER OF PRESENTATION

Chapter II will be a summary of approaches to keyboard practices of the 1700's and will include a listing of the predominant keyboard instruments of the day, with discussions of the existing approaches as indicated by books and analyses of representative literature of the times.

Chapter III will be a discussion of changes in pedagogical approaches to piano technique as it was influenced by the development of the piano. This will include a discussion of prevailing attitudes concerning the potential and the limitations of the instrument, as well as the subsequent changes in attitudes as the piano developed. References to specific literature will illustrate a progressively greater utilization of the instrument.

Chapter IV is a discussion of changes in pedagogical approaches to piano technique as it was influenced by the continuous evolvement of new literature necessitating different kinds of techniques for this instrument. References for this chapter will be taken from an analysis of the technique required for the literature from each period, with a discussion of changes from period to period.

Chapter V will be a study of changes in pedagogical approaches to piano technique as it was influenced by the professional development of piano instruction concerned with improving methods of teaching technique. This will consist primarily of reference to letters and articles which were written by teachers and students, and which discuss changes in approaches to existing techniques as well as technical innovations.

Chapter VI will state the implications and conclusions that are supported by this study, and will include special reference to such findings as appear to have particular significance for the overall field of piano pedagogy, plus suggestions for further study.

CHAPTER II

INTRODUCTION

In keeping with the stated purpose of this study, it is necessary to present a brief resume of the historical background of keyboard music. This is not meant to deviate from the original intent of the study. To recognize a change in approaches to piano technique it is necessary to know what the primary approaches were before the change took place. To establish this premise effectively, a summary of pedagogical approaches to piano technique, which was less than a hundred years old at the turn of the century, as well as the pedagogical approaches the piano inherited from previous keyboard instruments, will be presented. The similarity of the harpsichord and the clavichord to the new piano is indicated by Ann Leland Golz:

> " . . . since those early pianos were extremely frail and could be easily hammered out of tune, the style of playing remained much the same as for the harpsichord and clavichord."[1]

Harry Stanton Spangler corroborates the importance of a background study of the keyboard instruments existing prior to the piano:

> "The history of piano playing is inextricably bound with the development of the instrument. One cannot understand the development of the instrument in its entirety unless one is cognizant of . . . the improvement of keyboard instruments. . . ."[2]

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[1] Ann Leland Golz, "Piano Technique and Pedagogy Through Two Centuries of the Development of the Instrument and Its Literature," (unpublished Master's Thesis, Eastman School of Music, 1944), p. 4.

[2] Harry S. Spangler, "A History of Pianoforte Methods, "(unpublished Doctor's dissertation, Department of Music, University of North Dakota. 1951), p. 2.

Further substantiation of the importance of including literature and writings prior to 1800 lies in the extensive amount of keyboard material which was composed in the eighteenth century, and which remains even today as an important part of the repertoires of teachers and performers.

HISTORICAL REVIEW

Development of the Keyboard Instrument

The first instrument which used the balanced (pivoted) keyboard was the organ.[3] Though it obviously required keyboard technique, there is not much correlation between the techniques needed to play this instrument and the piano of the 1800's.

> "Up to this time (1493) the organ-keys were of such a width that in many cases the player was able to stretch only a fifth . . ."[4]

It is impossible, however, to deny the connection between organ technique and that of the immediate predecessors to the piano.

> "Keyboard instruments. Generic name for instruments having a keyboard, particularly with reference to the period prior to c. 1750 during which there was frequently no clear distinction between the repertoires of the organ, the harpsichord, the clavichord, etc."[5]

The earliest string instrument to utilize a keyboard was the monochord. This instrument, a combination of harp and keyboard, was in existence after the tenth century.[6]

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[3] Albert E. Wier, The Piano, Its History, Makers, Players and Music, (London, New York: Longmans, Green and Company, 1940, p. 1.

[4] Ibid, p. 2.

[5] Willi Apel, "Keyboard Instruments," Harvard Dictionary of Music, (Cambridge, Massachusetts: Harvard University Press, 1961, p. 388.

[6] Robert Alfonso Henry, "An Analytical Survey of Modern Trends in Piano Technique," (unpublished Master's thesis, Los Angeles, University of California 1944), p. 16.

Echiquier

The earliest of string instruments which is believed to be the prototype of later keyboard instruments was the echiquier. Its exact description is not known, but authorities believe it to have been a type of clavichord with a primitive hammer action. This instrument was in existence as early as the fourteenth century.[7]

Virginal

The virginal was the popular keyboard instrument of England in the fifteenth and sixteenth centuries. It was a one-manual instrument with only one string for each note, and was played by means of a keyboard. It is similar to the harpsichord in that the tone was produced by depressing a key which caused a small quill to pluck the string.

Clavichord

The clavichord is the earliest type of stringed keyboard instrument about which specific information is available. Its known ancestry goes back to the sixth century B.C., when Pythagoreans used a monochord for his experiments in musical mathematics.[8] The clavichord itself progressed from a simple stringed instrument with a row of keys, each of which had a metal tangent that when struck produced a small, delicate tone, to its classic form in the seventeenth century. "The mechanism was enclosed in an oblong case three to four feet long and two feet wide. The sound was produced by means of small metal tangents attached to the ends of the keys: these tangents gently struck the strings from below. A certain nuance was possible but only within a limited range. One technique peculiar to this instrument was the Bebung, or tremolo, which produced a slight vibrato or fluctuation in pitch."[9] At this point the clavichord had at least one string per key

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[7]John Gillespie, Five Centuries of Keyboard Music (Belmont, California: Wadsworth Publishing Company, 1965), p. 3.

[8]Ibid, p. 4.

[9]Ibid, p. 6.

and sometimes two, whereas one string was used for several keys in the earlier instrument. In the sense that nuance could be produced by the manner in which the key was struck, the clavichord was similar to the piano.

> "In a certain respect it approaches the pianoforte since gradations of sound can be obtained by using a lighter or stronger touch. These nuances, however, are extremely slight since the whole dynamic range of the clavichord varies from a pianissimo quality to a mezzo-piano at the most."[10]

The clavichord was an instrument popular with both Johann Sebastian Bach and his son, Karl Philipp Emanuel. The instrument was also praised by both Mozart and Beethoven, though popular interest in the clavichord disappeared in the eighteenth century.

Harpsichord

The harpsichord assumed a major role in the music of the seventeenth and eighteenth centuries. As with the virginal, the sound is produced by the plucking of the strings by quills.

> "In investigating the character of the harpsichord, considering the confusion of terms which seems unavoidable in a discussion of early keyboard instruments, we must bear in mind that this instrument was in all respects exactly like the spinet or virginal (which, as we have seen, were identical) except that it had two or more strings to each note. In other words, it was a double, triple or quadruple spinet, and because its mechanism was of greater complexity, required a larger and differently shaped case. The outward form of the modern grand piano differs in no essential respect from that of the harpsichord."[11]

In the seventeenth century there were two sizes of harpsichords. The shorter had only one keyboard, with a range of three octaves and a sixth. The longer had two, the upper keyboard having a range of three octaves and a semi-tone, and the lower a range of four octaves. The

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[10] Willi Apel, Masters of the Keyboard (Cambridge, Massachusetts: Harvard University Press, 1953), p. 16.

[11] Wier, Op. cit., p. 11.

two keyboards provided three different dynamic levels. Unlike the clavichord, the harpsichord could not produce dynamic nuance.

> "During its golden age from 1650 to 1750, the harpsichord varied from six to eight feet in length and ideally had two keyboards, each with about five octaves. . . There were three or four sets of strings sounded by means of small quills or leather plectra hinged on wooden jacks. . . Each set of strings varied in pitch and tone quality. These strings were operated by means of stops placed above the keyboard. Frequently there was a lute stop, a device that dampened a given set of strings by means of small pieces of cloth or felt in order to imitate the lute sound. Since crescendo and diminuendo were impossible on this plucked instrument, it was necessary to have different timbres or tone colors produced by the sets of strings."[12]

The importance of the harpsichord is substantiated in the following quotation:

> "During the seventeenth and eighteenth centuries the harpsichord held first place among all musical instruments. Apart from its virtuoso role, it was indispensable as a sustaining and accompanying medium: it was heard in church lending its support to the choir: it was seen in the salon, where it accompanied sonatas and played an important part in other chamber music: and it was found in the orchestra as an integral part of the orchestral apparatus."[13]

Unlike the other early keyboard instruments, the harpsichord has maintained a degree of popularity in that it is still fairly frequently performed upon even in the twentieth century.

Piano

The necessity for overcoming the limitations of the harpsichord is indicated by the following quotation:

> "THE PIANO was invented 'to obviate the bad habit of the harpsichord which could not express coloring at all, or expressed it in exaggerated contrasts by its stops.' The problem was solved by devising a lever that slung a hammer against the string when the

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[12] Gillespie, Op. cit., p. 8.

[13] Ibid, pp. 7-8.

finger pressed the key: the force of the pressure was answered by a corresponding force in the resulting tone."[14]

In 1709 the Florentine instrument maker, Bartolommeo Christofori, produced a harpsichord with hammers. This instrument was named "gravicembalo col piano e forte," (harpsichord with soft and loud).[15] Later the name was shortened to pianoforte, and in recent years to just piano. Improvements on the instrument made by Christofori included the escapement mechanism, the single damper to each string, and the side-slip, which was the origin of the una corda, or soft pedal. It was John Broadwood who first patented a pedal for the piano, and through his influence it abandoned the tradition of the harpsichord. It became much heavier, it was given the two modern pedals, and its keyboard, instead of being recessed between the walls of the case, projected so that the hands of the virtuoso were visible.[16] It was this same Broadwood who manufactured Beethoven's favorite piano.

Though in many ways this new piano was an improvement over the harpsichord, it is closer in resemblance to the harpsichord than to the mighty piano that is known today. The following quotations support this statement:

> "He (J. S. Bach) was a master of the clavichord and harpsichord and he undoubtedly played the Silbermann pianos with a harpsichord touch. Admittedly Silbermann's instruments in 1747 were a long way from the instrument we know today, being light in action and feeble in carrying power. But they did have a wider dynamic variety than anything known up to then, and Bach was not the man to take full advantage of their potentialities.

> "The piano by then (1800) was well established. It had a five-octave normal range, and sixty-one keys as against today's eighty-eight. Knee-action pedals were in general use, though

[14] Curt Sachs, The History of Musical Instruments, (New York: W. W. Norton and Co., 1937), p. 391.

[15] Gillespie, Op. cit., p. 9.

[16] Sachs, Op. cit., pp. 394-395.

> the foot pedal introduced in England was beginning to make its way. Tone and action were light; the iron frame was still to come. With its wooden framework, the pre-1800 piano could not have had much resonance. Nor did it have a robust physique, and strings and hammers were forever breaking. Many of the early pianos had harpsichord-like stops. It took some time even for piano manufacturers to realize that dynamic changes had to be produced by the fingers and not by mechanical registrations. Not until well over a hundred years after its invention did the instrument develop into the massive iron-and-wood piece of equipment we enjoy today."[17]

Further developments of the piano will be covered in Chapter III of this study.

Background of Keyboard Literature

It has already been established in the beginning of this chapter that prior to 1750 an idiomatic keyboard style had not been developed.

> "The early keyboard music of the fourteenth and fifteenth centuries was in choral style as opposed to keyboard style."[18]

Willi Apel says:

> "Our documented knowledge of keyboard music begins shortly after 1300. A manuscript in the British Museum, known as the Robertsbridge Codex, contains the earliest organ compositions that have been preserved.
>
> "Suffice it to say that the principles involved here are exactly the same as those which were employed at the same time in Italian vocal music."[19]

Though it is known that the earliest keyboard instrument was the organ and that it had considerable effect on other keyboard music, it is also true that keyboard music was interchangeable among all existing keyboard instruments.

> "In the early sixteenth century very little distinction had been made between works for harpsichord and works for organ. . . .

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[17] Harold C. Schonberg, The Great Pianists. (New York: Simon and Schuster, 1963), pp. 17-19.

[18] Gillespie, Op. cit., p. 16.

[19] Apel, Op. cit., pp. 20-21.

> In other words, the stringed keyboard instruments had not developed enough of a basic style to warrant independent compositions of their own."[20]

In the latter part of the sixteenth century an independent literature for harpsichord and clavichord emerged as a synthesis of two elements--evolving lute and organ style. The final step in the development occurred when composers reassigned these lute and organ devices to create a new style for the harpsichord and clavichord.[21]

An indication of the technical demands of the keyboard music of the fifteenth and sixteenth centuries can be found in a score composed by Hans Buchner for organ, (1483-1540). This music is written in four parts with imitation in each voice. It requires fluent fingering and chord technique. Further evidence of the highly technical performance required appears in the compositions of Pierre Attaingnant (Paris 1530?). His three Clavier Studies demand a technique drilled in the intricacies of polyphonic playing, clean finger executions, and chord playing.[22] A comment on the value of keyboard music of this period is made by Shirley Balk:

> "A study of early contrapuntal works will aid the student's appreciation of twentieth century compositions."[23]

During the Baroque period keyboard instruments developed to their greatest height. A number of the innovations of Baroque music which had their influence on keyboard technique are:

1. Church modes yield to major-minor tonality.
2. Science of harmony is developed.
3. Tonality is stablished and modulation is included.
4. Dissonance became part of expressive language
5. Melodies become more instrumental than vocal.

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[20] Gillespie, Op. cit., p. 33.

[21] Ibid, p. 34.

[22] Spangler, Op. cit., pp. 6-8.

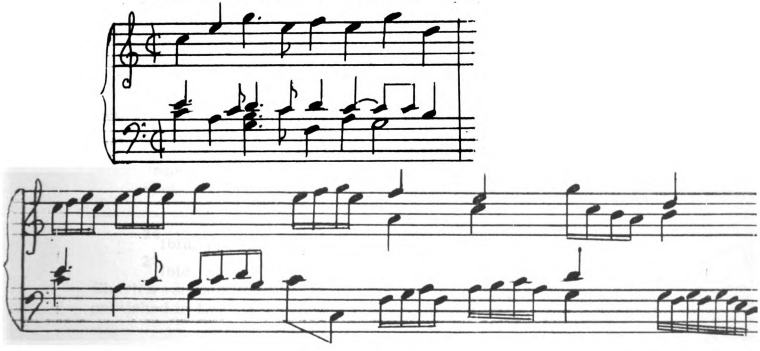
[23] Shirley Balk, "A Comparative Study of Early and Contemporary Elementary Keyboard Literature," (unpublished Master's thesis, Department of Music, Illinois Wesleyan University, 1950), p. 13.

A. Larger intervals.
B. Melodic leaps in either direction.
C. Repeated motives and phrases with echo effect of terraced dynamics.

6. Baroque rhythm as applied to harpsichord music is spirited and vital; since it is not possible to accent on the instrument, rhythm depends on phrasing, note values, harmony, and ornamentation.
7. Ornamentation plays a significant role in Baroque keyboard music.
   A. Embellishments such as trills and mordents are used differently by each composer.
   B. Ornaments are used to maintain rhythmic accent; to delineate a slow, lyrical phrase line; to introduce dissonances; to create an elegant style.
8. The changing of texture from polyphonic to homophonic results in the harmono-polyphonic style.[24]

John Gillespie[25] describes the striking device favored by virginal composers in their method of embellishing melodic segments and phrases by the addition of notes. This becomes a type of instrumental variation wherein the original motive at times becomes so encumbered with extraneous notes as to be completely transformed.

Ex. 3 Giles Farnaby: Rosalis (Sundew)



[24] Gillespie, Op. cit., pp. 38-39.

[25] Ibid, pp. 51-52.

Many of the virginal pieces are technically quite difficult, with such devices as repeated notes, rhythmic patterns of all kinds either used singly or combined with other rhythmic patterns, low-spaced thirds and a free concept of texture which includes both polyphonic and harmonic passages with florid passages in the bass line. All these point up a keyboard idiom apart from organ style.[26]

The keyboard music of this period was heavily ornamented, the style and amount of ornamentation seeming to differ not only from composer to composer but from performer to performer. According to Charles van der Borren:

> "From the multiplicity and the comparative confusion of these interpretations, we may come to the conclusion that the question of deciding how the virginalistic graces ought to be executed is still far from being settled. Moreover, the problem is of no very great importance; we have, in fact, a conviction that the graces are purely superficial ornaments only, the presence of which has no determining influence on the stylistic physiognomy of virginal compositions. In that particular the latter differ entirely from the French pieces for the harpsichord of the epoch of Couperin, in which the graces have generally a decorative value. It suffices to read (them) just as they are--that is to say, deprived of their ornaments--to come to the conclusion that these compositions are wholly sufficient in themselves, and that the mordents and shakes add nothing to their beauty."[27]

An additional source for the music of the virginalists is Willi Apel, who refers to their work as extremely important in early keyboard music and deserving of considerable examination. About the specific technical demands he writes:

> "Numerous elements of the pianistic technique--rapid scales, broken-chord figures, quick passages in parallel thirds and

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[26] Ibid, pp. 52-53.

[27] Ibid, pp. 53-54. This is a quotation from page 143 of Charles van der Borren's The Sources of Keyboard Music in England, published in London by Novello and Company in 1913.

> sixths, broken octaves, and so on--appear here and are exploited with an astonishing degree of virtuosity. As may well be expected, the compositions in which this virtuosity is carried to the highest point are not necessarily those of the highest artistic significance."[28]

In the music of Domenico Scarlatti are found the most extensive demands of the technical contribution of the Italian cemba'o music.

> "More than any of his contemporaries, Scarlatti prepared the way for a future school of piano composition."[29]

The technical requirements of the cembalists' music included sweeping arpeggios, prolonged trills, fugato passages, cross-hands, "crush" or role, repeated notes, trills, appoggiatura and acciaccatura. In the works of Francesco Durante (1684-1775) were found parallel octaves, sixths, and thirds, and in the works of Azzolina della Ciaia (1671-1755) there are expansive leaps, profuse ornamentation and an early example of an upward glissando. Not to be ignored is the much-used "Alberti bass," which appeared a little later and is associated with the composer Domenico Alberti (ca. 1710-1740).[30]

The French clavecin school, of which Francois Couperin is perhaps the best known, represents an important contribution to keyboard literature. These clavecinists did not, however, extend the technical demands that were already in existence. Some sources feel that the contribution of the French clavecinists is akin to that of the English virginalists.

> "The German musicologist Max Seiffert held the opinion that the French clavecin school received its impetus from the English virginal school through French lutenists. It is true that the French lutenists used the English type of florid variation, and furthermore the use of evocative titles and symbols for ornaments can also be traced to English origins. . . . They therefore

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[28] Appel, Op. cit., p. 61.

[29] Gillespie. Op. cit., p. 69.

[30] Ibid, pp. 73-74.

> appropriated the style but adapted it to the more flexible capabilities of their keyboard instrument."[31]

Concerning another type of technique Gillespie writes:

> "English virginal composers favored the broken-chord ending, and the French lutenists gave it importance as an integral part of their style brise or broken style. . . ."[32]

Donald Jay Grout alludes to this similarity of the two schools.

> "This was the 'broken style' which other French composers adapted to the harpsichord, together with certain features of the variation technique derived from the English virginalists; they also systematically developed the use of little ornaments (agrêments), sometimes indicated by stenographic signs on the page and sometimes left to the discretion of the player."[33]

Francois Couperin made an outstanding contribution to the pedagogy of this period in his book L'Art de toucher le Clavecin (1717), which will be discussed later in this chapter.

The outstanding figure in Baroque keyboard music, on the basis of the amount of literature written for the instrument, the culmination of the technical capabilities of the instrument, and the contributions toward keyboard pedagogy, was Johann Sebastin Bach.

> "He (Bach) did, however, take the existing forms of keyboard music, strip them of all superfluity, and polish them to a high peak of perfection. . . .
>
> With few exceptions, every piece that Bach wrote reveals an earnest objective aided by a formidable technical apparatus. The technical apparatus, however, never obtrudes; it serves as a cleverly concealed scaffold upon which Bach builds his magnificent tonal edifices."[34]

Even in Bach's time there was not a completely established idiom for each keyboard instrument.

> "With the impressive development of the school of German harpsichordists and organists from Froberger to Bach, the distinction

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[31] Ibid, p. 82.

[32] Ibid, p. 85.

[33] Donald Jay Grout, A History of Western Music, (New York: Norton & Co., 1960) p. 307

[34] Gillespie, Op. cit., pp. 130-131.

> between the harpsichord and organ idioms crystallized mainly through the mediation of the French clavecinists, but it did not come to an absolutely final separation, even as late as Bach."[35]

Bach used the term Klavier for any available keyboard instrument, rather than specifically to either the harpsichord or the clavichord.

> "The broad use of the word "Klavier" gave rise to endless confusion, for in French and English, clavier means simply a keyboard, not an instrument. In English it sometimes designates a practice keyboard entirely destitute of tone. Champions of the harpsichord and clavichord respectively grow heated in their claims that Klavier always means the one or always means the other. Das Wohltemperierte Klavier is to these enthusiasts a special bone of contention, and clarity is hardly promoted by mistranslations like The Well-Tempered Clavichord and Le Clavecin bien tempere. The plain fact remains that music written for the Klavier was intended to be played on any available keyboard instrument."[36]

This fact is further corroborated by Donald Jay Grout, who writes:

> "The term clavier is used to denote both the clavichord and the harpsichord. It is not always possible in the Baroque period, especially in Germany, to tell which of the two a composer intends in a given piece; sometimes it is even uncertain whether a clavier or an organ is the desired instrument."[37]

Several authorities attest that the fusion of many national elements is apparent in Bach's music. Willi Apel[38] writes of the culmination of Baroque music in Bach, and further states that absorption of the forms and styles of German, French, and Italian music exists in Bach's music in addition to the incomparable mastery with which Bach brought them to their culmination of artistic expression. John Gillespie refers to Bach as the "crossroads" at which all the characteristics of the north, south and west were gathered. He further states:

> "His masterful assimilation of these historical and geographical

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[35] Manfred F. Bukofzer, Music in the Baroque Era, (New York: Norton & Co., 1947) pp. 262-263.

[36] Ernest Hutcheson, The Literature of the Piano, (New York: Alfred A. Knopf, 1964), pp. 8-9.

[37] Grout, Op. cit. p. 347.

[38] Apel, Op. cit., pp. 136-137.

> influences is total. Nevertheless, his own originality is ever present, even in his youthful works."[39]

From these diverse nationalistic backgrounds, the country which influenced Bach the most in the writing of his keyboard works was France. In writing about Couperin's treatise on the art of playing the clavichord, as well as his precise instructions for fingering and for execution of the "agréments," Donald J. Grout has this to say about Couperin's influence on J. S. Bach:

> "Both Couperin's music and his treatise had considerable influence on the keyboard style of J. S. Bach."[40]

In the discussion of Bach's harpsichord music, Hugh Miller writes:

> "The style of Bach's partitas and suites for harpsichord comes directly from the French clavecin school. This is noticeable in the contrapuntal treatment and in the use of embellishment."[41]

Wanda Landowska, one of this century's greatest devotees to the keyboard music of J. S. Bach, suggests several indications of Bach's affinity for the technical as well as compositional devices of the French.

1. Bach admired the works of Couperin and recommended them to his students.
2. Cross-hand technique as done by the French. This was done by Couperin on two keyboards and was for sonority rather than virtuosity. Landowska cites the Goldberg Variations, the Fantasia in c Minor, and the Sinfonia in b Minor as examples.
3. Drone bass characters such as in the Courante from the B flat Major Partita which is similar to Le Moucheron of Couperin. The theme of the A flat Major Fugue from Book II of the Well-Tempered Clavier is almost identical to the Allemande from the first Concert Royal of Couperin.
4. In the first English Suite in A Major, the descending hexachords which exist also in La Venitienne of Marchand, in a gigue of Dieupart and in a gigue of Gaspard Le Roux. In addition in the same suite, a Sarabande with the ornamentions for the same Sarabande, which was a Couperin device.

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[39] Gillespie, Op. cit., p. 130.

[40] Grout, Op. cit., p. 348.

[41] Hugh Miller, History of Music, (New York: Barnes & Noble, Inc., 1955) p. 106.

5. French titles for the suites as well as French forms.

6. As a student, Bach listened to a group of the Duke de Celle which for the most part was made up of French musicians.

7. In the manuscript notebooks of Bach's pupils were pieces by many French composers. In addition to these were Bach's own compositions to which he had added "in stile trancese."

8. The use of the dotted rhythm peculiar to the French, which would have lengthened the dotted note and shortened the smaller note.

9. He used French titles almost every place a dance was concerned.

10. He adopted the ornaments of the French.

In an added editorial note written in 1938, Madame Landowska writes:

> "It is a bad sign that so many keyboard players specialize exclusively in Bach because it is impossible to play and love Bach when one has little knowledge of those he loved and played and with whom his works are tied intimately. . . . Their ignorance of the chief works of Bach, and of the music of Couperin, Rameau, Pachelbel, Buxtehude, and others, is constantly felt in their renderings of Bach's keyboard works. How many times it has happened that the Couperin or Pachelbel have enlightened for me a phrase of Bach's about which I was anxiously undecided!
>
> "I confess that in spite of my fanatical love for Bach, I am able to pass naturally from The Goldberg Variations to the Passacaille of Couperin without any of these shouts if indignation that I have heard from some musicians."[42]

Authorities generally concede that Bach was not an innovator but a finisher. The same apparently is true of the technical demands of Bach's music. One statement which tends to support this belief is the following of Willi Apel:

> "If he (J. S. Bach) ever won universal acclaim, it was for his organ playing, not for his compositions, and the few who were impressed by his works nevertheless regarded them as old-fashioned and involved, as, in a way, they indeed were."[43]

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[42] Landowska On Music, edited by Denise Restout assisted by Robert Hawkins (New York: Stein and Day, 1964), pp. 80-84.

[43] Apel, Op. cit., p. 138.

Perhaps some insight into Bach's contribution to keyboard technique can be gained through the following two quotations from Madame Landowska:

> "In opposition to that, the right hand dominates, sustaining the melody. This is the principle of romantic pianism in which bel canto plays the main role, the rest becoming accompaniment relegated to the background. It produces a lack of balance and we clearly see Bach's admirable construction falter. . . . We should read Mizler, Forkel, and Gerber, who spoke with such enthusiasm of Bach's touch. Clarity and precision, rhythm and lightness made of his playing something unique. . . .Those of his pieces generally considered very difficult seemed trifles to him; he played them with such perfection and ease that they appeared to be nothing more than simple bagpipe tunes; all his fingers were equally developed and capable of the greatest refinement."[44]

J. S. Bach's contribution to keyboard technique, therefore, was not in new technical devices or concepts. In fact, when an authority mentions a technical device of Bach's, he points to an identical or a very similar device used by one of Bach's predecessors. An example of this type of reference is found in Madame Landowska's comments about Bach's using Couperin's type of cross-hand technique rather than Scarlatti's in The Goldberg Variations, the descending hexachords of the English Suite in A major that are identical to those of Marchand in La Venitienne, and his adoption of the French ornaments.

The technical composite of Bach's keyboard works, by and large, is the same as that of the virginalist, the clavecin and the cembalists' schools. Although the contribution of The Well-Tempered Clavier was monumental regarding the advantages of tempered tuning and the technical requirements made in each Prelude and Fugue, the idea had been initiated previously by Johann Fischer (ca. 1710) and in 1719 by Johann Mattheson.[45]

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[44]Landowska, Op. cit., p. 170.

[45]Gillespie, Op. cit., p. 132.

The one area in which J. S. Bach's music does extend the technical concepts of his day is in the linear type of polyphonic writing, which requires a keyboardist to realize from two to five separate and individual melodic lines simultaneously. It is the antithesis of this kind of technique that Madame Landowska criticizes when she writes that "the right hand dominates, sustaining the melody." In support of this kind of technique she quotes Bach's contemporaries, who wrote, "All his fingers were equally developed and capable of the greatest refinement."

Bach's instructional concepts, which include his revision of prior concepts of fingering, will be mentioned later in this chapter.

The next major contributor to keyboard technique was K. P. E. Bach, the second of J. S. Bach's sons. His major contribution was in pedagogy, which will be discussed later in this chapter. His contribution to keyboard literature is in the Empfindsamer Style (expressive style) of playing.

> "Turning now to the 'expressive' group of pre-classical composers, we come to a school in eighteenth-century music which is closely allied to a broader cultural movement of the period, known under the German name of Empfindsamkeit, or sensibility. This movement was represented by literary men, painters, and musicians who, in response to Rousseau's teachings, tried to arrive at an expression of true and natural feelings, anticipating to some extent the Romanticism of the nineteenth century."[46]

K. P. E. Bach lived at the time the pianoforte was becoming increasingly prominent. This change is reflected in his sonatas. The first sonata is called "Claviersonaten," a title which probably indicates the use of clavichord, harpsichord, or pianoforte. The last five sonatas expressly call for the "forte-piano."[47]

The early keyboard works of Franz Joseph Haydn were, like those of K. P. E. Bach, designated to be played on either harpsichord

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[46] Apel, Op. cit., p. 178.

[47] Ibid, p. 181.

or piano.[48] Many sources agree that Haydn was strongly influenced by K. P. E. Bach.

> "The closer we come to Haydn's third period, the clearer become the indications of the influence of Philipp Emanuel Bach. . . .But it cannot be denied that a certain similarity exists between Haydn's Sonata No. 19 and Emanuel Bach's piano compositions. The transparency of the two-part writing in the younger composer, the accompaniment of melodies in high register by low-pitched basses resting on accented beats of the measure, the dramatic development in the first movement, the broad baritone melody of the subsidiary theme in the second movement, and most of all, the unrelenting intensity of feeling permeating the whole work, all show Haydn as a diligent disciple of Johan Sebastian's great son."[49]

Haydn himself stated:

> "'Who knows me well. . . .must have found out that I owe a great deal to Emanuel Bach, that I have understood and diligently studied him.' As a matter of fact, no other composer except Mozart influenced him as much as the north-German master."[50]

Haydn's later sonatas were intended for the piano.

> "Chronology, of course, gives a clue as to the intended instrument. Haydn is supposed to have said that after 1790 he had 'completely lost the habit of playing the harpsichord.'"[51]

As far as keyboard technique is concerned, it is well to remember that though Haydn was moving closer toward greater utilization of the piano, at this particular time the piano was more similar to the harpsichord than to the modern piano.[52] In her research Ann Golz comments on the early piano's capacity for virtuosity:

> "Because of the thinness of tone of the early instruments, melodies were often decorated beyond recognition, and virtuosity seemes to have consisted in an ability to interlace a melody with mordents, turns, appoggiaturas, and chromatic scales."[53]

Though Haydn was an innovator in developing compositional forms and

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[48] Landowska, Op. cit., p. 329.

[49] Karl Geiringer, Haydn, (Garden City, New York: Doubleday & Co., Inc. 1963), pp. 244-245.

[50] Ibid, p. 32. [51] Landowska, Op. cit., p. 329. [52] Loc. cit.

[53] Golz, Op. cit., p. 4.

symphony and chamber music, he did not extend keyboard technique. It appears that as he grew older he was less interested in the keyboard.

> "It is curious that Haydn, who was not a pianist, should have composed more than fifty piano sonatas and several short piano pieces. What seems more logical is the discovery that he progressively lost interest in keyboard composition and concentrated instead on the string quartet and symphony. Haydn wrote only three piano sonatas during the last twenty years of his life."[54]

Ernest Hutcheson summarizes the technical aspects of Haydn's keyboard music as follows:

> "The performance of homophonic music, while less complicated than that of polyphony, makes its own special demands. A keen sense of melodic line and inflection is called for and the subjugation of accompaniment, especially of repeated chords and the broken-chord figures known as "Alberti basses," becomes increasingly important. The technique of Haydn closely resembles that of Mozart and the early Beethoven, abounding in scale and passages, trills and ornamentation."[55]

Wolfgang Amadeus Mozart was a contemporary of Haydn and therefore was composing during the same stages of the keyboard instrument's development. In comparing Mozart to Haydn, Alfred Einstein writes:

> "On the other hand, even where he is not entirely himself, there is always this difference: Mozart was a born pianist, while Haydn always thought in terms of the quartet or the orchestra. How often in Haydn's piano style one feels the translation from another instrumental sphere, while in Mozart everything flows smoothly under the hand."[56]

Wanda Landowska maintains that Mozart felt the piano was best suited to the most expressive resources of bel canto.

> Those who had the good fortune to hear Mozart play the pianoforte were ecstatic in describing his cantilena, which seemed to issue from the throat of a singer rather than from the keyboard of an instrument. His playing in the virtuoso passages was brilliant without being loud and in a moderate and human pace. In the slow movements it became sensuous, yet spirit-

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[54]Gillespie, Op. cit., p. 161. [55]Hutcheson, Op. cit., p. 82.

[56]Alfred Einstein, Mozart, (New York: Oxford University Press, 1962). pp. 241-242.

> ually lively, punctuated by question and exclamation marks and by cesuras, which set off each phrase like an aria or a recitative sung with the loving intelligence only to be found in the greatest singers. There were those who even went so far as to say that when Mozart played a simple scale, it became transformed into a cavatina. 'He had small and pretty hands,' said Franz Niemetschek in his biography of Mozart, 'and he knew how to use them at the keyboard in such a caressing and natural manner that the pleasure of watching him was no less great than that of listening to him.'"[57]

Landowska further suggests that the pianist who would perform Mozart should attempt to develop the control and technique "to reproduce most faithfully: the same kind of sound that Mozart obtained on his piano in his day."[58] It is known that Mozart wrote for his own pianistic capabilities.

> "Even so pure a composer as Mozart wrote for his own capabilities and was never so happy as when he could write to his father boasting of the difficulties he had put into the piano part and how he had "wowed" his audience."[59]

Mozart was the first of the great pianists, and evidently was an extremely well-disciplined pianist, if one judges from the description of those who heard him play and from his own criticism of the lack of technical discipline in other pianists of his time. Unlike Haydn, he wrote most of his keyboard works for the piano.[60]

It was Mozart who during his lifetime first developed the legato touch to its greatest height. Until this time legato was the exception rather than the rule in piano technique.[61] Thirds, sixths, and octaves evidently were not a part of Mozart's "forte," since he scornfully describes Clementi's playing of them, saying that this was the extent of his (Clementi's) forte in keyboard skill.[62]

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[57] Landowska, Op. cit., pp. 306-307. [58] Loc. cit.

[59] Schonberg, Op. cit., p. 12.

[60] Schonberg, Op. cit., pp. 29-35.

[61] Ibid, p. 43. [62] Ibid, p. 48.

Mozart's technique involves a homophonic style of playing with various types of chordal accompaniments. His melodies, especially in faster tempos, include fast-moving scalar passages in both major and minor modes. In his freer forms, such as the Fantasias, he uses sweeping scale and chordal passages. He uses lavishly the ornamentations and embellishments of the day, especially in slower movements.

If Mozart was the first of the great pianists, Muzio Clementi was the first of the virtuosi.[63] Clementi is reputed to have far excelled his contemporaries in brilliance of playing. In technique he is said to have excelled even Mozart.

> ". . . .but Clementi's playing thrilled audiences as Mozart's never did. He has been called the founder of the modern piano school, the Columbus in the domain of piano playing and composition, the father of all technique."[64]

Clementi played on the new English piano, which is thought to have contributed to his success because the action, much easier than even Beethoven's piano, would have made technical feats easier to accomplish.[65] Moscheles commented on Clementi's contributions to the piano as "the cultivation of amazing powers of execution, overwrought sentimentality, and the production of the most piquant effects by the most rapid changes from the soft to the loud pedal, or by rhythms and modulations which, if not to be completely repudiated, should only be allowed on the rarest occasions."[66]

Clementi's technique included a completely quiet hand. This fact will be discussed further under pedagogy in this same chapter. He developed great velocity along with clarity and evenness of scales. In fullness of tone and technical strength, which included double notes

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[63]Ibid, p. 54. [64]Ibid, p. 50.

[65]Ibid, p. 49. [66]Ibid, p. 52.

and octave trills in one hand, he was considerably far ahead of any other pianist of his time.[67]

> "In a way, too, Clementi's music was the first that really exploited the new instrument (piano) . . .There is no question that Mozart's concertos are infinitely superior as music to anything Clementi conceived, but there equally is no denying that Clementi wrote more effectively for the keyboard."[68]

It is true that the development of the piano contributed greatly to the expansion of keyboard technique. It is also true that the development of the piano was aided by the technical capabilities of the pianists, as Carl Czerny indicates:

> "Clementi and Beethoven contributed greatly (between 1790 and 1810) to perfecting the fortepiano by the demands of their playing, and in London, Clementi took part in their manufacture. About 1802 the pedals (formerly called mutations) came into use."[69]

Fritz Rothschild goes on to state that it was Clementi that created the new approach to piano playing.[70] Clementi's contribution to the area of keyboard technique is his "Gradus Ad Parnassum," which served as a builder of technique for many piano students, but also as a model for other collections of technical exercises to follow.[71]

This century's two other great contributors to piano technique and pedagogy were Ludwig von Beethoven and Carl Czerny. Since the more influential portion of their contribution came after the beginning of the 1800's, their contribution will be discussed in Chapters IV and V.

Background of Keyboard Pedagogy

In the late Renaissance and the early Baroque there were schools

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[67] Ibid, p. 53. [68] Loc. cit.

[69] Fritz Rothschild, Musical Performance in the Times of Mozart and Beethoven, New York: (Oxford University Press, 1961), p. 38.

[70] Ibid, p. 40. [71] Gillespie, Op. cit., p. 250.

of clavier-playing in Italy, France, England, and Germany. The Italian school records the earliest system of instruction. Between 1593-1609 Girolamo Diruta wrote a method entitled "Primo parte del Transilvano, dialogo sopra il vero modo di sonar organi, ad instrumenti da penna," (a dialogue between Diruta and Transilvano on the best way of playing the organ and harpsichord). Diruta explains the keyboard, shows the hand position and the use of the fingers, and explains the tablature, or score. Next he selects several compositions to illustrate the difference between organ and harpsichord playing. He teaches how to write melody, to transpose ecclesiastical modes, to accompany a chorale harmonically, and gives rules for contrapuntal playing. The fact that numerous editions of Diruta's method extended into the seventeenth century gives ample proof of its value.[72]

The following are Diruta's "rules for playing the Organ with propriety and elegance":

"1. The player should sit in the middle of the keyboard;

"2. His body and head should be held upright and graceful, and there should be no movement of either in playing;

"3. The arm should guide the hand; both should be held straight neither being higher or lower than the other, which will happen when the wrist is kept at the proper height;

"4. The fingers should rest upon the keys, slightly curved, not straight, and the hand should be light and relaxed, or else the fingers cannot move with agility and promptness;

"5. And lastly, the keys should be gently depressed, never struck, and the fingers withdrawn in lifting the key."[73]

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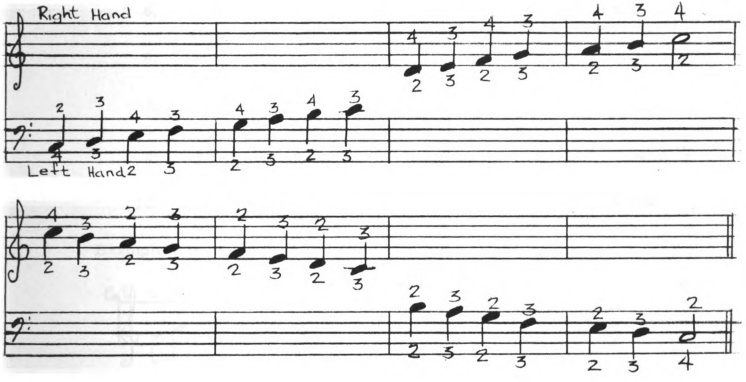
[72]Spangler, Op. cit., pp. 9-10.

[73]Arnold Dolmetsch, The Interpretation of the Music of the XVII and XVIII Centuries, (London: Novello & Co., 1915), pp. 372-373.

Diruta did not consider the thumb suitable for keyboard playing. Below are examples of Diruta's fingering.[74]



From the French school came the harpsichord method of Francois Couperin LeGrand (1668-1733), the great French composer. His method, entitled L'art de toucher du clavecin, was published about 1717. Couperin utilized the basic accomplishments of keyboard playing of the Baroque period. Couperin's music was of delicate craftsmanship--poetic and decorative. It represented the "style gallant" which was designed to entertain. The following seem the most important points of Couperin's method:

1. Note values are stressed.
2. A bar over the hands occasionally regulates the height of the hands.

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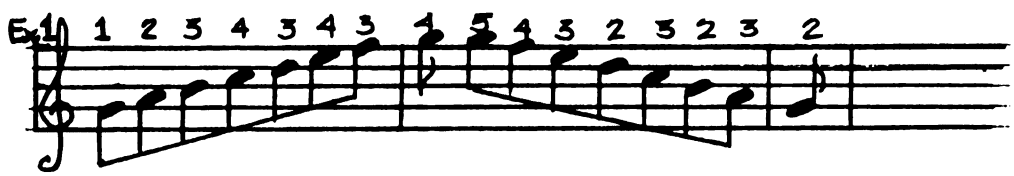
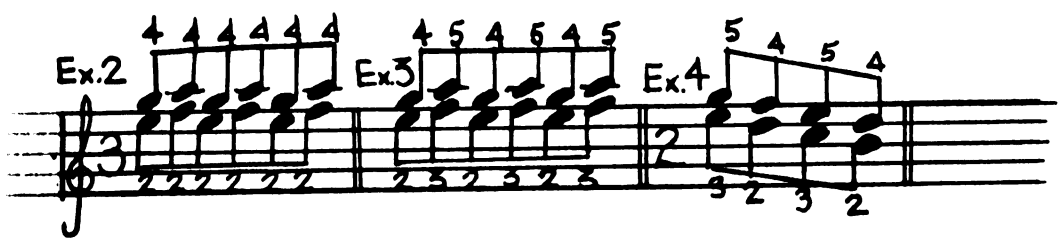
[74] Ibid, p. 377.

3. Underparts of elbows, wrist and fingers shall be level.
4. Avoid grimaces or keeping time with the feet, body or head.
5. Supervised practice is advocated so the pupil shall not forget what was taught in the three-quarter hour lesson.
6. Model exercises for training the fingers are given; the student is advised to make his own exercises.
7. Massage for stiff fingers is recommended.
8. Trills for weaker fingers are to be practiced.
9. Thumb is to be employed frequently in wide stretches and in running passages for the left hand.
10. A mirror should be placed in front of the student so that mannerism can be seen.[75]

Example 1 is an example of Couperin's scale fingerings.



Example 2 illustrates the early method of fingering thirds. In Examples 3 and 4 are new fingerings given by Couperin for fingering thirds.



Slurred fingering as given in Examples 3 and 4 was evidently an innovation of Couperin's time, as in his writings he encourages students

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[75]Spangler, Op. cit., pp. 10-11.

to try it to improve their playing. The above examples and comments are taken from Dolmetsch.[76]

Jean Philipp Rameau's Traite de Harmonie was an influence on keyboard literature, which in turn influenced technique. In a later work Rameau discusses a system based mainly on fingering where certain fingers are assigned to certain intervals in such a manner that the resolution of discords and a sequence of chords without consecutive fifths are obtained, to some extent, mechanically.[77]

An indication of the attitude toward the use of the thumb is given in a statement by J. S. Bach which is quoted by his son Karl Philipp Emanuel.

> "My late father told me that in his youth he had heard great men who never used the thumb except when it was necessary to make big stretches."[78]

J. S. Bach goes on to say that he found it necessary to develop a fingering that would better utilize all the fingers and that the thumb was quite helpful in difficult keys where it must be used as nature intends.

According to Albert Schweitzer,[79] Bach's method of playing included strongly incurved, loose fingers and loose wrists. The fingers rested directly on the keys. He played with so slight and easy a motion of the fingers that one could barely notice it. Only the front joints of the fingers were in motion; the hand maintained its rounded form even in the most difficult passages; the fingers were only slightly raised above the keys.

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[76] Dolmetsch, Op. cit., pp. 398-399.

[77] Ibid, p. 410.

[78] C.P.E. Bach, Essay on the True Art of Playing Keyboard Instruments, (New York: Norton & Co., 1949), p. 35.

[79] Albert Schweitzer, J. S. Bach, (tr. Ernest Newman), (London: A. & C. Black, Ltd., 1923), p. 207.

Bach's touch was very complex. He aimed chiefly at a singing tone. To this end he did not merely let the key, after pressing it down, come to rest and then ascend, but raised it by a gradual drawing back of the finger-tips toward the inner part of the hand, so as to give the string the proper time to vibrate and die away.

In Bach's new fingering of scales he established the rule that the thumb of the right hand must fall immediately after the two semitones of the scale going up, and before them in coming down, and vice versa in the left hand. To release the note, the tips of the fingers were not so much lifted as withdrawn. Bach played with a scarcely perceptible movement of his hands; his fingers hardly seemed to touch the keys, and yet tones came out with perfect clearness, and a pearly roundness and purity. His body, too, remained perfectly quiescent, even during the most difficult pedal passages on the organ or harpsichord.[80]

According to Johann Forkel,[81] the first thing Bach did with his students was to teach them his manner of touch by giving them isolated exercises for all fingers, which he wanted them to practice from six to twelve months. If students became impatient, he would write short pieces in which those exercises were combined. From thence came the six little Preludes for Beginners as well as the Inventions. In these pieces also were included all the ornaments in both hands. In polyphonic music Bach insisted that his students pay constant attention to the consistency of each single part, both as a single melody and as a part of several other melodies.

Though Scarlatti did not write a method, it is known that he did teach, and his sonatas and other pieces were written for his students

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[80]Robert Alfonso Henry, "An Analytical Survey of Modern Trends in Piano Technique," (unpublished Master's thesis, University of California, Los Angeles: 1944), p. 20.

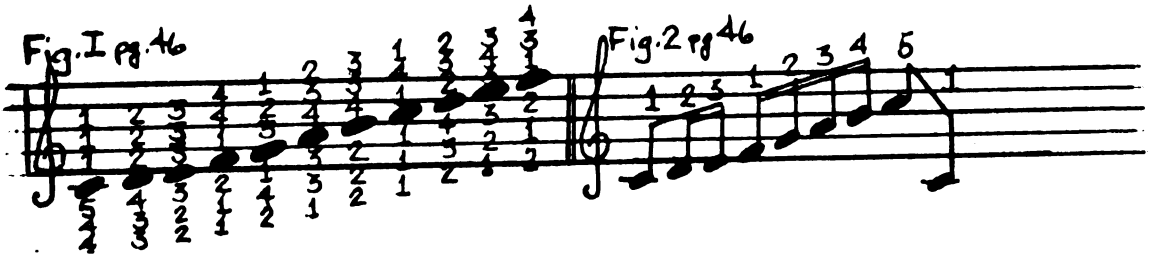
[81]The Bach Reader, ed Hans T. David and Arthur Mendel (New York: Norton & Co., 1945), pp. 328-329.

as well as for himself. Some historians consider Scarlatti "the father of modern virtuosi."[82]

The outstanding teacher and contributor to musical growth in the Rococo period was Karl Philipp Emanuel Bach. In 1753 he published at his own expense his "Essay on the True Method of Playing the Clavier." This was the most extensive work on clavier techniques that had yet appeared. The innovations of his method that concerned finger technique were:

1. In ascending, the thumb of the right hand is put after one or more black keys.
2. The thumb on the black keys themselves must be avoided.
3. The passing over of one finger by another, which earlier had been the main feature in scale passages, was now abandoned.[83]

Below are examples of K. P. E. Bach's Fingerings. The numbers closest to the notes are the most preferable to him, and the ones on the outside the least preferable.[84]



K. P. E. Bach gives special attention to legato playing and a singing

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[82] Spangler, Op. cit., p. 11.

[83] Henry, Op. cit., p. 22.

[84] K. P. E. Bach, Op. cit., pp. 45-47.

tone.[85] His exercises begin with scales and chords, progress to unison practice of the two hands, and then move on slowly to easy pieces.[86]

Both Haydn and Mozart taught extensively and wrote music for their students to perform, but little is known about their teaching methods per se. It is known that Haydn was very amiable and well-liked, and that Mozart was very demanding of exact perfection. Their contributions to technical knowledge exist in their works, which have already been discussed in this chapter.

Muzio Clementi strove for complete equality of tone as well as the evenness stressed by his predecessors. It was he who started the idea of placing a coin on the back of the hand during practice. If the coin fell off, the hand position was faulty.[87] Clementi was the one who started the system of strengthening the weak fingers of the hand by holding down one note while playing others.[88]

Another method which reflects the influence of Haydn, Mozart, and Clementi is that of Johann Hummel (1778-1837). He advocates: daily practice of no more than three hours a day; keeping the eyes fixed on the music; easy pieces and slow practice; quiet hand and arm motion, with which he recommends the use of Logier's chiroplast, which was the first mechanical aid for the acquisition of keyboard technique.

The composer who represents the Paris Conservatory method of Adam, and who was highly praised by Chopin, was Kalkbrenner (1778-1849). His exercises devoted to octaves with the wrist were a new contribution to technique. Other points worth noting are listed under

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[85] Ibid, p. 149.

[86] Henry, Loc. cit.

[87] Schonberg, Op. cit., p. 53.

[88] Henry, Op. cit., p. 24.

his general rules on rendering:

1. Ascending passages must be played crescendo, descending ones decrescendo.
2. All tones foreign to the key or notes with accidentals must be marked.
3. A note several times repeated must be shaded by swelling or diminishing the sound.
4. Oft-repeated passages must likewise be variously executed.

Kalkbrenner also advocates the use of the chiroplast.

This completes the contributions of influential keyboard teachers of this period. Again it is noted that Czerny did live within this time, but his contributions will instead be discussed in Chapter V in the contributions of the 1800's.

CHAPTER III

THE DEVELOPMENT OF THE PIANO

At the beginning of the nineteenth century the piano began to assume a position of importance as a concert instrument, although it was not sufficiently advanced to be used for an entire concert. This was probably due to the lack of literature for the instrument rather than a deficiency in the structure of the instrument itself.[89] The following statement of Albert Wier's elaborates on this point:

> "The concert at which the piano was the featured instrument was usually diversified by the addition of one or more vocal soloists, and the pianist usually played a bravura composition with orchestra; because of this custom the early composers for the piano usually wrote a number of showy pieces with orchestral accompaniment. This led to a further exploration of the tonal resources of the piano, and indirectly increased the knowledge of its possibilities in that direction."[90]

The last date the harpsichord was reported to have been played in public was in 1805, in Berlin and in England in 1795. France is reported to have used the harpsichord some twenty years after England.[91]

The development of the pianist's status in performance necessitated an extension of the piano's capabilities.

> "An instrument was required which not only combined the subtlety of the Viennese piano with the fullness and roundness

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[89] Wier, Op. cit., p. 38. [90] Loc. cit.

[91] Percy Scholes, The Oxford Companion to Music, (London: Oxford University Press, 1960), p. 463.

of tone of the English, but also had facilities for speed and repetition in playing and a tone which would fill a large hall."[92]

Many operatic and symphonic works were being transcribed for the piano, a practice which led to the development of many devices for reproducing orchestral effects. Some of these devices were mechanisms that prolonged the sound after a key had been released, couplers that gave the octave above and below, and an adjustment that made possible a mechanical tremolo in imitation of the string tremolo of the orchestra.[93] In addition, a piano-organ was built with two keyboards, and pianos were built with transposing devices and pedal keyboards.[94]

There were three methods attempted for prolonging the sounds of the piano:

1. In 1802 John Isaac Hawkins of Philadelphia invented a device for bowing the strings of the piano with circular bows worked by treadles. When the key was pressed the string of the instrument was raised to meet the revolving bow. The dynamics of the sound could be varied by pressing lightly or heavily. This instrument was called the claviol.
2. In 1800 the father of Hawkins patented a device in which a cylinder with projecting teeth, which kept revolving while the instrument was being played, caused the hammer to re-strike again quickly as long as the key was kept down. This was an imitation of the Bebung of the clavichord.
3. A method of producing a continuous sound by employing currents of air to keep the strings of the piano in vibration.[95]

Many other devices to create programmatic effects, such as drums, cymbals, and triangles, were connected with the piano at the turn of the century, and accounts are given of their being used by performers. Not all pianists valued these innovations, as indicated by this statement of Czerny's:

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[92]W. L. Sumner, The Pianoforte, (London: McDonald & Co., 1966), p. 54.

[93]Wier, Op. cit., p. 39. [94]Sumner, Op. cit., p. 55.

[95]Sumner, Op. cit., p. 57.

"Only three pedals are necessary: 1, The damper pedal (forte): 2, Una Corda (Verschiebung); 3, Piano (piano). . . . 'All other pedals, such as the Fagotto and Harp pedals, or the Drum and Bells, or Triangle, etc., are childish toys of which a solid player will disdain to avail himself.'"[96]

An innovation which was appreciated by pianists was the double-escapement action which allowed greater satisfaction with repeated notes. This was patented in 1821 by Pierre Erard. Moscheles, an outstanding performer, commented on the new device:

"Pierre Erard showed and explained to me. . .his Uncle Sebastien's new completed invention. . . .It consists in the key, when only sunk half way, again rising and repeating the note. I was the first to play upon one of the newly completed instruments and found it of priceless value for the repetition of notes. In the matter of fullness and mellowness of tone, there is something yet to be desired, and I had a long conversation on the subject with Erard."[97]

W. L. Sumner quotes from a Miss R. E. M. Harding[98] a list of the stops which were found on the piano at the turn of the century:

"Forte. . . . This was a mechanism for raising the dampers first by handstops and later, in 1783, by a foot-pedal. . .

Piano. . . . This was called pianozug by the Germans. Strips of cloth or soft leather were interposed between the hammers and the strings. The device was later extended by Isaac Hawkins in 1800 so that by raising or lowering the cloths gradually, dimuendi and crescenti could be achieved. . . .

Una Corda (Verschiebung). . . . By the movement of a pedal, the hammers were made to strike one, two or three strings at the will of the performer. . . .

Harp. . . . A strip of leather damped the motion of one of each set of unison strings and, at the same time, the hammers were moved to strike the strings which were affected by the leather. . .

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[96]Ibid., p. 58. [97]Ibid., p. 56.

[98]Sumner, Op. Cit., pp. 59-62. This is a direct quote from p. 113 of Miss R. E. M. Harding's A History of the Pianoforte, (Cambridge: 1933).

> Buff Stop. . . . This was similar to the "harp," "Buff," or "Lautenzug" of the harpsichord. . .A piece of leather presses and damps one of each set of unisons at the side, or, occasionally, from below.
>
> Sordin or Mute. . . . A piece of wood, hinged to the case and worked by a pedal, lined with 'soft leather, hair or silk shag.' The curve of the wood followed that of the sound-board bridge (Broadwood 1783). If soft leather is used the effect is that of the Lautenzug (the Lute stop) and if hair or silk the effect is that of the Harfenzug (the Harp stop).
>
> Harpsichord Stop or Cembalo. . . . Tongues of leather, tipped with a hard substance, such as bone or ivory, are placed between the hammers and the strings, so that the hard substance strikes the strings. . . .
>
> Swell. . . . A pedal raised a portion of the lid or the dust plate. . . ."

Miss Harding points out the difference between the terms "Sordini" and "Sordino." When Beethoven's Sonata in C# minor (Opus 27, No. 2) has instructions "Senza Sordini," this means that the dampers are to be lifted throughout the movement. Sordino is another name for a lute stop which was used by Schubert as well as other composers.

Miss Harding continues to list the tone-changing mechanisms that were added in the early part of the nineteenth century:

> "Harmonic sounds. . . . A pedal brought into operation a set of hammers or a bar which touched the strings at their central points. This produced an echo effect which was a feature of Pastoral music. . .other tonal effects could be produced by touching the strings at points one-third of their length.
>
> Dolce Compana (Compana, a corruption of Campana, a bell). . . By means of a pedal, weights apply pressure to the sound-board at about eight places. This lowers the pitch of the instrument, so that a rapid operation of the pedal gives the effect of a vibrato, like the tremulant of the organ.
>
> Harmonic Swell. . . . The piano had two bridges and the raising of dampers allowed the wires between the bridges to vibrate sympathetically with the ordinary speaking lengths of strings. The device was called the swell, because gradations of power could be obtained by: 1, raising the dampers of the harmonic swell; 2, raising the forte dampers; 3, raising both sets of dampers.

> Cymbals. . . . Two or three thin strips of brass were made to strike the bass strings.
>
> Bassoon. . . . A piece of parchment or stiff paper was placed against the strings. . . . The effect is dry, penetrating, reedy and unpleasant to modern ears.
>
> Octave couplers. . . . These showed the influence of the harpsichord. They tended to become unreliable and spoil the expressive touch of the piano. . . ."

It should be noted here that another stage of piano development, the evolvement of the upright piano, took place during the nineteenth century.

> "The date of the upright piano, which is a comparatively recent invention, may be conveniently fixed at 1800, when Isaac Hawkins of London patented a perpendicular instrument some four feet high and announced it as being of 'a more convenient and elegant shape than any heretofore made.'"[99]

Eric Blom goes on to say that this was not the first attempt at the vertical shape inasmuch as other upright models had been made as early as 1739. Blom explains that these earlier models were no different from the table-shape or harp-shape piano except that their strings and soundboards were turned up on end. "The Hawkins upright of 1800 was the first really distinctive instrument made in the new shape and conforming to new conditions."[100] To make the upright piano more practical piano manufacturers continued to experiment with the reduction of its size.

> "By the middle of the nineteenth century at the latest, the upright piano had victoriously established a popularity far in excess of that of the grand pattern, though of course for practical rather than artistic reasons."[101]

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[99] Eric Blom, The Romance of the Piano, (London: Foulis, 1926), p. 167.

[100] Ibid, p. 168

[101] Ibid, p. 171

In an attempt to stabilize tuning of the grand piano, there was other experimentation with a type of action in which the hammers would be lifted by weights and strike down on the strings. In other systems the hammer was returned to its position of rest by means of springs. This system did become popular with some musicians even with up-striking actions, but lost its popularity with the improvement of the technique of piano playing.[102]

Other experiments attempted to determine the ideal striking place on the string. A piano manufacturer named Clagget devised new forms of keyboards on which the five-finger position would work in a similar manner on all keys, and trills could be played easily and evenly.

As the popularity of the piano as a concert instrument increased, the weakness of the wooden frame became a serious problem. The strings that were struck by hammers were required to withstand a great deal more pressure than those of the harpsichord or clavichord. This kind of pressure demanded that the strings be made thicker and be drawn tighter.[103] W. L. Sumner writes of Beethoven's frustration with the limitations of the piano of his time. He includes this quotation from Anton Reicha, a contemporary composer and teacher of Beethoven:

> "He asked me to turn the pages for him. But I was mostly occupied in wrenching the strings of the pianoforte which snapped, while the hammers stuck among the broken strings. . . ."[104]

The piano was not only too fragile to meet the performance demands of its nineteenth century performers, but it also lacked volume.

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[102] Sumner, Op. cit., p. 64.

[103] Wier, Op. cit., p. 70.

[104] Sumner, Op. cit., p. 147.

> "The piano manufacturers were further perplexed by the clamor for increased dynamic power from public and artists alike; the new instrument presented great possibilities in the matter of imposing tone if the frame could be so constructed as to bear enormous tension."[105]

Experimentation began with the possibility of a metal frame. Though there was dissatisfaction over the tone quality of the early metal frames, perfection of the complete iron frame was finally achieved by Steinway in 1855. Since that time the iron frame has advanced to the point where it satisfies the most critical ear, and the tension sustained by the frame has increased from eight thousand pounds to sixty thousand pounds in modern grand pianos.[106]

Hardness of the leather on the hammers was responsible for unsatisfactory tone of the piano. The final stage of this development was reached by Broadwood, who improved the tone by using a felt made of wool.[107]

Extension of the keyboard became necessary with the expansion of range demands in music written for the piano. Mozart's concert grand piano was restricted to five octaves.[108] Twenty of Beethoven's thirty sonatas were composed for an instrument of a compass of five octaves, although Beethoven seems to have been irritated at the limitations of the piano. In Beethoven's Opus 106 (the Hammerklavier Sonata), the compass of the keyboard was six octaves and a fourth.[109] The full seven octaves were reached about 1850.[110] Since that time an additional three notes have been added, which makes seven octaves and a minor third.

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[105] Wier, Loc. cit.

[106] Ibid, p. 71.

[107] Blom, Op. cit., p. 176.

[108] Ibid, p. 172.

[109] Sumner, Op. cit., p. 151.

[110] Blom, Op. cit., p. 174.

It appears to be the concensus of sources on the history of the piano that no significant contribution has been made to the structure of the instrument since the middle of the nineteenth century.

> "It will be of great interest to readers who may not have followed the history of the piano closely to note that no fundamental changes have been made in the principles of its construction since the middle of the nineteenth century; the best practices of preceding generations of piano makers are now crystallized in the modern instrument in a period less than one hundred years after the piano began to be accepted as the successor of the harpsichord or clavichord."[111]

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[111] Wier, Op. cit., p. 50.

CHAPTER IV

THE DEVELOPMENT OF PIANO LITERATURE

Harold C. Schonberg[112] writes that in the nineteenth century the word "expression" replaces the word "taste" of the eighteenth century. Self-expression is at the center of the Romantic Movement and therefore a prime motivator of the innovations in the music of the nineteenth century; consequently it is also an aid to understanding nineteenth century innovations in techniques of piano playing. According to Schonberg, Beethoven was not so interested in the technique necessary for execution as he was in the idea he was expressing. Many authorities agree that Beethoven did not write to accommodate the existing piano nor the technique of playing it.

> "Chopin composed in terms of the human hand and the piano keyboard as he found it, but Beethoven did not think of or write for the instrument in such a felicitous manner. He was often frustrated by the limitations, even of the physical strength, of the pianos which he played."[113]

Albert Wier[114] further adds that Beethoven's genius led him to experiment with great masses of sound. The piano facilitated this type of experimentation on a larger scale than did previous keyboard instruments and appealed strongly to Beethoven's unconventional nature.

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[112] Schonberg, Op. cit., p. 71.

[113] Sumner, Op. cit., p. 147.

[114] Wier, Op. cit., p. 118.

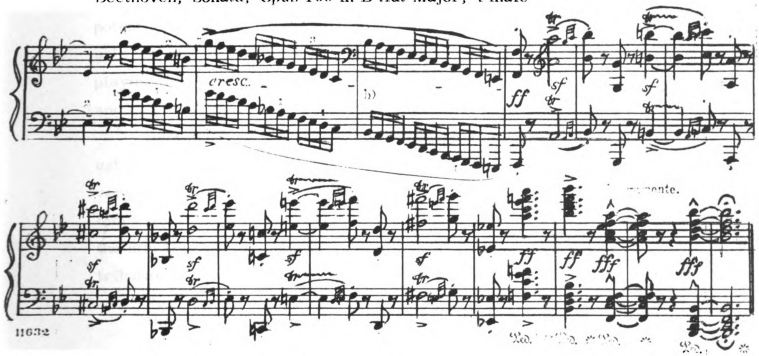
Most of Beethoven's sonatas were not intended for amateurs or students; therefore, he was unhampered by the technical and musical inexperience of students and each sonata was the product of an emotion or a mood.

> "The fact that he was unrestricted by considerations of expediency contributed in no small measure to the delineation of a steady intellectual and emotional progress in his piano works."[115]

One of the foremost contributions Beethoven made toward extending the piano technique of his day was in demanding a more powerful sound.

> ". . .he (Beethoven) did not play with the finesse and delicacy of the latter, (Mozart) but leaned more toward massive tonal effects and sharply defined contrasts."[116]

Beethoven, Sonata, Opus 106 in B flat Major, Finale



Albert Wier adds that Beethoven's scale playing was more colorful in the matter of touch but that he frequently sacrificed smoothness in order to obtain this diversity.

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[115] Loc. cit.

[116] Ibid, p. 119.

Beethoven's music made use of a wider range of sounds as the compass of the piano increased during his lifetime.[117] Further innovations in techniques found in Beethoven's music include more variety in melodic invention, which results in fewer of the scale-like passages so prevalent in the music of Mozart. With Beethoven's exploitation of the keyboard and his interest in sound possibilities, there exists in his music a greater number of keyboard leaps. The left hand, which during the classic period, so often occupied the role of an accompaniment begins to contribute in a more thematic manner, which leads to a greater thematic equality between the hands. There is a greater use of octave and chordal passages in both hands, which indicates the unfolding of the capacity for power possessed by the piano. The instrument's potential for a wide range of expression is demonstrated in Beethoven's bold use of dynamic shadings. At this point in the development of piano playing the pianist was gaining fuller use of his own physical ability, and of his instrument's mechanism.[118]

Harold C. Schonberg refers to Carl Czerny as "one of the greatest pianists who never played in public."[119] Czerny evidently was a very capable pianist, as his playing ability was praised by Beethoven himself. Schonberg suggests that Czerny was revolted by travel and the strain of performance. He did, however, make a significant contribution to piano pedagogy.

> ". . .Czerny was the great man of practice; a quite unique person, the hero of all piano-teachers, whose practical eye runs equally over all the possibilities of playing, and works them out in separate parts; the genius of the Étude."[120]

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[117] Schonberg, Op. cit., p. 87.

[118] Helen Bussell, "Didactic Influences on Keyboard Music," (unpublished Master's Thesis, Department of Music, University of California, 1955), pp. 36-38.

[119] Schonberg, Op. cit., p. 93.

[120] Oscar Bie, A History of the Pianoforte and Pianoforte Players, (London: J. C. Dent & Co., 1899) p. 188.

More substantial evidence of Czerny's effectiveness as a teacher lies in the record of his outstanding students, among whom are Franz Liszt, Theodore Lescheititzky, and Theodore Kullak. Czerny's Op. 500 is a very comprehensive series of études based on the finger gymnastics necessary to play the music of his time. Ann Golz writes that Czerny attempted to develop a facile pianistic technique which would be so much a part of the performer that he could use it without thinking.

> "Czerny's principle was to occupy the mind as little as possible with deeper musical thought in studies and to teach technical principles by constant repetition."[121]

In the Op. 500 there is a chapter on the Maelzel metronome, which Czerny felt was of value to the study of technique. There is still considerable use of the Czerny Études today though the trend appears to be away from the concept of thoughtless repetition.[122] The Chopin, Liszt and Debussy Études are some examples of the technical study that is interwoven with a worthwhile musical motive which could not effectively be performed thoughtlessly. In discussing this kind of étude, Oscar Bie writes:

> "Its preference is for constructive logic in detail. More genuine piano music than the Étude there cannot be. The essence of the piano has in it become music. Matter and aim here alone determine the form, which no longer speaks merely in a universal musical language."[123]

Carl Marie von Weber was one of the best pianists of his time. Many authorities have commented on the size of his hands, which is reflected in his piano compositions. John Gillespie[124] writes that

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[121] Golz, Op. cit., p. 18.

[122] Spangler, Op. cit., p. 21.

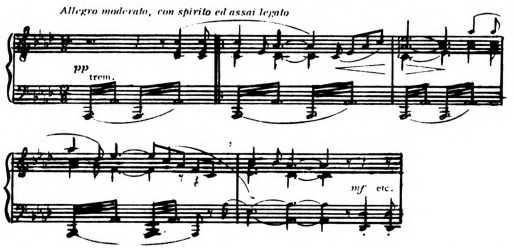
[123] Bie, Op. cit., p. 207.

[124] Gillespie, Op. cit., pp. 199-200.

Weber must be credited with two important elements of nineteenth-century composition.

1. He introduced dramatic effects--keyboard tremolos powerful crescendos that influenced music for nearly one hundred years.

Ex. 2. Weber: *Sonata Opus 39: Allegro moderato*

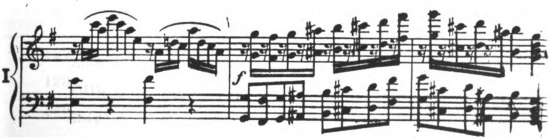


2. He introduced keyboard techniques that were developed more fully by later composers: large stretches for the hand; wide leaps from one keyboard register to another; rapid passages in thirds, sixths, and octaves; and dramatic crescendos;

Harold Schonberg[125] writes that more than anybody else in that decade Weber explored the potentiality of the piano and was thoroughly cognizant of what could be done with it.

Ernest Hutcheson[126] attributes to Feliz Mendelssohn the use of alternating octaves replacement of the broken octaves found in many of Beethoven's works.

Mendelssohn, Concerto in G minor presto



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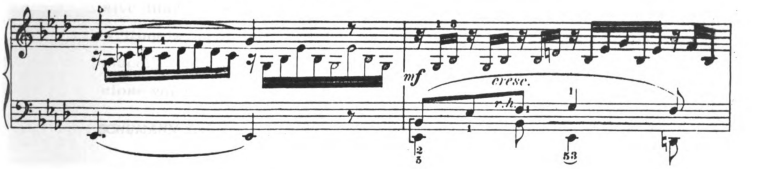
[125] Schonberg, Op. cit, p. 95.

[126] Hutcheson, Op. cit. pp. 160-161.

Another novel feature of Mendelssohn's works is the distribution of a melody between two hands to an arpeggiated accompaniment.

Mendelssohn, Duet, Op. 38, No. 6



W. L. Sumner[127] writes that Mendelssohn favored an "elastic hand staccato," which demands a supple, well-trained wrist.

In discussing Mendelssohn's accompaniment figures, John Gillespie writes:

> "More often he (Mendelssohn) uses either broken chords in syncopation or else widely arpeggiated figures in the left hand and tonal-density enrichment in the right hand."[128]

Gillespie suggests that Mendelssohn's Six Preludes and Fugues might be considered as études since each one exploits a particular technical device. Gillespie further comments on numerous keyboard figurations characteristic of Mendelssohn as found in the Variations Sérieuses and lists them as a staccato technique, syncopation, melody in inner voices, broken-octave and chordal passages.[129]

Robert Schumann was similar to Beethoven in his motivation for composing, in that Schumann appeared to be more concerned with the effect he was creating than with the technique necessary to create that effect. Authorities believe that Schumann might have become an outstanding pianist had he not attempted to strengthen his fourth finger

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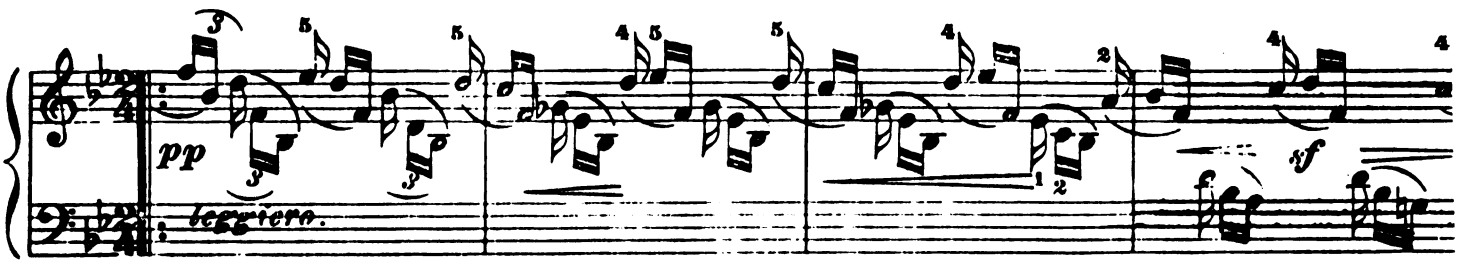
[127] Sumner, Op. cit., p. 157.

[128] Gillespie, Op. cit., p. 208.

[129] Ibid, p. 210.

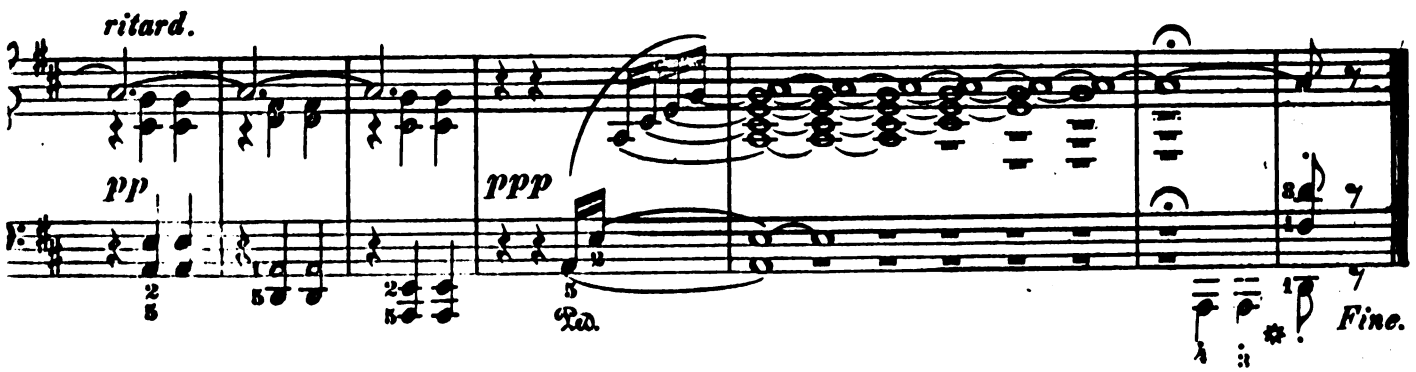
with the mechanical device he had contrived which permanently crippled his hand.[130] Schumann's technical idiom seems to avoid the popular figurations of the Classical period, such as the Alberti bass and extensive amounts of scale passages. The technical innovation in Schumann's writing is apparent in his chordal technique, which excludes "commonplace." This technique involves moving from one chord to another in close voice leading in an interlocking fashion.

SCHUMANN: Kreisleriana op. 16/1



Schumann also used the device of allowing a chord to fade away by removing one note at a time until only one note is held down.[131]

Schumann, Papillons, No. 12



In his opening statement concerning Chopin's contribution to keyboard literature Harold C. Schonberg writes:

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[130] Hutcheson, Op. cit., p. 170.

[131] Ibid, pp. 173-177.

> "He was the very first of the new pianists, the one who snapped for all time the thongs of classicism. The basic elements of his style of playing, his innovations in fingering and pedaling, were not to be substantially altered until Debussy and Prokofieff appeared. Once Chopin's Études were published, there was little more to add."[132]

Dr. Theodore Baker adds another dimension to Chopin's importance.

> "Chopin represents the full liberation of the pianoforte from traditionary orchestral and choral influences and its authoritative assumption of a place as a solo instrument per se."[133]

Chopin can thus be considered the first composer to achieve a true "piano style."[134] Albert Wier[135] attests to Chopin's preference of Bach and Mozart. The flawless architectural design of Bach, his absolute perfection, the clarity of Bach's ideas and the intricacy of their development were most satisfying to his aesthetic sense. In Mozart, Chopin found and admired all the musical elements that make for greatness.

Authorities agree to the individuality of Chopin's musical style and in general label this uniqueness as poetic sensitivity. The concern of this study is for the innovative technical components of Chopin's distinct style.

One salient feature of Chopin's music is his melodic structure.

> "His melodies are basically vocal rather than instrumental and his music may therefore be said to derive more from Schubert than anyone else. Unlike Beethoven he never uses the symphonic-type melodies that lend themselves to ample development and to motivic construction. Chopin's melodies are capable of elaboration, but it is a kind of self-development relying on harmonic change, modulation, rhythmic transformation and, above all, ornamentation."[136]

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[132] Schonberg, Op. cit., p. 134.

[133] Theodore Baker, Biographical Dictionary of Musicians, (New York: G. Schirmer, Inc.), p. 278.

[134] Bussell, Op. cit., p. 39.

[135] Wier, Op. cit., p. 137. [136] Gillespie, Op. cit., p. 221.

Gillespie further adds that Chopin was fond of Italian opera, and particularly the works of Vincenzo Bellini. Authorities seem to agree that Chopin's melodies were influenced by those of Bellini. The fact that Chopin's music was melodic is not unique, but his type of melody and his technical handling of the melodic line set him apart from his predecessors and his contemporaries.

Alfred Hipkins of the Broadwood piano firm is quoted in praise of Chopin's "singing-legato touch."[137] This is apparently the same as the "cantabile" touch mentioned so frequently by Gerald Abraham[138] and others.

> "Though piano cantabile had been taught and heard from Mozart's time onwards, Chopin's way of 'making the piano sing' was a unique experience, the point in his technique most frequently reported by those who heard him play."[139]

To maintain the complete legato, Chopin initiated the device of finger substitution in piano technique.[140] This is the device organists use of changing fingers on a key to avoid a break in the melodic line. In writing about Chopin's cantabile melodies, Gerald Abraham comments on Chopin's instinctive ability to invent a melody giving the illusion of singing that is often lovelier than singing itself. Abraham adds that Chopin's melody, in so far as it is Italian, is not an imitation but a stylization of Italian "bel canto."

> "To take only one example of his method: he produces marvelous pseudo-cantabile effects by repeating a note instead of sustaining it. (See the opening of the B flat minor Nocturne, Op. 9, No. 1, for one of hundreds of cases, bar 11 of the sostenuto section of the First Impromptu for a slightly more subtle example of melodic intensification by this means.) The device is in the direct

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[137] Schonberg, Op. cit., p. 147.

[138] Gerald Abraham, Chopin's Musical Style, (London: Oxford University Press, 1941) p. 29.

[139] Alan Walker (ed.) Frederic Chopin, (London: Barrie and Rockliff, 1966) p. 38.

[140] Schonberg, loc. cit.

> line of descent from the vibrato and Bebung of the clavichordists; . . . And we must not overlook the fact that the Italian opera-composers themselves employed both parlando effects---'speaking' on a single note---and coloratura note-repetition."[141]

A vital reason for the distinctiveness of Chopin's position in music history is the duality he personified in his life, his music and therefore in his innovations in keyboard technique. Chopin possesses elements of both classicism and romanticism. Harold C. Schonberg[142] labels Chopin as a romanticist who hated romanticism. Schonberg and other authorities substantiate the theory that Chopin disliked the word romanticism and as much as possible avoided the romantic movement that was sweeping the country.

> "He (Chopin) was repelled by the furious and frenzied face of romanticism; he could not endure the confused effects and excesses of delirium."[143]

Testimony to Chopin's identification with the Romantic Period exists not only on the word of authorities but in his innovations in all the elements of music and in his expressive subject matter.

> "He (Chopin) was so thoroughly and uniquely filled with sentiments, the most cherished types of which he believed he knew in his youth--with the only sentiments he wished to express in art--and he held for art such a singular, unchanging view that his artistic inclinations could not fail to be affected thereby."[144]

Chopin's interest in the elements of classicism has already been mentioned in this chapter. It is further substantiated by Franz Liszt,[145] who writes that in Chopin's eyes Mozart was the ideal type, the poet supreme. Alfred Cortot writes:

> "There is no doubt whatever that it was his (Chopin's) fervent admiration for Mozart and Johann Sebastian Bach (his regard

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[141] Abraham, Op. cit., pp. 64-65.

[142] Schonberg, Op. cit., pp. 134-135.

[143] Franz Liszt, Frederic Chopin, (London: The MacMillan Co., 1963), p. 144.

[144] Ibid, p. 143.

[145] Ibid, p. 146

> for the latter being quite exceptional for the time and place in which he lived) which gave Chopin, in the years which followed, that taste for classical discipline which resulted in the unequalled perfection of line to be found in all his work."[146]

There are several indications of the Classic influence in the music of Chopin and in the manner in which he performed. Many authorities quote those who heard him play, and they frequently note the delicacy of Chopin's touch. Ignaz Moscheles wrote:

> "The harsh modulations which strike me disagreeably when I am playing his compositions no longer shock me, because he glides over them in a fairy-like way with his delicate fingers; his piano is so soft that he does not need any strong forte to produce his contrasts, and for this reason one does not miss the orchestral effects which the German School requires from a pianoforte player, but allows one's self to be carried away as by a singer. . . ."[147]

Oscar Bie[148] writes that before Chopin played a recital he practiced Bach, not Chopin. Albert Wier discusses the similarity of the purity of style of Mozart and Chopin and further describes Chopin's performance:

> "The delicacy and subtlety of his touch, and his mastery of pedaling were the constant wonder of such audiences; his effects were produced rather by the infinite variety of his nuances than by extreme contrasts."[149]

Further indication of the traits of classicism in Chopin's keyboard technique is found in his conformance to the quiet hand and arm motion characteristics of Mozart and Clementi. Harold C. Schonberg[150] quotes Alfred Hipkins, who writes about Chopin keeping his elbows close to his sides and playing only with finger touch. Schonberg acknowledges Chopin's directions that the upper arm be used, but adds:

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[146] Alfred Cortot, In Search of Chopin, (New York: Abelard Press, 1952,) p. 165.

[147] Sumner, Op. cit., p. 162.

[148] Bie, Op. cit., p. 268.

[149] Wier, Op. cit., p. 138.

[150] Schonberg, Op. cit., p. 147.

> "Chopin was the least flamboyant physically of all the great pianists, and the French pedagogue Marmontel went as far as to say that in equality of fingers and perfect independence of hands, Chopin stemmed from the school of Clementi. There is more than a grain of truth in the statement."[151]

Both Chopin's extensive use of ornamentation and the type of ornamentation used are suggestive of both Baroque and Classic influence. Gerald Abraham refers to Chopin's type of ornamentation as a "filigree" ornamentation and then defines this terminology.

> "But the filigree ornamentation of the quieter passages already suggests the Chopin of the later nocturnes much more definitely than anything in the only slightly earlier Nocturne in E minor, Op. 72, No. 1. . . .The essence of Chopin's filigree style, as of Field's and Hummel's, is the throwing of a lacy and mainly chromatic veil by the right hand over a firm basis of diatonic broken chords in the left."[152]

Gerald Abraham further states that Chopin inherited from his predecessors, from C. P. E. Bach to Mozart, Field and Hummel, a rich collection of sterotyped ornaments, all of which he drew on freely throughout his career.[153] As with Baroque ornamentation, Chopin's occupies a functional relationship to his music.

> ". . . but his later compositions confront us with the paradox of 'ornamentation' that constitutes the very substance of the thing ornamented."[154]

Albert Wier[155] asserts that the ornaments in Chopin's music are an integral part of the texture of any given composition, and they are never used for a decorative purpose. Alfred Cortot[156] discusses Chopin's use of a fingering that was in practice in the early Baroque period, of crossing fingers over fingers without the use of the thumb.

A significant example of the similarity of concepts is found in Mozart's and Chopin's definition of the term "rubato." Mozart wrote

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[151] Loc. cit. [152] Abraham, Op. cit., pp. 17-

[153] Ibid, p. 70. [154] Loc. cit.,

[155] Wier, Op. cit., p. 143. [156] Cartot, Op. cit., p. 30.

that in slow tempi the left hand should keep strict time while taking liberties in tempo with the right hand. Chopin's definition is:

> "The left hand is the conductor, it must not waver or lose ground; do with the right hand what you will and can."[157]

It may appear paradoxical that in reverting to devices used by Baroque and Classic composers, Chopin was at the same time innovating keyboard technique. Logically, there should be a great similarity in sound between the music of Bach, Mozart and Chopin if the use of these Baroque and Classic devices did not effect a change in keyboard approach. The point is that Chopin's music and therefore his keyboard style was distinctive. His innovations came not from the devices he used but from the way in which he used them and the material content of each device. It has already been established in this paper that the newness of Chopin's melodies and his manner of handling them lay in their association with vocal, as opposed to instrumental, techniques. Chopin directed his students to listen to singers if they wanted to develop legato playing.

> "Concentrate on legato. Hear great singers: "If you want to play the long cantilena in my Scherzo (in B flat minor), go hear Pasta or Rubini." (Chopin adored good singing all his life, was a friend of Bellini, and in his nocturnes tried to capture a Bellinian type of melody over a John Field bass. The legato style of singing had a decided influence on Chopin's playing.)"[158]

John Field, mentioned in the above quotation, was a virtuoso pianist and composer, and a student of Clementi who preceded Chopin. The styles of writing of the two composers are very similar, especially in the set of noteurnes written by each composer. It is known that Chopin knew and taught these works.

> "As yet, indeed, there was no new school, though certain pieces by Field, Spohr, Hummel and Weber contained seeds of romanticism. As a composer, Chopin was helped by those four men, and by several others.
> . . . . . .

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[157] Schonberg, Op. cit., p. 145.

[158] Ibid, pp. 149-150.

In the repertoire of his students were pieces by Mozart, Dussek, Field, . . . "[159]

Authorities do not agree on the extent to which John Field's writing influenced Chopin, but on the existence of some influence of John Field in Chopin's music they are in general agreement.

> "Nevertheless Chopin's debt to Field, not only in this aspect of his keyboard writing but in a score of others, was enormous."[160]

One source of extensive change in the music of Chopin from that of his predecessors and contemporaries was in his departure from Viennese tradition of harmonic progressions.[161]

> "Brief mention may be made of the important role which Chopin played in the nineteenth-century development of harmony, a development which led from the prevailingly diatonic harmonies of the classical era to the highly chromatic harmonies of the Romantic."[162]

Willi Apel further mentions Chopin's chromatic progressions of diminished seventh chords and fast harmonic rhythm. John Gillespie[163] refers to Chopin's harmony:

1. Modulation (free) is accomplished enharmonically and by assumption of a key.
2. Dissonance is liberally treated. Sometimes there are so many passing tones and non-harmonic tones that the actual harmony is veiled.
3. Frequently, the harmony itself engenders the melody such as in the Étude, Op. 25, No. 1 in A flat major.

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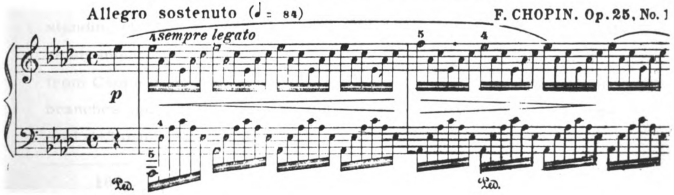

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[159] Ibid, pp. 136, 148. [160] Abraham, Op. cit., p. 74.

[161] Sumner, Op. cit., p. 168. [162] Apel, Op. cit., p.249.

[163] Gillespie, Op. cit., p. 222.

Chopin also had a dramatic command of rhythm.

Although it has been established in this paper that Chopin inherited the kinds of ornaments he uses from his classic and baroque predecessors, their content and use are considerably different. They are both diatonically and chromatically constructed and they are used to give tone color as well as expression to a melody.

> "The rich interplay of the harmonics of the ornaments with the notes of the melody produce new tonal hues: sometimes the melody itself is suggested by rich ornamentation and delicate filigree figures."[164]

Gerald Abraham[165] discusses the use of ornaments to veil and soften outlines that otherwise would be too classic, such as "commonplace" harmonic cadences (Impromptu in A flat, measure 14 of the sostenuto middle section) and note repetition (Nocturne Op. 32, No. 2, measure 6). Abraham also suggests that with Chopin ornamentation takes the place of true variation. He cites Chopin's fondness for repeating a cantabile phrase with florid ornamentation. Sometimes, as in the opening four measures of the Nocturne, Op. 55, No. 1, the ornamentation is so structured that the distinction between melody and decoration is obliterated. Both are fused into a new significant melody line.

The subject of rubato is extensive enough to be worthy of a study in itself, however, it is mentioned in this thesis only as one attribute of the technical requirements of certain composers. One of the outstanding characteristics of Chopin's playing was his tempo rubato, already mentioned. Some additional insight into his rubato is gained from Chopin's metaphor of a tree whose trunk stands firm though the branches and leaves move with the breeze. Ernest Hutcheson's general definition of this rubato is:

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[164] Sumner, Op. cit., p. 169.
[165] Abraham, Op. cit., pp. 71-72.

> "Rubato is the innate flexibility of rhythm which makes it responsive to emotion. Rhythm is the pulse of music, and just as our physical pulse beats faster or slower in joy or sadness, in excitement or calm, so rhythm quite naturally adjusts itself to mood. A bad rubato resembles the irregular pulse of a fever patient. A proper rubato is just as rhythmical as the antithetical tempo giusto, and a metronomic performance of emotional passages is every whit as unmusical as an unmotivated rubato."[166]

Perhaps the greatest contribution Chopin made to innovations in keyboard technique was the initial establishment of a true keyboard style of writing based on the capabilities of the piano.

> "Chopin's greatest distinction, the quality in which he outpointed all others, lay undoubtedly in the astonishing originality and appropriatness of his writing for the piano. He divined the soul of the instrument, and his every phrase, technical pattern, and ornament sounds inevitably proper to the chosen medium."[167]

Further corroboration of Chopin's unique contribution to the keyboard is found in this quotation from Alfred Cortot:

> "Chopin was not only the most music-minded of pianists, he was also the most exceptionally keyboard-minded of all composers."[168]

Evidence of Chopin's understanding of the human hand and its adaptability to the piano keyboard is found in this quotation from a "method" he had hoped to complete.

> "No admiration can be too great for the genius who was responsible for so cleverly adapting the construction of the keyboard to the shape of the hand. The black notes, intended for the long fingers, make admirable points of purchase. . . . Thoughtless people, knowing nothing of piano playing, have frequently suggested leveling the keyboard. This would do away with all the ease of movement and the support which the black keys give to the hand: . . . If the keyboard were leveled, it would be necessary to remove a joint from each of the long fingers in order to play a staccato passage."[169]

Chopin's fingering was unorthodox for his day. He used a simple natural position of the hand and adopted the fingering that was the most

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[166] Hutcheson, Op. cit., p. 214.

[167] Ibid, p. 212.

[168] Cortot, Op. cit., p. 21.

[169] Cortot, Op. cit., p. 41.

comfortable even though it might be against the rules. For this reason he was criticized for putting a thumb on a black key or passing the thumb under the fifth finger. He was adept at sliding a finger from note to note (not necessarily from black key to white key) without breaking his legato touch.[170] Chopin criticized those who attempted to develop equal strength of all fingers.

> "Since each finger is formed differently it is far better to develop their special characteristics rather than attempt to destroy their individuality."[171]

Apparently Chopin's hands could stretch a good distance over the keyboard. Stephen Heller commented that in spite of the smallness of his hand, Chopin was able to stretch over a third of the keyboard.[172] In addition to this there is considerable use of the tenth in Chopin's music which he played himself.

John Gillespie concludes his section on Chopin by writing:

> "Chopin is a true poet of the piano. . . . Chopin himself knew that his talents were best disposed toward piano music. He remained almost exclusively a keyboard composer, and in that field he was a genius."[173]

Franz Liszt epitomizes the virtuoso pianist of the Romantic Period. His phenomenal technique and his concert behaviour have caused reactions ranging from complete adoration to utter disgust. Albert Wier[174] refers to Liszt as the "virtuoso of virtuosi," and Harold C. Schonberg quotes a British critic who bitterly noted that Liszt had been given a gift for that which every young student would be severely reprimanded--that is for "thumping and partially destroying two very fine pianofortes."[175]

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[170] Schonberg, Op. cit., p. 147.
[171] Sumner, Op. cit., p. 167.
[172] Gillespie, Op. cit., p. 235.
[173] Loc. cit.
[174] Wier, Op. cit., p. 144.
[175] Schonberg, Op. cit., p. 153.

> "Liszt, as a composer, is one of the most controversial figures of nineteenth-century music. Condemned by many as a mere charlatan, he has been praised by others as a great genius. In a way he is both. His works are just as full of inspired and fascinating ideas as they are of cheap and superficial tinsel."[176]

Willi Apel adds that though the musicality of Liszt's works may be open to question, there is no doubt about their influence on the development of modern pianism. After hearing Paganini, Liszt is supposed to have commented that what Paganini had done for the violin he (Liszt) would strive to do for the piano.[177] It is generally agreed among historians that in matters of technique and approach toward performance, Liszt was the counterpart of the great violinist.

John Gillespie[178] states that Liszt did more to develop piano technique than any of his predecessors. The sound Liszt was capable of achieving is referred to as being almost orchestral.

> "He (Liszt) was the first to orchestrate on the piano, and it was no accident that some of the most popular pieces in his early repertoire were his arrangements of symphonies by his Beethoven and Berlioz.
>
> . . . . . .
>
> The effect, the sonority, the excitement and diablerie and boldness of attack, the orchestration on the piano and the exploitation of the instrument--those were the important things."[179]

Sacheverell Sitwell[180] writes that Liszt established standards of technique and exhausted the possibilities of the instrument which he played. In the accounts of even the most critical musicians of his day Liszt was reported to have astounding technical ability which allowed him to perform with apparent ease passages that were technically almost impossible.

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[176] Apel, Op. cit., p. 255.

[177] Hutcheson, Op. cit., p. 299.

[178] Gillespie, Op. cit., p. 238.

[179] Schonberg, Op. cit., pp. 160, 169.

[180] Sacheverell Sitwell, Liszt, (London: Cassell & Co., LTD., 1955), p. 305.

> "One of the transcendent merits of his playing was the crystal-like clearness which never failed for a moment even in the most complicated and, to anybody else, impossible passages; . . ."[181]

Sacheverell Sitwell[182] names three figures who strongly influenced Liszt--Berlioz, Paganini and Chopin--and states the most valuable of these was Chopin. Because of Berlioz, Liszt was reducing the most audacious of orchestral scores into a form in which all their subtleties could be handled at the piano. Paganini influenced Liszt into effecting unheard-of innovations in piano technique. For a generation, some of Liszt's music could be performed by none other than himself. From Chopin, Liszt acquired the quiet expressiveness for which Chopin was so well known. Sitwell also suggests that Chopin influenced Liszt to curb some of the extravagance in his essays. Some of the similarity in the lyricism of Liszt and Chopin is due to the fact that they had in common a great love for Italian opera.

Liszt was a very prolific composer. His piano works exceed four hundred, if all arrangements and transcriptions are included. Gillespie writes that Liszt had an uncanny ability to recreate orchestral effects at the piano but that on the other hand, technical aspects far outshine the musical substance in a great deal of his music.[183] In an 1837 essay, Liszt comments on the orchestral possibilities of the piano.

> "In the circumference of its seven octaves it embraces the whole circumference of an orchestra; and a man's ten fingers are enough to render the harmonies which in an orchestra are only brought out by the combination of hundreds of musicians. . . .We can give broken chords like the harp, long sustained notes like the wind, staccati and a thousand passages which before it seemed only possible to produce on this or that instrument. . . The piano has on the one side the capacity of assimilation; the capacity of

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[181] Donald Brook, Masters of the Keyboard, (London: The Camelot Press Ltd., 1949) p. 77.

[182] Sitwell, Op. cit., p. 25.

[183] Gillespie, Op. cit., pp. 238-239.

taking into itself the life of all (instruments); on the other it has its own life, its own growth, its individual development. . . ."[184]

There are conflicting reports as to the size of Liszt's hand. Rudolf Breithaupt wrote that Liszt could span a twelfth.[185] Carl Lachmund, another pupil of Liszt's, wrote in his book that Liszt had such difficulty in playing a tenth in either hand that he could not play a chord quietly without breaking it.[186]

Liszt is credited with giving an entire concert by himself without the help of an orchestra or the assistance of singers. This was in the year 1839. The term "recital" was first used in England in reference to Liszt's performance at Hanover Square Rooms, June 9, 1840.[187]

Liszt's contributions to technique include the following:

1. Large leaps that previously were unheard of, resulting in new sound combinations.
2. Tremolo for both hands.
3. The most extensive use of the entire seven octaves in chords set sharply against each other.
4. Powerful chords in octaves, used with both staccato and legato touches.
5. Chromatic scales in tenths, sometimes for crossed hands.
6. Double note passages and double note glissandi for the right hand.
7. Chromatic sixths for alternating hands.
8. Octave and rapid scale passages for both hands.
9. Broken octave passages.

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[184] Bie, Op. cit., p. 282.

[185] Loc. cit.

[186] James Huneker, Franz Liszt, (New York: Charles Scribner's Sons, 1911), p. 403.

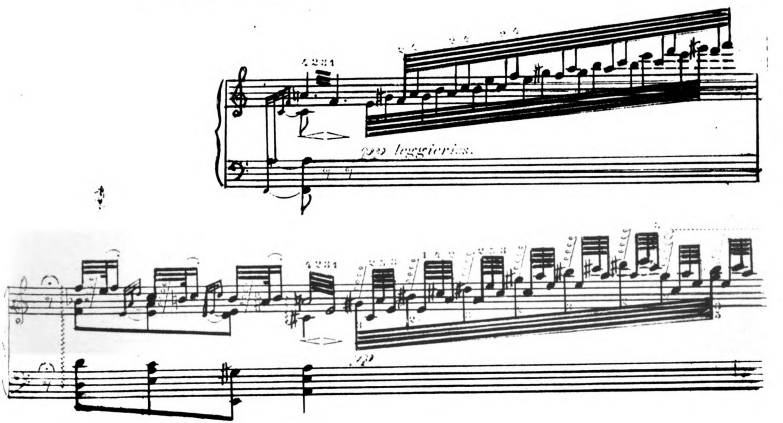
[187] Arthur Loesser, Men, Women and Pianos, (New York: Simon and Schuster, 1954) pp. 368, 371.

10. Repeated notes.[188]

Oscar Bie[189] corroborates the above information and describes Liszt's cross-hand method and notation as follows:

> ". . . above all a perfect systematization of the method of interlacing the hands, partly for the management of runs so as to bring out the color, partly to gain a doubled power by the division, and partly to attain. . . . a fulness of orchestral chord-power never hitherto practised. This is the last step possible for the piano in the process of individualisation. . . . The three systems of notes, instead of two, appear more frequently; in fact the two hands appear for the most part to play a group of notes which seem to be conceived for three. And precisely by this means the two hands run inside and through one another, as if they were only a single tool of ten fingers. The music appears again to become a corporate unity of tone, as it had already once been in its first beginnings. But it has now become, out of a universal music, a music for the piano. An historic mission is fulfilled."

LISZT: Hungarian Rhapsody No. 11



[188] Bussell, Op. cit., p. 45.

[189] Bie, Op. cit., p. 283.

Albert Wier[190] writes that Liszt was often depicted as possessing more arms than two and more fingers than ten.

Liszt also had Chopin's gift for melodic line and ornamentation. He went further than Chopin in exploring the resources of keyboard technique. In Liszt's music Chopin's ornamentation is extended into ingenious cadenzas.[191] The kinds of trills that Liszt uses are the single trill with single fingers of each hand, the trill in double thirds in both hands and the octave trill. Breithaupt writes that all of these serve to intensify the introduction or close of the divisions of a composition.[192] Liszt's ornamentation is not always so functional as Chopin's. Many times the ornamentation in Liszt's music appears to be completely unnecessary and exists more for technical display than for melodic enhancement.[193]

Like Chopin, Liszt wrote with a complete understanding of the human hand. The most difficult passages lie well pianistically and, once mastered, are not difficult for the fingers to retain.[194]

For a short time Liszt had been a student of Czerny. It is conceded by most authorities, however, that in the building of his phenomenal technique, Liszt had "pulled himself up by his own bootstraps."[195] As did Chopin, Liszt broke all the rules in matters of fingering and technique. The sound he wished to produce determined what fingers and what technical devices would be used.

> "What he wished to do he did without concerning himself as to the how or why."[196]

Liszt appears to have been the first to involve the entire arm and shoulder in playing the piano. Harold C. Schonberg[197] writes that

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[190] Wier, Op. cit., p. 146. [191] Hutcheson, Op. cit., pp. 276, 280.
[192] Huneker, Op. cit., p. 407. [193] Sitwell, Op. cit., p. 194.
[194] Hutcheson, Op. cit., p.297. [195] Ibid, p. 154.
[196] Huneker, Op. cit., p. 404. [197] Schonberg, Op. cit., p. 169.

Liszt used a weight technique, playing with loose shoulders and a high position of the hands and fingers. Rudolph Breithaupt substantiates that point of view and further contends that the distinguishing feature of Liszt's technique was the absolute freedom of his arms.

> "The secret lay in the unconstrained swinging movement of the arm from the raised shoulder, the bringing out of the tone through the impact of the full elastic mass on the keys, a thorough command and use of the freely rolling forearm. He had the gift for which all strove. . . . the springing arm, the springing hand, the springing finger. He played by weight--by a swinging and a hurling of weight from a loosened shoulder that had nothing in common with what is known as finger manipulation. It was by a direct transfer of strength from back and shoulders to fingers, which explains the high position of hands and fingers."[198]

Besides his great technical accomplishment, Liszt was noted for the subtlety of his expressive playing and for his use of rubato. Harold C. Schonberg writes that Liszt sparked the bravura school of the nineteenth century. Many pianists, in an attempt to copy Liszt's mannerisms, greatly misused the rubato and reduced Liszt's great technique to sheer mechanics.[199]

Liszt, like Chopin, did not encourage the equal development of the fingers, as he felt some fingers were weaker than others. Liszt did, however, demand equal facility of the two hands. Apart from extensions of existing piano technique and innovations initiated by Liszt, there is yet another factor of piano playing influenced by Liszt. That is the speed which Liszt's music requires.

> "For example, he demanded absolutely equal facility between the two hands, extreme velocity in passage work of long duration, and runs in double notes played at the same speed as similar passages in single notes."[200]

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[198] Huneker, Op. cit., pp. 403-404.

[199] Schonberg, Op. cit., p. 171.

[200] Wier, Op. cit., p. 146.

In the judgment of those who heard him play, Liszt more than met the above requirements in his own playing. Arthur Loesser writes that "few pianists had the athletic energy or speed of Liszt."[201]

Ferrucio Busoni writes:

> "As a composer of pianoforte music, Liszt's merits are more generally acknowledged than as a composer of any other kind. Here indeed his position is a commanding one. We should be obligated to regard him with respect, admiration, and gratitude, even if his compositions were aesthetically altogether a failure. For they incorporate an original pianoforte style, a style that won new resources from the instrument, and opened new possibilities to the composer for it, and the player on it."[202]

The contribution of Johannes Brahms to piano technique did not fall in the virtuoso tradition established by Chopin and Liszt. Albert Wier writes that Brahms' conceptions have neither the emotional power of Chopin's nor the superficiality of Liszt's.

> "The technique required for their interpretation differs from that necessary for the works of any other composer of the period."[203]

Oscar Bie[204] describes Brahms as working in a world of tone with no inclination toward virtuosity. There are several evidences of Brahms' interest in tone colors that could be produced on the piano. W. L. Sumner attributes Brahms' interest in sonorous basses to his being the son of a double bass player. Sumner further writes that Brahms' use of thirds and sixths along with his doubling of the melody in two or three octaves is a product of his search for organ-like sonority.[205] Brahms' attraction to thirds and sixths is further substantiated by Willi Apel, John Gillespie and others. Many authorities, likewise, describe the quality of Brahms' piano music as being or-

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[201] Loesser, Op. cit., p. 359.
[202] Huneker, Op. cit., p. 410.
[203] Wier, Op. cit., p. 157
[204] Bie, Op. cit., p. 322.
[205] Sumner, Op. cit., p. 174.

chestral.[206] In discussing Brahms' Sonata in F Minor, Op. 5, Albert Wier writes:

> "The design of this work is somewhat heavy; the orchestral influence over purely pianistic requirements is prominent."[207]

Wier further writes of Brahms' "heavy tread" on the keyboard with thick scoring in the lower registers. This kind of writing is described by Wier as being suggestive of Beethoven.

Brahms' lack of interest in the virtuoso style of music is discussed by several authorities. John Gillespie writes that Brahms shunned bravura and brilliance for their own sake and attributes the difficulty of Brahms' piano music to the unpianistic language used by Brahms.[208] Ernest Hutcheson writes that some of Brahms' piano technique is awkward and unpianistic.[209] Harold C. Schonberg describes Brahms' playing:

> "Though Brahms was trained as a pianist and in his youth might have been a good one. But he never practiced enough to keep his fingers loose, and pretty soon experts began to poke fun at his playing. William Mason said that it not only lacked finish, but that it was not musical, lacking style and contour. 'It was the playing of a composer, not that of a virtuoso.!'"[210]

As an indication of Brahms' lack of regard for the piano idiom, Albert Wier refers to the excessive disparity between parts and the lack of any compensating motion.[211] Wier later writes that Brahms' conception of the piano idiom was at no time equal to Chopin's.

Many authorities believe that the uniqueness of Brahms' piano writing is due not so much to his lack of understanding of the piano or his aversion to virtuoso playing as to a difference in concept and type

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[206] Gillespie, Op. cit., p. 462. [207] Wier, Op. cit., p. 158

[208] Gillespie, Op. cit., p. 259. [209] Hutcheson, Op. cit., p. 254.

[210] Schonberg, Op. cit., p. 338. [211] Wier, Op. cit., p. 159.

of writing that is broader than the single piano idiom.[212] Brahms himself is supposed to have said:

> "I have never written anything awkward or unusually difficult. Just take the time to play intelligently."[213]

W. L. Sumner, who writes that Brahms' piano music does not lie well under the fingers, labels the technical demands of Brahms' music as a method of playing that looked to the future.[214]

Ernest Hutcheson writes that Brahms was not an innovator of technique.[215] Therefore the difference in the demands made by the music of Brahms from those of his predecessors lies not in new technical devices but rather in an extended use of traditional technique. The demands, both technical and musical, of Brahms' music are discussed by James Friskin and Irwin Fruendlich.

> "Most of the pianoforte music of Brahms calls for a certain degree of maturity, both technical and musical. Warmth and depth of tone are prime requirements; virtuoso brilliance (particularly a brilliant finger technique) is less in evidence - one might say that Brahms rarely asks one to play a scale. A certain type of arpeggio passage, laid out in handfuls, with the fifth finger passing over the thumb or the thumb passing over the fifth finger, is characteristic."[216]

The lack of scale passage work in Brahms' music is discussed by other authorities, among them, Ernest Hutcheson, who likens Brahms' style of writing to that of Robert Schumann, a close friend of Brahms.[217] Concerning ornamentation in Brahms' piano music, Kathleen Dale writes:

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[212] Gillespie, Op. cit., p. 258. [213] Hutcheson, Loc. cit.

[214] Sumner, Op. cit., p. 175. [215] Hutcheson, Op. cit., p. 253.

[216] James Friskin and Irwin Freundlich, Music for the Piano, (New York: Rinehart & Co., 1954), p. 93.

[217] Hutcheson, Loc. cit.

> "One of the chief distinctions of the piano writing is that it is almost entirely devoid of unessential ornamentation."[218]

Kathleen Dale elaborates further on the essential harmonic function served by the ornamental work in the Intermezzo in B flat minor, Op. 117 No. 2, Intermezzo in C sharp minor, Op. 117 No. 3 and the Capriccio in D minor, Op. 116, No. 7.

A prominent feature of Brahms' music is rhythmic complexity. This is sometimes achieved by a shifting of accent of a single hand, both hands simultaneously or different accents in each hand. Another kind of rhythmic complexity is achieved by the simultaneous employment of more than one metrical pattern.

> "The combination of different rhythms or metres is a strong characteristic of Brahms' music as a whole. It is especially noticeable to pianists, whose two hands sometimes have to cope simultaneously with four lines of texture each running in a different metrical grouping. Brahms even went to the length of writing special finger-exercises to perfect his own technique in this particular respect."[219]

An example of the above-mentioned structure is the rhythm of two against three.

The extensive use of contrapuntal writing techniques is a notable factor of Brahms' music. Peter Latham discusses the Variations, Op. 9.

> "If the piece is still not easy to play, the difficulties now are mainly due to an increasing preoccupation with counterpoint. Three of the sixteen variations are in canon and several of the others contain contrapuntal interest."[220]

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[218] Kathleen Dale, Nineteenth Century Piano Music, (London: Oxford University Press, 1954), p. 222.

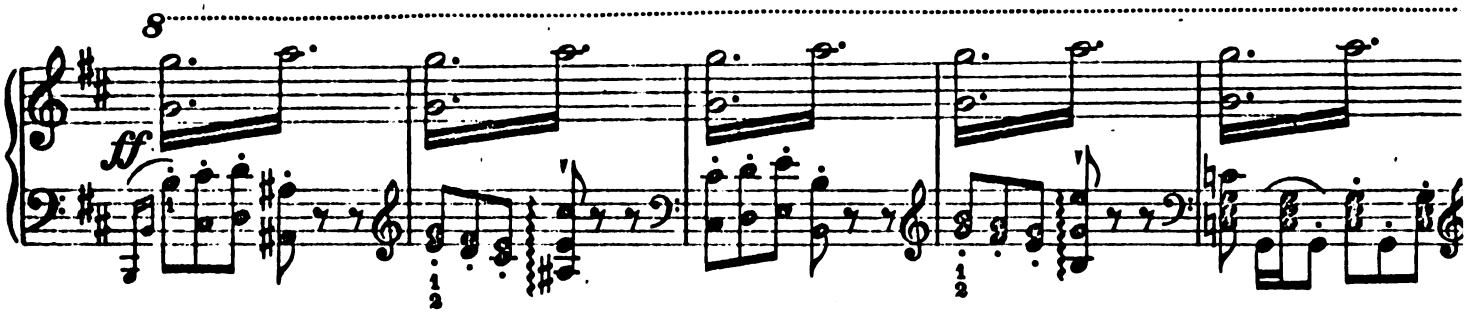
[219] Ibid, p. 118.

[220] Peter Latham, Brahms, (London: J. M. Dent and Sons, Ltd., 1948), p. 113.

Additional evidence of Brahms' interest in contrapuntal devices is the fugue at the end of the Variations on a Theme by Handel, Op. 24. John Gillespie attributes the existence of counterpoint in the music of Brahms to his interest in and performance of the fugues of J. S. Bach.[221] The imitation and canon in the Sonata, Op. 1 in C major serve as added examples of Brahms' interest in counterpoint.

Other technical characteristics of Brahms are his wide spacing of parts and the use of chords formed from the octave and the sixth.[222] Single-handed double tremolos which are wider than an octave exist in the first movement of the Sonata Op. 2, in F# minor, along with complex writing on three staves in the Finale.[223]

Brahms, Sonata, Opus 2 in F# minor, Andante con espressione



Abram Chasims discusses the stature of the Brahms piano concertos.

> "In the first place, they are anything but showpieces, so that they are unlikely to attract any but substantial musicians, Everything in them is music; everything reflects the force and ardor and serene spaciousness of their creator. Their vast power and organization are enough to make any serious-minded artist demand from himself the minimum task of devoting to their recreation a measure of that inexorable self-criticism and artistic responsibility which Brahms lavished upon their creation."[224]

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[221] Gillespie, Op. cit., p. 258. [222] Wier, Op. cit., p. 160.

[223] Dale, Op. cit., p. 86.

[224] Abram Chasins, Speaking of Pianists, (New York: Alfred A. Knopf, 1958), p. 242.

Ernest Hutcheson refers to the Brahms-Paganini Variations as Brahms' "one essay in virtuosity."[225] This is a very difficult work that contains all the before-mentioned technical characteristics of Brahms in addition to glissando octaves and difficult leaps. Though this is one of the few times when Brahms uses technique for technique's sake, there is still sound musicality and logical construction.[226]

Like other composers of his time, Brahms drew on the works of other composers. He amplified an étude of Chopin by double notes, transferred the passage work from Weber's Perpetuum Mobile and Schubert's E flat Impromptu to the left hand, setting Bach's Chaconne for left hand alone and offering two alternates of Bach's Courante from the G minor Suite for Violin.[227]

Brahms composed a set of exercises based on the extensive technical demands of his own music. In addition to devices of fingering, the exercises make use of two varieties of touch simultaneously and of four different metrical patterns with two hands.[228]

John Gillespie qualifies the title of "Romantic Classicist" which he gives to Brahms as "a skilled artisan of musical fabric who fortunately was born in the 'Romantic' nineteenth century."[229] Gillespie adds that seemingly contradictory attributes of Romantic and Classic merge successfully in Brahms' music.

As the works of J. S. Bach serve as the summary of Baroque music, so Albert Wier suggests that those of Brahms closed the Romantic era.[230]

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[225] Hutcheson, Op. cit., p. 254.

[226] Gillespie, Op. cit., p. 262

[227] Hutcheson, Op. cit., p. 253.

[228] Sumner, Op. cit., p. 175.

[229] Gillespie, Op. cit., p. 257.

[230] Wier, Op. cit., p. 160.

Alfred Einstein records that from the second half of Brahms' creative career, he had turned almost exclusively to the writing of short pieces, such as the Ballades, Intermezzi, Fantasies, Capriccios, Romances and Rhapsodies. Einstein submits that these short pieces of Brahms were an indication that the romantic epoch of great brilliance was over.[231]

One of the most influential composers of piano music was Claude Achille Debussy. His influence is attributed to the fact that his music created new sounds which required new and different techniques to achieve the desired results. Authorities' affirmation of this influence is typified in this quotation from Oscar Thompson.

> "Today these three (Chopin, Liszt and Debussy) may be regarded as among the most idiomatic of all composers who wrote for the instrument, and at least partly because they did not accept the limitations and the essential characteristics of piano playing as they found it."[232]

It should be stated that though Debussy's influence on keyboard literature and technique is of paramount importance to this paper, his effect on the musical world was not limited to the keyboard medium. Historians submit that it was Debussy's reaction against the Teutonic tradition which led to the establishment of a new musical style known as Impressionism.

> "Indeed, while to the Romantic mind music was the expression of the inner self, Debussy conceived of it as a supersensitive mirror reflecting the impressions received from the outer world, an outer world, to be sure, not of hard facts and stark realities, but of subtle shades and vague contours."[233]

Historians relate Debussy's inclination towards Impressionism in music to the influence of the writers and painters of his day.[234] A

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[231] Alfred Einstein, Music in the Romantic Era, (New York: W. W. Norton & Co., Inc., 1947), p. 225.

[232] Oscar Thompson, Debussy, Man and Artist, (New York: Tudor Publishing Company, 1940) p. 248.

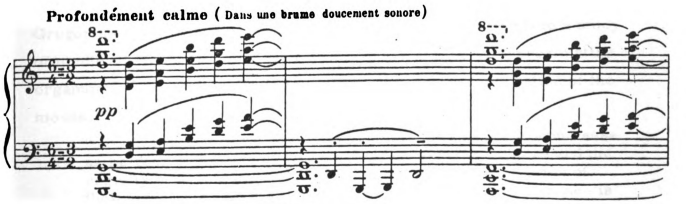
[233] Apel, Op. cit., p. 274. [234] Loc. cit.

statement of Debussy substantiates his enthusiasm for the innovations of his contemporaries in poetry:

> "Verlaine, Mallarmé and Laforgue used to provide us with new sounds and sonorities. They cast a light on words such as had never been seen before; they used methods that were unknown to the poets that had preceded them; they made their verbal material yield subtle and powerful effects hitherto undreamt of. Above all, they conceived their poetry or prose like musicians, they tended it with the care of musicians, and, like musicians, too, they sought to express their ideas in corresponding sound values."[235]

Debussy established the new technical basis necessary to achieve impressionistic concepts in music.[236] Two of the most prominent devices of composition evident in his music that are in direct contrast to the existing system of his day are parallel chords and the whole tone scale. Parallelism in Debussy's music extends from the forbidden triads and seventh chords of traditional harmony to any dissonant grouping of notes including intervals of seconds and fourths.

Debussy, Prelude X, La Cathédrale engloutie



This violates principles of conventional harmony because of the parallel fifths and octaves that occur, the unresolved dissonances that exist

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[235] Marion Bauer, Twentieth Century Music, (New York: G. P. Putnam's Sons, 1933), p. 126.

[236] Apel, Loc. cit.

and, more important than these, the rejection of the functional use of chords. In Impressionistic music, chords seem to lose their individual significance and become a part of one overall sonority.

This unique structure of the whole-tone scale provides an equalization of tones, thus annihilating specific designation of a tonal location or center. In essence Impressionism's effect on music was to replace the use of functional harmony with that of tonal color.[237] Debussy has been referred to as the most original composer since Liszt.[238]

A contributing factor to the uniqueness of Debussy's melodies is his use of the pentatonic scale. This is an oriental influence attributed to Debussy's hearing the Javanese gamelan orchestras at the International Expositions in Paris 1889 and 1900.[239] It was at these same occasions and with the same groups that the possibilities of the whole-tone scale were impressed upon Debussy. Historians concede that it was possible that Debussy heard some whole-tone music in Russia but that it is more probable that the real influence was the Javanese gamelan orchestra.[240] The influence of church modes upon Debussy's music has been traced to a visit Debussy made to Rome. At this time Gregorian music made such an impression on him that he made a study of medieval church modes. He also made use of a style approximating organum.[241] E. Robert Schmitz discusses Debussy's utilization of the modes.

> ". . . In his use of medieval modes Debussy shows the same ease as he does in the use of diatonicism: his is not a turn toward the regidity of archaism, yet it is a very complete revaluation of their uses, not just a passing coloring. A marked preference is shown for Aeolian, Dorian, and Phrygian, with less frequent uses of the Lydian and Mixolydian modes. A note of warning: in the works of Debussy, these modes are nearly always transposed, and do not confine their compass to an octave. Further, the dif-

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[237] Ibid, p. 274-276.

[238] Friskin and Fruendlich, Op. cit., p. 200.

[239] E. Robert Schmitz, The Piano Works of Claude Debussy, (New York: Dover Publications, Inc., 1966), p. 257.

[240] Bauer, Op. cit., p. 128. [241] Loc. cit.

> ferentiation of the position of the dominant in plagal and authentic modes is not necessarily maintained. For instance, the Aeolian mode sometimes functions as the plagal form of Dorian, and sometimes as an authentic mode with its dominant at the fifth. Debussy also frequently uses a mode pentatonically or hexatonically, i. e., with some of its tones missing, which, however, a later phrase of the melody may supply.
>
> The use of the modes in his works is a horizontal process, which is 'harmonized' by a counterpoint freed from its earlier limitations of dissonance. Further, modality has a definite influence on the cadential uses in Debussy. His fresh attention to the subdominant and submediant chords, both in modal and diatonic passages, is worth noting here as a heritage of plagality, as is his use of the Phrygian cadence."[242]

Though chromaticism was not new, later nineteenth century composers' use of it had caused the chromatic scale to emerge from being an alteration of a diatonic scale to becoming a basis for a mode of its own. It was in this context that Debussy used it, which made chromaticism a contributing factor to the new sound of Debussy's music.[243]

Debussy himself was a pianist and it was with this idiom that his impressionistic innovations had their greatest effect. One hearer described Debussy's playing: "You forgot that the piano had hammers when Debussy played."[244] Gillespie acclaims Debussy as one of the most important composers in the history of piano music.

> "He refused--like Chopin and Liszt before him--to accept the keyboard restrictions set up by his predecessors and so proceeded to imagine different concepts of pianistic techniques and coloristic devices."[245]

The piano, with its capabilities for harmony and tonal blending, was a natural instrument for a type of music built on these factors. Prior to Debussy's time the potential of tone color available from the piano was virtually untouched. With the piano was also the possibility

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[242] Schmitz, Op. cit., p. 26.

[243] Bauer, Op. cit., pp. 111-112.

[244] Sumner, Op. cit., p. 175.

[245] Gillespie, Op. cit., p. 330.

of shifting tonalities so as to create the impression of no tonality at all.

Debussy's approach to the piano was different from those of his predecessors. His concern was for tonal colors and effects. Debussy's pianoworks are evidences of a re-evaluation and a much more extensive experimentation of the tonal resources of the piano.[246] In discussing the culmination of Debussy's piano music one authority writes:

> ". . . eventually the creation of the Debussyan piano stands out, like the creation of the Chopin piano, as a unique artistic phenomenon in the history of music, radically changing the musician's whole conception of what the instrument can be made to convey. The instrument Debussy created is unique technically, and it is unique imaginatively."[247]

The difference in Debussy's concept of the piano was in the creation of coloristic sounds. It was also commented that Liszt's use of the piano was orchestral. This reference, however, was more to the extended range of the dynamic potential of the piano as developed by Liszt than to the expansion of this orchestral concept to include the many subtle nuances of tone color as conceived by Debussy. The subtlety of Debussy's orchestral palette is inherent in the impressionistic concept of "impressions of sounds."[248]

Perhaps the paramount change in piano technique required to play Debussy's music is that of the new kind of touch. Oscar Thompson relates several comments on Debussy's playing. One referred to Debussy's touch as being like a cat rubbing against the hand that was stroking it. Thompson interjects that only rarely could Debussy have thought of the piano as a percussive instrument, or as a medium for organlike sonorities. Thompson compares Debussy's approach to the

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[246] Thompson, Op. cit., pp. 247-248.

[247] Edward Lockspeiser, Debussy, (London: J. M. Dent & Sons, Ltd., 1951), p. 162.

[248] Schmitz, Op. cit., pp. 214-222.

piano to that of Robert Schumann, who also used extra-musical ideas. Debussy's approach is more painterlike in his concern for sights and sounds.

Thompson quotes Vallas as acclaiming Debussy as an original virtuoso remarkable for the delicacy and mellowness of his touch. In his youth Debussy was said to have both strength and grace in his playing but to lean more to grace than to strength. His tone was described as dim and veiled and at times almost inaudible. The comment most frequently made about Debussy was that he produced tones without the impact of hammers or the vibrations of strings.[249] Thompson further quotes Louis Laloy, a biographer of Debussy, as describing the sonorities of Debussy's music as rising up "into a transparent atmosphere, where they unite without merging and dissolve in iridescent mists."[250]

It should be noted that not all of Debussy's piano music is illusive and ethereal, as is described in this quotation from Lockspeiser.

> " . . . These chords are displayed in the stark outlines of concrete reality, or, let us say, they are rather chords of iron brutality hammered out of the keyboard to form one of the most powerful examples of modern piano music, reaching far beyond the Debussyan art of illusion to something approaching the hard clarity of the later neo-classical style of Stravinsky. The limits of Debussy's art are wrenched apart in this study, and the conception is established of the piano as a percussive instrument, the instrument of the piano works not only of Stravinsky, but of Bartók and of Hindemith."[251]

The most unique factor in Debussy's piano music is the delicacy of the touch required to perform it, as has already been noted in this paper and as corroborated by several other sources.[252] Debussy's own instructions to students for the playing of his piano music indicate the importance of this light touch. Oscar Thompson writes that Debussy encouraged his students to play as if the piano had no hammers,

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[249] Thompson, Op. cit., pp. 248-250. [250] Ibid, p. 251.

[251] Lockspeiser, Op. cit., p. 161.

[252] Friskin and Freundlich, Op. cit., p. 201.

to aim at blending of patterns so as to produce a sonorous halo. Thompson quotes Maurice Dumesnil as quoting Debussy's chief instruction to students to play with more sensitiveness in the fingertips, and to play chords as if the keys were attracted to the fingertips as if magnetized.[253]

Next to touch, harmony is the most important factor concerning keyboard technique in Debussy's music. As has already been discussed in this chapter, the umprecedented sounds of Debussy's music were not constructed nor did they progress like those of traditional music. Harold Schonberg writes:

> "In Debussy's (music), the piano appears almost to have ceased being a keyboard instrument. Harmonies billow up and figurations float through them, foglike and mysterious. . . . Debussy's characteristic harmonies are often exotic, based on the whole-tone scale or suggesting a gamelan orchestra."[254]

The factors of chordal structure and progression as they occur in Debussy's music require some changes in finger technique. As Oscar Thompson writes:

> "He (Debussy) added to, and in some cases altered in their application the resources of piano technique."[255]

Debussy's affinity for modal, whole-tone and pentatonic melodies gave new directions and patterns to melodies. This meant that fingers accustomed to diatonic groupings would have to adjust to new melodic figurations. Schonberg writes of the new kind of digital figuration in Debussy's music.[256] E. Robert Schmitz writes that it is proverbial that Debussy's works will not fall under the fingers. Each new work brings a new set of technical problems all its own, and a new form of virtuosity.

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[253] Thompson, Loc. cit.

[254] Schonberg, Op. cit., p. 389.

[255] Thompson, Op. cit., p. 247.

[256] Schonberg, Loc. cit.

"Debussy calls forth all the pianist's ingenuity as to technique, and also demands the thoughtfullness and education of a thorough musician."[257]

Debussy's coloristic or orchestral approach to the keyboard caused him to write for sound effects more than had previous composers for the piano. This was a new pianistic sound which required a different manipulation of technical devices.

"Debussy in his orchestral use of the piano makes it sound like other instruments when he desires it. But it is in its tremendous range of expression that the piano now reaches toward the coloristic conception of the orchestra."[258]

Oscar Thompson describes Debussy's pictorial writing:

"With Debussy, small details of rhythm and accent render picturesque and evocative the curl of phrase. Fluidity of line and transparency of background are achieved with a new refinement of utterance. Often the effect is of harmonies that dissolve in the moment of their emergence. . . . The piano is like an artist's palette, but employed for sketches and not completed landscapes."[259]

William Sumner writes of the tone pictures which Debussy created in his Spanish music and points out how Debussy could create the illusion of a static, statuesque effect, as of a marble figure in a moonlit garden, by the repetition of similarly compounded chords on different notes. Sumner mentions Debussy's exploitation of the sensuous beauty of a piano chord as a thing in itself and quotes Maurice Emmanuel on the Coloristic aspect of Debussy's playing:

" . . . He (Debussy) was a charmer at the piano. He conjured from the keys all the diverse sounds of the orchestra, and his touch was perfectly delicate and apparently limitless in its wealth of shading. . . . "[260]

Other innovations of piano technique in Debussy's piano music

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[257] Schmitz, Op. cit., p. 36.

[258] Loc. cit.

[259] Thompson, Op. cit. pp. 253-254.

[260] Sumner, Op. cit., pp. 175-176.

stem from his use of conventional devices rather than from the creation of new types of technique. Some sources identify Debussy's basic heritage as being from the Classic and the Baroque periods. Schmitz lists the facets of Debussy's music which evidence this association:

1. Contrapuntal conception of voice leading and of independently evolved and developed horizontal levels.
2. Terracing of dynamic levels.
3. Great individuality of phrasing of the superimposed voices.
4. A non-metric conception of the bar line.
5. Sensitive attention to appoggiaturas and resolutions.
6. Polyrhythmic stresses resulting from nonconforming rhythms of each voice.
7. Tremendous diversity of pedal points and of motivic patterns in direct descendance of the "divine arabesque" of Bach.
8. Sharp contrasts of dynamics, scoring and texture are reminiscent of baroque period.
9. Minute attention to ornaments in symbol or written out in melodic line give more than a passing bow to the "style gallant."

In discussing the texture of Debussy's music, Schmitz writes that it is greatly imbued with the clarity of pattern and the keyboard style of the baroque and classic masters, from whom Debussy also borrowed little tricks such as the crossing of hands, arpeggi, scale passages and ornaments.[261]

Schmitz cites the following factors as evidences of the romantic heritage in Debussy's music:

1. Attention to color and therefore to orchestration and its transference to the piano. This results in an orchestral as well as piano virtuosity but not as a means unto themselves.

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[261]Schmitz, Op. cit., pp. 18-19.

2. Extremes of compass.

3. Extremes of dynamics.

4. Pictorial effects.

5. Association of certain motifs, harmonies or rhythms to certain objects, emotions, or situations.[262]

The function of each factor of the baroque, classic and romantic backgrounds acquires a new dimension with its utilization in Debussy's music. The compass of the contrapuntal melodies in Debussy is widely divergent, with ranges of a third to ranges of several octaves. Debussy's rhythm is non-metric. Dynamics in Debussy may range from FFF to PPPP. One level of dynamics may be percussive while the other is singing. All technical shadings from staccato to portamento to legato are used singly and in combination. In Debussy's music there is a maximum array of materials (motifs, themes, pedal-points, harmonies, modalities and tonalities which all contrive to bring out of the piano its maximum diversity.[263]

As with previous composers, Debussy's Études relate to the technical needs of his own music.

> "Their scope is musically most varied from fierce to tender, very fast to slow, soft to strident, modal through diatonic and bitonal to near atonal, and a matching array of technical problems of performance; for, to the more frequently treated double-thirds, double sixths, octaves, which he completely revaluates, Debussy has added studies in the problems of such fascinating equations as ornaments, opposed sonorities, double-fourths, and repeated notes, and embodies the expansion of the instrumental capacities of the piano, and research into the differentiated timbres and tone colors it is capable of, simultaneously or singly."[264]

Sources do agree that the Études represent a synthesis of Debussy's conception of the piano.[265] As is indicated in the quotation

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[262] Ibid, p. 17.

[263] Ibid, p. 35.

[264] Ibid, p. 192.

[265] Lockspeiser, Op. cit., p. 160.

above, there are studies dealing with the traditional problems of piano technique as well as those that deal with the technical problems in producing the unique sounds of Debussy's music. An example of the latter is Étude number eleven, entitled "Pour les arpèges composés" which deals with the illusive disintegration of chords which are re-formed into lacy arpeggios.[266]

Like Chopin, Debussy appears to have had an understanding of the physiology of the hands and the strengths and weaknesses of each finger. To obtain the equality of tone required in the first Étude, Schmitz suggests that the traditional curved finger approach not be used. This, Schmitz asserts, produces two different tonal colors - that of the short finger and that of the longer fingers. Schmitz suggests that the accomplishment of equality of tone comes from inclining the hand in towards the keyboard in order to lengthen the thumb and fifth finger and inclining the hand out away from the keyboard to shorten the second, third, and fourth fingers.[267]

Debussy refused to write any indications for fingering in his music. Victor Seroff quotes Debussy's preface to his Études, in which this point is discussed.

> "The fingering is intentionally omitted in these Études. It is obvious that the same fingering cannot suit differently shaped hands. The modern method of writing several fingerings over one another is supposed to solve the difficulty, but it results only in confusion. . . . It makes the music look like a queer sum in arithmetic in which the fingers, by some inexplicable phenomenon, have to be multiplied by one another. . . . Our old masters--I mean our own admirable clavecinists--never indicated the fingering, no doubt because they had confidence in the ingenuity of their contemporary performers. It would be unseemly to distrust the skill of our modern virtuosi. To sum up; the absence of fingering provides excellent practice, it abolishes the spirit of contradiction which prompts us to avoid the composer's fingering, and proves the truth of the old saying: 'If you want a thing done done, do it yourself."[268]

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[266] Ibid, p. 161. [267] Schmitz, Op. Cit., pp. 194-195.

[268] Victor Seroff, Debussy Musician of France, (New York: G. P. Putnam's Sons, 1956), pp. 333-334.

In summation, Debussy's pianistic style is very exacting with intensive demands on both performer and instrument. Perhaps the greatest demand made on the performer is in the area of touch. In Debussy's music the knowledge of touches must be commensurate with the variety of colors in the Debussy palette. Merely depressing the key is not enough, as the manner of depressing the key affects the tone and opens many doors to coloristic experimentation. In Debussy's music virtuosity is ever present, but never as an end in itself, but rather as a tool with which to achieve a particular sound.[269]

A vital factor in the performance of Debussy's music lies in the use of the pedal which perhaps precedes touch in importance. Since pedal technique is not a part of this study and the evolvement of the pedal is sufficient for a study in itself, discussion of the pedal has purposely been deleted from this study. The mention of the importance of the pedal to Debussy's music however, is given to more adequately indicate Debussy's contribution to piano performance.

In the following quotation, Ernest Hutcheson assesses Debussy's place in music:

> "If Debussy cannot be considered a truly great composer, his works are phenomenal in their originality, mastery of technique, and power of suggestion by what in the arts we call impressionism."[270]

Sergei Rachmaninoff was a composer of some stature and received high acclaim as a pianist. John Gillespie names him as a descendent of the Chopin and Liszt tradition and describes his performance ability as equal to that of any twentieth century virtuoso.[271] In Donald Brook's opinion, Rachmaninoff was one of the finest executants

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[269]Schmitz, Op. cit., pp. 35, 37-38.

[270]Hutcheson, Op. cit., p. 307.

[271]Gillespie, Op. cit., p. 276.

on the concert platform.[272] Concerning Rachmaninoff's playing Harold C. Schonberg writes:

> "And it was playing buttressed by one of the colossal techniques in pianistic history, with a powerful left hand that probably left Dreyschock's far behind."[273]

Abram Chasims describes what he calls the most "fabulous aspects" of Rachmaninoff's playing as his melodic eloquence, dramatic virtuosity, unique rhythmic bite and his way of orchestrating chords at the piano through individual distributions of balances and blendings. Chasims also lauds Rachmaninoff's organic quality of figuration, his controlled rubato, dynamic range and variety of touches.[274]

Both John Gillespie and Harold C. Schonberg corroborate Chasims' assessment of Rachmaninoff's playing. Further comment is made concerning the wide stretches required by Rachmaninoff's music.[275] W. L. Sumner writes that Rachmaninoff's hands could encompass an eleventh.[276] Authorities seem to agree that Rachmaninoff's contributions to piano literature are well suited to the piano idiom.

Erik Satie is a composer of piano music who cannot be ignored if for no other reason than the influence he had on the French composers of his day. Especially strong was his influence on Debussy and Ravel. Satie was one of the primary figures who took the initiative in the opposition against subjectivism and exuberant emotionalism. One way in which Satie evidenced his opposition to post-romantic musical practices was in the music he wrote.

> "As early as 1890 Satie wrote piano pieces which held up to ridicule the exhibitionism and ostentatiousness of the late Romanticism

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[272] Brook, Op. cit., p. 140. [273] Schonberg, Op. cit., p. 367.

[274] Chasims, Op. cit., pp. 45, 256.

[275] Schonberg, Op. cit., p. 368.

[276] Sumner, Op. cit., p. 192.

> and the fin-de-siècle refinement of Impressionism; these works, though artistically insignificant and trifling, clearly show the new tendency to revolt."[277]

Another way in which Satie exercised influence was involvement with and indoctrination of the younger composers of his day.

> " . . . he helped to form a musical creed among the younger composers, the 'Group of Six'--Honegger, Milhaud, Poulenc, Auric, Germaine Tailleferre, and Durey--and a still younger group of four, L'Ecole d'Arceuil, named after the place where Satie lived. These included Sauguet, Cliquet-Pleyel, Jacob and Delvincourt."[278]

According to Peter Yates, the purity of Satie's skill as well as the defiance evidenced in his musical practices and theories gave to the younger twentieth century composers the faith that music could be rethought from its beginnings. Yates labels Satie "the forerunner and hero of those twentieth-century originals who continually begin fresh, in disregard of any tradition."[279]

As certain as it is that Satie did exercise influence on the composers of his day, historians do not agree on how important that influence was. Gillespie describes Satie as "a very important and enigmatic figure" during the early twentieth century, considered by some critics as the "direct precursor of Impressionism," while others thought of him "as an eccentric dilettante." Gillespie maintains that both positions are valid.[280] John Gillespie further cites some particular stylistic characteristics in Satie's music that could be labeled as forerunners of impressionism, while Willi Apel tends to view Satie's contribution in a different light.

> "His novel methods are startling rather than convincing; . . . These methods are significant, not as such, but as indications of a mentality which was bent on shocking the bourgeois, including the bourgeois musician."[281]

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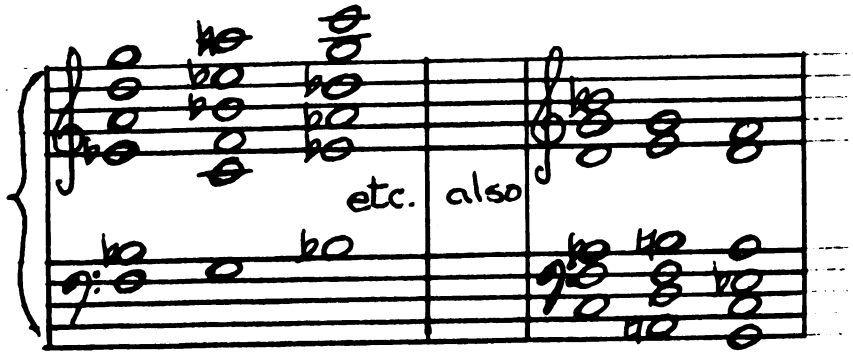
[277] Apel, Op. cit., p. 281. [278] Bauer, Op. cit., pp. 234-235.

[279] Yates, Op. cit. pp. 170-171.

[280] Gillespie, Op. cit., p. 366. [281] Apel, Loc. cit.

As to the actual characteristics of Satie's music, Marion Bauer writes that Satie anticipated the general employment of chords in fourths and polyharmony in such chords as given in the examples below.[282]



The characteristics in Satie's music which Gillespie cites as possible forerunners of impressionism are:

1. Use of modality
2. Series of parallel chords--sevenths, ninths and elevenths--dependent on delicately designed melodic patterns.

Another element of Satie's style is his use of static chord groupings which are treated in modal style like plain song accompaniments and alternate with free melody in octaves.[283]

Alexander Scriabin is a composer recognizable for his own pianistic art, but also for a certain amount of innovative influence resulting from his unique concept of music. Scriabin won the gold medal for piano performance at Moscow Conservatory and later was added to the conservatory staff as a professor of piano. After leaving the conservatory, he toured extensively as a concert pianist and performed until three weeks before he died. Scriabin is described as an "elegant, light-fingered pianist, most at home in the shallower side of the repertoire, and . . . gifted with a fluent technique. Scriabin was a spontaneous kind of pianist and never played anything twice the same way."[284]

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[282] Bauer, loc. cit.

[283] Gillespie, Op. cit., p. 367.

[284] Schonberg, Op. cit., p. 343.

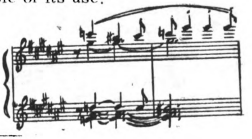
Marion Bauer divides Scriabin's compositional contribution into three periods:

1. piano compositions of peotic refined "salon" type in which the hand of Chopin is distinctly visible, even in the use of titles--preludes, mazurkas, études, etc.
2. transitional period in which Scriabin wrote forty works for piano and some for orchestra. During this time Scriabin came in contact with French impressionism, and was thrilled at the idea of opening new paths.
3. transcendental period which was given over to the composing of cult music.[285]

It was during this third period that Scriabin was impressed with the writings of Nietzsche and oriental philosophy. From this Schriabin developed his own personal belief in a free, all-powerful personality that identifies itself with the cosmos "(I am a God, I am the world, I am the center of the universe)."[286] From this occult facet of Scriabin's life came the motivation to attempt the correlation of life and art in which he conceived art as transforming life into joy.

> "To express his esoteric ideas he invented a 'mystic' chord based on the upper overtones (the ninth, tenth, eleventh, thirteenth and fourteenth), usually disposed in order of fourths:

> and available in many alterations and inversions. Here is a simple example of its use:[287]



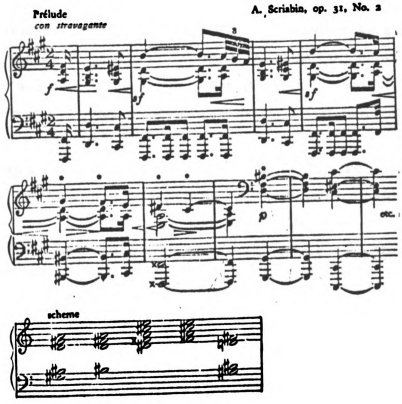
[285] Bauer, Op. cit., pp. 169-170.

[286] Gillespie, Op. cit., p. 272-273.

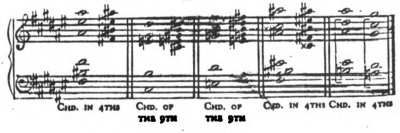
[287] Hutcheson, Op. cit., p. 332.

Scriabin cultivated his own individual style of writing, which was primarily based on harmonic innovation. Scriabin's harmonies are vertical, but frequently complicated figurations in the inner voices give the impression of polyphony. Scriabin's harmonic devices comprise the following:

1. Altered chords--raising or lowering members of regular chords, extending triads to the seventh, and ninth.



2. Chords in fourths.



3. Arbitrary scales and chords.

4. Mystic chord and short melodic elements.

Scriabin's music also includes the use of the intervals of the seventh and ninth as a definite unit as in the series of etudes, opus 65. The augmented fourth or diminished fifth is often used as a bass figure in the relationship of tonic and dominant. Scriabin is reputed to have regarded the augmented fourth the point at which the octave is cut in half. Another contrivance in Scriabin's music which Schoenberg was later to adopt is the stretching the octave to a ninth.[288]

Scriabin's importance in music history lies in the contribution he made toward the movement away from the traditional music of his time.

> "Prominent among the men who finally broke the fetters of nineteenth century harmony was Alexander Scriabin."[289]

Scriabin's innovation in piano technique exists solely in the adjustment of finger manipulation necessary to bring to realization the different tonal groupings in his music.

The names of Maurice Ravel and Claude Debussy are frequently linked as if they were co-workers in the impressionistic movement. Biographical sources for each composer disagree as to the amount of influence one had on the other, but they generally agree that each was affected by the other's works. One source writes that, though Debussy and Ravel worked simultaneously, they worked differently. This same source makes the comparison that with Ravel the pianist manipulates

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[288] Bauer, Op. cit., pp. 171-180.

[289] Apel, Loc. cit.

the keys but with Debussy the piano appears to have ceased to be a keyboard instrument.[290] Gillespie writes that to regard Ravel with Debussy as the two truly representative Impressionist composers is only partly correct.

> "Although they (Debussy and Ravel) were contemporaries and admired each other's works, they had substantially different ideas about musical composition. Many of Debussy's unorthodox harmonic techniques were incorporated in Ravel's music; and vice versa, Ravel's 'Jeux d'eau' (1901) disclosed to Debussy a wealth of coloristic sound combinations. But the two composers did not approach musical composition in the same way. Ravel's background, musical education and keen intellect guided him in creating works equally as superb in craftsmanship as Debussy's are superior for freedom of form."[291]

Gillespie and others cite Spain and the dance as being the two foremost influences upon Ravel's music. The Spanish influence came through Ravel's mother, who was Basque but was in Spain when Ravel's father met her. The evidences of Spanish influence in Ravel's music are found in his use of Spanish titles, Spanish rhythms and imitations of Spanish instruments all through his career. Ravel's extensive utilization of dance forms and dance rhythms evidences his attraction to the dance and its influence in his music.

> "He (Ravel) drew upon both ancient and modern dances and fused them through his personal manner of expression."[292]

Roland-Manuel extends the primary influences in Ravel's music to include comedy and enchantment, which, according to Roland-Manuel, are the only subjects of the majority of Ravel's works.[293]

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[290] Schoenberg, Op. cit., p. 389.

[291] Gillespie, Op. cit., pp. 338-339.

[292] Gillespie, Op. cit., p. 338.

[293] Roland-Manuel, Maurice Ravel (London: Dennis Dobson Limited, 1947) pp. 121-122.

Composers of the Romantic period whose music influenced Ravel were Schumann, Weber, Chopin and Liszt. The strongest of these influences was Liszt.[294] Contemporary composers who affected Ravel's style of writing were Chabrier, Saint-Saëns and Debussy.[295] Eric Satie was the contemporary composer that had the greatest amount of impact on Ravel's writing. The succession of chords in thirteenths and ninths found so often in Ravel was first used by Satie in 1887 in his three "Sarabandes." Satie was the first to indulge in this type of free writing, which by 1920 had become a device used by all student composers in their first step in going "modern." All the avenues of freedom of writing were opened to Ravel by Satie.[296] The importance of Eric Satie to Ravel as a composer is supported by Victor Seroff.

> "It was Joseph Ravel who arranged a meeting with Satie for his son--a meeting which Maurice Ravel believed to have been decisive in his development as a composer. . . . Not only as a boy of fourteen, when his father introduced him to Satie, then in his twenties, but also as a mature composer, Ravel was among those who held Satie in great esteem. On January 16, 1911, when Ravel was already a well known composer, he arranged a concert of Satie's works, for he sincerely believed in their importance. 'Even though some of them are clumsy,' he said, 'they are nevertheless the works of a genius.'"[297]

Ravel's harmony is characterized by the addition of new tonal combinations to established familiar chords. In this manner Ravel extends the harmonic capabilities of each chord and thus multiplies the tonal resources of the composer. Ernest Hutcheson cites the "Pavane pour une Infante défunte" as an example of how Ravel could be modern within the limits of simple diatonic progressions.[298] Perhaps the

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[294] Norman Demuth, Ravel (London: J. M. Dent & Sons, Ltd., 1947) p. 5.

[295] Hutcheson, Op. cit., p. 316.

[296] Demuth, Op. cit., p. 52.

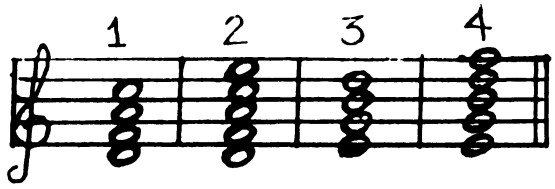
[297] Seroff, Op. cit., pp. 31-32.

[298] Hutcheson, Op. cit. p. 319.

feature of Ravel's music which sets him apart from all other twentieth century composers of piano music is his ability to create a new sound within the established tonal framework.

> "Whether we admit it or not, all European melody implies the diatonic. Ravel never forgets it; and not the least of his claim to fame will be to have recalled music to a respect for this fundamental principle while retaining all his love if innovation and fantasy within the limits of tonality."[299]

Ravel, like Debussy, worked out his own harmony, which consists predominantly of chords of the ninth and elevenths.[300] In some instances chords of the thirteenth and fifteenth are used as in the "Pavane,"[301] Roland-Manuel writes of Ravel's preference for chords known as secondary sevenths and ninths which are naturally formed on modal tonics of D. and E.



According to Roland-Manuel, these chords form the harmonic foundation of Ravel's first period compositions. Interest is maintained through internal pedals, appoggiaturas and constant acciaccaturas. Comparison is also made of Debussy's preference for the major ninth and Ravel's preference for the secondary ninth chord in which there is no trace of the whole tone scale. Further comparison is made of the followers of Debussy who destroy tonality with the use of the tritone and Ravel, who uses the tritone as an integral part of the chord of the augmented eleventh.[302]

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[299] Roland-Manuel, Op. cit., p. 112. [300] Hutcheson, loc. cit.
[301] Demuth, Op. cit., p. 51. [302] Roland-Manuel, Op. cit., pp.115-116.

Norman Demuth's comment that Ravel's orchestral and piano music are interchangeable leads to the impression that Ravel, like Debussy, was interested in experimentation with sounds. Demuth goes on to explain, however, that, generally speaking, Ravel was not interested in the exploitation of sonorities.

> "The 'juxtaposition of tones' played a part only incidental to his expression. He was not concerned with this or that scale and did not make any fetish of any particular chord or chords. . . . Indeed, his use of common chords we have seen to be a peculiar and natural part of his technique. He had, therefore, a broader range than Debussy, who bothered too much about sonorities."[303]

This is not to say that Ravel had no interest in impressionism. His composition "jeux d'eau" indicates his interest in sonorities and his use of the piano for picturesque purposes. In the set of pieces "Miroirs," Ravel uses the piano orchestrally as an illustrator of programme or descriptive music.[304] Another source discusses Ravel's uses of the devices of impressionism with light touches, vagueness of melodic line and illusive harmony.[305]

Historical sources describe Ravel's harmonies, for the most part, as being more crisp, more out-going and more percussive than Debussy's. Marion Bauer writes that Ravel's compositional curiosity led him away from impressionism into experimentation with neoclassicism, polyharmony and polytonality.[306] This places Ravel in line with composers who were to exploit the percussive aspects of the piano's tonal resources even more extensively.

Ravel's incisive rhythms are indicative of the Spanish influence in his music and his love for the dance. In comparing Ravel's and

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[303] Demuth, Op. cit., p. 174.

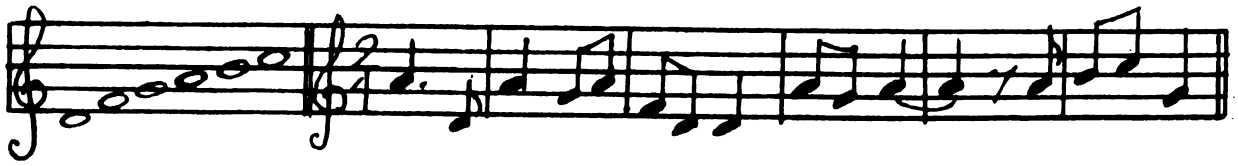
[304] Ibid, pp. 61-62.

[305] Ackére, Maurice Ravel, (Bruxelles: Elsevier, 1957) pp. 17-18.

[306] Bauer, Op. cit., pp. 147-148.

Debussy's use of rhythm, Gillespie describes Ravel's rhythms as being "more piquant and sharply punctuated."[307]

Ravel's melodies are modal and for the most part fall into the Dorian and Phrygian modality figure prominently in the folk music of the Basque Provinces and the rest of Spain. In his use of the modes Ravel seems to favor what Roland-Manuel describes as the "gapped scale."[308]



Roland-Manuel also acknowledges some influence from the oriental scales and describes what he calls the particular character of Ravel's melodies.

> "The particular character of the Ravelian 'melos' can be seen in a system of chords which often seems to be a projection of melody into the harmonic plan; the origin of the chords is in the arpeggio; the horizontal is made up of the vertical."[309]

Ravel's primary contribution to piano literature is his extension of virtuoso technique, comparable to Liszt's, into the modern tonal idiom. Numerous sources attach Ravel's compositional lineage to that of Franz Liszt and comment upon the virtuoso technique required to play Ravel's music.

> Ravel's technical procedures in the difficult and dazzling 'Jeux d'eau' are similar to those in Liszt's "Jeux d'eau à la Villa d'Este', but not at all like Liszt is the end effect achieved by Ravel--a delicacy emanating from his exploration of the half tones in the pianistic palette; and myriad fleeting sensations

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[307] Gillespie, Loc. cit.

[308] Roland-Manuel, Op. cit., pp. 112-114.

[309] Ibid, pp. 114-115.

impelled by cascades of eleventh chords, dominant ninths and major sevenths."[310]

Norman Demuth writes that the composition "Jeux d'eau" stamped Ravel as an instinctive and natural writer for piano and says concerning the technical demands of Ravel's music and the heritage from Liszt:

> "Although 'Jeux d'eau' was a revelation in piano sonorities and a revolution in piano technique, it has its forbear--Liszt. The idiom is quite different, but precede 'Jeux d'eau' by Liszt's 'Au Bord d'une source' and the parentage is obvious. . . . The finale (Sonatine) is a tour de force of simple brilliance, hard and metallic, a perfect miniature of virtuosic writing. . . .
>
> . . . . . .
>
> There is much rushing up and down the keyboard, to no great purpose other than brilliance; . . ."[311]

In this same vein, Roland-Manuel contributes the following information:

> "For this slight work ('Jeux d'eau') was to have profound consequences. From it there rapidly emerged a new piano technique, which made Ravel's contemporaries acknowledge themselves his debtors, however small their contribution to virtuosity. . . . the composer of 'Jeux d'eau' was not aiming to revolutionize piano-writing so much as to extend Liszt's experiments with the use of the high registers of the instrument in a fluent and sensitive manner whose vivacity was akin to the Sonatas of Scarlatti."[312]

Biographical sources agree that Ravel was surprised at the sensation created by 'Jeux d'eau.' However, at the composing of 'Gaspard de la Nuit' Ravel is quoted to have said to the pianist Maurice Delage that he wished "to write piano pieces of transcendental virtuosity which are even more complicated than 'Islamey.'" Roland-Manuel writes that in "Gaspard de la Nuit" all Ravel's qualities as a musician, and all the strength of his genius are crystallized, and quotes the

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[310] Gillespie, Loc. cit.

[311] Demuth, Op. cit., pp.57-60.

[312] Roland-Manuel, Op. cit., p. 30.

pianist Alfred Cortot as labeling "Gaspard" as an enrichment of the repertory of his (Ravel's) time by one of the most astonishing examples of instrumental ingenuity ever contrived by the industry of composers.[313] Victor Seroff describes Ravel's genius in this same composition for purely pianistic effects as being super-Lisztian, "not like Liszt of Liebestraum but of Mephisto Waltz, Feux Follets, and the sonata D'après une lecture de Dante."[314] Other sources label "Gaspard" as the most significant virtuoso piano piece since Liszt and a composition which exploits the piano to its utmost limits. In this composition, Ravel is credited with having created a virtuoso piece but one with musical content, Norman Demuth writes:

> "The piano's capabilities seem to be exhausted. . . (Scarbo) Nevertheless with all the difficulties, the music is magnificently laid under the hands. . . .
>
> . . . . . .
>
> he brought to modernity the natural pianistic aptitude of Liszt."[315]

In the main, technical innovation in Ravel's music stems from the required manipulation of conventional technical devices to make them fit Ravel's new tonal idiom. Such adjustment is evident in the extension of the hand to play the widely spaced chords in Ravel, such as chords of the eleventh, thirteenth and fifteenth. The unusual note groupings in his blocks of dissonances and the free manner in which these chords progress require different finger groupings and finger movements. Widely spaced arpeggios that encompass the greater part of the keyboard in a free tonal framework require an expansion of traditional arpeggio technique. A technical requirement frequently associated with the piano music of Ravel is the close interlacing of the hands. Some biographical sources consider this technical device as evidence of Ravel's interest in sixteenth century clavecin technique.

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[313] Ibid, p. 54.

[314] Seroff, Op. cit., p. 135.

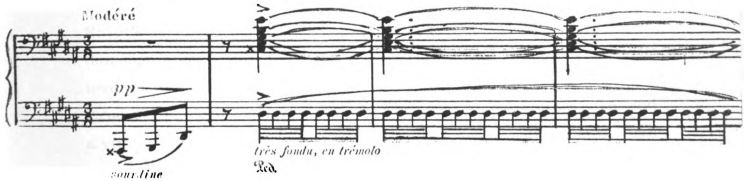
[315] Demuth, Op. cit., pp. 75, 172.

An example of this point of view is indicated in this quotation of the pianist, Myers Foggin.

> "When a pianist studies Ravel's music he is always well repaid for the many hours he practises, for, apart from its value as music, it is so well written for the instrument that it can, with a reasonable technique, be not only played but also controlled. At times it is very difficult, and at other times the hands do tend to get in one another's way (thanks to the influence of the two keyboards of the clavecin), but there can be no doubt that Ravel's knowledge of the capabilities of the instrument and of the pianoforte technique was vast."[316]

Ravel's melodic innovations of the use of modes and modal patterns, such as the flattened leading-note of the modal scale and the fusion of melody into the arpeggiated chords, require different kinds of finger movement and control. The reiterated syncopated notes found so frequently in Ravel's piano music are considered as one evidence of the Spanish influence and are likened to the repeated notes of Scarlatti.

Ravel, Gaspard de la Nuit, Scarbo



Another technical characteristic of Ravel's piano music which is similar to the keyboard technique of Scarlatti is the importance of the thumb.

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[316] Ibid, p. 82.

> "It is pleasant to come across M. Henro Gil-Marchex, who in a study of rare insight sees exactly the relationship between the Basque and the Spanish-Neapolitan composer (Scarlatti): the same skill in the finger mechanisms, the constant use of thumb passages frequently combined with repeated notes. The use of the thumb is very remarkable in Ravel's piano work. The thumb takes control--especially in Gaspard de la Nuit, which contains some of the most characteristic discoveries of his supreme techniques."[317]

Ravel, evidently was quite proficient in the use of his thumb.

> " . . . he could twist his thumb into the palm of the hand with unbelievable facility which allowed him without any trouble to press down three keys at a time. This thumb explains the passages in seconds in 'Scarbo. . . ."[318]

Victor Seroff writes of this same ability but with a little less enthusiasm than the above source.

> "Also, his thumb was curved to such a degree that he could navigate from black to white keys like a duck in a pond, but otherwise this abnormality of his thumb did not prove to be of any particular advantage."[319]

The glissandi in thirds and fourths comprise another very vital innovative factor in Ravel's piano technique. It is generally agreed among Ravel's biographers that in all his piano music clean playing and thorough workmanship are required. The assessment of the technical level of Ravel's piano music is summarized in this statement by Ernest Hutcheson, who writes: "Most of Ravel's piano pieces demand a virtuoso technique."[320] Though his music required a virtuoso technique, Ravel's playing evidently did not reach that level.

> " . . . he was content--for he never practised, to be a fairly good pianist whose hands were possibly the tyrants of musical creation, as Weber wrote of himself. He sat incredibly low at the piano and this peculiarity may perhaps be the reason why he never used octave passages; the long and agile fingers, the slender hand joined to an extremely supple wrist seemed to be those of a conjuror . . . ";[321]

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[317] Roland-Manuel, Op. cit., pp. 118-119.

[318] Loc. cit.

[319] Seroff, Op. cit., p. 22

[320] Hutcheson, Op. cit., p. 322.

[321] Roland-Manuel, Loc. cit.

Ravel is reputed to have been verbally chastised by his piano professor at the Conservatorie de Paris for being last in his performance class when he could have been first.

> " . . . but those who knew Maurice Ravel did not agree with his professor and did not blame his failure entirely on his lack of interest in practicing. In their opinion Ravel's small, bony hand was not a hand easily adaptable to piano virtuosity. He could hardly stretch an octave; later, when Ravel had to play his own works, he used to leave the lower notes of the octaves out."[322]

Regardless of the inadequacies of Ravel's personal piano technique, there is complete agreement among historical sources that he did expand to new dimensions the existing technique of playing the piano on a virtuoso level.

> "Maurice Ravel, a lesser but quite independent composer, converted the later impressionism of Liszt, which Debussy reflected, to a new clarity of outline, aware of both Couperin and Debussy, inventing his own keyboard virtuosity, tenuous and without obvious display. He is the last of the nineteenth-century keyboard masters who stem from Czerny, as Bela Bartok is the first keyboard master of the twentieth century."[323]

Norman Demuth writes that it is impossible to exaggerate Ravel's importance as a composer of piano music, and predicts that in thirty years Ravel's effect on piano music will be equal to that of Roussel on French symphonies. Demuth's assessment of Ravel's status in music history is given in this statement:

> "By reason of his early works and the influence they brought to bear on the general outlook of French composers of their immediate following, and the stamp imprinted on French music by them, Ravel may truly be said to be a candidate for greatness."[324]

A composer who made a great impact on music in the twentieth century was Arnold Schoenberg. One of the most controversial figures

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[322] Seroff, Loc. cit.

[323] Peter Yates, An Amateur at the Keyboard, (New York: Random House, Inc., 1964), pp. 169-170.

[324] Demuth, Op. cit., pp. 173-178.

of his time, Schoenberg was one of the principal composers in the establishment of the expressionist school of musicians.

> "One of the musically momentous events in this century occurred with the birth of the Expressionist school. . . . The person most responsible for formulating and developing musical Expressionism was Arnold Schoenberg."[325]

Expressionism, in painting and music is a contrasting approach to impressionism, in that it attempts to represent inner experience and uses any means suitable to that purpose. The subject matter of expressionism is man as he exists in the modern world and is described as helpless, isolated, full of fear and anxiety and rebellious. Therefore, expressionistic art is characterized by desperate intensity of feeling and revolutionary modes of utterance.[326]

Schoenberg's innovations differ from those of his predecessors in that they built on their past traditions, whereas Schoenberg deliberately broke away from the traditions of his time. Marion Bauer writes that Schoenberg substituted "a new and logical foundation on which to base absolute music in what Weissman calls 'a ruthless search for truth and truthful expression.'"[327]

In his movement away from the established formulae of tonality in the Romantic period, Schoenberg used the twelve tones of the chromatic scale in such a manner that each tone of the scale is equal in importance.

> "And Schoenberg raised the chromatic scale to primary estate by making it the basis of 'atonality.'"[328]

In accordance with Schoenberg's twelve-tone system, a composer chooses the order in which to use the twelve-tones of the chromatic

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[325] Gillespie, Op. cit., pp.348, 349.

[326] Donald J. Grout, A History of Western Music, (New York: W. W. Norton & Company, Inc. 1960), p. 650.

[327] Bauer, Op. cit., p. 210.

[328] Bauer, Op. cit., p. 101.

scale in a given composition. This order remains set for the entire composition except for the contrapuntal devices of retrograde, inversion, and retrograde inversion. Each one of these forms of the twelve-tone row can be transposed to any of the twelve tones. Strict adherence to the twelve-tone system insists that the melody and harmony of a composition consist solely of the established row or one of its three modifications and that no tone within the row can be repeated until all twelve have been played. Any of the tones can be displaced at any given point to another octave.

The emphasis of all the notes in the tone row and the de-emphasis of any one note resulted in a new atonal style of composition with its new melodic, harmonic and structural order. Schoenberg himself refused to accept the word "atonal" in reference to his music.

> " . . . the author (Schoenberg) refuses to accept the word atonal. All music, he says, is in a given tone, whether it is referred to a single tonic or whether the successions of chords are justified by more complicated relationships or references. . . . When Schoenberg says that his music is tonal, he means that each chord is in a certain key. But according to Schoenberg, four successive chords, for example, will be in four different keys. The speed at which one key passes to another and the complexity of each chord do not leave the ear enough time to take in the different keys and their relationships. Since there is no continuity in establishing a given key apparent atonality results. Schoenberg's music is thus tonal and atonal at the same time, depending on the light in which it is examined."[329]

Regardless of the light in which Schoenberg's music was viewed, it was a radically different sound from anything heard before and the object of considerable controversy for some time. The opinion of

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[329]Paul Collaer, A History of Modern Music, (Cleveland: The World Publishing Company, 1961), pp. 68-69.

music historians is, as Paul Collaer writes, that Schoenberg and his followers did not merely present a new way of writing music, but a completely new way of thinking. Collaer submits that Schoenberg was the instigator of a negative revolution which destroyed the structure of tonality. At the end of the revolution new foundations were needed upon which music could exist.[330]

In defense of his position in music Schoenberg is quoted as saying:

> "Only that music which gives expression to a thought for the first time can be called new music, music which will preserve its feeling of newness. Music which does not fulfill that condition is obsolete from birth and cannot expect to get recognition."[331]

Another statement of Schoenberg's presents his theory of tonality:

> "Tonality is not a hard and fast compulsion directing the course of music but a concept which makes it possible for us to give our ideas the requisite aspect of compactness. The alleged tones believed to be foreign to harmony do not exist; they are merely tones foreign to our accepted harmonic system."[332]

Schoenberg believed that music was dependent not only upon acoustics but also upon logic and the particular rules that effect this logic in musical sounds. Schoenberg viewed tonality as one means to the end of unification and perception of musical ideas, a means which is no longer needed if these same goals can be achieved with another system of logic. According to Schoenberg tonal consonance takes up too much room in music since it consists of everything that comes before and after it and needs to be replaced. Schoenberg submits that in his twelve-tone system each tone is a tonal center and therefore twelve-tone music is pan-tonal, not atonal.[333]

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[330] Collaer, Op. cit., pp. 91, 234-235.

[331] Merle Armitage, Schoenberg, (New York: G. Schirmer, Inc., 1937), p. 4.

[332] Loc. cit.

[333] Bauer, Op. cit., pp. 210-211.

Peter Hansen cites some of the qualities of twelve-tone music.

1. Melodies are characterized by wide leaps since a tone in the row may be sounded in any octave.
2. An attraction toward sevenths, ninths, and compound intervals as well as diminished and augmented intervals.
3. The distinction between vocal and instrumental style loses its former meaning since Schoenberg uses the same intervals in both styles.
4. There is a predominance of unaccented rhythms resulting from Schoenberg's strong opposition to composers who write driving, machine-like rhythmic patterns.
5. Definite beginnings and endings are avoided since in Schoenberg's music everything is in a state of flux--of becoming.
6. There exist a great many tempo modifications in Schoenberg's scores which are consistent with his subjective and expressive attitude toward music.
7. Traditional harmonic terminology, including the terms "consonance" and "dissonance," is no longer applicable since vertical combinations are determined by the tone row and may consist of any number of tones from two to twelve of any intervallic content.
8. There are no predictable root progressions since functional harmony is not used.
9. The texture of Schoenberg's music is preponderantly contrapuntal.

The piano figured prominently in Schoenberg's development. At each point that an innovative stride was taken the piano was the chosen medium for that change. This statement is corroborated by the pianist Eduard Steuermann:

> "It would appear that Schoenberg has most frequently written for the piano when a particularly important step had to be taken in

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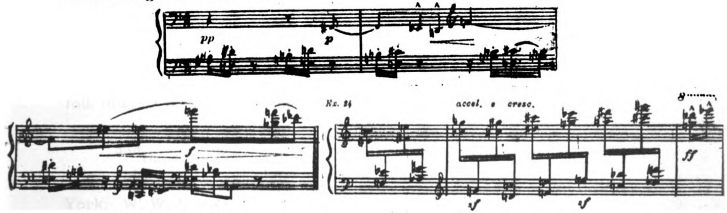
[334] Peter S. Hansen, An Introduction to Twentieth Century Music, (Boston: Allyn and Bacon, Inc., 1967), pp. 202-203.

> the development that so thoroughly changed the very foundations of musical structure. Almost all of his compositions for the piano are milestones in the development of modern music, and it is important first to examine them from that point of view.[335]

The piano style of Schoenberg is described by René Leibowitz as very difficult and radically different from that of the pre-Schoenberg composers. Leibowitz submits, however, that Schoenberg's piano style is well adapted to the pianist's hands. Leibowitz further asserts that the difference between the piano style of Schoenberg and that of his immediate predecessors is no greater than any other steps in the development of piano literature.

> "Indeed, the difference between the piano style of these pieces (Op. 11, Op. 19, the songs of Op. 15 and Pierre Lunaire) and that of, say Chopin is certainly no greater than the difference between the piano style of Chopin and that of Mozart."[336]

According to Leibowitz, Schoenberg writes much more appropriately for the piano than many of the post-romantic pianists influenced by Liszt that wrote so frequently in the style of piano reductions. Everything that belongs to the pianist's tradition, Leibowitz maintains, is present in Schoenberg's music in its most authentic and traditional form. Since all of these devices are applied to the chromatic resources as is effected by the twelve-tone system, they lose some of their resemblance to similar uses in a diatonic system. Below are two examples given by Leibowitz indicating a change of register and virtuosity in Schoenberg's music.[337]



[335] Armitage, Op. cit., p. 125.

[336] Rene Leibowitz, Schoenberg and His School, (New York: Philosophical Library, 1949), p. 99.

[337] Leibowitz, Op. cit., pp. 99-100.

A novel device attributed to Schoenberg is the use of piano harmonics required in several of his scores. These harmonics are achieved by retaining certain notes in the middle octave of the piano with the sostenuto pedal without sounding them and then sharply striking the same notes in the bass register. The released strings sound in sympathetic vibration.[338]

Joseph Machlis sees a resemblance in Schoenberg's piano music to the piano style of Johannes Brahms and cites as evidences of this resemblance the rich texture and sweeping use of the keyboard, the appearance of the notes on the page, the spread of the left hand, the double notes and full chords in the right hand. The difference, Machlis adds, is that Schoenberg's is another language.[339]

The influence that was effected on piano technique by the twelve-tone system Schoenberg established exists in the approach and realization of the note patterns and groupings which because of their mathematical structure no longer sound or progress in traditional manner.

A principal contributor to twentieth century piano literature was Béla Bartók. In the developing of his style Bartók was an eclectic. It is generally agreed among historians that the principal source of influence on Bartók's writing was Hungarian folk music. Believing that the world's only concept of Hungarian folk music was that of the Hungarian dance style evidenced in the music of Franz Liszt and Johannes Brahms and that the true folk idioms of Hungarian music were virtually lost to the world, Béla Bartók along with Zoltan Kodály undertook to advance the awareness of the actual music of the peasantry of Hungary. Bartók and Kodály used the elements extracted from authentic Hungarian folk music as the foundation for their own musical style.[340]

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[338]Hansen, Op. cit., p. 68.

[339]Joseph Machlis, Introduction to Contemporary Music, (New York: W. W. Norton & Company, Inc., 1961), p. 363.

[340]Collaer, Op. cit., p. 343.

"Elements of Central European folk music impregnate much of Bartók's composition. Although this is primarily true of the earlier works, it nevertheless applied to the last period as well. Most obvious of these influences are the modal scales already mentioned. Free metric patterns, avoiding the symmetry of the four-bar phrase are also to be traced to the same source. Melodies of narrow compass, with word-inspired rhythms, are also frequently heard. . . ."[341]

As with the expressionistic school Bartók avoided the restrictions of tonality and the bar-measure system of rhythm.[342] He was interested in the works of both Stravinsky and Schoenberg and though he adopted neither atonality nor the twelve-tone system, the influences of these two methods of writing are evident in Bartok's music.

" . . . that although Bartók does not follow Schoenberg's twelve-tone technique, he nonetheless achieves the liberal spirit of the twelve tones by using various ancient modes simultaneously, either by superimposition in by-modality or by fusion or interpenetration of different modes. In this way, the twelve tones are always verified, but the clear impression of the presence of modes prevents the disappearance of the notion of tonality. . . . relationships become more free, but the backbone of the tonal principle is retained--the tonic-dominant relationship, including the cadential function of the dominant."[343]

Halsey Stevens corroborates the twelve tone influence in his discussion of the first of the Studies, Op. 18, which he submits "is devoted largely to what may be called a disjunct chromaticism, not unrelated to the octave-displacement that plays so large a part in the twelve-tone technique."[344]

One additional statement seems to summarize the place chromaticism held as a part of Bartók's writing.

"Though Bartók compromised tonality by his preference for

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[341]Hansen, Op. cit., p. 246. [342]Collaer, Op. cit., p. 345.

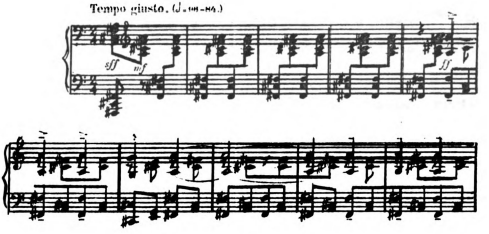
[343]Ibid, p. 346.

[344]Halsey Stevens, The Life and Music of Béla Bartók, (New York: Oxford University Press, 1964), p. 126.

close intervals and pre-diatonic melodies, explored atonality, and adapted the tone-row to his own purposes, he never abandoned tonality for total chromaticism."[345]

The classical influence in Bartók's music is evident in the percussive use of the piano, clarity of structure, simplification of texture, ornamentation, rhythmic drive and use of counterpoint.

BARTÓK—*Allegro Barbaro*



"In an interview published during his tour, Bartok described the tendency of composers of the time to turn toward the musical styles of earlier periods, and his own turning toward the older peasant music of Hungary, as manifestations of a single urge; and he linked these tendencies with the calculated avoidance of the traits of romantic music. His own music of the period, of course, is by no means negativistic. In it are interlinked the characteristics of peasant melody and rhythm and those of early art music, with a consequent simplification of texture and clarification of structure. It is apparent now that Bartok's editing and transcribing of old keyboard music, prompted by pedagogical considerations, helped immeasurably to refine and codify his style."[346]

One technical innovation Bartok initiated is in his use of arpeggiated chords in which he arpeggiates the chord downward as in

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[345]Yates, Op. cit., p. 178

[346]Stevens, Op. cit., p. 72.

Bagatelle, Opus 6, Number 10, and in the second piano concerto the hands are arpeggiating in opposite directions.[347] Another technical innovation in Bartok's music came as a result of a tone cluster device used by the American pianist Henry Cowell. The experimental procedure used by Cowell was to play large groups of adjacent notes with his fist or his forearm.[348] Halsey Stevens writes that after Bartok heard Cowell playing his tone clusters he wrote to him asking if Cowell would object to Bartok's using tone clusters in his music.[349] Bartok did not, however, use the fists and forearms but kept the notes under the fingers.

> "From the technical standpoint, the climatic middle section (second piano concerto) culminates in rapid pianissimo tone-cluster trills played with both hands flat, spanning all the notes within the octave; the pages in which these passages are included, together with certain parts of the Cantata profana, constitute what may be considered Bartok's most advanced use of the cluster technique."[350]

The other technical aspects of Bartok's music exist as innovations only to the extent of variation in use of conventional technical devices as required by Bartok's unique eclectic style of writing.

> "Bartok encompassed the various trends of his time, from polytonality to the atonal, from expressionism to the neo-classical, from folk song to the constructivist, from a rough primivitism to the intellectual, from lyricism to the purely dynamic, from racy humor and grotesquerie to the tragic; and--the ultimate step--from nationalism to the universal."[351]

John Gillespie refers to Sergei Prokofiev as one of the finest twentieth-century composer pianists.[352] Historians agree on Prokofiev's outstanding reputation as a concert pianist and on the controversiality of his playing. The startling effect of the piano technique of Prokifiev, who won the Rubinstein Prize for piano in 1914, was

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[347] Ibid, pp. 125, 241. [348] Gillespie, Op. cit., p. 424.

[349] Stevens, Op. cit., p. 67. [350] Ibid, p. 242.

[351] Machlis, Op. cit., p. 191. [352] Gillespie, Op. cit., p. 359.

was basically its percussiveness. Adjectives used to describe Prokofiev's playing are such words as vigorous, exuberant, percussive, and metallic-sounding, Prokofiev's style of playing is described as brilliantly individual with clear-cut finger technique, steel-like touch and exceptional freedom of wrist movement.

> "As a pianist Prokofieff was the New Man of the century. He had little in common with the past, and his playing was completely original. His influence upon the century's piano philosophy was profound. This was the kind of approach needed to play Bartók, Stravinsky and the other moderns. It was functional pianism, stripped clear of artificial device, bleak and powerful, unpadded, impatient of bar lines and orthodox metrics and agogics."[353]

In his autobiography Prokofiev lists the four basic lines along which his music developed:

1. The classical line with neo-classical use of eighteenth century forms and style of writing.
2. The modern trend with a search for new harmonies.
3. The toccata of "motor" line with repetitive intensity of melodic figures. Prokofiev labels this line as the least important.
4. The lyrical line.[354]

Although Prokofiev felt that the "motor line" in his music was the least significant, other sources felt that this element of movement was one of the predominant characteristics of a large part of his music.

> "True, the element of a dominant energy, 'of movement for the sake of movement' is very strong in Prokofiev's music. This toccata quality is to be found in a good quarter of all his music. Prokofiev's extraordinary rhythms, vigorous, clearcut, sharp and yet simple, almost 'square,' as sturdy as granite and as indestructible as steel, are invariably stimulating and refreshing."[355]

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[353] Schonberg, Op. cit., p. 394.

[354] Sergei Prokofiev, S. Prokofiev, (Moscow: Foreign Languages Publishing House), p. 36.

[355] Prokofieve, Op. cit., p. 229.

Prokofiev's harmonic idiom is described as being basically diatonic but full of surprises, sharp dissonances, and unexpected modulations. Although this gives a certain angularity and harshness to the music, the logical modal structure which preserves a definite tonal core prevents the harmonic experiments from sounding as 'dissonances for the sake of dissonances.' This represents a different style of writing from that of the atonal, polytonal and schematic composers.[356]

A simple clarity characterizes Prokofiev's harmonic idiom and he rarely emerges from the stable major-minor harmonic relationships. The key of C major is one that occurs most frequently in Prokofiev's music, yet with Prokofiev this familiar key has such sudden transitions to distant tonalities and such new chord combinations as to make it appear an entirely new key with extensive potential. Though Prokofiev's chord combinations may be dissonant, his conclusions are generally tonal. Prokofiev also incorporates the use of the sustained ostinato figure into his style. Another important element in Prokofiev's harmonic style is the linear principle whereby many angular chords occur as a result of the crossing of two or more horizontal lines, or in some cases, two different chord progressions.[357]

Prokofiev's concept of melody is not that of the impressionists where melody is absorbed by harmony. The melodic lines in Prokofiev's music are clearly defined and built, like the classics, on the essential major or minor triads or on the simplest scale movement. Though the materials and appearance of Prokofiev's melodies are similar to the classics, his unique use of those materials and his unrestricted movement of his melodic line produce a distinctive sound.

> "In melody in rhythm and harmonic idiom, for that matter--the composer frequently indulges in curious juxtapositions of the

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[356] Loc. cit.

[357] Isreal V. Nestyev, Sergei Prokofiev, (New York: Alfred A. Knopf, 1946), pp. 61-62.

> simplest and most firmly established classical effects with the most unusual and startling angularities. . . . The particularly uncanny, jarring interval of the ninth, for example, is employed in many themes associated with grief and despair. . . . "[358]

In discussing Prokofiev's musical style Peter Hansen writes of the "blatant melodies doubled in minor ninths." Reference is also made to Prokofiev's use of scale-like passages with "wrong note" harmonizations, and the lyric singing quality of his melodies, which consist basically of small intervals but occasionally soar to an upper octave. According to Hansen, Prokofiev often uses modal scales familiar to all Russians and has a special preference for the mixolydian mode. Prokofiev's attitude toward dissonance is a conservative one since he uses dissonances to establish points of tension and not as a normal harmonic climate. Prokofiev is quoted as lamenting the overuse of dissonance and stating that he thought it was time that dissonance was once more relegated to its proper place as one element in music contingent on the meeting of the melodic lines.[359]

Essentially Prokofiev's piano style is the result of a movement by the impressionists away from the coloristic use of the instrument to the objectivity and clarity of the classic period. Besides the use of eighteenth century forms, evidences of classical traits in Prokofiev's keyboard style are:

1. The thinness and simplicity of his texture, which at times uses only two or three voices with a parallel movement in octaves.
2. The technique of skips and handcrossings reminiscent of Domenico Scarlatti.
3. The technique of scale runs similar to the piano style of Haydn and the early works of Beethoven. As an example

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[358] Nestyev, Op. cit., p. 63.

[359] Hansen, Op. cit., pp. 283-290.

the simplified passages in the form of five-finger exercises in Concertos numbers one and three.

4. The toccata effects consisting of alternating chords in the right and left hands, with emphasized non-legato. Incorporated in this are the element of movement, patterns of mechanical motion, perpetual motion.

Though the classic tendencies are predominant in Prokofiev's music, there are some instances of the traits of impressionism. These evidence themselves in blurred chordal sonorities and complexity of the structure and polyphonic development.[360]

The impact of Prokofiev on technique exists in the classical clarity of his approach coupled with his unique harmonic idiom and the twentieth century concept of the percussive use of the piano.

A composer who at least needs to be mentioned in this study is Dmitri Shostakovich. Although he was a pianist of some stature, Shostakovich's principal contribution to the musical world was not in the area of keyboard music.[361] Shostakovich's style of writing is basically in the neo-classic vein and has many similarities to that of Prokofiev. One of the differences between the music of Prokofiev and Shostakovich is that Prokofiev's is basically a harmonic idiom whereas Shostakovich's is more contrapuntal.

Another difference in the styles of the two composers is that Shostakovich's writing is more disjunct than that of Prokofiev.

> "Not all of Shostakovich's melodies lend themselves to the voice. Many of them are suitable only for instruments and depend upon the specific qualities and mode of expression of one or another instrument. . . . Wide intervals (leaps) are characteristic of Shostakovich's melody. The composer strives to lend independent expression to every tone. . . . Broad progression of intervals

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[360] Nestyev, Op. cit., pp. 68-69.

[361] Gillespie, Op. cit., p. 363.

lend his melodies an especial freedom of motion and a greater canvas for his color."[362]

Additional reference is made to the disjunct nature of Shostakovich's writing by a comparison with the music of Tchaikovsky.

> "Here I should like to stress its (Shostakovich's style) connection with the melodic currents of Tchaikovsky. . . . The principal difference is that Tchaikovsky frequently and gladly used close intervals by steps, whereas this is rarely true of Shostakovich. Nearly always, the current of his melody is interrupted by broad and daring leaps and these, in fact, lend the respective melodies great expressive force."[363]

Similarities to Prokofiev's style of writing are those of neo-classic tendencies such as the element of movement, textural simplicity and structural clarity. As with Prokofiev, Shostakovich's music is basically tonal and achieves its innovation by the unique progression of sounds within this tonal framework.

> "In his (Shostakovich) more mature works, it (harmony) is strictly tonal, rarely ventures beyond its framework of major or minor and shuns the complex and ambiguous modes. At times he resorts to the most primitive means of harmonic expression (the elementary juxtaposition of triads), Nevertheless, he is also drawn to the unusual progressions of tone, unexpected leaps of modulation and this lends his harmony particular freshness and originality. Shostakovich does not shrink from dissonance. Applied with great skill in his mature works, it never obscures the main tonal perspective."[364]

There are many other composers who have contributed to the literature for the piano, but have not created innovations in piano technique. Mention must be made of the avant-garde literature for the piano in the twentieth century which has utilized extra-pianistic devices which do

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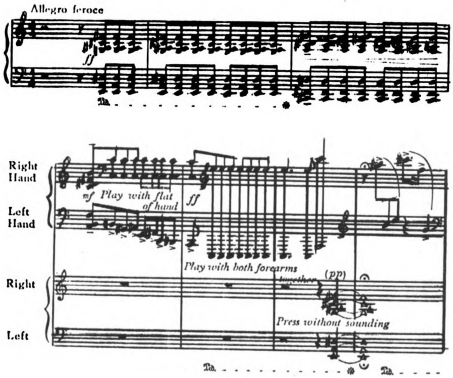
[362] Ivan Martynov, Dmitri Shostakovich, (New York: Philosophical Library, 1947), p. 157.

[363] Ibid, p. 158.

[364] Ibid, p. 159.

not fall under the realm of conventional finger and hand technique. Examples can be found in such literature as that of Henry Cowell that utilized clusters of tones played by fists, elbows and forearms. Examples from Henry Cowell:[365] Tiger



Cowell also requires the pianist to lean over and pluck the strings. Charles Ives in his Concord Sonata has the pianist depress the keys with a long piece of wood.

John Cage has written music that requires everything from absolute silence to the striking of the sound board. Authorities agree that John Cage is one of the most influential of the twentieth century experimentalists composers.[366] This influence is evidenced not only in the number of young composers that followed in his footsteps, (such

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[365]Eric Salzman, Twentieth Century Music, An Introduction (Prentice-Hall, 1967), p. 152.

[366]Hansen, Op. cit., p. 391.

as Morton Feldman and Earle Brown, but also in a following from other areas of the arts. Aaron Copland writes:

> "In the early '40s Cage moved his center of activities to New York and there exerted considerable influence on a group of painters, some of whom later became famous."[367]

Cage's initial preoccupation in composition was in percussion music out of which came the "famous prepared piano."[368] Peggy Glanville Hicks in the September 1948 issue of the Musical Courier describes the Prepared Piano:

> "The changement is achieved by the addition of divers objects to the strings at varying distances from the damper point. Screws, bolts, (with careful specifications as to type and size), rubber bands, bamboo slats, hairpins, and a miscellany of objects of quite humble origin are pressed into service. . . . The "Prepared" sound, however, may not only bear no relationship in timbre to its unprepared piano counterpart, but its tonality, pitch, and whole position in the piano range territory may be totally unexpected. The sound may jump up three octaves, down one, up a second, down a ninth, all while the fingers are playing notes adjacent to each other in a simple scale passage."[369]

Eric Salzman describes the prepared piano as a one man percussion ensemble, related in sound to the Javanese gamelan.[370] Gilbert Chase discusses Cage's compositions for the prepared piano:

> "Cage's most ambitious work for the prepared paino is a set of sixteen sonatas and four interludes, composed between February, 1946, and March 1948, which takes eighty minutes to perform. Each of the twenty pieces that make up this complex work is a self-contained unit with its own structural pattern. The basic principle of organization is that of unchanging phrase-lengths within a given piece. If Mr. Cage decides that a sonata will consist of a succession of nine-measure phrases, he adheres strictly to that pettern throughout that particular composition.

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[367] Aaron Copland, The New Music 1900-1960, (New York: W. W. Norton & Company, Inc., 1968), p. 177.

[368] Salzman, Op. cit.

[369] Scholes, Op. cit., p. 145.

[370] Salzman, Loc. cit.

> Another sonata may consist of six-measure phrases, another of ten-measure phrases, and so forth. The composer explains that this system of division "corresponds to the Oriental organization of poetry in terms of breath-phrases." This principle of rhythmic organization supplants the system of harmonic organization upon which traditional Western European music is based. The end of a rhythmic phrase takes the place of a harmonic cadence. The whole scheme is rigidly controlled by the application of a pre-conceived plan."[371]

John Cage's study of oriental philosophy resulted in his departure from the supremacy of pitch organization in Western music. Cage later denied the relationship between one sound event and another and ultimately the conscious determination and control of such events.[372]

Cage writes: "The highest purpose is to have no purpose at all. This puts one in accord with nature in her manner of operation."[373] Applying this philosophy to the writing of music, Cage submits:

> "And what is the purpose of writing music? One is, of course, not dealing with purposes but dealing with sounds. Or the answer must take the form of paradox: a purposeful purposelessness or a purposeless play. This play, however, is an affirmation of life--not an attempt to bring order out of chaos nor to suggest improvements in creation, but simply a way of waking up to the very life we're living, which is so excellent once one gets one's mind and one's desires out of its way and lets it act of its own accord."[374]

Cage popularized the idea of "indeterminacy" or "aleatory" music, in which he developed devices for achieving unpredictable results. Cage's chance operations included such devices as the use of the I-Ching sticks and random plotting of notation on the imperfections of a piece of paper. Cage's Music For Piano is written entirely in whole notes and their length is determined by the performer. The

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[371] Gilbert Chase, America's Music, (New York: McGraw-Hill Book Company, Inc., 1955), p. 594.

[372] Salzman, Loc. cit.

[373] John Cage, Silence, (Middletown, Connecticut: Wesleyan University Press), p. 155.

[374] Cage, Op. cit., p. 12.

notes correspond to the imperfections in the paper upon which the piece was first written. In this composition tone production is determined by chance and tempo and dynamics are undetermined. Cage instructs that the sixteen pages can be played as separate pieces or as one continuous piece. In the Concerto for Piano and Orchestra by John Cage which consists of sixty-three pages containing eighty-four different aggregates the performer is given the permission to play the whole composition or any of the parts in any sequence.

Cage's piece 4'3" is one which consists of four minutes and three seconds of complete silence. The pianist with a stop watch sits immobile at the keyboard except for the marking of the three sections by the closing and opening of the fall board to the piano.[375]

An interesting commentary on John Cage's contributions to piano performance is given by Ernest Hutcheson:

> "An introduction to the present state of revolutionary tendencies in the history and literature of the piano and its performance has been furnished by the inventor of the 'prepared piano,' John Cage, a gifted pianist, versatile composer, and highly accomplished author, whose peculiar detours from the usual go in all directions. Hardware stores are friendly to him and his disciples, or vice versa. He himself presents doings that call for hitherto unheard of publicity, which, to my thinking, is neither enticing nor very sympathetic. He has become the apostle of undistinguished concert behaviour that one might endure in not very serious entertainment. He is considered an 'enfant terrible' at the European music festivals. His most telling performance, so far, features the unusual piece entitled Silence: John Cage enters, sits quietly at the piano, stands up after 'Four Minutes and Thirty-Three Seconds,' and retires. It amuses the audiences and embarrasses the serious music-lovers. Kicking over the innocent piano bench, hitting the top of the piano with a lead pipe, extracting some bottles (vintage not given) from the instrument just to throw them to the floor, spreading rosaries

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[375] Hanson, Op. cit., pp. 392-393.

among the audience, and hurling eggs at the wall behind him--such extra-artistic activities prevent a healthy evolution."[376]

Other disciples of John Cage are the duo pianists Art Ferrante and Lou Teicher who also utilize the prepared piano. A similar device is employed in the "tack" piano of Lou Harrison which utilizes tacks in the hammers of the piano. All of the avant-garde uses of the piano are represented in the music of John Cage.

Other contemporary composers have required the raking of a piece of wood over the pins which hold the strings and the striking of different parts of the piano case.[377]

Since these avant-garde uses of the piano are experimental and new, their importance or their influence has not yet been assessed. These experimental uses of the piano will be included in the suggestions for further study.

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[376] Hutcheson, Op. cit., p. 392.

[377] Schonberg, Op. cit., pp. 295-296.

CHAPTER V

THE DEVELOPMENT OF PIANO PEDAGOGY

To evaluate accurately the effect of pedagogy on the development of piano technique it is necessary to remember that pedagogy has followed innovation and not introduced it.[378] As would be expected the pedagogical methods of pianistic technique have consistently been behind the innovative development of piano technique in any given period. Part of this lapse in technical knowledge has been due to the development of the piano itself.

> "The reader now can grasp the irksome problem confronting the musician. He must meet the changing keyboard action with a technical method based on experience and this experience recorded from a method with a lighter keyboard action."[379]

Thomas Fielden elaborates further on the problem of using past technical methods to meet present technical demands.

> "In the days of Bach and Handel, the mechanism of these instruments required the exercise of very little physical strength for their manipulation. The movement and weight of the fingers alone were sufficient. These circumstances gave rise to the system of writing finger exercises in order to develop the necessary technique for the music that was available at the time. In very little of the clavier music up to the time of Bach do we

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[378] From a conversation with Dr. Milton Stern, pianist-musicologist at California State College, Los Angeles.

[379] Spangler, Op. cit., p. 109.

> find the demand for any wrist work, least of all arm work; . . . While this method of technical training was suitable to the conditions, it was involuntarily the cause of much retardation of development when the nature of the instruments changed, and greater physical exertion was required. . . . The instruments improved, but performers and teachers continued to base their technique on the old methods. . . ."[380]

Performers and composers who were extending the technical demands of their music outside the scope of existing methodology also contributed to the gap between pedagogical knowledge and performance demands.

> " . . . for instance, after certain principles of technique seemed to be established, some technical innovator having mastered the process required by the increased demands of the composer and the heavier keyboard action, was unable to recognize his own innovations. An example of such composition would be Beethoven's pianoforte sonatas Opus 106, 109, and 111. Indeed, when such an innovator taught, he employed older methods. Now these obsolete methods were generally written by theorists who were many years in arrears of the innovators' technical achievements. Under such unreliable conditions, little accuracy of procedure was possible. The disparity between methods is apparent in reviewing one hundred years of piano teaching."[381]

Fielden submits that even such great pianists as Liszt and Tausig "taught the old method of still-hand exercises . . . though they were seen to play differently from what they taught."[382] Fielden further submits that it is a fallacy to label the great pianists as the product of the methodology by which they were taught.

> "Liszt was a great pianist: Czerny was his teacher--probably using a system of rigid finger exercises: therefore the Czerny method must be the right one. No one seemed inclined to be-

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[380]Thomas Fielden, The Science of Pianoforte Technique. (London: MacMillan and Co., Ltd., 1961), p. 1.

[381]Spangler, Op. cit., p. 110.

[382]Fielden, Op. cit., pp. 2-3.

> lieve that close observation of Liszt's methods would have shown that he could not have played as he did if he had followed blindly the Czerny teachings. This is not to say that Liszt did not profit by his lessons with Czerny; . . . he certainly must have benefited from the discipline of a great teacher, and his natural genius did the rest, saving him from the harmful results that lesser men suffered under similar tuition."[383]

What pedagogy has contributed, however, is the knowledge of how to perform better the technique demanded by existing literature as well as the necessary exercises and drills.[384]

In consideration of pedagogy's role in the development of piano performance, those methods which did effect change in pedagogical attitudes toward piano technique will be discussed.

As far as methodology is concerned, the development of piano pedagogy can be divided into three major areas:

1. The technical approach carried over from early keyboard instruments that preceded the piano to the early piano of which the primary emphasis was on finger action. The set position of the hand was a requirement of this approach.
2. Technical emphasis moving away from the fingers and hand to the shoulder and arms. The fixed position of the hand was replaced by the flexible position.
3. Scientific approach to technique which has replaced conjecture about the playing apparatus with a physiological analysis of what is taking place.

Perhaps a fourth categorization exists in the approach which rejects any of the three previously mentioned areas as "a" method, but eclectically draws from all three areas where the need arises.

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[383] Ibid., pp. 69-70.

[384] From conversations with Dr. Milton Stern and Dr. Roy Underwood, Emeritus Professor of Music, Michigan State University, East Lansing, Michigan.

In the nineteenth century Carl Czerny was a principal exponent of the technical approach using the fixed hand with emphasis on finger action. Czerny was a student of Beethoven and had been schooled in the Clementi method of teaching. Czerny composed thousands of studies based on technical difficulties. Each study is written so that it requires a considerable amount of drill on the emphasized technical difficulty. The purpose of this kind of repetitive drill is to train the fingers to cope with the various technical difficulties of playing the piano as well as to develop this finger action to the point where it occurs automatically. The metronome came into existence in Czerny's lifetime and he was among the first to make use of it in his technical studies. Czerny's method of extensive technical development resulted in virtuoso technique and it was as a teacher that Czerny was most successful.[385]

> "It is as a teacher that Czerny is of paramount importance. Franz Liszt was the most famous of his pupils, but there were also Dohler, Kullak, Jaell, Leschetitzky, Belleville--all important artists of the next generation."[386]

As didactic as Czerny could be in the matters of technique, Schonberg quotes him as saying that because of the difference in the size and shape of the hand there could be no technical method applicable to all students. Each piece of music must be adapted to the case at hand.[387]

After Czerny there was a movement away from writing the strictly mechanical étude. The expressive trend of romanticism promoted a musical rather than a mechanistic approach to technique. With the development of the virtuoso performer and the correspond-

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[385] Spangler, Op. cit., pp. 20-21.

[386] Schonberg, Op. cit., p. 94.

[387] Loc. cit.

ing exploitation of the technical resources of the piano came the necessity for a different kind of technical preparation.

> "Furthermore, the wide leaps and rhythmic problems of Schumann, the chordal clusters and cross rhythms of Brahms, and the almost absent scale figuration required an entirely new approach in technique. . . ."[388]

Spangler further submits that the new approach needed a combination of the mechanistic and the musical and that this need was met in the music of Chopin and Liszt, who combined technical devices with pianistic poetry.[389]

Donald Jay Grout corroborates this union of musicality and technique in the works of Chopin, Liszt and Brahms.

> "An étude is, as the name indicates, a study primarily for the development of technique; consequently each single étude as a rule is devoted to a specific technical desideratum and is based on a single musical motive. Of the thousands of piano études written in the nineteenth century those of Chopin were the first which fully realized the potential of combining this practical aim with conceptions of the highest musical significance, and Liszt and Brahms followed Chopin's lead in this respect. Chopin's études are transcendent studies in technique and at the same time intensely concentrated tone poems; . . ."[390]

Ernest Hutcheson further substantiates the musical as well as the technical value of the Chopin études.

> "It has seemed proper, in speaking of the studies, to consider their technical demands with some minuteness. Yet it must not be forgotten that none of these works has a mechanical value only; in many of them the musical importance is obviously paramount."[391]

The writing of études which developed both the technical and musical concepts of a given period did not terminate at the end of the romantic period. Chapter IV of this study has shown that com-

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[388] Spangler, Op. cit., pp. 23-24.

[389] Loc. cit.

[390] Grout, Op. cit., p. 518. [391] Hutcheson, Op. cit., p. 239.

posers such as Debussy and Bartók have also written studies using this dual musical-technical approach. In each case, both the technical and musical concepts have been extended to meet the innovations of the composer they represent.

With the rise in popularity of the virtuoso performer and the corresponding development of the piano to sustain this kind of performance came the solo recital and the exhibitionism of virtuoso technique. As athletes are labeled by the particular kind of athletic accomplishment in which they excel, so the virtuoso performer was lauded for the facet of piano technique in which he exceeded the accomplishments of his predecessors and contemporaries. Examples of performers who made certain kinds of piano technique their specialty are Ignaz Moscheles, who featured repeated notes in his recitals, and Alexander Dreyschock, who amazed the musical world with his mastery of octaves to the point of reputedly playing the left hand of the Revolutionary Étude in octaves, up to tempo.[392] This kind of specialization of piano technique necessitated a corresponding kind of technical preparation that was geared to separate areas of emphasis.

Among the first of this specialized kind of technical studies is the School of Octave Playing by Theodore Kullak. According to Schonberg, Kullak was one of the more popular teachers who prepared pupils for Franz Liszt and was one of the teachers who began the Berliner Musikschule. He later broke away to start his own Neue Akademie der Tonkunst. Schonberg also testifies to the lasting influence of his School of Octave Playing.[393]

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[392] Schonberg, Op. cit., pp. 114, 196.

[393] Ibid, p. 241.

The essentials of Kullak's octave technique consist of the independence of the hand from the arm and the evenness and equality of the up and down strokes of the hand. Exercises to acquire these skills are repetitions of an octave on one tone with either hand while the other hand plays a chord or rhythmic figure. Musical interest is maintained through varying rhythm, notes, values, dynamics and tempi. The development of the thumb and fifth finger is accomplished by one or the other of the two fingers sustaining a note while the other finger plays at the octave. Exercises are based on the chromatic and diatonic scales. The second book contains études based on octave technique acquired in the first book. These studies remain the principal contribution to octave technique.[394]

Another area of specialization in piano playing was that of the "singing tone." The principal exponent of this type of playing at the early part of the nineteenth century was Sigismond Thalberg.

> "The piano in the hands of Thalberg was an instrument which could produce a beautifully phrased singing line and accompany it at the same time."[395]

Liszt is reputed to have commented that Thalberg was the only artist who could play the violin at the piano. A technical specialty of Thalberg was playing a central melody with the thumb of either hand and surrounding it with brilliant arpeggios.[396]

From Thalberg's directions on The Art of Singing on the Piano he advises that the first requisite be to attain complete freedom from rigidity, and to possess in the forearm, wrist, and fingers suppleness and flexibility as in the voice of a skillful singer. Thalberg advises against striking the keys hard but rather with fingers close to the keys to "knead" the tone with "boneless hand and fingers of velvet." Thalberg labels as tasteless the mannerism of striking the mel-

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[394] Spangler, Op. cit., pp. 25-27.

[395] Sumner, Op. cit., p. 180.

[396] Baker, Op. cit., p. 1090.

ody after the accompanying note and suggests this practice always be avoided. In order to sustain notes for their full value, Thalberg advises changing fingers on notes sustained, and for the mastery of polyphonic playing he recommends the study of the fugue.[397]

Adolph Marx, an associate of Theodore Kullak in the establishment of the Berliner Musikschule, should be mentioned because his opinions on the piano playing of his time evidenced the beginning of concepts that were later to be the focal points of piano teaching. Marx advocates greater individuality and independence of the fingers. The concept of pressing the key rather than striking it is strongly supported by Marx, who also recommends that the hand be inclined toward the side principally involved. This inclination of the hand is the forerunner of the "rotary touch" which is to be stressed so heavily in later years by Deppe, Breithaupt, and Matthay.[398]

The Daily Exercises of Carl Tausig are not innovative in the sense that they changed the approach to piano instruction, but they are worth considering since they are much more difficult than other exercises published at this time. In addition to the increased difficulty of conventional piano technique, Tausig also includes exercises with wide leaps for the expansion of the hand. Tausig, a student of Franz Liszt, is described by authorities as one of the most brilliant pianists of his time. Schonberg submits that Tausig was every bit Liszt's equal in pianistic technique and that he played with much more finesse than his master.[399]

The new concept of tone production was advocated in the teaching of Ludwig Deppe.

"The first of the great modern teachers to realize the draw-

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[397]Spangler, Op. cit., p. 27.

[398]Ibid, p. 29.

[399]Schonberg, Op. cit., p. 244.

backs of the old system, and the value of freedom and suppleness, was Deppe, . . ."[400]

The following principles from Deppe's method represent what was new about his approach.

"3. Arm-wrist-fingers: The arm should feel like lead, and the wrist should be as light as a feather. The wrist must be loose, held high, and be free from restraint.

4. Fingers: Let the arm sustain the hand in its proper position. Conduct its movements so that each finger is placed upon the key that is intended to be played. Qualities necessary to develop the fingers are flexibility of arm, wrist, and fingers, which are considered as a complete set of linkages.

5. Tone production: The higher the finger falls, the less can force be controlled. Play with the weight of the finger. Let the fingers sink down with the key without forced muscular exertion."[401]

How Deppe's approach differs from the traditional technical method is obvious. In Deppe's method the arm is developed as well as the wrist and fingers. The concern for flexibility of the entire playing apparatus marks a contrast to the traditional rigid hand position. Deppe's directions to let the fingers fall on the keys and to play with finger weight was the beginning concept that was to be extended later by Breithaupt and Matthay and embraced by much of the world of pedagogy.

Hans von Buelow, outstanding pianist and a pupil of Franz Liszt, was a contemporary of Deppe's and made some comments on piano pedagogy in his edition of the Cramer Studies. For the most part von Buelow's approach is traditional. Worthy of notice, however, is his strong emphasis on separate hand practice. Von Buelow would have each hand practiced separately in slow tempo and at a uniform level of loudness until an equality of sound is accomplished. Dynamics

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[400] Fielden, Op. cit., p. 3.

[401] Spangler, Op. cit., p. 35.

are then added and tempo increased before the hands are put together. Von Buelow also advocates the practice of changing fingers on the same key to develop lightness of touch and the use of silent keyboards in piano practice.[402]

In 1885 a Heinrich Germer published a Manual of Tone Production, which could possibly be considered a forerunner of the psysiological approach to piano teaching. In chapter one of his manual Germer describes the finger, wrist and arm from the physiological standpoint. His description was not so thorough or so scientifically accurate as the later works of Arnold Schultz and Otto Ortman. Except for the physiological discussion and one reference to the finger supporting the hand, Germer's approach is an orthodox one.[403]

Oscar Raif in his New Method on Piano-Playing did indeed present some ideas that had not been emphasized before. According to Raif, flexibility is dependent on the capability of the player. Raif defines technique as correct timeliness of movement and ties all problems of expressiveness and musicality to mechanical motions. The passing under of the thumb is labeled by Raif as one of the greatest obstacles to equality of tone; consequently, he suggests that if the thumb is played lightly in scales, the unevenness of tone will not be noticed.[404]

Ferruccio Busoni was a musician of considerable note and a contributor to the development of piano instruction. In describing Busoni, Schonberg writes:

> " . . . the theorist and intellectual who was one of the founders of the modern style of piano playing, the avant-garde composer who worked out new scale systems, the titanic technician and master of pianistic effects."[405]

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[402]Ibid, p. 37. [403]Ibid, pp. 37-39.

[404]Ibid, pp. 39-40.

[405]Schonberg, Op. cit., p. 345.

Busoni's suggestions for piano technique are taken from his footnotes to his edition of the Bach Well Tempered Clavichord. His comments on octave playing represent an extension of that of Kullak.

"1. The Position of the Hand, in Octave Playing. The back of the hand, together with the first joints of the fingers, should form an even, nearly horizontal plane, having a slight downward inclination from the wrist. The three middle fingers, which are mostly unemployed should be held in a loose group, with their tips drawn inward, so that the disagreeable scuffling across the intervening keys in the octave may be avoided. While the wrist should move with perfect freedom and looseness, care must be taken to keep the thumb and little finger at exactly the right distance apart and in position for striking.

2. The Movements are Three: a) The striking of the key, a sharp, decided downward movement of the wrist. On this the editor wishes to lay special stress; while the rebound of the hand from the keyboard should be involuntary, effected solely by the combined elasticity of the hand and the pianoforte action.

b) The second kind of movement is that of the arm. It is the function of the latter to follow the hand sideways and horizontally, and to carry it over the place where the downstroke is to be made. This renders it possible to strike the keys vertically and exactly in the middle. The movement of arm, which principally affects the forearm, must likewise be perfectly free and loose.

c) The third kind of movement is the turning of the wrist carrying the hand with it, to either side, the arm remaining quiet; also, the slight shifting from white to black keys and vice versa."[406]

For playing broken chords Busoni suggests that firmness of touch and certainty of aim are the most important requirements. To insure this requirement, the hand should be prepared to strike all the notes of the chord as if they were meant to be struck simultaneously. Busoni further suggests that such passages should be practiced in chord blocks.

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[406]Spangler, Op. cit., p. 45.

To accomplish evenness of trills, Busoni advises that a determinate number of beats should be in each trill. An extensive number of exercises are then presented with trills on different degrees of the scale, with different intervals and different fingers. Further drill is presented with double trills in contrary motion, trills with changing number of parts, with a second obligato part and chord trills alternated between the two hands. Busoni's methods represent a very thorough contribution to trill study. Another fact worth noting is that Busoni's exercises were directed to the needs of a particular composition under consideration.[407]

Isidore Philipp, student of Stephen Heller and prominent teacher of concert pianists at the National Conservatory in Paris, directs his Complete School of Technic for the Pianoforte to the technical needs of the pianist before he plays the pieces.

> " . . . there can be no satisfying interpretation of the great works until the performer is so fully a master of technic that his mind can freely assert itself in tone-production, and the musical rendering of the phrase, the sentence, the entire piece."[408]

A distinctive feature of Philipp's technical approach is his emphasis on exercises for the independence of fingers. These are based on note groupings, sometimes the diminished seventh chord, in which certain tones are held while individual fingers play. Outstanding in Philipp's methodology are the many schemes he devised for practicing, and consequently reinforcing, the technical subject matter.

> "These schemes, (rhythmic) starting from universally accepted forms of accentuation, he has so ingeniously enlarged, formulated, and applied that they may well be regarded as his own. Through their use, finger activity and resistance are speedily established and the first steps in velocity almost imperceptibly taken. Stress being alternately thrown upon dif-

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[407] Ibid, pp. 46-47.

[408] Isidor Philipp, Complete School of Technic, (Philadelphia: Theo. Presser Co., 1908), p. 4.

> ferent fingers and different notes of a passage, the touch is equalized and weak spots are strengthened. The student, by means of the rapidly alternating strong and light strokes, acquires command over instantaneous muscular contraction and relaxation, and a consequent ease and endurance which enable him in a comparatively short time to play long and brilliant passages effectively, without stiffness or fatigue."[409]

In addition to rhythmic schemes, Philipp also advises working with different dynamics, tempi and touches--staccato, portamento, and legato. Philipp obviously intends his methods to be an extension of basic piano technique, as is indicated by his opening statement to the School of Technic, in which he presumes those using exercises are "students of medium attainments" who "have acquired the principles of piano technic, --elementary preparation at least--for this is not a part of the plan of our work."[410] Philipp does mention keeping a supple arm, but otherwise the approach to hand position is traditional.

In his edition of the Chopin Études, the famous French pianist Alfred Cortot carried one step further the approach used by Busoni in his edition of the Bach Well Tempered Clavichord. Whereas Busoni contributed exercises for one particular type of technique, such as octaves or trills, Cortot wrote exercises for a particular technical difficulty found in the piece itself. Cortot employs the usual methods of transposition, varying rhythms, tempi, dynamics and touches. Cortot also advocates the playing of a passage or piece in octaves.[411]

William Mason, a student of Franz Liszt and a major contributor to piano instruction in the United States, is traditional in approach except for emphasis of the triceps and scapular muscles and for the use of photographs as an aid in the teaching of touch. Mason strongly emphasized the use of the metronome in the development of technical accomplishment with increasing speed.[412]

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[409] Loc. cit. [410] Loc. cit.

[411] Spangler, Op. cit., p. 48. [412] Ibid, p. 49.

Wassili Safonoff, an outstanding piano pedagogue in Russia, in his book New Formula for the Piano Teacher and Piano Student submitted that the center of all technical difficulties was the thumb. Safonoff contrives short formulae which require the thumb to pass under the different fingers. Double notes are also included in his formulae. Safonoff strongly encourages the use of the intellect in studying the music away from the keyboard and in the conscious control of the fingers. In the Safonoff method, suggestion is made to refrain from watching the hands and even in the driest of exercises "to control the beauty of sound."[413]

The three most influential piano teachers of the twentieth century are, in chronological order, Theodore Leschetizky, Tobias Matthay and Rudolph Breithaupt. Leschetizky was a student of Carl Czerny. Proof of Leschetizky's eminence as a teacher of piano is evident in the number of concert pianists who studied with him. Among the prominent students of Leschetizky are Ignaz Friedman, Arthur Schnabel and Ignacy Paderewski. Leschetizky would take only advanced pianists, and, even so, before acceptance each student was required to have at least one year's preparatory study with a Leschetizky assistant. The duty of the assistant was to prepare the student in the basic technique Leschetizky required, including technical drill, curved hand position and the relaxation of the muscles.[414]

Though much has been written about the "Leschetizky Method," there is commensurate disparity of opinion as to what it was. Leschetizky himself denied having any method and maintained that his teaching varied according to the individual needs of the student. The individuality of Leschetizky's teaching would explain why each student described the Master's method differently. Two of his students, Fannie Bloomfield Zeisler and Ignacy Paderewski, support

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[413] Ibid, pp. 50-51

[414] Schonberg, Op. cit., pp. 277-278.

Leschetizky's claim to an individual approach for each student. In an attempt to label Leschetizky's approach as a methodology, Paderewsky is reputed to have said: "In one word, it is the method of methods."[415]

Leschetizky himself did not commit his teaching principles to written form. The only book on the Leschetizky "system" that was endorsed by the master is the Groundwork of the Leschetizky Method, written by one of his students, Malwine Bree. Authorities question the accuracy of Bree's representation of Leschetizky's teaching, and there is some conjecture as to why the master endorsed this book.

The Groundwork of the Leschetizky Method, which consists of twenty-three sections, is not an innovative method. The hand position is a conventional one and the stress is on finger movement only. For the most part the directions and the exercises are of the same type as had been presented in previous methods. In Rule Three on page eight of this method, to avoid rigidity, direction is given to raise and lower the hand frequently while playing. Such comments concerning the avoidance of rigidity and others such as in Section V which insist upon a loose wrist show some inclination toward the contemporary pedagogical trend favoring relaxation. The loose wrist was also advocated in Deppe's teaching. Thomas Fielden submits that Leschetizky developed a concept of Deppe's: the realization that the flexing and extending muscles of the fingers lay mainly in the forearm and not in the hand.

> "Leschetizky taught his pupils to imagine the fingers as extending right up the arm, thus assisting in great measure to drive away the tendency to stiffness in the hand."[416]

Other indications of a less rigid use of the hand than conventional pedagogy usually allowed are found in the exercises for octaves in Section XV and also in the arpeggio exercises in Section XVII. In

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[415] Ibid, p. 279.

[416] Fielden, Op. cit., p. 4.

the exercises for octaves the directions are that broken octaves be played with a twisting motion of the wrist. In playing the right hand arpeggio exercises, the directions are that the hand makes a quick turn toward the fifth finger.

In developing equality of tone in scale passages, directions are given at the top of page fourteen that fingers playing immediately before and after the thumb should strike harder than others. A contrasting suggestion was made previously by Oscar Raif that the thumb play lighter in order to achieve equality of tone.

A comment worth noting is in Section XIII dealing with the playing of repeated notes with alternating fingers. The directions in this section state that the tips of the fingers should make a wiping motion on the keys. Of interest also is the terminology used in the directions in Section XVI dealing with chord playing, that where leaps occur between chords the hand is carried over with a swift swing.

According to Harold Schonberg, the facet of piano playing which Leschetizky emphasized the strongest was that of tone. Leschetizky is reported to have been tremendously impressed with the quality of tone produced by the Bohemian pianist, Julius Schulhoff. It was Schulhoff's concept of tone which Leschetizky is reputed to have emulated and endeavored to achieve in his students. Schonberg affirms that the most famous of Leschetizky's students were noted for their tone.[417] Malwine Brée asserts in Section XIV, which deals with touches, that where Leschetizky's students have excelled in touch and tone it is because of the finger exercises. The factors in these exercises that might be considered unique are the directions in legato playing, cantilena style, and in the playing of chords in Section XVI, that the keys be pressed down with the fingers and an upward swing of the wrist.

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[417] Schonberg, Op. cit., pp. 282-283.

Before proceeding to Tobias Matthay, the second, chronologically, of the three most influential teachers of the twentieth century, mention should be made of the teaching of Xaver Scharwenka. A German pianist and composer, Scharwenka was a student of Kullak in Kullak's Academy. Upon graduation from this academy in 1868, Scharwenka was appointed to the teaching staff. After beginning his own conservatories in both Berlin and New York, Scharwenka finally established his own Master School for the Piano in Berlin.[418]

In his Method of Pianoforte Playing, Scharwenka cites as the three factors in musical attention the eyes, the ears and the musical feeling, Scharwenka deplores the misuse of the relaxation principle as being as disastrous as the over stressing of rigidity. According to Scharwenka, the participating limbs should be relaxed except to the degree of fixation necessary to perform any given passage. The essence of Scharwenka's approach to piano technique is a balance of tension and relaxation. Tension is applied to the area of concern at the moment of attack and released immediately afterward. Scharwenka advises that the ability to relax the muscles during even the smallest amount of time between muscle contractions and to relax those muscles not being employed at the time is the secret of endurance and lack of fatigue. The use of falling, throwing and swinging motions in octave technique is encouraged by Scharwenka's method. To implement these motions the training of the elbow joint to its freest motion is suggested. Exercises are provided in Scharwenka's piano method for the training and development of the entire arm and hand as one unit; the forearm, upper arm and hand as individual units, and the combination of any two of these units. The use of the rolling or shaking movement in the playing of broken intervals is also developed.[419]

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[418]Baker, Op. cit., p. 964.

[419]Spangler, Op. cit., pp. 52-55.

Unlike Leschetizky, Tobias Matthay was a voluminous writer in the area of piano technique, as is evidenced by his many books on that subject. Matthay, like Leschetizky, was a renowned teacher of piano and had many successful students. Among the more prominent students of Matthay were Dame Myra Hess, Moura Lympany and Guiemar Novaës. Authorities agree that Matthay's work was built on precepts established earlier by Deppe. Matthay and Rudolph Breithaupt, however, were the principal figures in the revolutionary approach to piano technique that opposed the fixed-hand methods of the nineteenth century.[420] Thomas Fielden writes that both Matthay and Breithaupt were working "contemporaneously toward the same goal." Fielden, as well as others, affirms that the cardinal points of the discoveries of both Matthay and Breithaupt were the use of weight in tone production and the use of relaxation both in producing the tone and avoiding stiffness in the hands and arms.[421] This doctrine of relaxation spread rapidly.

> "He (Matthay) retained independent movements of the fingers, but they were still to transfer the relaxed weight of the arm (in one of his touch-forms, the relaxed weight of the hand alone), and each of the fingers was to be assisted by an 'invisible' rotary exertion of the forearm. The winds of doctrine blow hard, and this particular wind swept everything before it. For many years it must have been an exceptional teacher indeed who did not go through the ritual of lifting his student's arm and then dropping it while he spoke the magical words like an incantation. Nor did the authority emanate from the textbooks alone--it was passed on by word of mouth from teachers to students who became teachers; . . . One has only to go over the magazine articles of the first decades of the century or the advertising announcements of teachers to discover that, however loose the joints, an idée fixe was abroad in the land. Practice rooms all over the nation must have been occupied by students flaccidly practicing their Hanon exercises with armweight resolutely relaxed from the shoulder."[422]

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[420] Otto Ortmann, The Physiological Mechanics of Piano Technique, (New York: E. P. Dutton & Co. Inc., 1962), p. xx.

[421] Fielden, Op. cit., p. 5. [422] Ortmann, Op. cit., pp. xx-xxi.

Of the fifteen publications which Matthay authored, he refers to The Visible and Invisible in Pianoforte Technique as a digest of all his teachings brought up to date. One of the basic concepts in Matthay's method is the economy of motion in sound production. In essence Matthay's writings assert that all bodily motions involved in tone production should terminate at the point of attack since all motions after the tone has sounded can do nothing to affect that sound. Matthay also advocates close key contact before, during and after the attack in order to develop the intelligent sensitivity necessary to producing any desired tone. According to Matthay, the three available physiological elements are: (1) finger exertion, (2) hand exertion and (3) the arm element. No tone can be produced without the exertion of the finger, but it can be supported by one or both of the other two physiological elements. Economy of motion is also advocated by Matthay in the conscious choice of which physiological elements are needed in the playing of each tone. Matthay reiterates frequently that the exertions necessary to playing the piano do not always necessitate movement, and the economy of motion is stressed in the encouragement to limit hand and arm motions only to the area or areas required to produce a given tone. What Matthay labels as "invisible" in piano technique are those contractions and relaxations of muscles that are not necessarily apparent in outward motions.

In Section V of The Visible and Invisible which deals with "The Physiological Details of Touch," Matthay advises never to hit the key down but to touch it gently and with the exertion of the finger to press the key down. The two modes of finger-use are the "folding-inwards or gripping exertion" and the "opening-out or unfolding exertion." Elsewhere in the book Matthay refers to these as the "Bent" and "Flat Finger-use." In normal playing Matthay advises that hand exertion should always support finger exertion.

According to Matthay, the arm must be used in six distinct ways, four of which are optional. The four optional are:

1. The whole arm more or less than fully released during the act of tone-production--for singing and chord effects.
2. The forearm weight alone released--for light effects.
3. Forearm down-exertion added to upper-Arm Weight-release for loudest tone effects.
4. Upper-arm forward-drive along with the Forearm down-exertion--to be strictly avoided--unless for special effects."[423]

The poised Arm and the Rotative Arm are the two compulsory arm uses which are applied to all technique. According to Matthay, the arm is "poised" when it is suspended above the keyboard with none of its weight resting on the keyboard. The Poised Arm is used either intermittently or continuously. The most important of all arm uses, according to Matthay, is the Rotative Arm which applies in all playing.

Matthay's concept of the rotational movement submits that the forearm, when lying relaxed, would have the hand lying on its back with the palm upward. In order to put the hand into playing position a rotational exertion is required. If this rotational exertion is relaxed, the hand normally falls back toward the little finger. According to Matthay, these rotational exertions and relaxations may be visible or invisible. The use of the rotational movements requires less exertion and, consequently, less tension and less stiffness. Also, the proper manipulation of the exertion and relaxation is an indispensable aid to effective tone production. According to Matthay, tension and stiffness occur when pressures contrary to the natural inclination of the playing apparatus are exerted.

Matthay writes that in slow tempi the rotational exertions may be visible, but in fast tempi there is no time for this. Relaxation, according to Matthay, is that state when the arm is free to act. Though much of Matthay's work has been severly criticized, it

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[423]Tobias Matthay, The Visible and Invisible in Pianoforte Technique, (London: Oxford University Press, 1964), p. E15.

should be stated that Matthay was among the first to attempt to solve the pianist's technical problems in terms of physiological law.[424] Thomas Fielden writes:

> "Matthay, . . . has forced teachers to think; he has made them observe the operation of the mechanism of the pianoforte, and important, but hitherto neglected, factor in the attainment of technique; and he has laid for ever the spectre of the deadly method of mechanical teaching and practice which existed up to his time."[425]

Rudolph Maria Breithaupt was the third, chronologically, of the three most influential piano teachers of the twentieth century, and the second to use the physiological approach. Like Matthay, Breithaupt wrote books on his teaching method, of which the most popular in America was the School of Weight-Touch-Natural Piano Technic, published in 1909.[426] In the early part of the twentieth century, Breithaupt was one of the more popular piano teachers in Europe.[427]

Breithaupt, like Matthay, was interested in weight and relaxation. In the pianist's early study Breithaupt encourages him to use a low bench to make relaxation easier. In developing the "loose arm," Breithaupt advises that the arm must hang completely loose from the shoulder and that it should oscillate freely. The shoulder must carry the entire arm and the first signs of fatigue in playing should be in the shoulders, not in the wrist or arm. The exercises for developing this weight bearing and weight release involve what Breithaupt refers to as the "Longitudinal Swing Exercises" in which the arm is dropped with full weight on a note within a rhythmic framework. In Chapter III Breithaupt directs that the weighted arm supported by the finger be

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[424] Spangler, Op. cit., p. 96.

[425] Fielden, Op. cit., pp. 9-10.

[426] Spangler, Op. cit., p. 74.

[427] From a conversation with Lois Rogers Stoneman, concert pianist, student of Breithaupt.

placed on middle C. With marked precision the student is to count from one to four and on the count of four to swing the arm off this key and let it drop on D. This exercise utilizes the same finger on each key, but subsequent exercises use the same process with different fingers on different keys. Another exercise has the arm swing up from the lap and fall with full weight on a finger and then drop back to the lap within a rhythmic framework. Earlier in his writings Breithaupt maintains that a very important factor in weight technique is firm "hand-bridge" to support the weight of the arm. The fingers are compared to stilts or props supporting the weight borne by the palm of the hand, which is arched to form a bridge.[428]

Breithaupt uses the term "high-fall" to denote the upward swing of the arm and "low-fall" the dropping on the keys. According to Breithaupt, technic is not much more than alternating high-fall and low-fall. In comparing Breithaupt's use of weight to that of Matthay's, Thomas Fielden writes:

> "Breithaupt's use of the weight might be called more positive than Matthay's, that is to say he went further back than the shoulder for his inception of movement, and laid greater stress on the idea of throwing the weight on to the keyboard, as opposed to the use of the passively falling weight. Energy was therefore greater in the Breithaupt method than in the Matthay one. Speaking broadly, the former was kinectic, and the latter static. . . . Breithaupt advocated the full physical control of the inceptive action, launching it on its way, as it were, with the result that the energy had more momentum, and the timing of the stroke was better."[429]

The second action which Breithaupt discusses is the extension of the forearm. This action is described as "jerked" straightening out of the forearm, which at the same time produces a "passive" extension of the hand. The purpose of this action, according to Breithaupt, is to reduce stiffness in the arm and to limber the elbow joint.

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[428] Spangler, Op. cit., p. 76.

[429] Fielden, Op. cit., pp. 7-9.

One of the more important characteristics of the Breithaupt method is discussed in Chapter V under Action III. This action utilizes the rotary, or rolling, motion emanating from the elbow. When accelerated, this motion becomes a vibration which Breithaupt labels a "rolling-vibrato."[430] The exercises which follow on page twenty-four involve the rocking of fingers on sixths, broken chords and trills in single adjacent notes. In the following section on combined rotary motions, exercises are presented utilizing the transfer of weight by rotation from the thumb to the other fingers. Breithaupt would abolish the passing under of the thumb and the passing over of the third and fourth fingers in scale passages with a leap or a swing of the arm to the next position.

Breithaupt's emphasis on the arm and hand as one unit is evident in Chapter VI, where he directs that the arm as one mass should move along together, with the arm rolling the weight in front of it. In Chapter VII Breithaupt relates that when an elastic body falls to the ground a natural rebound takes place. Breithaupt suggests that this same action takes place with the staccato touch in piano technique. It is further suggested by Breithaupt that finger staccato is no longer needed.

In Breithaupt's concept of "free oscillation of the fingers" it is interesting to note that after the other parts of the arm have been developed, then permission is given to let the fingers "co-oscillate" with the remainder of the arm. This, as Breithaupt describes it, is the "swinging" of the fingers slightly forward from the knuckle joints before striking the key. The fingers still transfer the weight of the entire arm from finger to finger.

Two primary emphases of Breithaupt's method are the con-

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[430]Spangler, Op. cit., p. 85.

cept of the dropping of the weight on the keys and the rolling of the arm.[431]

The work of Breithaupt and Matthay was followed by an approach to teaching based upon an actual physiological laboratory study. Foremost of these studies is that of Otto Ortmann, an American who graduated in 1889 from Peabody Conservatory.[432] Ortmann's scientific approach refuted many of the statements of both Breithaupt and Matthay. In his book The Physiological Mechanics of Piano Technique, Ortmann states that the relaxation concept that had achieved so much popularity was misleading. Ortmann further submits that the great pianist did not and could not play with relaxed arms. According to Ortmann, this relaxation concept, which is the result of the movement away from the old school, fixed-hand technique, has gone too far to the other extreme. A partial return to the old school type of teaching is encouraged by Ortmann.

> " . . . the need for practising finger drill with the arm poised above the keys, that is, without arm-weight. Fortunately, pianists have always, to some extent, played this way, since it is quite impossible mechanically and physiologically to play certain passages otherwise. But I feel quite sure that in the last decade, finger-stroke has not received adequate consideration in piano pedagogy, and that undue stress of relaxation has seriously restricted velocity and technical brilliance."[433]

In his preface on page xxxiii, Ortmann labels the three values of his study:

1. A general theoretical value, in that it seeks to arrive at the true status of the operation of the muscles used in piano playing.
2. A practical value, in that it throws light upon concrete problems of piano technique.

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[431] From a conversation with Lois Rogers Stoneman, concert pianist, student of Rudolf Breithaupt.

[432] Oscar Thomson (ed.), The International Cyclopedia of Music and Musicians, (New York: Dodd, Mead and Co., 1964), p. 1554.

[433] Ortmann, Op. cit., p. 276.

3. A cumulative value, in that it forms, in connection with the physical phases, a necessary basis for any investigation of the psychological aspects of the problem.

In the first chapter of his book, Ortmann submits that the principle of the lever indicates that it is impossible to locate in a part the specific muscles that move the part, and that the composition of forces shows that the visual aspect of movement used so extensively in previous methods is not a safe guide to the muscular cause of the movement. On page fifteen of this chapter the elbow-joint is credited with being able to perform only two movements--bending (flexion) and straightening out (extension). According to Ortmann, the forearm rotational movement is not an elbow-joint movement, though it has previously been labeled as such. Forearm rotation is actuated by the radio-ulnar joint, which is situated in the region of the elbow but is distinct from the elbow joint.

On page twenty-four, in his discussion of finger movements, Ortmann writes that since the movement of the key on the piano is a vertical movement; any kind of finger stroke other than vertical is a waste of energy. Since the thumb's normal movement is horizontal and not vertical, the thumb stroke is never really a straight vertical line but somewhat of a vertical arc.[434] On page thirty-two of his book, Ortmann suggests playing on the fleshy part of the finger tip rather on the tip end of the finger as advocated by the early piano teachers.

According to Ortmann, the skeletal structure of the shoulder region and arm shows that, except in a few instances, every movement in piano playing involves movement in other joints.

> "The so-called simple 'arm-drop,' a free falling of the arm, and the exercise given to beginners to insure relaxation, if accompanied by key-contact, involves some movement in

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[434] Ibid, p. 24.

practically all arm and finger-joints and is not restricted, by any means, to movement in the shoulder-joint."[435]

Ortmann's study also provided enlightening information concerning the muscles involved in piano playing. The enigma of the fourth finger is due to the presence of ligamentous bands connecting the tendon of this finger with those of the third and the fifth. Ortmann states that these bands limit the extension of the finger and no amount of practice will overcome this. Fatigue in playing the piano affects the relaxation rate of muscles first and not the contraction. Ortmann states that in a case of muscular fatigue the second stimulus comes before the first stimulus has been neutralized. Muscle fatigue is due to a chemical condition in which increased activity causes waste to be deposited in the blood stream faster than it can be eliminated.

Of considerable import is Ortmann's statement that his study shows conclusively that muscular coordination changes with each change of tempo, intensity and pitch. This fact, according to Ortmann, completely invalidates slow practice.

> "In order, therefore, to exercise the muscles used in the actual movement, we should, from the beginning, have to practice each passage at the tempo, intensity, and pitch at which it is finally to be played. The practical impossibility of doing this does not invalidate the statement; the fact remains that, as soon as we change any of the three factors, the muscular reaction changes. . . . Consequently, the value of slow practice, of phrase practice, practising of each hand separately, later addition of the pedal, in fact all the forms differing from the form in which the piece is finally to be played, must be sought in the psychological field."[436]

Ortmann means that if there is any worth in these other forms of practice, it is psychological, not physiological.

In the Resume of his study, Ortmann strongly encourages piano teachers to become familiar with the basic principles of mechanics and of muscular action, in order to have a better understanding of

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[435] Ibid, p. 34.

[436] Ibid, pp. 376-377.

the problems of piano technique and to assist more intelligently in their solution.

A book which is not so scientific in its approach, in that it uses less of the scientific vocabulary, but yet is basically physiologically oriented is Thomas Fielden's The Science of Pianoforte Technique. Fielden's approach seems to represent a combination of the strong points of the traditional concept of piano technique as well as the weight-relaxation and the physiological concepts. Perhaps the foremost strength of Fielden's book is that he has related these cardinal principles of piano technique in a language more accessible to the piano teacher. Because of the similarity of their orientation, Fielden advocates, primarily, the same theories as were presented by Otto Ortmann. However, where Ortmann refuted the worth of practice any place but at the piano itself, Fielden submits that there are two types of training--that away from the keyboard and the other at the keyboard.[437] The training away from the keyboard as Fielden would have it would primarily be exercises for the development of the different muscles in hopes that the student would acquire a more intelligent use of them for the actual playing. In support of this theory, Fielden writes:

> "Only by knowing his technique physiologically and mentally will he establish the condition of permanence which is the criterion of achievement on any musical instrument."[438]

For Fielden, the proper condition of the arm and muscles in the approach to the keys is neither rigidity nor relaxation, but rather what he calls a state of resiliency. The act of walking, according to Fielden, represents the most accurate analogy to the conditions present in piano playing.

> "The leg moves gradually forward in a uniform manner, not falling in a relaxed heap, but controlled by the muscles which

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[437] Fielden, Op. cit., p. 34.

[438] Ibid, p. 44.

> connect it with the body: its own muscles are in a state of sensitive nervous preparation ready to act at the point of contact, the flexing muscles of the toes, and those of the feet . . . taking and supporting the strain of body-weight as the foot touches the ground. The foot does not strike the ground, nor can it be said to touch it gingerly: the contact with the ground and the repercussion on the whole muscular organism are practically simultaneous. Furthermore, this steadying action of the muscles in taking up the repercussion acts as a bridge to the movement of the weight of the body on to the other leg in taking the next step. The sustaining muscles act as a spring on which to propel the body forward. This is an important point which, if it be applied in the practice of slow legato finger work on the piano, will go far to solve the problem of teaching true and correct finger action."[439]

Like Leschetizky, Fielden recommends what he calls the undulating movement of the wrist in piano playing to retain suppleness of the wrist and to save energy. Like Matthay and Breithaupt, Fielden supports the rotation theory. The two rotary movements listed by Fielden are:

1. The rotation of the forearm actuated by the supinating and pronating muscles in the forearm and in the biceps.
2. The rotation of the elbow-joint actuated by the muscles in the shoulder.

In support of these two movements, Fielden submits that scientific investigation concludes that all piano technique is accomplished by the co-ordination of the arm and all of its parts, and the aim of all technical practice must be the attainment of the greatest possible freedom of movement and the inhibition of any impeding factors.[440]

In summation of teaching suggestions, Fielden writes that the progress of piano playing has advanced to the point where there is no room for a particular method, and technique must be regarded as a science. Fielden asserts that the human factor is one of the major obstacles in perfection of playing and submits that much is yet

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[439] Ibid, pp. 60-61.

[440] Ibid, p. 95.

to be contributed to the overcoming of this obstacle by the science of psychology. Fielden concludes that just as the great pianists have been such because of their inherent greatness rather than because of any particular method by which they were taught, so the great teachers have been such because of their "genius" for instruction rather than any method which they taught.[441]

Another follower in the physiological approach to piano technique is Arnold Schultz, author of the book The Riddle of the Pianist's Finger. As in the other physiological approaches, Schultz's principal concern is that the pianist consciously and intelligently choose which part of the playing mechanism he will use in any given situation. Schultz criticizes those who oppose the idea of "a" method of teaching piano technique. According to Schultz, no systematic development of technique can take place within an approach that bases its method on the individual differences of the students.[442] Much of Schultz's approach is similar to past methods within the framework of the physiological concept. His nomenclature, however, is to a great extent uniquely his own.

On page two of his book, Schultz defines a controlled key-descent as one "in which the applied force makes a positive difference to the key throughout the whole course of its descent and throughout the required time-value of the tone." Schultz further states that the controlled key-descent is the first objective of the piano student and subsequently the first general precept of piano technique.

In support of his theory that piano technique be scientifically studied and applied, Schultz submits that no longer can intellectual analysis be evaded. Schultz's contention is that because modern piano pedagogy is already permeated with theoretical notions, both

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[441] Ibid, p. 143.

[442] Arnold Schultz, The Riddle of the Pianist's Finger, (New York: Carl Fischer, Inc., 1959), p. 220.

sound and unsound, the present day pianist is compelled to a scientific approach in order to know which theories to accept or reject. Schultz further contends that intellectual analysis has worked so effectively in fields outside piano playing that if it has not worked in piano teaching it is more apt to be due to the method of use rather than the analytical approach itself.

Schultz defines velocity in piano playing as the speed with which key-descents follow upon one another. According to Schultz, highly lifted fingers or hands are inconsistent with the goal of velocity; consequently, for this objective Schultz recommends that the movement of the playing part or parts be limited as far as possible to the extent of the key-descent, three-eighths of an inch.[443]

Schultz's views on relaxation are consistent with the others of the physiological approach. In his criticism of earlier teachers for their overemphasis on relaxation, Schultz writes:

> "The only general value of relaxation, let it be repeated, rests in its promotion of endurance. It cannot be, accordingly, a panacea for all the technical evils. Piano technique implies much more than the ability to endure, and the emphasis on relaxation as a principle has been excessive to the point of absurdity."[444]

In the mechanics of playing, Schultz cites three categories of movement:

1. Movement of the playing-unit caused by weight alone.
2. Movement of the playing-unit with an unmoving base caused by muscular contraction.
3. Movement of the playing-unit with a moving base caused by muscular contraction.[445]

Schultz uses the prefix "contra" to signify when the base does not move and "trans" when the base moves. Seven types of movement within the three categories are listed with the stipulation that

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[443] Ibid, p. 18.

[444] Ibid, p. 27.

[445] Ibid, p. 33.

the first, fourth and seventh are the most valuable to the pianist:

1. Movement caused by weight alone.
2. Contra-weight movement.
3. Contra-pressure movement.
4. Contra-fixation movement.
5. Trans-weight movement.
6. Trans-pressure movement.
7. Trans-fixation movement.

The theory of weight transfer in piano playing Schultz considers weak, since in the transference of the pianist's ability to control the individual intensities of tone is restricted.[446]

Schultz maintains that there has been insufficient physiological study of the fingers in piano playing. The three individual parts of the fingers should be developed just as are the component parts of the arm and hand, according to Schultz. In his chapter on the finger, Schultz presents a detailed study of the muscles and the co-ordinative muscular movement and includes summation of which muscles are more effective in the different kinds of situations.

On the subject of tone quality, Schultz quotes Ortmann's study, which, through laboratory experiments, substantiates the thesis that a piano tone can vary only in intensity. Schultz submits that though these findings of Ortmann are true, the pianist still interprets the difference between a loud tone and a soft tone as quantitative rather than qualitative. Concerning what is involved in "poor" tone quality, Schultz submits the following statement:

> "Piano-playing which involves so-called "ugly" tone is always piano-playing in which the legato is highly unsatisfactory, in which percussive noises on the key-surfaces are noticeably present, in which the control of intensity is poor, or in which offensive extremes of intensity and pitch appear."[447]

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[446] Ibid, p. 60.

[447] Ibid, p. 196.

Schultz contends that the absence of a true legato is by far the most important factor in what has been designated as bad piano tone and that the teachers are not concerned enough with what is involved in the merging of tones. According to Schultz, most problems with tone would be remedied with a controlled key-descent.

Schultz concludes his book with evaluations of the methods of Leschetizky, Matthay, Breithaupt and Ortmann. In these evaluations, Schultz states that the technical objectives of Matthay are identical to his own. He further submits that no greater light has been shed on piano technique than in Ortmann's The Physiological Mechanics of Piano Technique.[448]

The trend in twentieth century piano teaching seems to have moved away from the "method" approach to piano technique. Rather it tends to adhere more closely to the statement of Leschetizky that the individual problems of the student determined the method to be used. An attitude which could be considered typical of today's piano teacher is that of William S. Newman. In his book The Pianist's Problems, Newman encourages consideration of the student's technical strengths in selecting music, choosing only those drills and exercises that correct a specific weakness in the student's technique, and the building of exercises out of the technical difficulties encountered in the music being studied.[449] Newman states that there is considerable misunderstanding among piano teachers as to purposeful use of technical exercises and drills.

> "The vital point, however, is that the practice of Czerny study leads mainly to the perfection of that Czerny study rather than to Beethoven is first of all to practice Beethoven. The practice of Czerny can help Beethoven only when an identical passage occurs in both, and such practice can mean the wasting of a lot of valuable time. . . . The main fallacy in adhering

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[448]Ibid, pp. 265, 310.

[449]William S. Newman, The Pianist's Problems, (New York: Harper & Brothers, Publishers, 1956), pp. 32-33.

> to Czerny et al. lies, it seems to me, in the illusion that piano practice means the development of the piano-playing muscles in general. But it does not. It means developing specific muscular co-ordinations to meet specific situations. . . . One learns only what he practices. Each technical feat must be learned separately. Technique does not generalize."[450]

Newman hastens to add that he strongly advocates the choice of particular studies for the particular needs of a student.

The two words eclecticism and functionality seem to describe the prevailing attitude toward piano technique in middle twentieth century; the eclectical drawing from many areas of psychology, physiology and the empirical methods of the past, and the functional application of this information to the technical problem at hand.

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[450] Ibid, pp. 34-35.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was (1) to determine changes in pedagogical approaches to the teaching of piano technique from 1800 to the present time and (2) to investigate these changes as they relate to these three factors:

1. The development of the piano and the corresponding understanding of its potential, which opened new possibilities of pianistic sound requiring new types of technique.
2. The continuous evolvement of new literature for the piano necessitating different kinds of technique.
3. The professional development of piano instruction that resulted in a concern to improve methods of teaching technique.

Of the many areas of technique that are worthy of study, this paper was limited to an historical study of only the changes which have taken place in the finger skills of piano technique and the resulting changes in pedagogical approach as they have direct bearing on the three motivating factors given in this paper.

PROCEDURES

1. A bibliography was compiled from pertinent materials listed in the card catalogs of Michigan State University, University of California at Riverside, and College of the Desert, abstracts of doctoral dissertations and master's theses, and the Reader's Guide to Periodical Literature.

2. Bibliographical material and suggestions of piano literature to be studied were submitted in response to survey of seventeen piano teachers. (Appendix A and B)

3. Bibliographical material was studied to determine background upon which the study could be based.

4. Further research was conducted to discover changes necessary in approaches to piano technique as these changes were related to the three factors stated in the purposes of this study.

5. Representative compositions from each period were analyzed for technical demands that had not existed previously.

6. The findings of this research were reported under the separate chapters of the study.

CONCLUSIONS

From the data collected for this study, its evaluation and categorization, it has been possible to arrive at the following conclusions:

1. There has been a correlation between the development of the piano and changes in attitudes toward teaching piano technique:

   A. The evolvement from the lighter action of the harpsichord and earlier piano to the heavier action of the present-day piano resulted in the development of force in playing.

   B. The iron frame was developed to meet the demand for more dynamic power from the piano.

   C. The keyboard was extended to meet the corresponding demands for range expansion.

   D. The invention of the double-escapement action greatly facilitated the playing of repeated notes.

   E. The change from hard leather on the hammers to soft wool felt improved tone quality.

II. The literature written for the piano has made considerable change in the attitudes toward teaching technique.

   A. Literature has required further development of the piano, as a result of the composer's and performer's desire:

1. To produce a more massive sound.
2. To use a wider range.
3. To produce dynamic effects.
4. To create dramatic effects.
5. To perform rapid note passages.

B. Literature was written to bring to realization the full potential of instrument through innovative developments in:

1. Melody.
2. Rhythm.
3. Harmony.
4. Texture.
5. Timbre.
6. Technique.

III. Pedagogy has not contributed innovation in technique in the same sense as there has been innovation in the development of the piano and in new literature.

A. The role of pedagogy has been to contribute knowledge and method for the improvement of the performance of existing technical requirements. Within its role pedagogy has innovated methods for accomplishing existing technique. Such innovations have included:

1. Specialist studies in every facet of piano technique to accommodate the movement toward virtuosity,
2. Weight and relaxation studies to amend the difficulties caused by rigidity,
3. Physiological studies to extend the knowledge of the human playing mechanism.

B. Pedagogy represents the attitudes that were being changed rather than another force upon the change of attitudes.

IV. From the findings of the study the following data appear to be significant and worthy of mention. A principal figure, perhaps "the" principal figure, in the innovation of piano

technique has been the performer. This conclusion is substantiated in that:

A. The performer has figured prominently in the instigation of new developments of the piano as well as the literature written for the piano. In the research in the development of the piano, frequent reference is made to the piano performers of a particular time requesting some improvement in the structure or performance mechanism of the piano.

B. It is highly probable that in most cases the innovative devices of piano technique were already realized accomplishments in some performer's technical skill before they became a part of a written composition.

C. The majority of the outstanding composers for the piano were outstanding pianists before they began to compose.

RECOMMENDATIONS FOR FURTHER STUDY

From the findings revealed by this study, and recognition of its obvious limitations, the following studies appear to be needed:

1. The relationship of the performer to the change in approaches to the teaching of piano technique.
2. The relationship of the outstanding pianist to outstanding composers for the piano.
3. The effect of avant-garde uses of the piano on piano performance.
4. The study of the development of the piano pedals and pedal technique.
5. The study of the extent of the influence of the physiological approach to piano study.

APPENDIX A

PIANO TEACHERS TO SERVE AS A BOARD OF EXPERTS TO APPROVE BOOKS FOR DISSERTATION STUDY

1. Dr. George Anson
   Texas Wesleyn College
   Fort Worth, Texas

2. Miss Mary Frances Bannon
   Department of Music
   Michigan State University
   East Lansing, Michigan

3. Mr. Stefan Bardas
   North Texas State College
   Denton, Texas

4. Mr. Digby Bell
   School of Music
   University of Oklahoma
   Norman, Oklahoma

5. Miss Dorothy Bishop
   School of Music
   University of Southern California
   Los Angeles, California

6. Mrs. Celia Mae Bryant
   School of Music
   University of Oklahoma
   Norman, Oklahoma

7. Miss Charlotte DuBois
   Division of Fine Arts
   University of Texas
   Austin, Texas

8. Dr. Guy Duckworth
School of Music
Northwestern University
Evanston, Illinois

9. Mr. Julio Esteban
Peabody Conservatory of Music
Baltimore, Maryland

10. Mr. Joseph Evans
Department of Music
Michigan State University
East Lansing, Michigan

11. Dr. Bela Nagy
Boston University
Boston, Massachusetts

12. Dr. William S. Newman
School of Music
University of North Carolina
Chapel Hill, North Carolina

13. Dr. Robert Pace
Box 182
Columbia Teacher's College
Columbia University
New York, N. Y.

14. Mr. John Perry
Oberlin College
Oberlin, Ohio

15. Mr. John Richardson
Department of Music
Michigan State University
East Lansing, Michigan

16. Dr. Gordon Terwilliger
School of Music
Wichita University
Wichita, Kansas

17. Dr. Roy Underwood
29560 Thornhill Drive
Sun City, California

APPENDIX B

1. Would you list two or three books which you consider valuable resources of attitudes toward the teaching of technique for each of the following centuries. List title, author and publisher.

Seventeenth Century: _____

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Eighteenth Century: _____

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Nineteenth Century: _____

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Twentieth Century: _____

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_____

2. Would you list two or three compositions for each century which you think are representative of the TECHNICAL demands of that century:

Seventeenth Century: _____

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Eighteenth Century: _____

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Nineteenth Century: _____

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Twentieth Century: _____

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APPENDIX C

SUGGESTIONS FROM THE BOARD OF EXPERTS

1. Hutcheson-Ganz has a comprehensive bibliography.
2. Under "Pianoforte playing" in Apel dictionary (p. 583) is an excellent bibliography.
3. Study all dissertations on the subject so as to contribute in a way not already covered.
4. Do not over-complicate or over-extend yourself.
5. One possible approach to subject would be through the evolution of the keyboard instrument and the changes in technique which were required, i. e., the history of the piano.
6. Investigate descriptions of how Beethoven, Chopin, Liszt, Brahms, etc., played.
7. "Century" divisions are awkward because of overlapping. Techniques of the seventeenth and eighteenth century keyboard instruments are actually anti-piano techniques. It has taken time since the invention of the piano to develop technique for it.
8. "The consequence of Keyboard inventions." Suggest that in place of century groupings, time spans be allotted certain developments in the instrument; that each grouping consider the impact that the inventions had upon composition and performance problems.

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