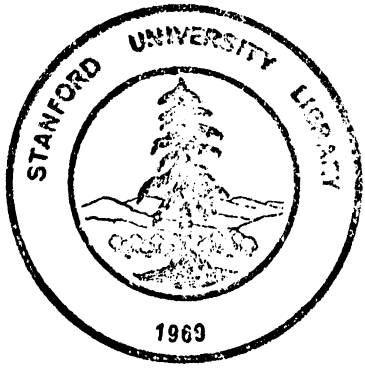
Conscious control in piano study

Ellen Amey



CONSCIOUS CONTROL IN PIANO STUDY

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By ELLEN AMEY

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PREFACE

We live in an altruistic age. In the professional world it is not enough that we work to raise our own standards; it is incumbent on artists and teachers alike to influence all toward highest ideals and, if we are truly devoted to our work, we shall generously share our experiences with the young teacher and embryo artist. No talent is so great that it needs not the support of reason and knowledge; it is indispensable that man have, as supports to talent, knowledge and theories drawn from all possible sources.

There never has been and never will be any question as to the essentials for the acquirement of musicianship; it is also true that the qualities necessary in the making of a student will be the same to the end of time. It is on the point of presentation of material, and the manner of acquainting a pupil with the conscious part he may take in his making, rather than the object to be attained and the qualities necessary, that different theories in this field have their origin. In acquiring knowledge of the subject and proficiency in technique, the importance of conscious and purposeful exercise of his faculties should be made known to the pupil clearly and definitely, through proper direction, and not left to be learned through a long course of experience. The necessity for concentration, too, is often overlooked, though this is the element yielding conscious control.

It should be fully appreciated that the ability to concentrate varies greatly in individuals, and its development is worthy the best efforts of the teacher. Concentration is the product of attention, and requires that we have something vitally interesting on which to fix the attention. It would seem apparent that we should engage logical truths which will not only hold the interest but upon which we can base reasoning and growth. We should present these truths in such a manner that an appeal is made directly to the mind as a vital and controlling factor. Thus the mind is given a treasure house of knowledge as well as the guardianship of the fingers; a mind filled with the very material of which music is made will be quick to recognize its own when studying the great masterpieces.

The scope of this treatise embraces the fundamental forms from which

music is built, inventions from these forms and creative work around them, as well as a brief discussion of the mental operations involved in their comprehension and execution. The purpose of the work is, primarily, the presentation of basic material, its assimilation and application to creative work. It should be the aim to present this material in such a manner that the active forces of the mind are kept interested and responsive, and awake to a sense of mastery from the beginning. In the first examples I have suggested points on which analytical work for the youngest pupil may be based, thereby early inculcating principles for that part of music study without which one cannot have a proper conception of a composition. A full comprehension of material with adequately trained fingers makes possible that conscious control which is the only medium to mastery.

Such natural gifts as take the form of imagery through the different senses involved in the study of music should not be depreciated. On the contrary, they should be brought to notice as important factors in the pupil's success, and should be cultivated to the highest possible degree of reliability. Special training along these lines will depend upon each individual, but my theory is that visual, aural and tactual imagery can best be strengthened and cultivated through consciously directed efforts in comparing and recording impressions, and that the only sure means is through the knowledge of self-established basic material. It is evident that a trained mind holds the key to whatever is needful in the acquisition of essentials in piano study, but the training should develop mental imagery and acquaint the student with the use of basic material.

This work is intended for the young teacher and the student capable of self-help. In its preparation I have hoped to reach this class of young musicians and to interest them in the practical psychology of piano study. Few students appreciate the importance of consciously controlled perceptions in study and the potency of the subconscious forces in the acquirement of technique. Neither do all appreciate the value of thorough musicianship, that knowledge which will give them assurance of composure. I have aimed to fill the book with helpful ideas on these two points and to lay before the reader possibilities rather than to give detailed treatment. I consider that every point presented is relevant to my subject, and still there are many left untouched. Piano playing is such a complex combination of mental, physical and emotional processes that the matter of conscious control can in no wise be exhausted in a volume of this size.

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CONSCIOUS CONTROL IN PIANO STUDY

CHAPTER I

CONSCIOUS CONTROL

THE ability to control the mental state to the degree that the mind can be depended upon as a directing force may rightfully be called *conscious control.* This power with its several requirements makes the master. It is the means which has produced the great pianists of the past, and it will produce those of the future. It forces recognition in the performance of every great artist, for there is always something that stamps his efforts preëminently above a merely beautiful interpretation with nicely worked out details and adequate technique. Broadly defined, it is the ability which enables him to control his effects at all times; his ability to control consciously and to direct the physical in the performance of conceptions formed from impressions or mental images, within recall.

This same ability should manifest itself proportionately in the study and performances of the student. It is as necessary to him as to the artist, and the very qualities that make it a recognized factor are those that make the pupil a student and the study hour a success. Conscious control is a matter of cultivation rather than a gift, though some of its requirements may appear as such. It is a fact to be remarked that there is always a wise frugality in the distribution of such gifts as may more effectively be developed through study and exercise. And so with regard to conscious control a student, however gifted in some of the essentials, should feel the necessity for its cultivation. The most auspicious time for beginning is with the early work. The mind, like the members of the body it directs, is subject to certain laws of habit, and in the matter of attention, control and correct conception, each element depends upon many separate acts which build up a possession that will never pass away and necessarily influences the whole musical career.

Requirements for Conscious Control. — Conscious control is possible to all students in a degree corresponding to the knowledge actually possessed. A mind trained to a true appreciation of the knowledge in its possession, a body that through relaxation offers freedom of action, and a will that marks consciousness of effort are the factors that make it possible. First of all, conscious control requires that the mind receive the impression of musical forms in such a manner that they become at will a product of the mind; it requires that the mind think the things demanded of the physical and that the physical be free and ready to obey this directing force. In this way only can the musician send out to the world a coherent message conveying his thoughts and feelings as he interprets the work. In the preparation or training of the mind for such an art, the student will find mastery.

The Modern Basis for Training. — The last quarter of a century has marked important changes in the training of the music student. In this time we have emerged from that period in which digital skill and musical notation were considered the only essentials to be taught in the making of a pianist. With this it was supposed that individual talent and the ability to imitate would supply other essentials. The general result was not real music, and, in consequence, only a few reached artistic heights. These were the rarely gifted, who were able to find a way to think things out for themselves. When standards were to be raised, as they always will be where there are earnest workers, the training was placed on a broader basis, not alone to help the few to become masters, but in order that the many might become better musicians. This showed a just consideration of the fact that all are not gifted in like degree nor even in the same particular.

As a medium for expression, technique has always been the essential most cultivated, and, in the same proportion, it has been the one most discussed. Naturally, improvements were first made manifest in this direction, but all improvement in method of study brought into prominence the directing force. More attention was given to tonal beauty and conscious control of the touch for its production. Less physical resistance was sought, and it was found in greater freedom of position through which was effected relaxation, the first essential in the acquirement of technique. Relaxation made possible the weight touch with which Breithaupt threw the pianistic world into the throes of a revolution. Matthay took us a step farther and has shown us what can be done by interesting a pupil in his instrument as well as appealing to his sense of power. The object has been to take the pupil to the point where he consciously controls the

physical to meet certain requirements that are determined by his own conceptions. This process has a tendency to preclude imitation. It leaves the standards of touch and tone flexible, so that they continue to expand with the ideas that are being developed and made manifest through consciousness. Thus the efficacy of conscious control is revealed from the beginning.

Mental Imagery. — Conscious control, well directed, makes it possible to give out the best that is within us, but it is exacting in proportion as we thoroughly understand the work to be interpreted as well as cultivate the medium for expression. In order to execute a creative work with freedom, and with a full conception of its form and content, it must become, for the time being, a product of the mind. Memorizing thus becomes an essential part of music study and should be cultivated from the beginning. The natural ability to memorize, like other gifts, is an individual matter differing not only in degree, but in the way through which the subject makes the strongest impression. These channels are necessarily the eye, the ear and the nerves of motion and touch. Any natural ability will lie in one or more of these three channels, but any one or any combination of the three processes involved is inadequate for a masterful interpretation of a composition.

These processes are the result of sensations or impressions from the stimulation of the three corresponding sense-organs which become involved in piano study. Though these sensations may be revived in memory as mental images, their accuracy and intensity depend largely, if not altogether, on the consciousness awakened at the time of the impression. It should be known that impressions can, to some extent, be made subject to conscious control. We are more apt to perceive what we wish to perceive and to see that for which we are looking. We also perceive with more definite outline what we are led to anticipate, or what agrees with previous knowledge. In this connection it is a fact to be reckoned with that mental imagery is especially vulnerable, and is most likely to be obscured when the subject is laboring under strong emotion, to which the student or pianist is constantly exposed through the influence of his music. It has been observed that pianists of unusual ability sometimes find themselves without a cue, that is, they suffer a lapse of memory. Where they are unable to proceed it will generally be found that they are trying to recall a mental image. Two such instances in public performances have come under my notice. Both pianists admitted that they memorized through the visual or by a mental picture, and that the loss of a single chord had caused distraction. The same disturbances may be superinduced

through the diametrically opposed sensations, elation and apprehension, equally disconcerting factors which must be faced by the young pianist. The manner in which he meets these difficulties will be determined by his mental type, for while mental images are not mutually exclusive, in thought-processes one image is generally found to predominate.

The emotional side of piano playing cannot be discounted, and accounts for many disturbances and distractions. While a student's training should embrace control of the emotions, this must not be carried too far. Such tendency is apt to develop a pianist without warmth and spontaneity. Instead, the training should be such that the mental state can overcome all disturbances, and this mental poise cannot rely on mental imagery alone.

The tactual image is ever present in the performance of a pianist, but it requires experience in actual and specific use before its presence will be observed. This image has to do with feeling or perception by touch, and is so named from the sense upon which it impinges and is made a conscious fact. It is allowed to embrace the kinæsthetic or motor image, which has to do with motion or direction. The tactual image may be accounted the most important of the three mental images, when considered singly, for upon the tactile sense rests the responsibility of correct movements, reaches and distances in skips in a production from a sensation, as when playing from notes, or from an image when playing from memory. While on the other hand the position of objective points will be made known from reasoning based on knowledge received through the visual or auditory senses, and it is through these images that all cues are usually given.

Memorizing through the tactile sense, or through a tactual image, is simply a mechanical process, and its efficacy depends on the manner in which the impression has been made. The purely visual and auditory processes are but reproductions of an impression or a mental image. As such they come from without and at best are but imitations, though they may bear the semblance of the real. Through these mental images one may be able to perform astounding feats of memory, but they cannot be depended upon at all times for reliability. If the visualist lose his image, he has no resource. The pupil who possesses the still rarer gift of memorizing by ear depends upon an auditory image and is exposed to the same danger. Where there is no gift in mental imagery, the pernicious habit of rote memorizing usually obtains unless effective work is begun in mind training. Memorizing by rote does not permit conscious control, since it is but a series of reflexes, the result of much repetition which would be disturbed by mental effort and would cause the loss of cue. This manner of learning

a composition necessitates thousands of repetitions and always takes a much longer time than is required if conscious control has been developed.

The Key to Memorizing. — Rational memorizing requires systematic study of the construction of a composition. The primary aim of this is to discover salient points which may enable the student to recognize the scientific basis that is found in all musical works, and about or from which melody, musical forms and harmony are created. Every well-trained student possesses a knowledge of this material. Its acquirement has been a part of his training in musicianship, and only through its use in daily practice can he hope to develop technique. If he has been led to build this material — scales and chords — for himself, always conforming to certain laws of construction, then it has become his possession, which he will not fail to recognize when found in creative work. About this basis may be correlated the inventions of other men, in this way associating the new with the known. Thus memory is not left to rely wholly on a mental image or abstract facts, but on knowledge and coherency based on unfailing principles. This places the responsibility upon the student and his efforts, rather than upon natural gifts, which always have their limitations.

The first analytical survey of a simply constructed composition resolves it into the parts or periods of which it is made up; the length of these parts or periods is necessarily determined by the length of the motive, and as a complete musical thought will admit of a mental grasp. Minute analysis, which should follow the first step, fills in every detail and brings each single period clearly before the mind either for the visual, the aural or the tactual image. It is therefore apparent that analysis not only prepares for rational memorizing, but it has a tendency from the beginning to improve the student's habitual method of recording facts by helping to make clearer impressions. There will come times in the career of every pianist when effective work of this kind will bring its compensation. Here is one of the many examples that could be cited. The late Dr. Henry G. Hanchett, while playing before a class in analysis at the Brooklyn Institute, found himself momentarily lost. It was plainly evident he had allowed himself to drift into a state of abstraction. After turning to his audience with this remark, "If you had not been here, this would not have happened," he proceeded to play through the intricate composition without a hitch. Dr. Hanchett's training and the special preparation for analytical work were, no doubt, the factors that came to his aid. It is quite probable the images were more intense and accurate. But, above all, he knew his material not as abstract signs, but as coherent thoughts that had logical sequence. In following these he was able to concentrate to the effacement

of self. The assurance of knowledge possessed gave him the power of conscious control.

Rational memorizing not only reinforces that process of memorizing by one or more of the mental images, but it makes possible an interpretation that cannot be realized through any one or any combination of the three processes. The conception of musical forms and harmonies is a correlation of impressions, and comes from within. The interpretation will be no greater than the pianist's individuality permits it to be with adequately trained fingers, but it will be his message, — something real, not an imitation; something he understands and should feel and over which he may have mastery through conscious control.

Mental Training. — The artistic performance of a master should be a matter of encouragement to every student, for while talent and individuality may be in evidence, the remarkable part can be traced to study properly directed. Every great artist of the present day stands out in history as an intellectual giant. His mastery is the tangible result of assurance that comes from knowledge and appreciation of mental power and the control of the physical. The feeling of mental power suggests concentration. This is made possible by having the material in hand on which to concentrate to the extent of effacement of self. Whatever course is followed by the student, it is plainly apparent that the mind must be trained for mastery. An appeal should be made to it as the directing force with the first act of touch, and it should be kept alert with healthy, vigorous thought and reasoning. The student should be taught to build scientific forms and to recognize them through the aural, the visual and the tactual images. Through the practical use of this knowledge he will acquire the assurance of mental power that asserts itself with such application to exigencies that the mind becomes qualified for concentration. Above all, the pupil should be taught systematically to listen and observe and to exercise discrimination, judgment and musical taste. All the possibilities for mental training are offered in the cultivation of rational memorizing. That is, rational memorizing gives the student a tangible outline for the thorough mental preparation exacted in the cultivation of conscious control.

It may be a matter of conjecture, what part of these essentials has been taught the great masters; for, with the highly gifted, empiric methods usually obtain. Such methods do not tend toward production through a reasoning process. They are what might be termed haphazard methods, for the idea comes first, and this is as apt to be wrong as right. With a true artist or student, however, the search for a logical sequence will follow the idea, and thus there is formed a basis upon which future reckonings may

be made. Pioneers in all the arts must have had recourse to such methods, but it is through their use, not their abuse, that progress is effected.

In music study, particularly, there is a great waste of time and energy in misdirected efforts, trying to get into the fingers what is not clearly outlined in the mind; a vivid and accurate perception is of the first importance, whether for sight-reading, successive readings, or memorizing. Mastery depends upon three factors: the subject-matter must be clear to the student, in other words, the student must know what is to be done; he must have the mechanism ready and he must know the most direct means for the execution of the act; he must have the ability to control consciously his effects at all times.

CHAPTER II

FIRST STEPS IN MENTAL TRAINING

THERE is much in the modern methods of teaching music to the very young that is to be highly commended. The points popularly considered are in most respects designed to arouse interest and develop rhythmic sense and musical intuition, all of which have a tendency to musical growth, and are necessary to actual enjoyment of study. They also bring to the surface latent talent that might otherwise remain dormant. But in the first lessons of piano study there seems to be a general wrong tendency to leave too much to the initiative of the pupil. The act of touch and the art of tone production, as relating to conscious effort, appear to be points little treated, notwithstanding the fact that they require readiness of the physical to meet the demands upon it and that they can be acquired more quickly through conscious preparation. Basic material is often so treated that the practical value of such study is not easily recognized, though this material has always been, and will remain, the nucleus for the correlation of musical ideas. It is too often the case that analysis is left for advanced students, and they are often handicapped by a lack of knowledge of the fundamental forms and a lack of training to observe, recognize and classify such forms when they are known. It is on these points and the matter of memorizing that, in the majority of cases, the artist teacher finds difficulties with which it is not easy to cope; for, in addition to an actual lack of knowledge, pernicious habits in study and practice have often been formed through haphazard methods of early work. There will always be more or less combat between empiricism and the rational or direct means of reaching results, one on an emotional and the other on an intellectual plane. This is due no doubt to an innate musical feeling in most beings, which is forever reaching out for satisfaction in expression regardless of the means. Thus it is that the right means for obtaining results must be supplied at once if correct habits are to be formed at the outset. Inasmuch as the mind is the controlling factor and ultimate guide, it is entitled to first consideration, and must be directed to conscious effort in the cultivation of these habits.

Visualizing the Keyboard. — The smallest detail in the first lessons should not be left to chance methods. Even in learning the names of the keys, the pupil should be taught to observe to the degree of visualizing. Effective work at the keyboard depends on the image of key position the pupil is able to carry, as well as on his control of the physical, for it is through the mind's eye — or a picture carried in the mind — rather than actual vision that we know the point where the fingers should come in contact with the keys so that adequate preparation may be made to place them with certainty. In reading at sight or when the hands are widely extended, as in the outer octaves while playing the scales in contrary motion, particularly the chromatic scale, the image of key position is invaluable, and it is through this image that the tactile sense may be developed to the greatest degree of efficiency. The ability to visualize must be recognized as a factor in the cultivation of conscious control. In view of this, after attention has been called to the keyboard, and due note has been taken of the black keys in groups of twos and threes, the pupil without the aid of the keyboard should be led to describe the white keys according to their position with relation to the black keys of these two different groups. If his picture be true, he will be able to find three different positions of white keys in the group of two black keys, and four different positions of white keys in the group of three black keys. When he finds that these seven different positions are repeated throughout the length of the keyboard, he should deduce the fact that only seven different names are required, one for each new position.

Interest in new work and alertness, that comes from a desire to begin, always mark these first lessons, so that learning the names of the keys is an easy matter for most pupils, even the youngest. If any point perplexes above another, it is usually found to be the position of the keys G and A. This can be made clear at once by describing the seven letters in a circle and placing these two, G and A, the meeting of the last and the first of the letters used, in the group of three black keys. This process should settle without a question the names of four different keys, F, G and A, B, and it is also found to be an aid in visualizing the position of these keys through a lucid impression from association. The white keys in the group of two black keys may, to advantage, also be treated as a group unit, thus making but two units instead of seven as when learned by position without association.

Study of Intervals. — The learning of intervals should immediately follow learning the names of the keys, for it is of the utmost importance that a pupil be taught to recognize the difference in the pitch of tones;

it is also necessary that he learn the distance from one key to another and be able to name the interval, so that he may be able to anticipate the tone corresponding to the interval. The ability to recognize an interval through the ear is a great art, but if persisted in through systematic training, it will lead to the greater art of thinking music with a degree of certainty through the " mind's ear " — that is, reading mentally. In the first lessons the intervals should be confined to half-steps, whole steps and those of a step and a half or two steps as found in minor and major thirds. Step seems to be a better term for interval than tone, since it signifies distance and can never be confused with tone, " a musical sound." Only when a pupil is able to find steps and half-steps from any given key is he ready to build his first exercises, which should be the first five tones of the major and minor scales, formed on any key, black or white, and played with the five fingers of either hand. He should be taught to count carefully and to place the half-step between two and three of the scale for the minor and between three and four of the scale for the major.

This part of the work is especially interesting for the children, who love to count and build in their toy games. They usually find the building of these exercises most fascinating, particularly when told, while the hand still rests over the keys, to play simultaneously one, three and five of what they have found. They will be eager for the next step, when they should first compare the two modes, then the major and minor triads; they should also change one triad to the other by raising or lowering the third, and by listening should be able to name the chords when played for them. Although building by intervals, pupils should be taught to name the keys played. In raising and lowering a tone, simply by modifying its pitch name without changing its position in the scale, they will learn the meaning of sharp, flat and natural.

Rationalizing Practice. — In these later years, while teachers are with reason breaking away from certain traditional lines of study where mere digital skill was the aim, with its attendant useless and often senseless practice of technical exercises, there is danger that the well-intentioned process of elimination be too vigorously applied. It should not be forgotten that repetition is necessary for ease and accuracy of physical effort, and that confidence can come only from repeated assurance that efforts may be depended upon. The most needful requirements in piano playing should be cultivated early through consciously directed effort, so that they become like the habits of daily life, the practical effect of which simplifies movements, makes them accurate, and diminishes fatigue. Each separate act in the fundamentals of piano technique and the playing of basic forms should

be the result of habit carefully established through practice in which the pupil has found vital interest. Creating material, though it be only musical forms thought out, requires that attention which will be productive of interest, and concentration will be the result. There need be no chance work in building the material, and it is most necessary that the pupil understand these first forms; as recompense he has the major and minor triads in all the different keys. In the practice of these forms he is molding the hand for the primary position, which requires the hand to be softly relaxed so that the five fingers are in position to play the five keys for the first five tones of the scale. If left to play in one key until the hand be properly formed, attention would probably diminish as the particular keys become associated, and senseless practice would follow.

But we sometimes hear a protest from the adherents of empiricism against the iconoclastic methods of the moderns. They claim that the rational or direct means is based on a plane so intellectual that the pupil is required to think too much, and therefore is not free to sense the beautiful for which the emotional is longing. If this were true, a protest might be made with reason. But by an appeal to the intellectual we are breaking away from senseless and endless soul-torturing practice; we are giving more for less effort. How many weeks of weary practice before a pupil can learn these first forms for primary position of the hand, if practiced from a book, as they have been many times in the past! — and in the end they will be played with no degree of certainty, unless the pupil possesses some unusual gift. Some may question the advisability of giving these exercises. In the origin and form of the major and minor triads alone, a pupil has the foundation for material that will bring him unending pleasure, and the emotional will find utterance more freely when following through the channel of the tactual image which, previously determined, has become reliable through habit and experience. With active minds the intellectual forces are ever reaching outward for something of interest. They need that upon which attention can be fixed and from which they can learn with guidance to make practical deductions. The practical value of the exercises built will begin to show itself in the first written work.

The Great Staff. — The two staffs, the treble and bass, *upper and lower*, with a line for middle C between the two, make the *great staff of eleven lines*, and it should be taught as such. Later it may be interesting to note how the great staff we use to-day evolved from one line and grew to spread over the compass embraced by the eleven lines and the spaces between the lines. It is easily understood why the great staff was broken in two parts, leaving a wide space between the two. In this space belongs the line for

middle C, and it is added whenever needed. There are five lines, counting up from middle C, and five lines, counting down from middle C. This establishes the need of the two clefs used in piano music: one for the staff above middle C and one for the staff below middle C. The keys represented by the different lines are found to be every other one from middle C up for the upper staff and every other one from middle C down for the lower staff. The keys between are found to be represented by the spaces.

The pupil has only to study the keyboard or to make a mental picture of it and the reasoning will appear clear. Through this process there need be little effort since he learned to visualize the keyboard in naming the keys. He should have this picture to back up his memory in all the early work, when by chance the mind becomes confused. Memory may also be aided by elaborating associates of each thing to be remembered, and time is often well spent in finding associates. The many interesting truths about the names of notes from relative position furnish ample material from which to draw. The piano student in the early work should always associate the position of a note on the staff with its own particular key: thinking staff and key minimizes the process, and it precludes the cultivation of the habit of searching for a key after the note has been named.

It is a difficult matter for a pupil to find the connection between the two staffs, if they are not taught together as one or the great staff. From the first they should appear as they really are, parts of one great staff: one built up from middle C, the other built down from middle C. There is also advantage to be gained in being able to read notes by intervals, particularly by thirds, fifths and sevenths. This comes naturally if attention is given to it when building chords in the manner mentioned earlier. Some may later take up the study of viola or violoncello, when they will find it necessary to read notes with the movable C clef; this will be easier if one has learned to read the notes as suggested. Then, too, the impression, as in sight-reading, and the mental image, as in memorizing, will be more vivid if there is a tendency to recognize intervals. Correct habits should be formed in the early work, for upon them depend development and accuracy. These first essentials in music study have much influence in training the mind for conscious control.

CHAPTER III

THE ACT OF TOUCH

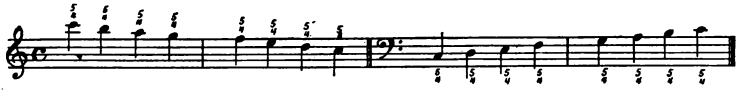
Prerequisites for a Good Touch. — In the matter of technique the first consideration should be cultivation of a rich, round, sonorous tone. In most cases this is a matter of slow growth, but certain factors requisite for its development should be given attention from the first. The act of touch that produces the tone depends not only upon the preparation for the movement, but upon the timing of the movement. Herein lies the difficulty, rather than in the act itself, and these are the points to which the attention of all pupils should be directed.

Preparation for the act of touch presupposes the proper position of the hand, but this alone will not insure the result sought. The hand held softly relaxed, with the outer side thrown slightly upward to admit the easy passing of the thumb when necessary, and the fingertips and the side of the first joint of the thumb ready to touch a level surface, is the usual prescribed primary position. With this there must be that relaxation of body that leaves the physical free to respond to the demands made upon it, and with the act of touch firmness must be secured at the point of expected contact with the keys to that degree that it may meet their resistance. With consecutive tones played legato, there is the additional difficulty of timing the downward stroke of one finger to meet the upward stroke of another. In scale and arpeggio passages there is still another difficulty in the smooth passing of the thumb under, or fingers over, in order to bring the hand into the new position. In skips, great or small, there must be the timely carrying of the hand from one part of the piano to another with the wrist movement or the combined movement of hand and arm. These matters should not be left to the initiative of the pupil or any chance method he may hit upon. The rapidity with which a difficult passage may be played oftentimes depends upon the mental and physical preparation for attacking it; while, on the contrary, many faults, including inartistic and amateurish effects, are due to incorrect movements that have their origin in trying to study without any conception of what is required.

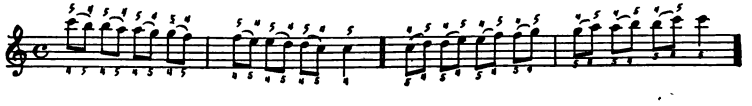
Effective Study. — With the very young, reason will seldom be a great factor in the first efforts at tone production or in the timing of movements.

Development will depend largely upon having the work, through which correct habits are formed, done under the supervision of the teacher, who should emphasize the necessity for conscious effort and control. At the same time there should always be an appeal to the pupil's sense of beauty, so that he may learn to listen and to exercise discrimination and judgment. He will soon observe that incorrect timing of the act of touch often mars what might otherwise be beautiful, and with ample illustrations he will learn, too, that lack of precision permits ragged rhythm; in this way his study and practice become more purposeful.

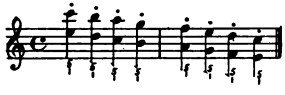
Single-tone Work. — While there can be no one method of actual work that will fit all cases, the effort should be to find a means that will enable the pupil to gain conscious control of the physical through the development of touch and proper timing. For finger touch and the timing of a single movement, there is nothing more helpful than the single-note exercise practiced in moderation. Such exercises may be made interesting, but hardly attractive, to the pupil, for there is no consecutive thought in a single tone; it requires a lively imagination or experience to find beauty in incompleteness. The single-note exercise played with a single finger has a tendency to strengthen that particular finger, and teach one how to retain the balance of weight with a single-finger movement. The fingers most benefited by this exercise are the fourth and fifth, though if the needs of the pupil call for its use with other fingers, the remedy should be rationally applied. The exercise for timing is excellent for simple work, since it is but a single movement. The touch first used should be that for the coloratura tone used in passage work, known as the finger movement or finger touch, since it is the simplest. This is amply described by Matthay in his work on "The Act of Touch."



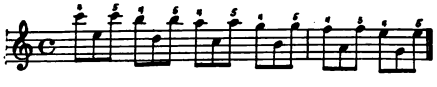
The two-note exercise played with two fingers combines the timing of the downward and upward stroke for a true legato, consequently the shifting of balance and weight from one finger to another with finger movement only. A simple exercise like this makes clear the requirements and points out the difficulties, if any exist for that particular pupil, while its practice strengthens the fingers in all cases.



Sixths. — In the study of wrist staccato, in which the movement of the hand from the wrist must be carefully timed, the practice of detached sixths is found to be much more interesting than the practice of single notes, and they are excellent as an exercise. They should be practiced by adults before the playing of octaves, which sometimes causes even a large hand to tighten when unaccustomed to reaching correctly. They require the pupil to keep one position, though the hand is lifted from the keys. The wrist must remain absolutely loose and carry the hand to each new position like a fine piece of machinery. The exercise is invaluable in many ways, but it is especially adaptable to this work; and, if practiced correctly, no exercise can take its place in the cultivation of conscious control.



Broken sixths played in triplets may follow detached sixths.



Broken sixths played as in the above exercise strengthen greatly the fourth and fifth fingers and train the thumb not to be too obtrusive; they also teach control in the matter of accent. Ascending the scale, the accented note of each group is played with the fifth finger instead of the fourth as in descending. It is not only valuable, but proves to be fascinating to the younger pupils.

An exercise combining the legato and the wrist staccato gives, by comparison, a clear impression of each of the two movements, finger and wrist; it also gives valuable practice in changing from one movement to the other. The forms usually chosen for this exercise are from material that should become known to the pupil in the first keyboard work, the first five tones of the major and minor scales for the legato followed by the broken chord in the same key played staccato.

Development of Free Thumb Action. — Special exercises for the passing of the thumb under and fingers over, give a pupil a definite idea of requirements that are necessary for conscious control in scale and arpeggio playing. In many cases occasional use of these exercises in practice is to be recommended. For a preparatory exercise the second and third fingers

of the right hand may be placed on D and E above middle C; holding them firmly to the keys, the wrist always loose, the thumb should first play middle C and then F above without moving the hand. The thumb may be passed under the third, fourth and fifth fingers to play A, always holding on their keys the fingers under which the thumb is passed.

The following calls for still greater control. With the fifth finger of the right hand resting on G above middle C, and holding the hand firmly in place with wrist remaining loose, C, D, E and F should be played with first, second, third and first fingers, respectively, and should descend to starting-point. For a second exercise, the fifth finger should be extended to A and held firmly while playing C, D, E, F and G with the first, second, third, fourth and first fingers, respectively. In the first exercise the thumb passes under the third finger while the fifth is held in place. In the second exercise the thumb passes under the fourth finger. In neither should there be any turning of the hand. This exercise may be elaborated on by playing C, D and E with the first, second and third fingers, respectively; passing the thumb to F, the hand should move to a new position as though swung on a pivot. This may be continued for two octaves up and back, counting as though playing quarter-notes in two-four meter so that the accented beat will not always be played with the thumb. The same may be played passing the thumb under the fourth finger, counting in three-four meter, and again passing the thumb under the fifth finger while counting as though playing quarter-notes in four-four meter. These exercises for the passing of the thumb are purely mechanical and contain no material for brain stimulus except possibly in the last, when the count changes in each group of threes, fours and fives according to the exercise. Therefore, they should be practiced only in moderation, or as may be found needful, and always under the supervision of the teacher.

There is much to be said against the finger exercise which at one time was often used, requiring one or more fingers to be held firmly on the keys while the other fingers were raised high and dropped swiftly. This was commonly and injudiciously used by holding the first, second, third and fifth fingers on the keys to develop strength in the fourth finger. But when raising the finger high it left the hand in a tightened position with no chance for a free movement of that weak finger. The study should be for relaxation and freedom with a position that will allow a simple direct movement. The above criticism is not relevant in the exercises for passing the thumb when the fifth finger alone retains its key as a reminder that the hand should not be turned, but that the movement should be made by the thumb aided by a softened palm.

The act of touch is so much a matter of individuality that there can be only suggestions for special exercises that direct attention to the points necessary in acquiring conscious control. There must be a mental stimulus if purely technical exercises like the above are to be made helpful, and this may be found in the interest a pupil, if a beginner, may have in forming his conception of what is to be done. When this is accomplished, an exercise has served its purpose, unless it may be found to possess other advantages. Repetition of an exercise should fix some principle mentally or strengthen the physical, or it may teach one to gauge measurements or reaches, or distances in skips; it should make easy by familiarity, diminish fatigue by exercising the muscles sufficiently, and give assurance by repeated successes. Otherwise, an exercise should be considered useless. In the act of touch as relating to the development of tone, everything will depend upon the conception a pupil may have of tone quality, and the effort he is willing to make in the cultivation of conscious control.

CHAPTER IV

FIRST WRITTEN WORK

Function of Early Written Work. — Along with other lines there has been an attempt to effect reforms in the choice of first written work. In condemning the contents of the overgrown book, that was usually given the young pupil, as being uninteresting and consequently dulling the musical sense, some have gone so far as to sanction the use of modern melodies or so-called musical idioms. They urge that these should be used in much the same way as the folk-melodies of Germany that were long ago put into form for the piano student by Damm and for the violin student by Weiss. But our modern melodies have not the mark of simplicity that characterizes those old folk-songs. They usually cover a wide compass that would require an extended position of the hand in playing them. The intervals are in many cases unusual and the rhythm jerky. The greater number of those that lay claim to being the most pleasing are drawn from musical comedies and have the jingle of motion that appeals to nothing higher than the physical. Though unmusical, they possess a quality that would play upon the emotions, while giving little knowledge because of their poor form. There is wisdom, however, in considering carefully the material for the first written work, so that it may prove interesting as well as instructive. In the first place, it should require the hand to retain the primary position, that is, the compass should not exceed the first five tones of the scale, or at least it should not require the hand to be extended over more than five keys. It should be simple in form and require only finger movement. While regular in rhythm, it should give variety enough to be interesting when thrummed at a table so that the pupil may have a conception of the rhythm before playing the exercise. Above all, the first exercises should clearly be taken from the material built by the pupil in his first work at the piano. The mind of the young pupil in the beginning is generally alert to what follows in consecutive order; and material written on and around the simple forms known to him will be of interest to him, if he is shown how to recognize it. We find exercises having just these qualifications in Gurlitt, Op. 117, "First Lessons for the Piano." Some new feature of much needed knowledge is added in each succeeding exercise. So simply and

clearly do new forms appear, that the mind absorbs them as though they were anticipated; but this is also due, no doubt, to the fact that the mind and fingers have been adequately prepared through previous exercises. Above all each exercise gives some salient point by which the mind may be aided in reading and in judicious memorizing.

When exercises are found possessing qualifications that fit each of the requirements for the development of the beginner, they should be presented in such a manner as to set all the faculties of imagery at work by appealing to each of the three senses that may be made to assist in such a process. An impression involving any one of these senses implies more than one of its kind, *i.e.*, more than one tone, one note or one key, and the mind should be taught to follow each change in consecutive order, whether through tones or staff or key position.

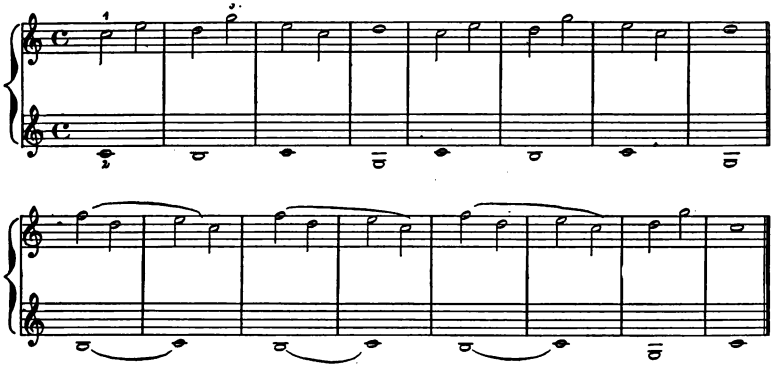
Analysis in Early Work. — The assimilation of the subject-matter, however, will depend on the pupil's ability to find in it something that corresponds to what should already be known as basic material. The paramount consideration in the preparatory study of an exercise should be to aid a pupil in recognizing such matter, whether used in the pure form or as the nucleus of invented forms. Analytical study in any subject whatever requires a knowledge of the elements constituting the material to be analyzed. Basic forms can be thoroughly understood only through their building, a synthetic process, and the mind should be helped to recognize consciously what it has put together rather than be left to the vagueness of subconscious forces. Systematic analysis based on governing principles places at the command of the pupil every help that in any way appeals to the mind whether through imagery or reason, and the acquirement of the qualifications for this essential necessitates a systematic study that otherwise would not be obtained. The result is a broader musicianship, which allows of conscious direction.

One of the first exercises in which ear, brain and fingers may be made to work equally and harmoniously may be found on the following page.

If a pupil is to be taught intervals, whether recognized by the eye or ear, and distances to be gauged by the hand and fingers, he should not be allowed to form his concepts from a single-note basis; that is, his unit must embrace two or more notes. In this exercise the average pupil would not be able to carry, without confusion, the impression of more than two notes at one time, the two notes of each measure where half-notes occur. He should be taught to receive the impression of these so that they may be recorded as a unit. In the first place he should be shown how to make a calculation that the notes for the right hand embrace the compass of a

fifth and that they are the first five tones of a scale; that these notes are from a form he built and named as the first five tones of the C major scale; that they, like those of the form he built and practiced, are played relatively with the same fingers, which requires the hand to be held quietly in the primary position, the thumb or first finger over one of the scale.

Afterwards the units may be read. The first unit reads one and three of the scale C and E in notes of equal value; the second unit reads two of the scale and a fourth above or five of the scale, D and G; the third unit reads three of the scale followed by one or the third below, E and C; the fourth measure has but one note equal in value to a unit of two notes as found in the first three measures, and is two of the scale, or D. Incidentally the notes become known; but it is of far greater importance that their

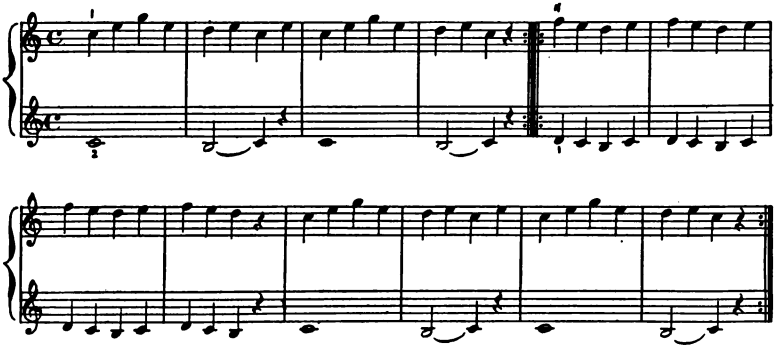


relative position be understood both for the visual and the tactual image, from either of which may be developed the aural. Comparisons should follow, when the first note of each unit should be chiefly considered, since the second note follows the cue of the first; it is also just as important that the pupil recognize what is required in passing from one unit to another, so that there may be no break between the measures. In the aural training it will be found that there is only one interval that may require special attention, and that is the perfect fourth, D to G. On comparing the last four measures with the first four they are found to be identical, and it should be made clear that the eight measures compose one motive of four measures, with an unfinished close, which is repeated, thus lessening the study of eight measures just one half. In the left-hand part it should be observed that, beginning with middle C, that note occupies every other measure, alternating with B and G, and that these notes are of equal value and always change on the first beat; moreover, that they always harmonize with the notes played against them with the right hand. The

second part may be made interesting by calling attention to the two successive measures that are occupied by a motive of descending thirds, which is played three times over before the two measures that bring the exercise to a close.

There is a variety of ways in which this exercise can be treated and thereby made doubly interesting. While it offers good material for the study of intervals for both the aural and the visual images, the possibility for an impression on the tactile sense is equally apparent, and since the result through the tactual image is direct and tangible, it will be quickly recognized. The effort should be to see that an exercise is thoroughly comprehended in every detail, for only in this way can it become divested of its difficulties.

There is also an advantage in knowing notes by their scale names, as well as their pitch names; it enables a pupil to transpose a simple exercise on the first five tones of the scale to any key, major or minor. In this effort reason will determine the notes of the key agreed upon, and the fingering will correspond in every particular to that in the key originally written. Thus is proved the efficacy of building basic material, for without that training transposition remains an almost incomprehensible problem to the average student.



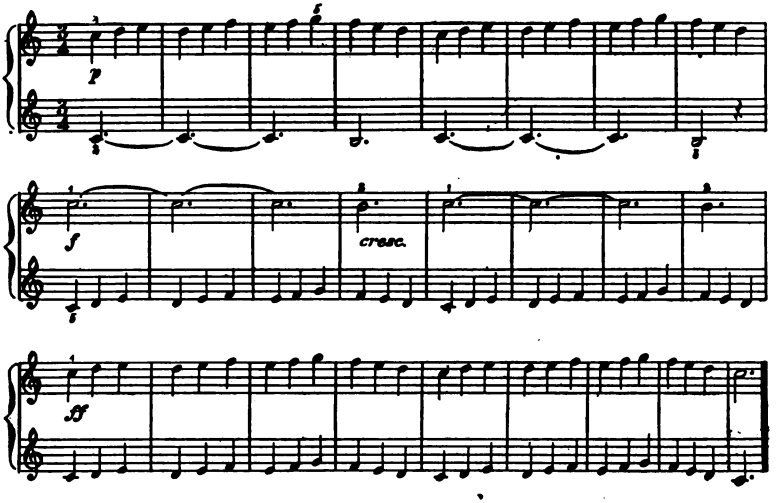
All exercises, however simple, do not offer the same points for analytical treatment. In the exercise given above, the first and third measures of the first part at once suggest a unit the notes of which should be read as one. The form may not be recognized in the written music by the beginner, but when played it will probably be named without hesitation, if there has been the usual practice in building basic material. The opportunity should not be neglected for reading similar forms in other keys, and for aural practice through which is developed the faculty for forming concepts that

enables one to understand and enjoy music through the medium of the "mind's ear." Attention should be directed to such matters in the beginning, not only for the cultivation of a habit for thorough study, but for the fact that interest is sure to follow the opening up of possibilities. The second and fourth measures are easily read as a unit, and as easily played and memorized by advertence to the degree of the scale on which the first and third quarter-notes are found. The impression of these two notes will be much stronger if there is a slight feeling for accent on the first and third beats of the measure, which will mark more plainly the progression on the accented beats, D to C. It should be understood that the left hand has the root of the C major triad in the measures where the triad is found. These four measures will appear much easier when a pupil is helped to realize that they are composed of a two-measure motive played twice over.

The second part is also interesting from the fact that in the first four measures the right and left-hand parts move in parallel direction a tenth apart. Direction and distance of moving parts in similar passages should always be noted in early analytical work. On examination the motive is found to be composed of four quarter-notes from three consecutive scale tones; and this, omitting the last note in the fourth measure, is played four times over, thus filling four measures, after which it returns to the first part. The one-measure motive of the second part can be presented in different ways. Described as three descending notes and back one is, perhaps, the simplest and easiest understood. The first measure should be so comprehended that the other three can be played from memory without any difficulty.

This exercise, like the first, requires the primary position of the hand, as all first exercises should. The right-hand part embraces the compass of five tones, the first five of the scale, while the left-hand part embraces the compass of three tones, the keynote and the degree above and below, one, two and seven of the scale. Though the fingers may have more to do in this than in the first exercise, the motives are shorter, and it will be found to contain only three entirely different measures; that is, if three are thoroughly learned, the pupil has only to remember the sequence and the small matter of certain omissions and he should be able to play it from memory. The practice of memorizing is quite as much for the purpose of making sure that the impression is clear, and that the mind can follow a sequence that is understood, as it is for playing without notes. Such training is invaluable to the piano student.

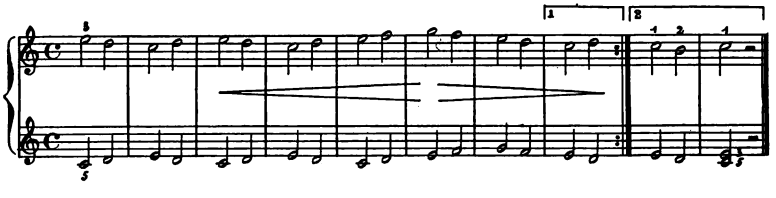
The material found in Exercise III suggests possibilities for new and in-



teresting analytical treatment. While it requires more knowledge of musical notation in the reading, its construction is more simple than that of Exercises I and II. In the first place, this exercise of twenty-five measures presents only one motive of four measures, which, after being played twice over, is passed to the left hand, after which it is played again with both right and left hand simultaneously. We find the first three measures of the motive to be composed of a group of three quarter-notes played in three different positions, thus constituting a sequence, the form of which fills a measure in three-four meter. This sequence form is made up from three ascending notes of the scale, and is played on each of three successive notes, beginning with the keynote; the fourth measure, beginning with the fourth of the scale (the note next in turn), has three descending notes by which a return is made to the first measure of the motive which is repeated. The left hand has the keynote suspended, like a pedal-point, throughout three measures, and is followed by the seventh, one half-step below, in the fourth measure. The general construction of the four measures can be seen at a glance, which settles at once the keynote, the compass embraced and the fingering to be used. From this it is only an easy step for a pupil to learn to read the period as a thought group. There is often a tendency to break the rhythm when passing from one period to another; this is not unusual between the eight-measure periods of this exercise, particularly where the left hand leaves the keys to prepare to take up the motive. Such places afford opportunities for the cultivation of much needed poise in the pianist. Through attention to requirements a pupil may

here learn how to finish one period while preparing to begin the next so that there will be neither hesitation nor undue haste.

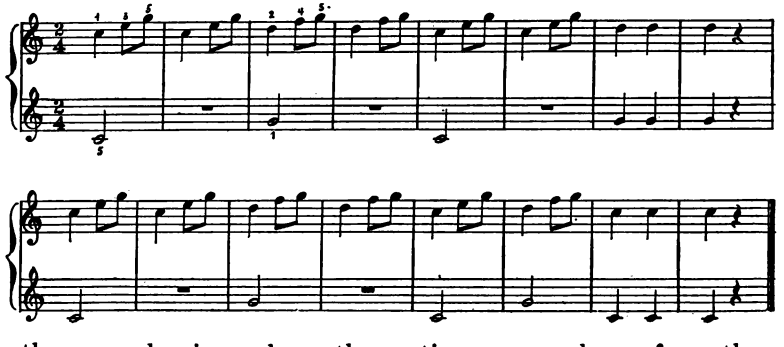
The fact that the first or accented note of the measure falls on successive tones of the scale should be noted, and, since the hand remains in one position, these accented notes, which are found to be C, D, E and F, are played with fingers one, two, three and four respectively; when the motive is passed to the left hand, these four notes are played with fingers five, four, three and two. This construction gives the fingers an equal opportunity for development, and for this reason it may be considered a good finger exercise. The motive is well adapted for transposition to other keys in both the minor and major modes; when thus treated, it will hold the attention from the very nature of the work. With the preparation that the building of basic material gives, transposition of this exercise will be an easy and agreeable task, when its construction is thoroughly understood. While such work may give pleasure and satisfaction to both teacher and pupil and have some advantage in study as well, it is of secondary importance. The real aim is to prepare a pupil to receive impressions so that they may impinge upon the visual, aural and tactile senses and, with their acceptance by the reasoning powers, possess musical sense or meaning.



The construction of the foregoing example is not so apparent on the surface as that of the three previously given, and consequently requires more careful analysis. The difficulty encountered by a young pupil will be very much diminished, if not entirely eliminated, by giving attention to the direction of the moving parts. For a simple exercise to be used in the first weeks of work it serves as a good illustration of the study necessary for the playing of inventions and fugues, when the mind must carry the voices or parts separately or independently of each other. Its greatest value is found in watching the right and left hand parts as they move first in contrary motion, then parallel, and again contrary and parallel. In the first period of two measures we observe that the motive, as played by the left hand, is the first three tones of the C major scale up and back, C, D, E, D; while the right hand has the same notes, but in reverse order, thus reading E, D, C, D. This form repeated fills measures three and four. The motive

found in the last half of the exercise proves still more interesting. Beginning with the third of the scale, the right hand ascends to the fifth and returns to the keynote, playing each successive tone. The left hand, starting a tenth below, follows closely along with the right hand and, with the exception of the first measure, plays the same notes one octave lower and necessarily one measure later. Each part must reach G before its return; thus it changes the distance from tenths to sixths.

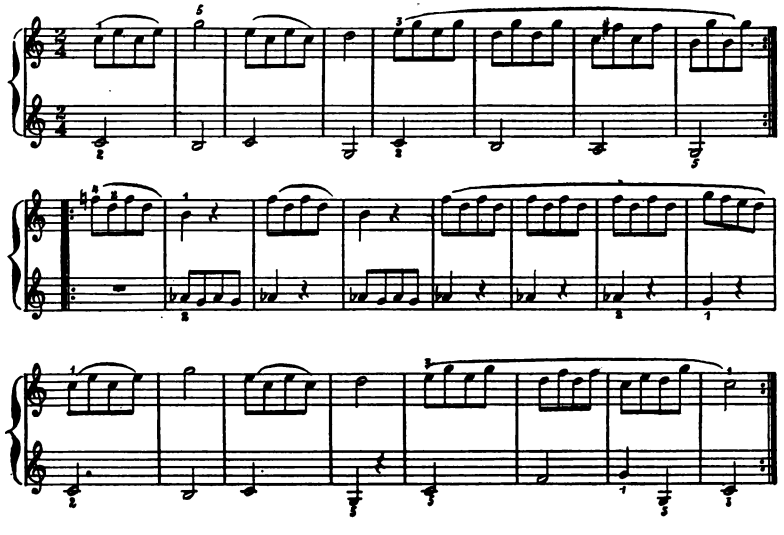
The simplest exercises present not only single chords but combinations of chords or a suggestion of these through the use of their constituent parts as pure basic material. The combination most often found is the chords built on one and five of the scale. The fifth of the scale is of secondary importance to none but the keynote, and when used as the root of a chord formed by one, three, five and seven from the tones of the scale of which it is five, it is a dominating power. When thus built, it is called the dominant seventh-chord; dominant because it is built on the dominant or fifth of the scale, and seventh because it embraces the seventh. Chords are always built in this manner, one, three, five, seven, nine, etc. When they read otherwise, they are inversions, and there may be as many positions as there are different notes in a chord. Examination shows that the dominant seventh-chord is a major triad with a minor seventh added. When the major triad has become known through the early building of basic material, it is only necessary to learn that a minor seventh is a half-step lower than a major seventh, which is found in all major and ascending minor scales; it is a whole step lower than its eighth, and unlike the major seventh has a tendency downward.



In the example given above the motives are made up from the pure basic material found in these two chords, the combination of the chord on the tonic, or keynote, and the dominant seventh-chord. The motives from these chords alternate in periods of two measures each, except in the

thirteenth and fourteenth measures, when the chord period of two measures is broken in order to bring the close on the keynote.

This exercise admits of different analytical treatment, but it would seem wisest to choose the one through chord forms, by which a pupil may learn the most important combinations of basic material, the recognition of which enables him to read and memorize whole motives through the relation of forms known to him. Analysis through harmony defines the largest readable unit, when the chord forms are known, and it proves most interesting to pupils young and old, for there is always satisfaction in the study of tone combinations. Rhythm is one of the laws of life and appeals to the physical, as is shown by the undisguised movements of a child when his ear has caught the first drum beat. Melody is an expression, a message, and appeals to the intellect. When a child is happy and would have the world know it, the girl will pour out her feelings in song; the boy may whistle, but the expression will come through melody. Watch the same boy and girl as they hear the tones of a great organ or a wonderfully balanced orchestra. They may not have caught the rhythm, there may be no defined melody as yet, but they stand spellbound. The music, the harmony, the combination of tones, has gripped their very being. It is as though soul spoke to soul, for is not harmony the soul of music? Chord combinations will have their fascination, and there will be interest in chord building and all that leads to it.



In the above example a motive is given out in the first four measures

and is followed by a transition period of four measures in which the subject is carried from the key of C major into the key of G major. This is the usual form when a theme is followed by a development part. The four-measure motive has peculiarities that make themselves equally felt by the aural, the visual and the tactile senses. The material suggests the C major and G major triads used alternately in one-measure groups. The two-measure phrase with ascending motion appears to be answered by a descending motion phrase, in which the first measure arrangement is inverted. The substance of the last four measures of the first part can best be analyzed by the passage notes that fall on the first beat of each measure. These notes descending by successive steps in tenths throughout four measures are thus carried downward four degrees. The development part of eight measures suggests the diminished seventh-chord by the introduction of $A^{\flat}$; but followed by G, it resolves to the dominant seventh on that note, and through this chord returns to the principal theme in C. The last four measures differ from those found in the first part inasmuch as they must remain in the key of C major. They are best understood when the right-hand part is analyzed by intervals of descending thirds, with the exception of the last half of the measure next to the last. The left-hand part of these four measures shows a most important, though simple, progression in C, F and G, one, four and five of the scale.

Diminished Seventh-Chord.—This exercise is more complex in construction than those previously given. It also introduces important material in the form of the diminished seventh-chord. A pupil may not be able to recall the technical name of this chord at all times in the first months of study, but he should be able to recognize it when heard among other chords. Its form, too, should be known for both the visual and the tactual images, and can be easily learned by a pupil who has a good knowledge of intervals. It is composed of four different tones placed at equal distances, each interval being a step and a half. There are but three different chords of its kind to be learned. When a pupil has built it on three contiguous half-steps, he will find himself back to the first, which will now appear in an inverted position. In free composition the diminished seventh-chord requires neither preparation nor resolution. Its resolution, when used, may be major or minor, while strictly speaking it belongs to minor keys only, since it is originally founded on the leading-tone, seventh of the harmonic minor scale. Though a volume might be written on the possibilities of the diminished seventh-chord, it is sufficient to know its construction, so that it may be recognized when seen or heard in creative work. It is also necessary that the hand be able to follow the mental cue of

recognition, for it is a chord with which technicians have juggled since its discovery, and is found in many forms of bewildering brilliancy.

The recognition of intervals is an important feature in music study and should be cultivated through both the visual and aural images. The recognition of pure basic material in the form of chords with their combinations and progressions makes possible a larger unit for reading and memorizing, and can be cultivated to embrace a thought sequence complete. In scale passages freedom in playing can come only through a clear comprehension of direction and distances of moving parts and how far extended. A knowledge of the possibilities of a sequence form, a group of notes or chords progressing through different positions of the scale in regular steps or intervals, makes clearly comprehensible whole passages, and is no less valuable when a suggestion of this form is found in melodies. It is also true that meter, rhythm, note-accent and phrase-accent can be made to assist or allowed to hinder in reading or playing; therefore these should receive their share of consideration. While the construction of the foregoing exercises has been of the simplest, it has proved adequate to illustrate these, the salient points in first analytical work.

Value of Impressions. — It is known that reason cannot be relied upon as a great factor in a young pupil's study; however, children are found to be susceptible to impressions, and these can become efficacious if made to stand out clearly in detail. While there is an advantage in the fact that a child has no ill-formed habits to hinder, there is also the responsibility of inclining the mind toward the forming of correct habits in study and practice. Attention to details is of no less importance to the adult or advanced student, for only from impressions in detail can mental imagery be set at work to give faithful reproductions. In his case reason may become a strong factor if he has acquired sufficient knowledge of the subject-matter from which to form his premises. In all cases, consciousness must be awakened to a sensation, if the image or impression is expected to be clear. There is another arbitrary law in mental imagery that appears particularly in training through the tactile sense: where an impression is made, either intentionally or inadvertently, which differs from the original, there will immediately arise more or less mental confusion through unlike images of the same thing. This is the basis upon which rests the deleterious effect of the use of incorrect fingering, either where it interferes with an impression already made, or when it has been carelessly chosen and is left for correction. Indecision, doubt and apprehension follow a blurred impression, for the nature of an act is determined by an antecedent image. Thus a reliable tactual image depends upon the correctness of the first impression,

which is left to be strengthened by repetition through a like series of movements.

Interest Value of Character Studies. — Besides the qualifications named for the first written work, there is still another that must appear sooner or later, if study is expected to hold a pupil with a vital interest. There must be in it that which, through the imagination, will appear as a mirror to life itself. As an art, music must set forth nature and humanity, and thus it becomes a medium through which truth may be revealed to us. In other words, it must possess the elements of human life and aspiration, which every soul longs to express. A suggestion of these elements is to be found in some of the works written for the young pupil and there should be a plentiful use of it. Gurlitt, Lecouppey, Burgmüller, Loeschhorn, Kullak, Gade, Schumann, Neidlinger, Scharwenka, Schytte and many others have met this need with exercises and pieces that reflect interesting scenes of life in many lands. These are not confined to one clime, nor are they confined to one condition of life; they reflect not only universal scenes that are found in all lives, but reveal to the young student the characteristics of many peoples. Thus in dance forms alone we have the Tarantella of Sicily, the Gavotte of a small mountainous province by that name in northern France, where the peasantry, wearing the proverbial sabots, danced in the open; we have the lively Bolero of Spain, and those dignified court dances, the dainty and charming Minuet, a dance form invented for the French court, and the stately Polonaise, the national dance of Poland. Besides the Waltz and Ländler of music-loving Germany, and the Mazurka of Poland, there are the usual dances peculiar to each nation of Europe, and these are usually known by the name of their country.

While the rhythm, accent and occasional phrasing of melody may show the disposition of the people, these also make apparent what is needed in the act of touch that it may be controlled to give the proper accent and tone-quality to color the scenes as the performer may wish. The rhythm on which the pupil's conception of these different dances may hinge should be so felt that its laws cannot be violated by a lack of sufficient preparation and proper training in the movements required. In the practice there should be a mental calculation of what is required and how it may best be done; there should be a clearly defined idea of physical requirements, so that the movements may be direct and simple and produce the effects in a natural and easy manner, thus precluding unnecessary and nervous movements that are apt to hinder not only rhythm but tempo and other more subtle effects.

Among the pieces that picture universal scenes the most common are the

Cradle-Song, the Boat-Song and the Chase or Hunting-Song. Here again rhythm is the chief element, and it gives unmistakably the key to the picture. While these, like the dances, depict motion which must be expressed through rhythm, they naturally call for more melody. Consequently, having an outlet through a more intellectual channel, they appeal less to the physical, and their song through the act of touch must be made to soar or die away, to be sharply decisive or langourous. There are other compositions that through their several elements of melody, rhythm and harmony appeal to the more subtle emotions and æsthetic feelings. When a title indicates or suggests the atmosphere, or an appeal is made to the imagination, there is instant response from the young pupil whose technique, as a medium, is adequate.

Great composers and teachers have not considered it beneath their art to prepare such a number of pieces for the young that there is a field of music rich in variety from which to select without choosing those in which purity of form is lacking. Through its possibilities such music should become vitally interesting and call forth the best that is within a pupil, not only for the present but for later work. Technique will then become an object, and scientific structures will be studied and practiced because they are found to be the backbone of written ideas or the nucleus around which are written ideas that give pleasure; there will also be a greater inclination to exercise judgment and discrimination when there is something definite and interesting to be expressed.

CHAPTER V

NECESSITY FOR ANALYTICAL WORK

As an art, music aims to express and excite feeling, and must necessarily have form and coherency. Its content is found through the relation of parts called motives or musical ideas. An analytical survey of a composition resolves it into these parts, which in themselves have a complete musical thought; these also admit analysis of the elements of which they are composed. The comprehension of each separate musical thought depends upon the relation of the parts of which it is composed, just as the content determined through the art of interpretation depends upon the relation of the motives, their introduction, connection and close. It is through this minute analysis, or analysis in detail, that imagery is made to outline clearly these parts in the mind. Through the study of the different elements, their origin and relationship, a chain of associates may be formed which will be of inestimable value in memorizing, for the danger of forgetfulness is greatly lessened; some portion is sure to be retained and surround itself with other associates. Above all, a musical or correct reading of these separate thoughts depends wholly, if original, upon the thoroughness of the analytical work.

This important feature of music study needs no special preparation, but rather calls for guidance, for it follows as a natural sequence in the order of systematic study, if attention be turned in this direction in the early stages of the work. Analysis implies consideration of more than a single tone and, having its origin in the relation of tones to each other, it claims attention even in so small a matter as the learning of the names of the lines and spaces of the staff. Of what practical value are these names unless a pupil has learned to discern and to weigh mentally much more than the mere position of a note on the staff? Its relation to other notes is of far greater importance. There is sometimes a protest that the process of reading through note relation interferes with learning the names of the notes. This is not necessarily true, but, if granted, the note-names or pitch-names will be learned as a matter of course through the various processes of study that prove interesting. The ability sought is to read a thought sequence complete, hear it through the "mind's ear," fit it to

the keyboard, real or imaginary, and to decide upon the means best suited to execute the idea; this should manifest itself above all secondary aims.

Origin and Relationship of Material. — As musical notation first presents itself to the student in abstract or single-note reading, there appear so many points upon which to focus attention that the result is only blurred impressions; a trial at the keyboard adds to the confusion, and as a consequence the *visile*, or one who memorizes through the visual, is left with a series of abstract symbols, which, having no connection in his mind, have no definite meaning to him and are liable to sudden obliteration; the audile has incomplete, incoherent thoughts or ideas that hardly permit of a reproduction; while the tactile, recognizing no relationship, has no basis upon which to calculate positions or distances. Thus the matter would stand for the beginner without the suggestion of origin or relationship. Pure basic material which dominates the forms of primary work reveals the origin, and it should insure a mental grasp of a complete thought; while the recognition of the principal note or form of a musical thought is necessary for the establishment of note relation. The fact that a pupil is taught to recognize the keynote of the compositions studied proclaims the general appreciation of note origin, but it often fails to be carried to any higher degree of practicability, which might be effected by recognizing connection with special or cumulative forms, such as chords. Origin from chords implies note relation as well as note origin and, if understood, leaves a broader foundation for reading and memorizing. If scale and chord forms are understood, a pupil needs only a suggestion to discover the origin, when it is pure basic material, as found in all rudimentary exercises, and a fact is established; but note relationship requires more than the recognition of a fact, for a constructive process is implied whereby the pupil forms his concepts around a note or group of notes. Importance is necessarily attached to the cognition of the principal note of the motive, phrase or group; when this note is once established, the interesting process of building and grouping begins, and should include operations appealing directly to each of the three sense-organs involved in playing the motive or phrase, not abating until the tactual image stands clearly outlined.

Attention to Distinctive Features. — It follows that attention to the form of a group of notes together with their value, if unequal, its peculiar accent as determined by value, or by position in the measure or phrase, helps the student in reading, memorizing and playing. Groups of notes of equal value require one to give attention to the structure and the order of repetition. If a form is built on successive tones, the scale should be determined as well as the point where the passage begins and where it ends; forms are

also built at regular intervals, which are usually found to have connection with the chords belonging to the particular key in which the passage is written. When a student has determined these or similar points, that part of the composition will be his, and this holds true in the study of all passage work. In the small compositions used as stepping-stones to greater things, one finds much of the brilliant work built from material just as easily acquired, so that in reading and memorizing the mind receives, through the vision, such material in thought groups, not by the process of acquiring by single notes.

Analysis appears to be but a systematic use of knowledge the practicability of which may be demonstrated through the efficacy of its application to study; this knowledge should be the possession of all well-trained students.

Futility of Unsystematic Work. — Instances are constantly coming to the notice of teachers where failures occur that in all probability could have been avoided by attention to construction and basic material through analytical study. One young girl of fourteen told me that she tried to learn a piece to play without her notes for some special school entertainment. She said she practiced very hard, but finally she had to carry her music, for she found she " did not know a note of it," as she expressed it. I picked up a piece from her pile of music and asked if she played it. Yes, she played it; but she was quite sure she could never play it without her notes. It was a piece in the simplest monophonic style. The bass throughout two themes, each with repetitions, was made up of two chords, the triad formed on the tonic and its dominant seventh-chord. The right hand had about the same material, a meager theme, beginning or ending with an arpeggio.

It was quite incomprehensible to her how I could tell what was in the bass by simply looking at it. She did not know what I meant by " chord built on the fifth of the scale," and she was surprised when I pointed out to her that she had the same notes with the right hand that she found in the chord to be played with the left hand. She confided to me that she was going to try again when she went home; that her teacher told her that she would memorize if she played " over and over again enough times." She had evidently attempted to memorize by rote; not knowing the material found in music, she could not base her work on systematic knowledge.

Another young girl of fourteen had studied three years, She talked glibly of practicing " Bach Inventionen " and having gone through " Chopin Waltzes." She had also begun the " Beethoven Sonatas." The girl had a fine mind and unusual ability, and was bubbling over with enthusiasm.

She told me that without her notes she could not play the first measure of the piece she studied last. In fact, she played nothing without her "eyes glued to the music." I looked at her last piece and told her I was sure she could play it without notes if she wished to do so. The first measure, the one that caused her woeful expression, was filled by a broken diminished seventh-chord with B for the bass note. Intervals and chords alike were Greek to her. She looked at me with bright eyes, but did not understand. She expressed a wish to know how to understand. She had not been taught how to use her mind in the study of music, and was unaware of possibilities the right sort of training might bring within her reach.

A few seasons ago a pupil of mine became interested in a young girl who was studying to become a teacher of music, and brought her to play for me. She was a girl of sixteen or more who had studied about five years and practiced on an average of three hours a day. She brought a Mozart Sonata which she was studying at the time. She played straight through in a mechanical way, accurately as to notes, rhythm and accent, but there was no beauty in the work, no shading, no nicety of finish to the phrases, no recognition of themes passed from one hand to the other and no feeling for the harmony. She had a restless sort of technique with exaggerated motions. Still the girl was musical and highly temperamental. Thinking she might be overawed by the intricate and delicate work in the sonata and would show better interpretation and finish in something less florid, I ventured to ask her to play some small composition. She told me she had brought only the sonatas and could play nothing else. She hoped to play pieces soon and expected to memorize sometime. It was evident she had no inkling of the beautiful themes and forms she had run through. I asked her in what key the secondary theme of the first movement was written, and found that she knew nothing about the sonata form. She assured me that she intended to study harmony and analysis and would learn all about these things. Upon further questioning she told me she practiced scales, but would not have broken chords and arpeggios until she studied harmony. Here was an intellect equal to the tasks of a good student, and a perseverance, patience and will not often found. She was one who would practice from morning until night. At this rate all I could see ahead of the girl was a woeful waste of time and energy before she would learn what she had missed. Think of the hours of practice necessary to work the reflexes so that they fall in place automatically! How much shorter and more interesting the process, and how much more satisfactory the result, when studying a composition through knowledge that gives one conscious control and a sense of power.

There are still found failures among those who study music, many of which may be accounted for by such instances as those quoted above. It is true we may not make musicians of all who come to us, but we can at least help them learn to play interestingly and, what may be more to their satisfaction, we can lead them to a true appreciation of music. This should be the first object in study. How and when it is reached with systematic work will depend not alone upon the pupil's ability, but upon the feeling of consent in his mind.

Assimilation of Subject-matter. — The only road to success is through mastery of the subject, and this may be found in analysis which makes clear the subject-matter: rhythm, form, harmony and content pass scrutiny; it shows the origin and relationship of the elements of music and requires that these elements first be known separately in order that they may be recognized either in combination or in pure simple arrangement. Every essential in piano study may find impetus in the result of careful analytical work; not the least of these are rhythm, accent, shading and the wonderful art of pedaling. Analysis trains the pupil in discrimination and judgment; it awakens consciousness to an impression, thereby leaving the image more vivid, and thus manifests the office of the three sense-organs; more than this, it makes known to the pupil the constructive power within which is brought to the surface, in the correlation of facts, the basis for effective work and judicious memorizing.

Analytical work should be one of the most interesting features in music study, for there is nothing that gives one more satisfaction than to be able to recognize the old in the new, to meet each object that appears to violate our established series of concepts, and, on examination, find it to be an old friend in disguise. James says, "This victorious assimilation of the new is, in fact, the type of all intellectual pleasure." Adult students declare the study of music to be a real pleasure. Herein is found the reason for their enthusiasm. Surprises of this kind hold the interest and elicit the wonder of the boy and girl. "Seeing into things," as some express it, appears to take away difficulties and suggest possibilities. This particular pleasure is the result of analysis. Systematic analysis should begin with the first written work; experience and discrimination will soon lead the pupil to grasp unerringly all salient points. In general, the points that attract will be those that present material with which the pupil is familiar. By looking deeply one is sure to find the structure or backbone which forms the harmony of the composition, though there may be fanciful themes, alluring rhythms and treatment otherwise that may obscure the essentials. Music gives us an infinite variety of delicately differenced elements, but it

is ever new form and new treatment of old material. Analytical study exacts the attention that is needed to appreciate this fact. Habits cultivated through such study are productive of consciously controlled perceptions, while every difficult passage becomes clearer and simple passages may be memorized at sight. Taken in its broadest sense, analysis is the natural foundation for the art of interpretation.

CHAPTER VI

SCALE STUDY

A COMPREHENSIVE study of the scales offers the piano student one of the most effective agencies in the cultivation of conscious control. This embraces scale formation and fingering, as well as the practice of scales. In the study of formation the student learns each scale degree and the corresponding pitch-name from which he can produce his own mental image at will. In the fingering there must be the exercise of discrimination and judgment, for the choice of fingers is determined by the scale degree and the position of the black and white keys; this necessarily requires absolute certainty of the scale degree and the keys to be played. These two requisites, formation and fingering, enable a pupil to prepare for what is ahead and to hold the physical in readiness to respond to direction from clearly outlined ideas; that is, the head knows what is required of the fingers. A knowledge of scale formation makes it possible for the pianist at any time to recall scale material through a reasoning process, and not depend upon mental imagery alone.

The study of scales is pursued more or less by all earnest students with varying results, and it is safe to say that in the majority of cases the object is technical acquisition. It is true that the practice of scales serves as a wonderful means for the building up of many prerequisites of the pianist's technique. Their study, however, should be regarded as having more significance than their relation to that essential alone. In their various modes they contribute material for all basic forms and inventions; the notes of these are better understood and often anticipated by recognizing the particular scale and key in which they have their origin. Even in the pursuit of technique alone the result of their practice would be less problematic if a pupil were to base it upon study which would require him to begin at the root of the subject and study scale formation. The present high school music course supplies this needed knowledge, but many music students begin scale practice before they have reached the grade where the subject is presented exhaustively, and many institutions of learning do not offer a course to cover this particular work. It is found that re-

sponsibility for beginning the study of scales, as well as their practice, usually rests with the piano teacher.

The usual manner of approaching this serious work appears to be through a given signature from which the keynote is determined, and the notes are then played as outlined by the signature. Some ambitious teachers even advise a good book like the Herz Scale Studies, and leave the pupil to digest the contents. Unless theoretical work follows such study closely, much valuable time is lost, the usual result being the memorizing of this important material by rote. This method of study leaves the pupil with the stupendous task of learning each scale and its prescribed fingering with but one associate, the signature, which may have no more meaning than so many sharps and flats; if persisted in, there will be for the average pupil an almost insuperable amount of work, and the prospect of the acquirement of little actual knowledge such as is necessary for building up a sound musicianship. What is worse still, such study does not direct the mind to the part that holds the attention to the point of interest, as would be the case were the pupil taught to build the scales according to model on any given note or key and from them formulate his own table of signatures with their keynotes, from which he may determine any particular order of sequence. The calculation necessary in scale building makes apparent scale degrees and their tone-names; it also teaches a pupil intervals: it gives him the material upon which to base all subsequent forms, scientific or created; and, more than this, it gives him the knowledge and experience necessary for the building and the use of such forms. The fingering, also, to fit all scales, may be learned from a few simple rules based upon key position and a recognition of necessities through intervals. The ease with which this can be done depends upon the basis of the first steps in scale study, and a method of presentation should be chosen that will supply the training to fit the pupil for mastery.

The Preparation for Scale Work. — An abrupt approach to scale study would be too difficult for the mind and fingers of a young pupil. In successful teaching the preparation is steadily going on from the first work at the piano. The practice of original five-finger exercises in the different keys, which demands the primary position of the hand, gives the first important physical requirement, that of keeping the five fingers over five consecutive keys. The passing of the thumb under and the fingers over in a simple exercise in the study of preparing and timing for the act of touch serves to overcome the only new physical difficulty in the playing of the scales.

The Major Scale. — In building the scale the mind has only to knit

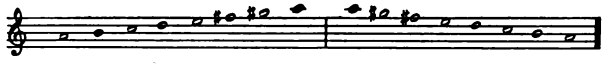
something new to a recent acquisition, and the pupil has the scale form; for, in constructing the five-finger exercises, he has the first five tones of the major and minor modes. Little remains to be learned of the major mode, since the mind and ear can easily settle the fact that the seventh is a half-step below the eighth. There is always interest in the fact that the upper four notes have the same construction (or arrangement of intervals) as the lower four notes; that each of these two parts is a Lydian tetrachord; and that their combination forms the modern diatonic major scale.

The pupil has determined his own major model when he learns that the half-steps lie between three and four and seven and eight, and he will not find it difficult to build his major scales from it. This scale is new to the pupil only in name and final approach, for the subject-matter has existed before, since it has existed in parts. The final approach is but the grouping of parts already known and should seem to come as an answer to a question in the pupil's mind, for the first exercises gave him, when ascending, only an unfinished musical thought.

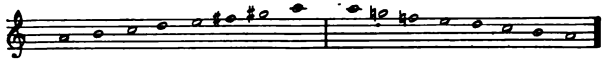
The Minor Scale. — The minor scales in their several forms give more trouble than the major scales. The confusion which sometimes arises may be avoided by an understanding of the natural minor. This scale, which antedates the major, was derived from one of the Greek systems and was afterwards incorporated into the old Church Song. While it is now obsolete as a whole, it is the form from which all other minor scales have evolved and is still retained in the descending melodic minor. It is found in the scale of natural tones from A to A, in which the half-steps are between two and three and five and six.

It is interesting to note that this scale has the same tones as C major: that C major and A minor (natural minor) are composed of the same notes. This establishes the fact of a major scale and its relative minor for every signature, and that the keynote of the major mode is found on the third of its relative minor, or, conversely, the keynote of the minor is found on the sixth of its relative major; but this interval is more often calculated by an inversion, that is, a minor third below the major keynote. In the course of development of scales, the natural minor proved unsatisfactory because of the whole step between seven and eight. This was obviated by

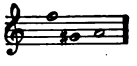
raising seven; but since that left an augmented interval between six and seven, which at that time was considered inadmissible, six was also raised, so that the upper part of the scale was like our major and descended in the same form.



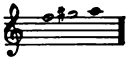
Soon after it was adopted, it was changed to the melodic minor now in use, which, with its minor third ascending and natural minor mode descending, is essentially minor and gives a scale quite distinct from the major.



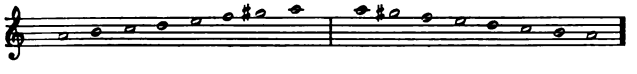
Later some inspired writer dared use a construction introducing the beautiful progression F to G♯ below the F, followed by A.



The mind began to associate F and G as essential parts of the scale of A minor; and although the following was not so commonly found in melo-

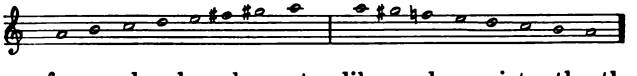


dies as the melodic minor scale, it was impossible to object to its admission as a portion of the mere succession of scale notes. From this sprang our harmonic minor scale, which is the same descending as ascending.



The harmonic minor is the most modern of all scale forms. It is the minor scale used in the study of elementary harmony and all strict chord progressions.

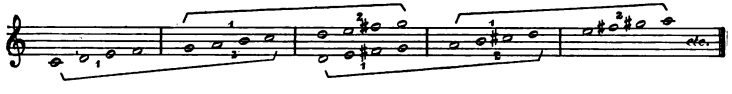
We occasionally find a combination of the two minor scales now in use, the melodic ascending and the harmonic descending.



The minor forms developed so steadily and consistently that none of them should confuse a pupil if he understands their origin, the natural minor, which is as easily remembered from a reasoning process as the major mode. A mental picture or an actual view of the keyboard will prove the accuracy of the reasoning process. Since the major mode is the one most often heard, there is no doubt that it is more easily recognized when played,

because the other senses are assisted by the aural; but this same fact should also establish the minor, if the ear be trained to recognize a minor third. The matter of related keys is of great importance and is better understood through the relation of the scale modes. These points prove to be stumblingblocks to the average pupil unless given their proper place in scale study.

Scale Transposition. — Attention has already been called to the fact that the upper half of the major scale is the same in construction as the lower half. Since the two halves have the same intervals, the second half of one scale can readily be used as the first half of another, or the lower half used as the upper half of another. This suggests the natural order of scale transposition. By writing the second half of each scale as the first half of a new one, we find ourselves beginning each new scale on the fifth degree of the preceding and obliged each time to introduce one new sharp to preserve the same succession of intervals.



We find that the keynotes throughout the sharp keys succeed each other by fifths, and that the new sharp is always a half-step below the keynote. Since the keynotes succeed each other by fifths, and the new sharp is found a half-step below, then of necessity the sharps must be added by fifths. This establishes the order of sharps and the position of the major keynote, which is always found a half-step above the last sharp.

In the inverted transposition, when the lower half of the scale is used as the upper half of another, we find it necessary to introduce one new flat with each new scale. The keynote for one flat is F, *a fifth below C;* the flat introduced is B♭, *the fourth of the new key.* This order of succession is observed throughout the flat signatures, *i.e.*, by fifths below. The fact is also established that the major keynote is found a fourth below the last flat. While this is the order of transposition for flats, it is quite usual for teachers to count a fourth above for the succession of the keynotes as well as the succession of flats in the signatures. This is immaterial when the order is once established, for an inverted fifth becomes a fourth. Intervals are as easily read in one direction as another, but it is true that pitch-names are more easily read when counting upwards. This order recalls that old rule, " Flat seven to pass to the key of the fourth," for one has only to build the dominant seventh-chord on the keynote, and the natural progression will be a fifth below or a fourth above.

The following diagrams, which may be found in some manuals, may make clearer the order of scale transposition.

Diagram I.

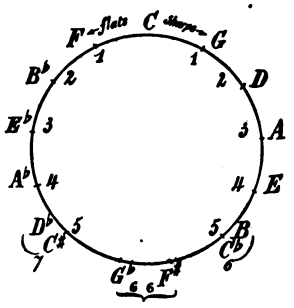
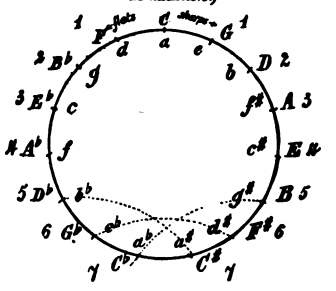


Diagram II.

(Same as diagram I only showing minor key-notes in addition.)



Function of Scale Study. — While the primary object is to teach the scales so that their construction may be fixed indelibly on the pupil's mind, there are other points to be gained by this process. Scale study is not satisfactory, or productive of good in any way, if there is no interest in the subject. The essential to be sought is interest, and in order to arouse this, there must be a leading into it that is comprehensible, and full of surprises; only in this manner can there be created, for the average pupil, the quality sought. As soon as one point has served its purpose, there will be a laxity of attention that can be revived only by adding something to the old or by leading into a new feature of the possibilities of the subject. The attention of the pupil demands that progress be made, and that we add to what is already understood. The reasoning is not uninteresting to pupils, and it is not too difficult for children when they can follow each point. If they are taught to think and recognize thirds, fifths and sevenths in the beginning, it is only a step farther to think and reckon fourths and sixths, especially as the latter interval is supposed to be connected with early technical training. The positions of the two intervals, fourths and sixths, are also determined as intermediate points of what is already known. In successful study each degree of the scale must become known successively and separately or there can be no conscious preparation to play the note required. The knowledge thus obtained leads to the higher art of thoroughly comprehending creative work, and it also gives an advantage to the student in his daily practice of scales. The time will come when these scales so carefully studied will be played with attention in the marginal, but the acquired knowledge will permit of focusing the attention, when it becomes

necessary, at any point and on any scale degree, because reason will aid other impressions.

In presenting the scales through systematic relationship a chain of associates is being formed that makes them well-nigh unforgettable. One may forget facts, but from a process of reasoning some of the associates must remain; one fact is found to be sufficient to call up the whole chain. The different scale structures, signatures and keynotes are best remembered in this way. Diversion in proving established rules may be used to advantage in training the mind to quickness of perception, and will also clear blurred impressions, if any exist.

Tradition designates the practice of scales as the stumblingblock in the study of music. It has been, no doubt, a harrowing question for both teacher and pupil, and must have reached the culminating point when the pupil was left to a book and his own initiative in working his way through them. This objection, however, may be partially obviated by engaging interest in the development and possibilities of scale formation. Even this will have to stand a test when it comes to serious practice. The pure scale most helpful in practice allows only a monotonous rhythm, and no melody and no harmony. Where is interest to be centered when scale formation has been mastered? The production of tone through the act of touch should engage the interest at this stage of the work, and is the point to which attention should be directed. Besides, familiarity with the scale material allows conscious effort in producing the tones, and is, next in order, the tangible point on which to focus attention.

Scale Practice. — Scale practice is often introduced too early. There should be the same care in the preparation of the arm, wrist, hand and digits as is exercised in the preparation for the mental process. The requirements for the execution of the scales should be as clear to the pupil as the formation of this important basic material, and the natural difficulties which they present should be gradually overcome by systematic preparation. Scales should not be made a part of the daily practice until the pupil has learned to swing the fingers with a swift, clean action and to focus all the weight at the fingertips, leaving the wrist loose and light as a feather. Scale practice should be a putting together of tones that have already begun to take on a semblance of beauty. Possibilities of beauty of tone will be felt by teacher and pupil almost simultaneously, when the pupil has gained the right feeling in the hand and wrist and can detect the improvement in the tone when it is pointed out to him. It is as though the fact were telegraphed from one to the other. In this way scale practice may be interesting through a conscious effort to make clean musical tones, and it should be the crowning

point of other technical work. The result of such practice and the interest of the pupil should depend upon his susceptibility to a musical tone and the image he may have in his mind of what a musical tone consists, but the preparation and the control of physical requirements are strong factors in this calculation.

It seems that rapid scale practice is a universal fault among ambitious piano students. It is not uncommon to find those who, after several years of study, cannot play the C major scale slowly with correct fingering and coördination of the hands. Scales should not be practiced so fast that the fingers appear to be beyond control; if urged to speed throughout the daily practice, they will soon show the disastrous effect of injudicious training. The first points to be gained are evenness and beauty of tone. Velocity will follow in the course of development, and will not be attended with the nervousness that is usually found when a student attempts to force the tempo. The effort should be to keep the fingers under control whether playing "fast or slow, loud or soft." They may tingle with the exercise, but the student should not indulge in a motion too rapid for control. The quality of tone is quite an individual matter, but allows of cultivation. The beautiful singing tone so necessary to the pianist is hardly possible when one persists in too rapid practice. A pupil should seek to cultivate the singing tone as well as the coloratura tone which is adapted to brilliant passage playing. There will be interest and consequent pleasure in scale practice if a student but make himself a willing subject.

Scale Fingering. — The ease with which the fingering of the scales may be acquired depends upon that part of the mental training that has to do with intervals and scale degrees as well as the position of the keys representing the notes to be played. All diatonic scales formed on notes played on white keys are fingered alike, with four exceptions, namely, the major and minor of B and F. There are eight notes in an octave. These notes are played on eight different keys. Having but five fingers, we pass the hand into a new position by means of the thumb and third finger in order to add the required number. This is best understood ascending with the left hand or descending with the right hand. When resting the fifth finger of the left hand on the keynote of the C major scale, it is clear why the third finger is passed over the first. It is a simple problem. We have five fingers and need three more to make eight. The same requirement holds for the right hand, as may be shown with the descending scale. Ascending with the right hand and descending with the left, the order is reversed, first three fingers and then five to make eight. Continuing the scale for two or more octaves, one finds that the first finger takes the place of the fifth on the key-

note, when beginning a new octave. Then of necessity the fourth finger must follow when ascending with the left hand or descending with the right hand. In this manner each octave has the same fingering. It is found that the first finger of the right hand has played *one* and *four* of the scale; that the first finger of the left hand has played *one* and *five* of the scale, excepting the first keynote, which is played with the fifth finger.

Exceptions to the General Rule. — The major and minor scales formed on B and F were named in the beginning as exceptions to this rule. The fingering of F major and minor differs for the right hand only; that of B major and minor for the left hand only. The fourth of F major and minor scales is found to be B♭ and, for this reason, the first finger passes on the fifth of the scale. The eight fingers necessary for the eight different keys of the octave are made up by four and four instead of three and five. A similar problem offers itself for the left hand in the B major and minor scales, when the fifth is found to be F♯, and the hand, on beginning, takes its position with the fourth finger on the keynote.

The C major scale is generally found to be more difficult to play with precise fingering than any other, since it has no black keys to serve as guides. However, the first, fourth and fifth of the scale remain infallible guides. A pupil should be taught to be mentally certain of these before beginning a scale. The acquirement of the correct fingering of the C major scale is well worth the effort. This will be admitted when it is understood that ten different scales, including the major and minor formed on notes played on five different white keys, are fingered in the same manner, and that what has been learned about one will apply to the other nine.

Scale Fingering a Mental Problem. — Through study a pupil may find the material of which each scale is made. He should then learn the physical process necessary to use this material. From that time, as before, the playing of scales should be a mental problem and a factor in the cultivation of conscious preparation and direction. Pupils may be told to pass first with the third finger, then the fourth, alternating in this order as they play through the different octaves, but unless their attention is called to the facts that make this particular order of fingering necessary, few will grasp the reason why they do this. With the facts before them, however, they may even assist in founding the rule. In this way their minds will be stimulated and exercised, and they will be almost certain to choose the correct fingering, and seldom have trouble in practice. Now and then, from lapse of attention, there may be a surplus of fingers or the reverse. There is only one remedy for this, and that remedy is *attention* and *calculation*, which must be required until correct fingering has become a habit.

By this process there will be two decided gains: the habit of correct fingering, and the still more valuable habit of giving close attention to the subject-matter at hand. The first-named gain is but a direct product of the second, since through it we are enabled to direct the physical unerringly. Sometimes an obstinate thumb or a bad position of the hand will force the use of the wrong finger. In such a case, finding the cause of the mistake will insure improvement.

The Fingering of All Diatonic Scales Formed on Notes Played on Black Keys. — There still remains to be learned the fingering of scales formed on notes that are played on black keys, and there are five different black keys waiting their turn. Young pupils, particularly boys, look upon the acquirement of a scale with correct fingering in much the same way that they look upon a newly learned trick. With ambitious pupils, the more difficult the scale, the more interest it arouses. From a physical and mental standpoint, C major is found to be more difficult, for smooth and even playing, than any major scale given thus far, and this decision will need no modification after the remaining five major scales have been studied. On the other hand, E major will be found to be the easiest of all the twenty-four scales, since guideposts, black keys for the sharps and flats, are found at the most convenient points for passing the thumb under, or the third and fourth fingers over.

For similar reasons, the scales yet to be considered do not offer the difficulties one might expect. It is found that in ascending with the right hand and descending with the left hand, the thumb plays the white key immediately following a black key. Descending with the right hand and ascending with the left hand, the third and fourth fingers pass over directly to a black key, and at each point for passing there arises the question, which of these two fingers should be used. It is true that they are used alternately, but it will be more to the purpose if the pupil be taught to study the positions of the black keys to be used, and to determine whether three fingers or four are needed to bring the thumb before the next black key. Then the problem for the correct fingering of these scales is found to be wholly in that direction of the scale which involves passing the fingers over the thumbs. If the fingering gives undue trouble, a suggestion to give attention to the left hand ascending and the right hand descending will generally insure correct fingering. In contrary motion this will be a more difficult matter, and will necessitate watchfulness for both hands at the same time, when the two difficult directions are brought together. For this reason a pupil should thoroughly understand the principle of this fingering while playing the scales in parallel motion. The mind and fingers will then be prepared for the greater task.

Scales Serving a Twofold Purpose. — Starting with C major, we may add sharps or flats until we have raised or lowered each of the seven notes in an octave, and, for each additional sharp or flat, produced a new signature with its major and minor keynotes. According to their notation, we find fifteen different major scales, and we have only twelve different keys on which to form them. For this reason three of these major keynotes and scales must serve in a twofold capacity, and the same office is required of the relative minor of each of these three major keys. This peculiar distinction is enjoyed by each of the five black keys. Referring to a diagram in the form of a circle showing the succession of keynotes by fifths and fourths, we find that five sharps is the audible equivalent for seven flats, six sharps for six flats, and seven sharps for five flats. It is now seen that these duplicate scales, three majors and their relative minors, are, with one exception, formed on notes played on black keys, and are the scales about to be considered.

The Fingering of B Flat Major Scale. — The study of B♭ major should follow F major and D minor. Its formation is already known and the signature has been found to be B flat and E flat. Placing the right hand over the keys for the first four notes of the F major scale, the pupil will find that he has the upper half of B flat major, with correct fingering to play the same. To descend to the keynote he has only to pass the third finger over to E flat, and the thumb is brought into place before the black key, B flat, which is again played with the fourth finger, when descending to another octave. Placing the left hand in position to play the scale ascending, the pupil will find that with the third finger on B flat, the thumb is brought into position before the black key, E flat, which is played with the fourth finger. The reason must appear clear, and the illustrations will prove its correctness.

In the first practice, through which we train the fingers to smooth and even playing, there should be a rapid calculation to determine correct fingering. By repetition we aid not only the physical process but we diminish the mental effort, until there would seem to be no calculation whatever. The dissimilarity of the fingering for the two hands proves a perplexing point in the beginning, but makes the impression in the end. For this reason these two facts should be kept in mind: B flat played with the third finger of the left hand is played with the fourth finger of the right hand. E flat played with the fourth finger of the left hand is played with the third finger of the right hand.

The Fingering of B Flat Minor Scale. — The fingering of the B flat minor scale, relative minor of D flat major, with its five flats, presents an

easy problem, since in the melodic minor descending there are found to be only two white keys in the octave, and these remain as resting-places for the thumbs, whichever form we play, harmonic or the melodic ascending.

The Fingering of A♯ Minor Scale. — The fingering of the A♯ minor scale is the same as that of B♭ minor, and the scale is audibly the same, but the notation for the former may be considered more perplexing, since A♯, the relative minor of C major, has seven sharps in the signature. Happily, every note is sharp, and a pupil can learn to think sharps as well as naturals. Comparing it with A minor he will learn that raising the first note of the scale has necessitated changing all the other notes accordingly.

The Fingering of E♭ Major Scale. — The fact should be kept before the mind of the pupil that he is constantly knitting something new on to past acquisitions. Especially is this true of all scale study. We have learned that we have only to add A♭ to the signature for B♭ major to obtain E♭ major. It may surprise a pupil to find that in playing the E♭ major scale he is placing the fingers of the right hand over the same keys as when playing B♭ major and F major, and that he has only to play sharps, flats or naturals as his keynote or signature may necessitate. In fact, throughout the major keynotes found on black keys, the right hand never changes its position, but remains over the keys as placed in playing the F major scale. This is a broad truth, and, when known, generally causes enthusiasm, but the pupils study and practice the scales all the more earnestly when they realize the importance of their sudden acquisition. Surprises on points like these serve to hold a pupil's interest through the first months of study.

The position of the black keys in the different scales requires the left hand to be shifted for each new scale until we reach D♭ or C♯ and G♭ or F♯ major, where we find that the hand lies in one position for both of these scales. Whenever we find peculiarities like those named above it is our good fortune, and we can use them to fix a principle. Our guide-posts, the black keys, remain, and from their position emanate all similarities and dissimilarities. So in the E flat major scale for the left hand they point out our fingering, and we play E flat with the third finger, passing the fourth finger over on A♭.

The Fingering of E Minor Scale. — E♭ is the relative minor of G♭ major and has six flats in its signature, only one note out of the seven remaining natural. If the signature with its array of flats appears to perplex a pupil, why not consider every note flat excepting F, the one that remains natural? This may be found an easier task for the mind than to think of adding each of the six flats separately. Instead of taking naturals as the basis and adding flats, take flats as the basis and deduct where a

natural is found. The fingering of E flat minor is clearly defined, since in the natural minor form, descending melodic, only two white keys are found in an octave, and, as in B flat minor, the thumbs easily learn their place on these two white keys. This fingering is used in all the different minor scales on E♭.

The Fingering of D♯ Minor Scale. — D♯ is the relative minor of F♯ major and has six sharps for its signature. Its sharps equal the number of flats in E♭ minor, which is its audible equivalent; and the fingering of the D♯ minor scale is necessarily the same as that of E♭ minor.

The Fingering of A♭ Major Scale. — A♭ major has four flats in its signature. To determine the fingering of the scale for the right hand, we have the two processes that have been established from experience and reason. First, as the hand lies over the keys to play the F major scale, so it will lie for all major scales which have flats for the signature. Second, pass the thumb to a white key immediately following a black key. In the opposite direction, use that finger which will bring the thumb immediately before a black key. The latter rule will determine the fingering for the left hand.

The Fingering of A♭ Minor Scale. — A♭ is the relative minor of C♭ major, and has seven flats in its signature. The melodic minor scale descending will determine the fingering for both the right hand and the left hand, since in playing this particular mode descending, we find only two white keys throughout the octave. The same fingering should be used for the right hand in the harmonic minor, but with the left hand we pass from C♭ to D♭ with the fourth finger instead of the third, as in the melodic minor. In this way we avoid passing the fourth finger over the interval of an augmented second, as would be the case if we played F♭ with the thumb and passed the fourth finger to G, the seventh of the scale.

The Fingering of G♯ Minor Scale. — G♯ is the audible equivalent of A♭ and is the relative minor of B major. B is the audible equivalent of C♭; B, or C♭, is the only white key that enjoys the distinction of serving in a twofold capacity as a keynote. The G♯ minor scale is fingered like A♭ minor.

The Fingering of D♭ Major Scale. — D♭ major has five flats in its signature. The fingering of the scale is a simple problem, since the thumbs have only to find the two white keys, F and C, which are also the only two notes left natural.

The Fingering of C♯ Major Scale. — C♯ is the audible equivalent of D♭ and has seven sharps in its signature. The pupil should think sharps without exception, and the scale will give no trouble, for it is fingered like D♭ major.

The Fingering of C♯ Minor Scale. — C♯ is the relative minor of E major and has four sharps in its signature. The C♯ melodic minor scale ascending presents an easy problem and leaves no choice but to play E and B♯ with the first finger of each hand. The descending melodic minor may confuse one, if the mind is not clear on the formation of the scale. No amount of practice will help when a subject is not clear to the mind, for the fingers will only hesitate and stumble. The fingering of the harmonic minor mode on C♯ differs from that of the melodic in the right hand when we place the first finger on A, the sixth of the scale, before playing B♯, in order to avoid passing over an augmented second; this will bring the third finger on C♯ instead of the second.

The Fingering of G♭ Major Scale. — G♭ major has six flats in its signature. Like other scales where all the black keys are used, the fingering of G♭ major presents no difficulties. If the formation is clear, the pupil should be ready for effective work.

The Fingering of F♯ Major Scale. — F♯ is the audible equivalent of G♭, and the sharps (six in number), found in F♯ major equal the number of flats found in G flat major. The fingering of F♯ major scale is the same as that of G♭ major scale.

The Fingering of F♯ Minor Scale. — F♯ is the relative minor of A major and has three sharps in its signature. In playing the F♯ minor scale, we again rely on our guides, the black keys, for the fingering. We find that the difficulty of fingering correctly has not diminished with the elimination of one or more sharps. We are simply left with a less clearly defined fingering, but we are never left without something on which to base our reasoning. In F♯ harmonic minor, as in C♯ harmonic minor, the fingering of the right hand is changed from that of the melodic minor to avoid passing the thumb and fourth finger over an augmented interval, so that F♯ played with the second finger in the melodic minor is played with the third in the harmonic.

Extended Study of Scales. — When each scale has been thoroughly studied in parallel motion with all the attending exercises in that particular key, a pupil is ready to practice them in contrary motion, in thirds and in tenths, in tenths ascending and sixths descending, in sixths with the left hand beginning on the keynote and in sixths with the right hand beginning on the keynote. These may be followed later with scales in double thirds, the fingering of which is just as clearly defined for the particular need of this work as for the single-note scale work.

Practical Value of Scale Study. — Scales are treated as though their practice employed only a physical process; this, as well as their study,

should remain throughout, a mental process. The first step is wholly work for the mind. The second step is the *control of mind over matter*. The value of scales as a mental study is inestimable. The pupil builds, from musical tones, scales of any form on any keynote he may choose. The process requires concentration, calculation and discrimination. To play the scale requires quickness of thought and action.

From a physical standpoint the study of scales is unique. There are no exercises that will so quickly point out unevenness of touch and a jerky manner of passing the thumbs as the scales and scale passages. There are no other technical studies that will so surely assist in developing wrists of feathery lightness, and, at the same time, assist in producing a round, singing tone. After months, even years, of scale study, one will find touch improving and tone steadily growing more beautiful.

A knowledge of the scales, a clear comprehension of the fingering of the different scales, and the ability to play them evenly with a clean singing tone, is of vital importance to the piano student aside from the matter of mental and physical development. From their study the pupil learns to associate the notes belonging to the different keys and to choose more correctly the fingering for melodies and scale passages. If his mind has become clear on the subject of formation, he should be able to read and play equally well in all keys. The hand, if held in the correct position used in scale playing, may be depended upon to suggest correct fingering. This will come as a natural result of habit, and is a point in the course of study to be gained as early as possible. The sooner we can make the nervous system our ally, the sooner will the higher powers of the mind be set free for their own proper work.

Scales the Foundation of All Music. — There is a still greater reason why scales should be thoroughly understood, and that is the fact that we must know them in order to acquire material from which to build all subsequent technical exercises. Likewise, all melodies and chords are built from them with the assistance of the chromatic scale. Students should not be left ignorant of the use, the purpose and the beauty of scales, and the possibilities of scale study. In this way they will find them inexhaustibly interesting, and as they add to their technical equipment and learn to analyze the compositions given them for study, they will find their knowledge of the scales a fund from which they receive daily compensation.

Exercises Attending Scale Study. — The center of interest to some students will be the study of the exercises attending each scale, namely, chords, broken chords, arpeggios and cadences. As each principle is more clearly understood, such modulations should be introduced as require a knowledge

of simple rules for chords and chord progressions. In this way a few elementary rules of harmony may be learned from practical experience. These technical studies are of great importance, and should have their place in connection with scale study. Not only does their practice train the hand to an extended position, but through their study the combinations of scale tones are more carefully considered. The influence of this work is shown in vertical reading and in all analytical study.

Scales and the attending study not only prepare the mind and body for conscious control, but they present every means for its exercise while building up one of the important essentials in a sound musicianship, a knowledge of the material of which musical ideas are composed.

CHAPTER VII

CHORD STUDY

CHORD study is a cumulative process; it serves to bring into clearer relationship and classify what has already been learned; it also groups the chords with the same combinations that are found in compositions of simple construction. The importance of an early consideration of chords will be more readily appreciated when they are found to admit of a larger unit in reading and memorizing, for their constituent parts serve as the basis for the greater number of creative forms. These will be more clearly understood when the basic material is known. They are so essential for analytical work that much time and effort are wasted when this subject is left to a chance opportunity for the study of elementary harmony. Chords are more easily constructed than scales, since the pupil is supposed to build from what has already taken on tangible outline. Their study should follow closely the building of the scales or those parts of scales in which they have their origin.

The Province of Chord Study. — While chord study is found to be but little more than systematizing material already assimilated, the experience gained through proper attention to the formation and use of chords cannot be overestimated. Years of study and practice, while neglecting this subject, will not bring a pupil what special training of a few months or even weeks will bring. In the matter of judicious memorizing, a knowledge of chords is indispensable, for they admit of a larger readable unit and are memorized as a whole; they constitute the nucleus of extended passages that, with recognition, may be quickly read and as quickly memorized; they are constantly standing the test of comparisons with creative forms that are accepted or rejected as corresponding to something already known, and hence they are easily remembered, some through similarities, others through dissimilarities. In this knowledge, and the wholesome and well-based assurance which it brings, we find one of the essentials for conscious effort. It is only in the practice of chords that a pupil can gain the physical requirements necessary for their proper playing. It might appear that the whole effort should be directed to molding the hand to the chords it is expected to play. While this is of great importance, the aim in the

beginning should be to reduce muscular antagonism through relaxation in which the pupil takes a conscious part. He must also learn the movements and the control of the fingers, hand, wrist and arm in playing chords to suit the desired effect, so that all efforts may be rightfully directed.

In practical work necessary at the piano chord building should not be dissociated from chord playing, for the tactile sense, which is a great factor in the playing of chords, particularly, can be cultivated only through practice. A pupil should first become familiar with chord building through the first five tones of the major and minor scales when the hand, by remaining over the keys representing these tones, retains the primary position. In the same way, when the major or minor triad is made to include the octave, the hand becomes accustomed to the new distances by leaving the primary position, to which it strictly adhered in the early work, and becomes extended over the greater number of keys, so that the notes of a chord may become directly associated with the keys which they represent.

Fingering of Chords. — In playing chords the fingers of an untrained hand will show an inclination to sprawl or fall over the keys, though the pupil may display marked musical ability. For this reason, time is always saved by gaining, at the beginning, a clear understanding of the fingers to be used and the correct position for both fingers and hand. With four-part chords there is only one question as to fingering, and that lies between the use of the third and fourth fingers in connection with the first, second and fifth fingers.

These are the answers usually given: In playing the first position of a triad, including the octave, with the right hand, use the third finger; in the second and third positions, use the fourth finger. In playing the first and second positions with the left hand, use the fourth finger; in playing the third position, use the third finger. This covers the ground, and still pupils who are given these rules stumble. The triple process of thinking chord notes, position and fingering seems to confuse most pupils.

In teaching pupils to play chords, it will be found effective to call attention to the intervals in the chord within the space of an octave. Two of these intervals are thirds, and one is a fourth. These intervals are shifted with each new position. When the note which is played with the fifth finger forms an interval of a third with the next note of the chord within an octave, the fourth finger will be used with the first, second and fifth fingers. The following rule may be clearer and it covers all the exigencies of the case. If the upper interval in a chord played with the right hand is a third, the fourth finger will be used; if the interval is a fourth, the third finger will

be used. What is true of the upper interval in a chord played with the right hand will be true of the lower interval in a chord played with the left hand.

Preliminary Practice and Manner of Playing Chords. — The first technical point to be acquired in chord study is the span or expansory capacity of the hand while leaving fingers free and wrist loose. The degree of difficulty encountered will depend on certain physical restrictions which are found in every human hand. Each hand brings new problems, since no two hands require the same treatment. Not alone beginners, but adult pupils, who have easily overcome other difficulties, are sometimes unable to play a chord correctly with the extended position of the hand, or even an octave, without preliminary exercises. Nothing can be accomplished by tightening the hand and wrist, yet the pupil with a small hand will invariably do this when attempting to play chords and octaves. On the contrary, the pupil who can retain looseness and lightness of wrist and freedom of finger action with an extended position of the hand will find his expansory capacity perceptibly greater than with the tightened muscles. A preparatory study of sixths will add to the freer use of the fingers and to a relaxed position of the hand, which always tends to reduce muscular antagonism. Practice alone cannot always overcome nature's restrictions, but efforts in the right direction will lessen resistance towards the points to be gained.

In the first practice of chords the hand should be extended over the keyboard so that each finger is in position directly over the key it is to play, the tips just escaping the surface of the keys. By a muscular movement of the fingers and wrist, the fingers should press their respective keys simultaneously; releasing the keys, and without changing their span, the hand should be passed to the next position, where the chord is played as in first position; in the same manner it may be passed to third position, and again to first position one octave above the starting-point. A return may be made through the different positions to the chord which was first played. This practice should be done with the greatest deliberation, the hand moving automatically from position to position, the span remaining the same throughout, since the first and the fifth fingers are required to reach an octave in each position. The second finger is called upon to shift its position slightly, since, with the first finger, it is required to reach both thirds and fourths, but when one thinks the note, the finger should involuntarily place itself over the right key. This would also be true of each note of the chord, if we chose to think of each separate part. But our object is to think of a chord as a unit, to play it as a unit, and to read it as a unit. If we wish to attain this object, we should not separate the train-

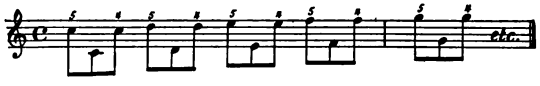
ing of the hand from chord study and practice. For the hand, it is a study of intervals and distances which remain the same in corresponding positions throughout all keys. Hence it will be seen that a hand well trained to play the tonic triad in one or more keys will easily adjust itself to all the other keys.

Teaching a Chord as a Unit. — This then is the question. How is one to teach a chord as a unit so that the pupil may understand it and be able to name its component parts? It is found that in naming the notes of a chord, attention is directed to the parts rather than to the chord as a whole; and, in playing a chord from such directions, the fingers try to reach out separately to the keys representing the notes named. At this rate the way through the tonic triads of the twenty-four keys would be a long and arduous one. It can be made quite the contrary. The principles underlying the science of chord building are so simple, and our pianoforte instrument so beautifully adjusted to fit the hand and fill the requirements of the music written for it, that it is a comparatively easy task.

The study of the tonic triad should go hand in hand with the study of the scale of the same name, since it is in the scale of one octave that we find material for the triad. The study of chord building may begin with the first lesson at the keyboard when the pupil, after building the first five tones of the major and minor scales on any black or white key, is able to play simultaneously one, three and five of each of the groups. The notes so built to form a group should become a unit to the pupil's mind, and the position of the five fingers over the five keys assists the mind in the grouping. As a product of this group the chord may be a unit from the beginning. When more tones are added to the five which are first learned, the pupil has the scale for one or more octaves. From the scale, chords should be formed with the hand in an extended position. Here the hand extends over the octave, and the grouping within the octave will fix attention to the extended chord as a whole.

Exercises for Gaining Expansion. — In many cases the extended position of the chord requires special training of the hand for extension. In view of this, a few suggestions may prove helpful. When the hand is small, or if it tightens from any cause, the chords may be practiced with the omission of the note played with the thumb or first finger until the three other notes have been played. Then, with the fingers still resting on the keys, extend the thumb and swing it downward without the assistance of hand or wrist. The expansory capacity will often surprise one. To obtain the best results the fingertips should press the keys with a firm nail-joint, while keeping the wrist loose and light and the elbow heavy. The following exercise,

which is often practiced in sixths, should make the playing of octaves easier, since it prepares the hand for a greater span by requiring the fourth finger to reach an octave. The hand should not be swung or tilted toward the key to be played, but should be extended so the finger has a position over the key before playing. The exercise is more effective when played strictly legato.



It is seldom found necessary to give other exercises than such as those named above. The special octave exercises, the dominant seventh and the diminished seventh-chords, serve their purpose later in training the hand as well as in presenting new material. With large hands the extensory muscles are often weak, the fingers refractory and the hand uncertain as to distances. Patience is required on the part of both teacher and pupil in training such a hand to distances. There are special chord exercises which are particularly helpful to the large hand in strengthening the muscles of the fingers. These are alternating notes played with two fingers while the other two fingers retain their keys.

Practice of Broken Chords. — With physical restrictions removed by judicious training, the hand should be ready for effective work with chords, broken chords and arpeggios. When the notes of a chord and the consequent distances by which the fingering is determined are learned, the broken chord may be practiced throughout three octaves. In doing this, attention should be given to the extension of the hand in preparation for the octave and again to the slight contraction when beginning each new position. As the first note of each position is played there should be an automatic adjustment of the hand over the keys in readiness to play the notes in that position. These smaller matters that are peculiar to passages composed of chord material requiring extension and contraction of the hand, bear directly on the study of the chords, and it is only through an understanding of their requirements, which necessitates a thorough knowledge and quick calculation of distances, that a conscious preparation can be made for the same in practice. The playing of chords, more than the playing of any other scientific structure, suffers from haphazard methods. If the importance of attention to details in preparation were more fully realized, a study of the requirements and movements for their correct playing would result in marked improvements. Broken-chord exercises equalize the touch to a wonderful degree when practiced correctly, and the contraction and expansion of the hand, though slight, is the beginning of the development

of the greater elasticity required in arpeggio work, which follows the broken chords.

Study of Arpeggios. — Practicing arpeggios is but another way of practicing chords, and arpeggios on each chord studied should be played in each of the three different positions. An arpeggio on a chord is simply continuing one position of a broken chord throughout any number of octaves. Each octave will have identically the same fingering. This will require the thumb in passing under the hand to reach a fourth in one of the positions and a third in the remaining two positions. Having learned the notes and fingering with the first study of chords, which were practiced later as broken chords, it will thus be seen that the only new point of difficulty to overcome is in passing from one octave to the next, which should be done so skillfully that no break or unevenness can be detected. If the hand has been well trained in previous chord study, the whole attention should be directed to the thumb or first finger, which has the responsible task of carrying the hand to each new position. Exercises for the special training of the thumb may be introduced, but with rare exceptions this will be unnecessary, if the attention of the pupil can be held to the points to be gained. Relaxation of the hand will give greater ease in passing from one octave to another. The hand is thus left more elastic and therefore capable of contraction and expansion. A light and loose wrist, a heavy elbow, and firm nail-joints when the fingers come in contact with the keys, are the great aids to relaxation at all times. In passing from octave to octave the fingers should never search for the keys. From a single cue the trained hand will take care that the fingers are in position over the keys to be played.

The Root of a Triad. — The notes of a chord, major or minor triad, should be thought of only as component parts of a whole or unit, the name of which is known as soon as its root is determined. Its parts depend upon its nature, major or minor, as well as its root. The order of its intervals may be determined from its root and the position in which it appears. From these facts it would seem advisable that a pupil be taught how to recognize the root of a triad. When a chord appears in any other position than the first, this question sometimes arises. Which note is its root? The upper of the two notes forming an interval of a fourth is an answer, the correctness and reason of which may be proved satisfactorily to the youngest pupil. As soon as possible, the pupil should make habitual the necessary muscular movements in playing the different chord studies, so that no time will be lost. It is left for the teacher to add interest to the study until the pupil is able to realize for himself that continuity of training is the great means

of making the nervous system act infallibly. Then, as chords and parts of chords are recognized, when they are found in exercises and pieces, a muscular movement will automatically follow the mental cue.

The Function of the Cadence. — The study of the cadence properly belongs to chord study, inasmuch as it groups the principal chords of the different keys in a systematic manner, and it may wisely be chosen as a medium through which a pupil may learn these important combinations. In grouping the essentials he necessarily learns a few rules for chord progression. The result is practical preliminary work in harmony, for he must know the chords and he must be able to think them before the keyboard; he must also know how to combine them correctly. While it may not be the purpose of the piano teacher to bring the study of harmony into the first lessons of pianoforte playing more than is necessary, it should be the aim so to teach scales and chords that they may be of practical value to the pupil. The forms thought out and built by himself from single tones may properly be called a product of the pupil's mind, and they constitute tangible musical matter upon which he can focus attention and interest in putting them together to make musical sense. The cadence, used as a means to evoke interest and stimulate imagination for constructive work, is found to hold attention, and chord combinations appeal to young and old as leading to original expression.

Introduction of the Cadence. — The study of the cadence should follow that of the scale and tonic triad of each particular key in natural order, while the tones of the scale and the pitch-names of the different degrees are so well fixed in the mind that their recall may not be too labored. Preliminary analytical work, or analysis of written exercises, that is begun long before scale playing, will show the combination of the chords on one and five (the dominant of the scale), so that when the exercises are played the mind and the fingers, through the tactile sense, may have already begun to associate these two chords. With the addition of the triad on the fourth or subdominant of the scale the pupil has all the material embraced in a five-chord cadence which he may be directed to play without further preparation. In doing this, such terms and names of chords should be used as the pupil has been taught. Care should be taken not to confuse by using technical names too early, lest the invasion of the realm of harmony-making prove a disastrous one. The particular combination chosen in the beginning should be of the simplest, but it should embrace the six-four chord as a preparation for the dominant seventh. This chord may be easily described and remembered as a triad, having its fifth in the bass; if the technical name be used, it may be explained by counting from its bass note,

one, four, six. It may be of interest to give one of the most important rules in chord progressions, namely, that when a note is found to be common to two successive chords it must be kept in the same part. This rule will guide the choice of close progressions, for it finds application at each step in a simple cadence. It is advisable to use a simple cadence in the beginning, one through which a pupil may learn the sequence of chords and, when playing it, be able to direct consciously each step; it should be so simple that it will not distract attention from the chords themselves until he has had experience in chord combinations. A pupil should also be taught to rely on his knowledge of chords rather than on the feeling of the hand and the fingers as they touch the keys. The tactile sense will emerge sooner or later, but the mind should first guide in fitting the hand to the keys, and it should decide upon the movements so that they will be direct and simple. The ear, too, should take part in this work by being called upon to follow the leading of the different parts to such a degree that the tones are anticipated. Thus each sense may be cultivated to the point of reliability without disturbing the efficacy of another; though it is not unlikely that the imagery that is strongest in an individual will assert itself and reinforce the others.

Use of Cadence to Hold Interest. — There will be no lack of interest as long as the difficulties presented hold the attention, and each new key may be depended upon to call forth new interest. The time will come, however, when there will be a tendency to play the cadence in a perfunctory manner; the chords and the first simple progressions will have been mastered. At this point less simple cadences may be used, introducing the chord of the sixth and suspensions or anticipations. A new interest may also be awakened by showing that these efforts are only a step toward something more engaging in the science of harmony-making, and that one may learn to pass or modulate from one key to another. This work proves to the pupil the practicalness of his study of chords and cadences, and to some it may open up possibilities for self-expression.

It is hardly relevant to conjecture what part of chord study has entered into the training of the great pianists. A genius or one highly gifted has the ability to see things in an unusual way; he also understands the value of concentration. In fact, the ability to concentrate is a product of his genius, and it may be that he begins where the average pupil leaves off, while many students never reach the point of knowing how near they have been to a full comprehension of that over which they have spent years of study. Some hands, too, because of an absence of physical restrictions, adapt themselves to requirements and follow a mental

cue more easily than others. However a gifted mind may look upon systematic preparation through technical studies, the knowledge of basic forms and experience in their use through consciously directed work are the only means by which the average pupil can obtain any degree of mastery.

CHAPTER VIII

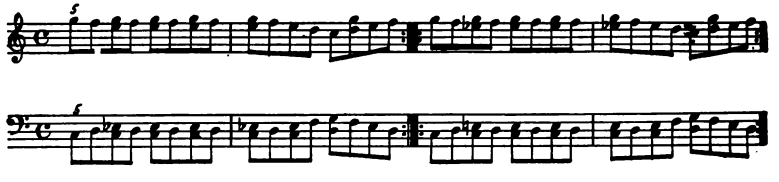
ESSENTIALS FOR TECHNIQUE

THE importance of technique is generally understood, but it is a fact to be recognized that many students lose sight of the essentials. These provide the technical equipment. When a work has become known to the pianist, the fingers have the responsibility of carrying the message; in other words, they are the servants of the mind. First in technical study these members must be set free through relaxation. Physical peculiarities or restrictions must be overcome, as far as possible, by special exercises. In addition to other essentials, there is the necessity for the acquirement of keyboard freedom. While the study and practice of scales and chords are the chief factors in the preparation of a technique that is reliable, they do not exhaust all possibilities. It is in the practice of creative forms, or a free treatment of basic material, that the student will find the greatest opportunity for the exercise of control in acquiring keyboard freedom. The fact that this great essential in technique is not found in the practice of scales and chords alone has in itself caused a wide diversity of opinion among progressive piano teachers with regard to the practice of scales. Their importance in foundation work, and the advantage in the exercise of their own peculiar requirements, however, cannot be overestimated.

Keyboard freedom may be easily acquired through the practice of and the acquaintance with technical figures drawn from an extensive acquisition of concepts or musical ideas. These may be passages taken from well-known compositions, masterpieces or studies; or they may be original concepts treated as sequences, that is, certain arrangements of notes repeated on regular scale or chord degrees. These and other special studies should cover a wide range, for piano technique, as understood at the present time, has been of slow growth. Its evolution has passed through a period of about two centuries, each composer having left his impress on its requirements. Particularly is this true of Scarlatti, Bach, Mozart, Beethoven, Mendelssohn, Chopin, Schumann and Liszt. Without development of new ideas Weber gave us compositions of great technical brilliancy, while Schubert bequeathed us compositions with a wealth of melody. The technical requirements in many of the works of these masters are not always

easily met by preparation through the practice of pure basic material alone. Detail technical studies, however, may give way to legitimate work found in the compositions studied. This is done to minimize purely technical practice, for pupils as a rule display little interest in the practice of such exercises, because they do not find their application. Nevertheless, when a weakness in the technique is found, it should be diagnosed and treated with a view to strengthening what might otherwise cause failure. It is well to have a supply of special exercises at hand to be used at such times as may seem necessary. If a pupil can be made aware of a shortcoming, he will surely assist in applying the remedy, and through the enlistment of his interest technical studies may be made efficacious.

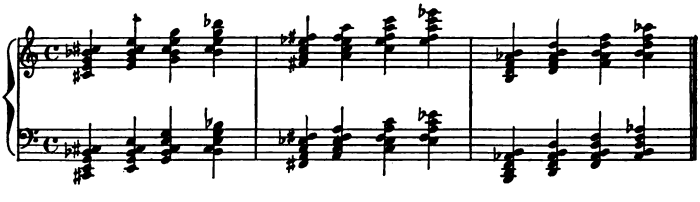
Developing the Weaker Fingers. — There are many exercises for the more advanced that may be studied with a view to greater development of that technique which is found to pave the way to Parnassus. These exercises, if given too early, will only serve to point out the shortcomings or unsatisfactory results of the first work. For instance, the exercise given below, while excellent as a double-note exercise, cannot be practiced to advantage until relaxation and lightness of wrist and freedom of finger movement have been secured. It is not a satisfactory medium through which to attain these essentials, but having attained them, it will equalize the touch and develop uniformity of finger action. When practiced, it should be played consecutively in both modes, major and minor, on each tone of the chromatic scale. In this way the hand is placed in every possible position for playing thirds with the weaker fingers. This exercise may be used to prepare the way for the practice of scales in double thirds. The study of the latter is most necessary in playing many of the compositions of Mendelssohn and Chopin.



Exercise Leading to Ornamentation. — The exercise below, formed from the chromatic scale, suggests some of the varied technical requirements found in Chopin's compositions. This exercise should likewise be played on each tone of the chromatic scale, and like many other exercises of its kind, must be practiced in moderation. It should not be practiced until the pupil has acquired a well-developed touch, otherwise he will show an inclination to push into the keys with the wrist, which is a fault to be

avoided. This exercise is valuable in preparing the technique for ornamentation and delicate shadings. It requires independent action of the fingers. Owing to the contracted position, which enables the hand to lie well over the keys to be played, there should be the utmost relaxation. The exercise should be practiced with each hand separately. The construction should be reversed when descending the scale.

The Value of the Diminished Seventh-Chord as a Technical Exercise. — In contrast to the contracted position of the hand, which requires the five fingers to be held over the keys representing five consecutive tones of the chromatic scale, the compass of a major third, we have the diminished seventh-chord. When played with the octave, each finger has its task, and there is no exercise so valuable in equalizing the reaches of the fingers. It should be practiced first with each hand separately, playing the notes simultaneously, and again as a broken chord formed on each tone of the chromatic scale and played consecutively throughout one octave. When practiced as a broken chord there is sometimes a tendency to move the hand with each new note or to contract the hand as the fingers release the keys. These faults should be corrected as soon as discovered, as little can be gained in a technical way if the pupil be allowed to persist in them.

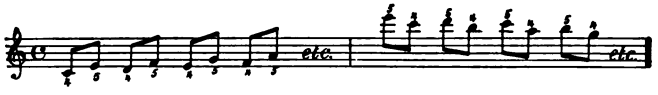


The pupil should become so familiar with this chord that he will be able to recognize it at a glance in whatever form or position it is found. As a technical study its greatest value lies in the development of the tactile sense which enables one to play through a mass of material derived from this chord with unerring fingers.

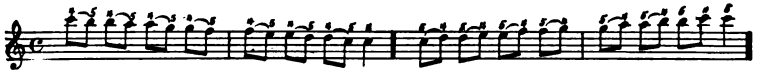
The Dominant Seventh-Chord. — The dominant seventh-chord, like the diminished seventh, finds employment for all the fingers, if one tone is doubled. It should be played in each of the different keys and practiced as an arpeggio in as many different positions as may seem advisable. By doubling the root of a dominant seventh-chord we have one, three, five, seven and eight. Since seven and eight of the original chord are contiguous

degrees, and are shown as such in whatever position the chord appears, the upper of these two notes or degrees is easily recognized as the root of the dominant seventh-chord.

There is a little exercise that prepares the fourth and fifth fingers for chord reaches. It is simply to play any scale in broken thirds with these two fingers. It should be used only in moderation, and never as an exercise for velocity. The greatest care should be taken to hold the hand in a quiet position throughout the exercise, which may extend through two octaves.



The following exercise gives a different treatment of an exercise found in an earlier chapter.

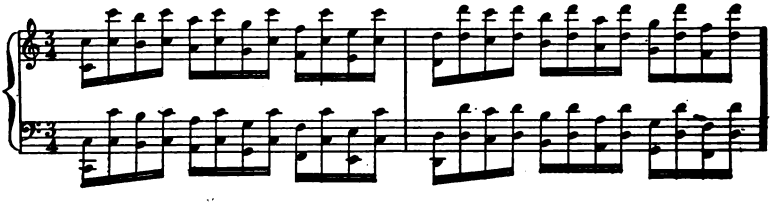


The study at this point is the passing of the fourth finger over the fifth and the fifth under the fourth. With this fingering a pupil is forced to feel the necessity of a softened palm. Care should be taken for a judicious use of the exercise, for in passing the fourth finger over the fifth there is a sensation of stretching which might tend to fatigue the muscles if persisted in long at one time. While it is excellent as a muscle exercise, it may be counted upon to give a preparation for the playing of legato chords and octaves.

Fingering of the Chromatic Scale. — The chromatic scale, into which the first and third fingers fit so readily, requires the use of the second finger only when playing two consecutive white keys. It will be found much more difficult if played in contrary motion for three octaves. The difficulty of the last octave, where the hands are widely extended, cannot be understood until the exercise is played. Pupils are sometimes surprised to find the scale with different fingering from that mentioned above. We find, however, that in long sweeping chromatic passages, other fingering is invariably chosen, as in Weber's " Perpetual Motion " and in the first movement of Beethoven's " Sonate Pathétique," where the adagio leads into the allegro. The fingering chosen necessitates less passing of the thumb, thereby having a tendency toward greater smoothness. It requires the use of the fourth finger in the group of three black keys. The right hand plays A♯ or B♭ with the fourth finger. Likewise, in similar

passages, the left hand would play F♯ or G♭ with the fourth finger. This fingering is recommended by Clementi in his "Gradus ad Parnassum."

The Study of Octaves. — With the advanced student, work for finger-development is usually superseded by the study of octaves. Here the ground to be covered is extensive. Requirements for playing detached octaves are relaxation, lightness of wrist, reach, wrist staccato (which should first be practiced in sixths), accuracy in skips and endurance. For the playing of legato octaves there must first be the preparation of the thumb and the third, fourth and fifth fingers. The octave studies of Theodor Kullak cover all these points and give abundant material for illustration. There are also exercises showing a nicety of phrasing where legato and staccato work are combined, as in Chopin's "Butterfly Étude." To play detached octaves the pupil, who has faithfully practiced preparatory exercises in wrist staccato, needs only the addition of work for accuracy in skips and for endurance. An exercise from the Wieck Piano Studies supplies this to quite a degree, giving all skips within an octave and making some demand on endurance.

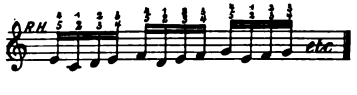


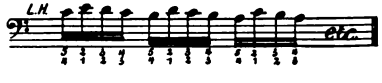
It is well to supplement the technical studies to this end by pleasing compositions that will aid in the work. There is an adequate supply for all grades found among compositions by Gurlitt, Schytte, Scharwenka, Rheinberger, Moszkowski, Mendelssohn, Chopin, Rubinstein and Liszt.

Preparation for the Trill. — In the first finger exercises the pupil should be gaining the essentials for the finished trill, for this embellishment requires relaxation, a good, well-controlled finger action and lightness of wrist. The only remaining points necessary for the playing of the trill are evenness, rapidity and endurance; these are the assured result of slow, steady practice. Sometimes special exercises are necessary as a means of preparation, but the end cannot be reached in haste. In studies usually chosen, more or less attention is given to the needs of the trill from the first exercises, beginning with Lecouppey's "Alphabet." In Cramer we find several studies devoted to the trill. Beginning with preparatory work, he follows with exercises in which we find a trill and a theme played throughout with

the same hand. He also allows the left hand to share the work with the right hand. In a few of the Bach Inventions we find trills for each hand. These are played for the most part with three fingers instead of two, and, though they seldom extend throughout more than four measures, they afford an opportunity to develop evenness and rapidity when played against a theme written in notes of equal value. Any number of trill studies will not produce an even and rapid trill if the pupil lose sight of the essentials. The trill is the result of acquired essentials. Thus the matter stands for all technique, particularly octave work and embellishments. Czerny's "School for Velocity" and his "Finger Dexterity" are of great value to the pupil, inasmuch as they add smoothness and endurance to other requisites in the development of technique.

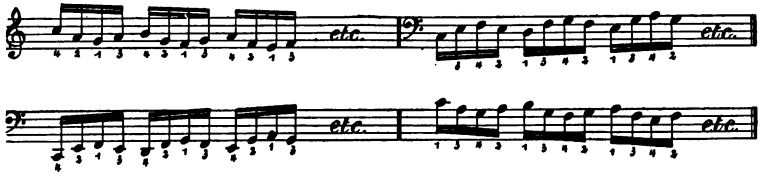
Exercises in Sequence Form. — The purely technical development of the young music student lies almost wholly in the ability to find new and varied interest in this particular kind of work and to incite ambition by keeping before the mind some objective point to be gained. The exercises for tone and relaxation, for expansion and contraction, practiced under the supervision of the teacher, should be as varied as the individual needs of each pupil. But five-finger exercises given in the first lessons, and the scale and chord work, should be practiced daily by every pupil. With this more serious work relief can be furnished and, at the same time, interest aroused by introducing a musical concept now and then which should be practiced as a sequence. Some concepts make excellent material for finger technique, and all extended sequence study tends to give one a command of the keyboard. With no deeper analysis, such exercises may be considered as having threefold value. One of the most helpful forms for sequence study is given below. It is composed of four notes played on consecutive tones of the C major scale and should be extended through two octaves. To descend the scale the construction should be inverted. It should be practiced with two sets of fingers. That which requires the use of the first, second, third and fourth fingers is equally helpful to that which requires the use of the second, third, fourth and fifth fingers. Particularly is this true when ascending with the right hand or descending with the left hand. In these cases, the fourth finger must have a slight feeling for accent, and the thumb, which is usually inclined to be obtrusive, must be restrained. In all work of this kind the left hand should be as familiar with the exercise as the right hand, and rapidity should be the last point to be gained.



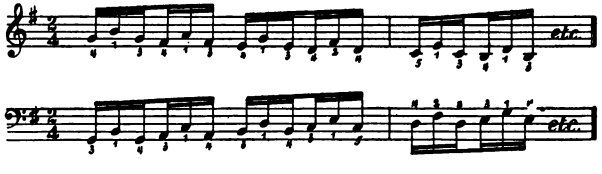


This form is easily recognized as one of those used by Cramer in the first of his "Fifty Select Études for the Piano," where he introduces it for both hands, which play in parallel motion a sixth apart for two octaves. Weber also used it as a sequence in some of his brilliant passage work. A great teacher once told me that this passage, as found in Cramer, caused the downfall of many an aspiring young pupil. After such a failure the industrious pupil returns to his practice more determined than ever, but injudiciously works in a hurried and tense manner. As may be expected, the result is always far from satisfactory and he is cultivating a nervous, overhurried manner of playing. Pupils should understand that the fingers are agents of the mind, and if they stumble after adequate training, the passage or musical form has not made a clear impression. The greatest value of sequence practice lies in the fact that the pupil must gain a clear impression of the construction of the figure to be played. Conscious effort shows him how to make use of this and how to acquire control of the fingers while playing it. Later work in analysis will show him that, as a result of this study, he has accumulated material for future use.

The following is also found in Cramer's First Étude, played as a descending passage for the left hand, with a different figure of four notes for the right hand. It is excellent for relaxation and for the study of finger control. It can best be mastered by consciously preparing for the slight contraction before the last note of each group of four sixteenths by which the hand is brought into position to play the next group.

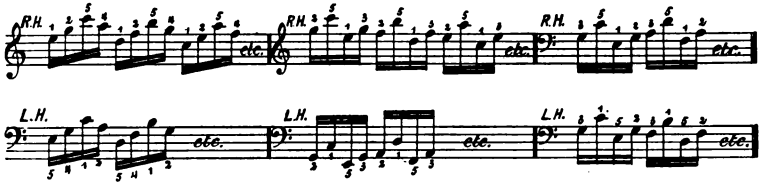


The following is a sequence study in broken thirds in triplets for the left hand. Played in the key of G major it requires a change of fingering once in each octave. The rhythm adds somewhat to its difficulty.



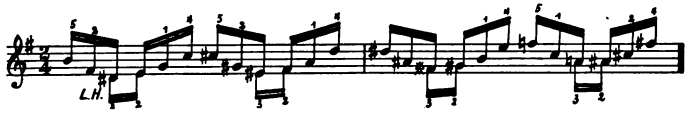
Forms from the Triad. — If a pupil has already practiced detached sixths, let him add the third, and he will then have the triad in the second

position, which may be practiced in ascending and descending passages in C major. To play this with both hands in parallel motion one octave apart requires extreme steadiness. We find that Rubinstein has made similar use of the triad in his " Staccato Étude " in C major. The two examples given below are derived from the triad and are valuable as technical work.



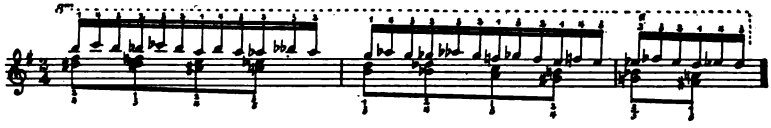
The triad furnishes material for many forms of elaboration that may be used as sequence studies. When these are played on consecutive half-steps, or tones of the chromatic scale, they require a light touch that should not be cultivated except for passage work of this sort. Besides, such passages have no messages to convey. When found in compositions they are merely flights of fancy that carry us to the clouds or bring us fluttering to the earth. A limited amount of this work is not unwholesome, since it illustrates how the notes of a chord may be worked into an elaborate passage. The principles of fingering required in practicing such passages should be considered an asset.

Sequence Forms Progressing by Half-Steps. — The following study uses the major triad in the second position. Two different forms are given. The one ascending is simple in construction and has no notes other than those of the broken triad, which descend and ascend alternately. The left hand aids the right by playing the lower note of each chord.



It is not necessary that a pupil see the notation of this passage before playing it. One should first practice the triad with the right hand throughout one octave, ascending by consecutive half-steps. This should be followed by broken fourths played with the right hand as given in the exercise. It will then be but a step to play the exercise complete through two octaves. The practice of the triad helps in making a definite impression of the chords. The practice of the broken fourths helps to make clear the fingering of this and corresponding passages. Chopin makes a similar use of the triad

in his well-known "A♭ major Polonaise." In the flourish of drums and trumpets which introduces the noble theme with its electrifying rhythm, he has four short phrases composed of triads in sixteenth-notes ascending in chromatic succession.

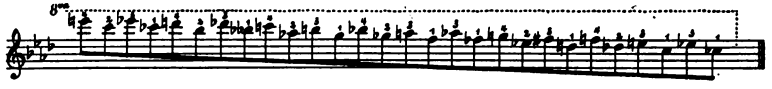


The descending passage is complex in construction, since there is a triplet figure on the upper note of each chord. The two lower notes, which are played with the left hand, give us the descending chromatic scale in minor thirds. The fingering of the chromatic scale in minor thirds is not difficult to acquire. The third and fifth fingers are used only twice throughout an octave, namely, with C and E♭, and G and B♭. The principle that makes definite the fingering for the left hand applies to the right hand and places the third and fifth fingers on F♯ and A, and C♯ and E. Analysis of the passage for the right hand in the example given above shows the triplet formed on each tone of the descending chromatic scale, which is a simple manner of elaboration. The finger required for the upper or second note of a triplet depends upon whether the first note of the succeeding triplet is played on a black or a white key. The fourth finger must be used if the following triplet begins with a note played on a black key, otherwise the third finger should be used to play the upper note of the triplet. When the descending passage has been played through two octaves, or back to the starting-point, it may be brought to a close in the key of E minor through the dominant seventh-chord by introducing A.

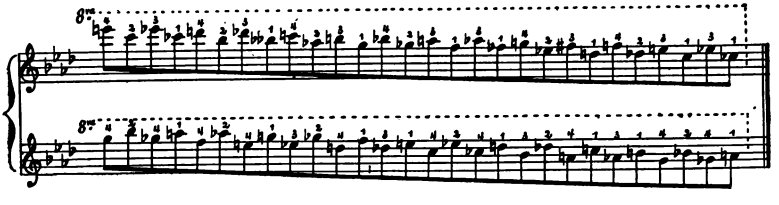
The ascending and descending passage given as a sequence study has little musical meaning in itself. It is found in "Le Papillon" by Lavallée, where it is used as a cadenza with the addition of a trill embellishment between the ascending and descending passages. As such it adds much to the brilliancy of the composition, which requires a facile technique throughout. As a study, its value lies in the acquirement of the fingering of certain technical figures, and in what these, as exercises, may suggest in the way of technique. The ability to play the notes accurately with correct fingering and the consequent assurance therefrom can be acquired only through a clear comprehension of their construction. Such passages, when found in compositions given for study, prove to be stumblingblocks to the average student, though in fact they may present less difficulty than the musical part of the composition. When taken separately they receive

a clearer analysis, and consequently a more thorough study, than when presented with other forms of difficulty; the object of *Étude Work* is to present difficulties singly.

The chromatic scale in broken thirds furnishes another field for technical work.



The above example shows the descending chromatic scale in broken major thirds. In the practice of this exercise the value of a light wrist and quiet hand will be proved beyond a doubt. As shown by the fingering, it is played throughout with fingers four and two, and three and one. These combinations are used alternately, with two exceptions, found where the lower notes of two consecutive thirds fall on white keys; here the third and first fingers will be used twice in succession. The principle may be applied to the fingering of the ascending scale, reversing the order of the thirds, and to the same passages for the left hand. The passage is not difficult when played alone. In " Liebestraum No. 3," Liszt gives us the descending chromatic scale in broken thirds for each hand. He ingeniously combines the two, using major thirds for the right hand and minor thirds in reverse order for the left hand.



Analysis of the passage brings out two interesting facts: namely, that the scale as written for the two hands descends in sixths, and that the combined notes, on each step of the descending scale, form a dominant seventh-chord. Observe that every other note for the right hand, beginning with the first, makes an interval of a major sixth with the corresponding note played with the left hand. Therefore, it is found that Liszt has used a well-known and easily recognized chord form in producing a passage of dazzling brilliancy. Its success as such is due to his rare ingenuity in working out effects. Boldness in execution depends much more on the preparation of the left hand than the right, since the thirds are broken in ascending order and require four different sets of fingers instead of two as indicated for the right hand. Observe that the third and second fingers

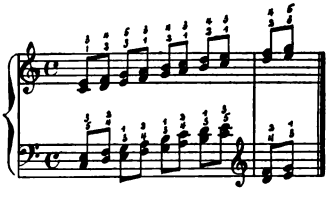
are used only where both notes of the minor third are played on black keys. As suggested earlier in similar passages, one should make sure of the arrangement of notes and the fingering; then, with a quiet hand, trust to the tactile sense when finally playing with velocity. The degree of success attained depends upon careful study and a reasoning process from the very beginning. The part played by the intellectual process is of the utmost importance, since it determines the emergent operations, that is, the impulse will be conveyed from the nerve centers with the same degree of definiteness as that in which the impression was made. This impulse is the cue to which motor effort is a response.

Fingering of Diatonic Scales in Double Thirds. — The diatonic scales in double thirds seem to be the last form usually taken up for exhaustive technical study. This is a wise arrangement and does not necessarily preclude all knowledge of this particular work or the execution of a scale in double thirds. Treated exhaustively, the study of scales in double thirds is a broad work and with but one exception, the one underlying principle for the fingering is based wholly on previous work. It may be a greater task to play a scale in double thirds than in single notes, but a pupil who has a mental grasp of essentials for playing the latter will easily comprehend the essentials for playing the former. For what do experiences count, if they do not prepare one for greater things? The daily experience of a music student should teach him to think and reason, to listen and discriminate. The five fingers of the hand furnish fingering for three degrees of the scale without changing position. With the left hand, these are five and three, four and two and three and one. We are required to prepare for four more degrees. Four and two and three and one, used twice over, will cover the four degrees.

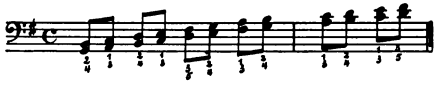
The question arises: In what order shall these three groups of fingers be distributed over the keys? In all cases whenever we can avoid the use of the thumb or first finger on a black key, the groups should be used in the order named above, otherwise the order will be determined by the keynote and the consequent position of the black keys. Only in major scales having less than three sharps and three flats in the signature can one avoid the use of the first finger on a black key, namely, in the major scales of C, G, D, F and B♭. Likewise, in the relative minor scales of those named above, with the exception of G, the relative minor of B♭ major, the first finger is not used on the black keys. In the succeeding scales, as black keys are added by the introduction of flats and sharps, the study should be to minimize the use of the first finger on the black key. But the harmonic form of the minor scale, which is used in general double-third scale work,

puts C, relative minor of E♭ major, into the first class through the elimination of B♭, the seventh of the scale, leaving for each hand the most opportune passing of the fingers.

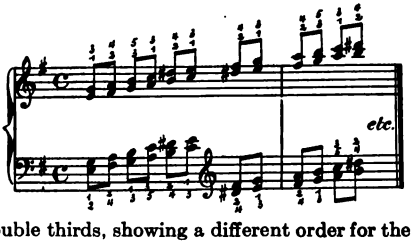
A few illustrations are given to show how the underlying principles of the fingering can be adapted to the different scales. The following example of the scale of C major in double thirds shows the natural order for the three groups of fingers.



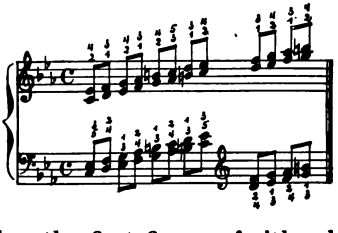
The following is the scale of G major in double thirds for the left hand. This requires a different order for the three groups of fingers, to avoid the use of the first finger on F♯. The fingering for the right hand is the same as that for C major.



Scale of E minor in double thirds, in which we find for the left hand a still different order for the group of fingers, while the right hand is fingered like C major.

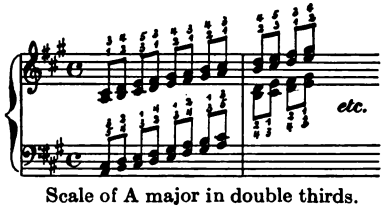


Scale of C minor in double thirds, showing a different order for the groups of fingers for the right hand, while the left hand is fingered like C major.



In the above examples, the first finger of either hand has not been used on the black keys. For the most part this has been due to a skillful ar-

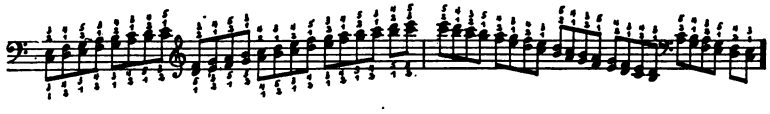
rangement of the order of the three groups of fingers. In the following example this avoidance is impossible, and it belongs to the second class, in which we seek to minimize the use of the first finger on the black keys.



Scale of A major in double thirds.

Many modern compositions are full of complicated combinations of double notes, and it is a discouraging matter when a student undertakes these with insufficient preparation. Double thirds, more than any double-note exercise, should have a place in the practice for technical equipment. The fingerings given are based upon what might be considered traditional principles, which are in themselves simple and may be made comprehensible to any student. There are more recent methods, but they require, at the start, a more developed technique. They also necessitate a combination of fingers that does not allow the cultivation of the needful qualities that should be gained in the first practice of double thirds. In technical study it would seem advisable to learn the older method first; any others may be easily evolved from this.

Most methods include a succession of two thirds where the third finger is employed twice consecutively. The perfect joining is impossible and the legato can be only approximately observed. Moszkowski has proved the possibility of finding, for all the scales, fingerings which do not offer this defect, for the same finger is not employed twice in succession, except when occasionally slipping from a black to a white key. In many scales the difficulty is not appreciably increased, while in others anything like a very rapid movement is practically unattainable. The advantage may be observed in the C major scale given below.



The principle of this fingering may be clearly outlined and should be known to the pianist and student. It may be found in Moszkowski's "Scales in Double Notes."

The scales in double thirds give us nothing new in form and nothing new

in point of technique that has not been anticipated. The fingering of the different scales would prove to be an almost insurmountable task to the average student if there were not an underlying principle, which can be used as a key to the situation. How many young students are able to deduce by themselves the principles of fingering as found in much of the basic work, and how many are able to use the fingering, when it is given them, without weeks and months of practice? These principles should be introduced into the art of fingering as soon as the subject-matter is introduced, and should be made the vital factor in formulating rules, when such exist. When the needs for the occasion and the means at hand have been pointed out, the pupils should be led by suggestions until they have established to their satisfaction some principle that will insure for them correct fingering. All pupils should be taught to take a conscious part in their own training. It is not too much to assert that a certain amount of ego is necessary, and an awakening of pride is usually followed by greater effort. In the study of music the pupil should be helped to build up a wholesome belief in his ability to set free mind and fingers, for in this matter auto-suggestion plays a large rôle in his success.

Technical Equipment of the Student. — Between purely technical exercises and compositions called pieces, however simple these may be, there is a wide range of technical work in the form of Études that supply an important need. Without the study of Études the pupil would enter upon the boundless field of interpretation with little knowledge of musical forms, limited experience of their possibilities in rhythm and phrasing, and a want of endurance that can be gained only by the practice of musical ideas exhaustively treated. Few pupils can forgo the benefit derived from much of the work found in Czerny's " School for Velocity " and his " Finger Dexterity," and in Cramer's " Fifty Studies." Lecouppey and Burgmüller have contributed studies that may be used as a preface to Czerny and Cramer. Heller and Loeschhorn anticipated the need of special studies in phrasing, and Neupert has given us some valuable Étude work in diversified form. In his " Gradus ad Parnassum " we find that Clementi covered every known difficulty and anticipated those of later invention in this work of one hundred studies, which are to-day the acknowledged basis of the art of piano playing. The majority of these composers were teachers, and many were pianists of acknowledged artistic ability. They understood the needs of the pupil and the technical preparation necessary for the artist. Each in his own way has worked into varied forms and rhythm the same material the pupil gathers step by step. In their work we find a broad use and treatment of this material which appears, for the

most part, ungarnished, and which is easily recognizable, though occasionally combined with melody and with new chord combinations. The experience gained through these studies extends the horizon, awakens discrimination, and fits the pupil technically for the more varied and complex work found in the masterpieces of the great composers where, in the words of Haydn, "Art and composition tolerate no conventional fetters: mind and soul soar above them."

The compositions of Bach hold a unique place in the equipment of the musician and stand preëminent in the intellectual development of the student. As exercises for concentration nothing can equal them. His wonderful creative genius fills one with amazement. In his Inventions he has demonstrated what can be done with a theme by the most simple but ingenious means, and has shown us the beauty of contrapuntal form. The study of these smaller compositions produces a most salutary effect on the mind, while the fingers are not neglected and attain great independence. The compositions of Bach should become known to every student chiefly for the high intellectual qualities and consummate musicianship which characterize them. They are the highest type of purely classical music, and, as such, appeal to the intellect rather than the emotions. It is only through the aid of the intellect that we discover their greatest beauty. Bach understood his material and how to use it, the instruments for which he wrote and their capabilities. His profound originality and unsurpassed intellectual grasp make his compositions stand out as musical monuments. His faculty for perceiving in an original way and the infinite pains taken in working out his musical ideas awaken like qualities in the devoted student. In the matter of technique his compositions are indispensable to the pianist. From the smallest to the greatest they are well adapted for the development of finger independence.

Technique, more than any other equipment, depends upon the efforts of the student. True, this essential is more easily acquired by some than by others; it is known, however, that some of the best pianists of their day were handicapped by what might be considered physical restrictions. The acquirement of technique is a matter of will and the willingness to control efforts in the discipline of fingers, hand and arm until they respond to direction.

CHAPTER IX

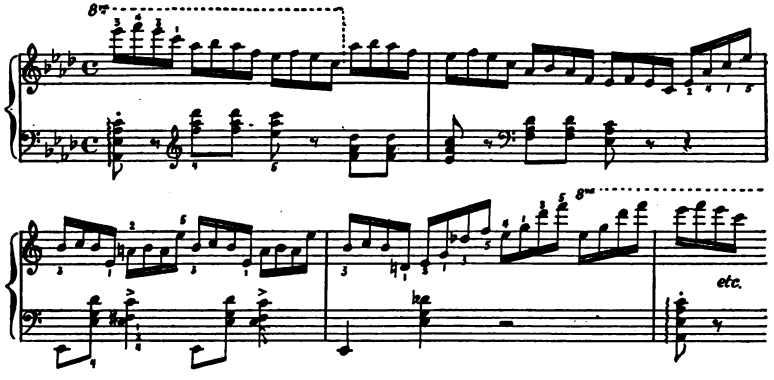
MUSICIANSHIP THROUGH ANALYSIS

THE work as suggested in the preceding chapters has been offered to illustrate the conscious part a pupil may be led to take in the building of material that serves as the basis for creative work. Attention has been directed to fingering with a view to presenting principles from which the fingering of such material may be deduced. In this way a pupil in practical study may mold the hand and fingers to these forms by a reasoning process, thereby making more definite the principles of fingering and the necessary movements in playing. There have been suggested for consideration in early analytical study a number of points involving knowledge thus acquired, while the effort has been to present the requirements under discussion in such manner that their efficacy in building up a sound musicianship might be more generally appreciated. It has also been the purpose to establish and elucidate the analogy between basic material, as used in technical studies, and the musical ideas found in written work. This has been done to show the appreciable influence knowledge systematized in conformity to these principles may have upon the success of the piano student. Through the exercise of such knowledge a student learns the force that lies within himself, and that this power will insure composure in the conscious direction of its use.

It follows that through adequate technical practice and the study of compositions by both classical and modern composers, the pupil should be led along lines that make clear the construction of the compositions studied. The ability to analyze establishes the fact of the acquirement of the knowledge necessary for this purpose, and that through it the assimilation of the new or creative work is possible. We have now to show more in detail the practical value of analytical work and the influence of conscious effort in assisting nature's slow process.

Structural analysis, or analysis of form, is very necessary for certain compositions — for example, Sonatas — and for the study of any composition as a whole. Our aim at this point, however, is to analyze material in a manner that will give the pupil a mental grasp of that which serves as the backbone of invented or created work; in other words, to analyze so that

a pupil may recognize basic material in invented or created forms. As an example take Wollenhaupt's Opus 22, No. 1, an Étude that is of value in the study of simple forms and in the technique that may be derived from such practice. It is clear to the mind that we have a descending



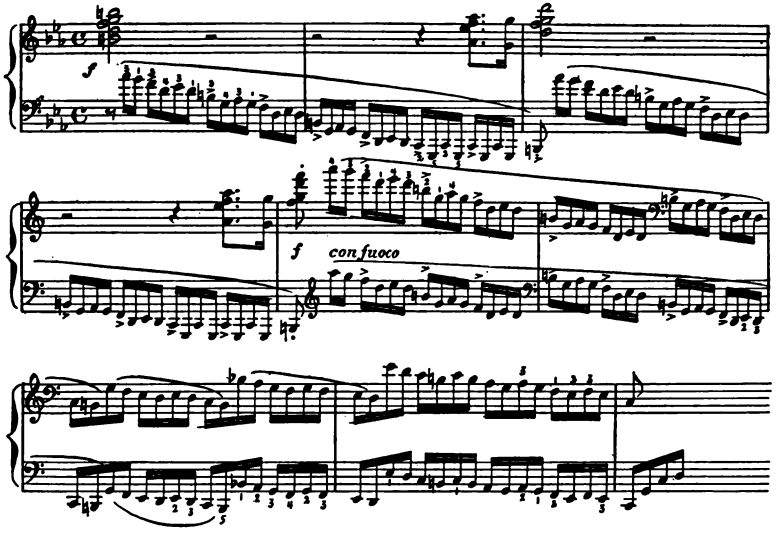
passage of two alternating groups of four sixteenth-notes: one on A♭, the keynote, and one on E♭, the fifth of the scale. These groups are identical in formation and are played with the same fingers. Beginning with four-lined E♭, the fourth E♭ above middle C, the passage is continued until the group four octaves below the starting-point has been reached, when we find the broken chord of A♭ major. This passage fills the first two measures of a period of four. Each of the first two groups appears as a thought group, and the remainder follows as a sequence. The left hand has the chords of A♭ and D♭, which alternate with each beat; the repeated chords, falling on the weak beats, bring the single chords on the accented beat. In the third measure we find the dominant seventh-chord on E♭, and on this chord is based the figure for the right hand which is written within the compass of an octave. The principal notes are E♭ and B♭, one and five of the chord. A pleasing change comes on the third and fourth beats of the measure, where the dominant seventh changes to the diminished seventh. In the fourth measure we have the dominant seventh-chord as the basis, to which is added the ninth in the ascending passage for the right hand. This leads to the second period of four measures, where the figure found at the beginning of the first period is repeated. In the first sixteen measures this descending passage appears four times. As a part of the secondary theme, the left hand has a similar ascending passage in the key of E♭ major. After the episode, in which broken chords serve as the material, the ascending chromatic scale carries

us to the first descending passage. Lastly, this passage appears in the coda, where it descends far into the bass before the final chords of A♭ major bring the Étude to a close. A pupil accustomed to the study of chords and technical figures will be able to acquire the material in the example with the first careful analysis. The chords constituting the structure about which the simple musical ideas are interwoven and which, in some instances, lend their component parts to compose entire passages, are, with the exception of an occasional diminished seventh-chord, those found grouped in the cadences of the keys represented. The manner in which the themes are linked together comprises the real mental study in the whole composition. These various links contain differences which, if noted, will greatly aid the memory, through dissimilarities. This Étude, like many of the more simple ones by Cramer, is an example of what might be considered tests of a pupil's power of concentration. One should be able to hold to the thread of connection that runs throughout the study and after a little practice play it through slowly without notes. Studies of this kind cannot be played in rapid tempo without the aid of the tactile sense. This latent sense will make itself manifest where there has been adequate technical preparation and a full knowledge of the material to be played. In cultivation it appears to be the result of motor effort under favorable conditions. These conditions depend upon the definiteness of the mental process required to reach certain points by the most direct means. One attainment always leads to another, and through this process we find that musical matter becomes visualized. Motor effort should never be handicapped by vagueness of direction or distance.

Chopin, Étude, Op. 10, No. 12

An Étude of Emotional Content. — This Chopin Étude, while lyric in form, is a bravura study of the highest order. It is written in the key of C minor and is called by many the "Revolutionary Étude." The melody, rising aloft out of a mad and tempestuous storm of passages for the left hand, now proudly majestic and anon passionate, soars above it all. Grief, anxiety and despair are the burden of its message as expressed by a noble soul. History tells us that it was composed in Stuttgart in 1831, shortly after Chopin had received tidings of the taking of Warsaw by the Russians, and while he was yet uncertain as to the fate of his relatives. From beginning to end the left hand sweeps through a mass of notes that, in parts, may appear to the uninitiated to be piled up in chaotic confusion.

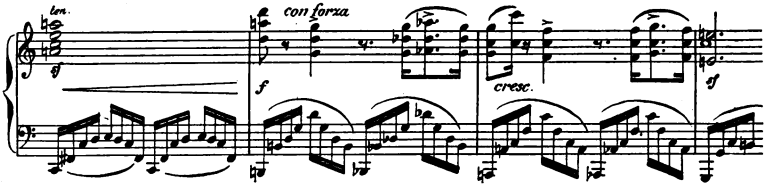
First Period of Eight Measures



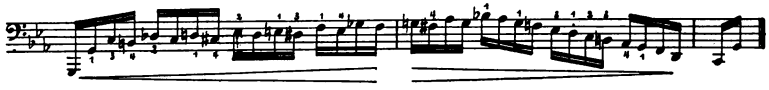
Analysis shows us that the Étude begins with an introduction of eight measures in which the dominant seventh-chord on G figures as the chief harmonic basis. Immediately following this chord in the second position, which is played with the right hand on the first beat of the measure, we find a descending passage for the left hand composed of two alternating groups of four sixteenth-notes formed on three and seven of the chord. On the third and fourth beats of the second measure the harmony changes to that sharply dissonant chord of the seventh formed on four of the minor scale. In the third measure we return to the dominant seventh-chord on G. This time it appears in the third position, with its third in the bass. It is followed by the descending passage as in measures one and two. At the beginning of the fifth measure we reach a climax when we return to the dominant seventh-chord for the last time before beginning the melody. At this point the chord is moved still higher, appearing in the fourth position. Here the descending passage is taken by both hands one octave apart. Beginning high in the treble the passage continues through two measures where, dropping to C, the sequence form changes to three short descending scale figures beginning successively on G, B♭ and E♭, five, seven and three of the C minor scale. These bring us to the ninth measure, the first of a new period of ten measures, where the left hand begins the restless, surging passage that forms the setting to the melody. Here we

reach the long-delayed keynote which we were led to expect with the first dominant seventh-chord. The broken chord of C minor occupies the succeeding five measures of the left-hand passage. The two figures as found in the example given below fill alternating measures until the sixth measure of the period is reached.

The first is an extension of that found in each half of the second measure. In these measures we find only one auxiliary note. D is always used between C and its third, E♭. The introduction of this note adds much to the solidity and strength of the passage. These two figures appear with each return of the first phrases of the theme and fill twenty measures of the study. In the sixth measure of this period the C minor changes to the diminished seventh on C. This is followed by a change of harmony with each half-measure, the base note descending a half-step with each change.

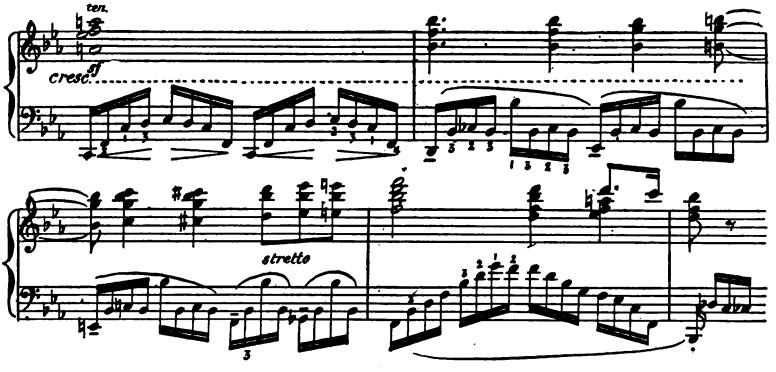


Through these measures the bass drops from C to G, but the ascending chromatic passage which follows begins on C. Upon reaching B♭ we descend by the C minor scale to C, where the accompaniment prepares for the return of the first phrases of the theme. The example shows ascending chromatic passage and descending scale.



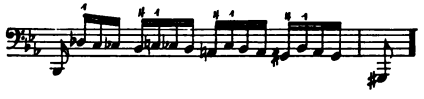
We return to the theme with its accompanying passage of the broken chord of C minor. In the sixth measure of this period the chord changes to the dominant seventh on F with the fifth in the bass. Following this change, the melody and accompanying passage ascend by half-steps. The bass passes from C to G♭ through each intervening half-step, with one exception, and finally settles on F with a six-four chord followed by the

dominant seventh, which resolves directly to B♭ major, as shown below.

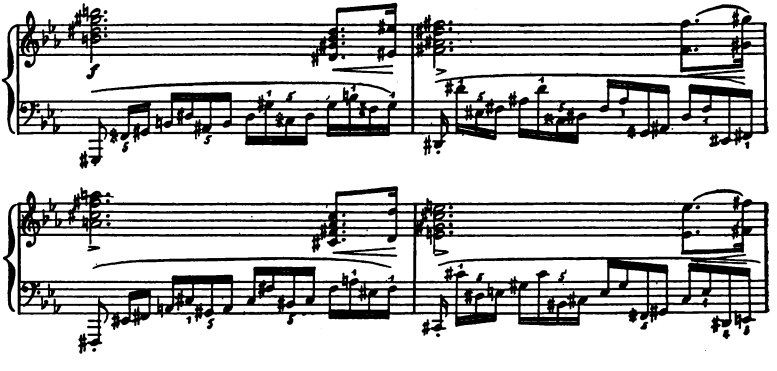


Leaving the key of B♭ major by a chromatic sequence figure of four notes descending by half-steps for four changes, we reach the next period of eight measures.

Chromatic Sequence Leading to This Period

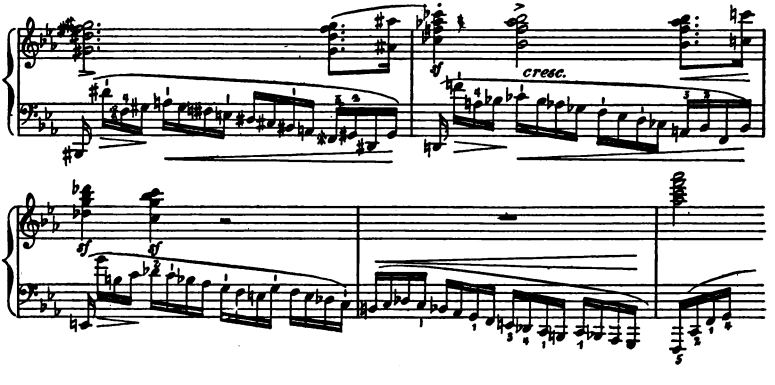


Though the harmony employed in this period is transitional, the material is not so elusive as one might expect at first glance. In the first four measures we find nothing but broken three-part chords, the root always appearing in the bass. These chords follow those for the right hand, through which the melody sings, and with them change with each measure. In the second measure the chord for the right hand drops a fourth and the left hand carries its harmony to a chord having the same root. The last two measures follow the first two as a sequence one degree lower.



In the extract given above we find that G♯, the bass note, is followed by the broken chord of G♯ minor. The three notes of each position are augmented by a note which is always one half-step below the first note of each new position of the chord. This gives four notes to each position, thereby leaving the changes regular, and these are found to occur on the last half of each beat. This order is observed throughout the four measures of broken chords. In the first and third measures the chord positions ascend; in the second and fourth they descend. The separate requirements in the playing of these measures are simple. Think of the first triad to be played and place the hand so that the fourth finger is ready to play the lowest triad note of each new position. This leaves the fifth finger free for the auxiliary note. The name of this note is of little importance; if the pupil knows the chord and its position, he can supply the name at will, since it is a diatonic half-step below the lowest note of the chord. If he can visualize the chord, the note is easily added. If he can play the notes of the chord with a quiet hand and correct fingering, it will hardly be possible to miss the note with the finger in position over the key. So the effort, in this and similar places, should be to discern the basic material, separate it from the mass, and let the auxiliary notes find place about what we know and recognize as a unit.

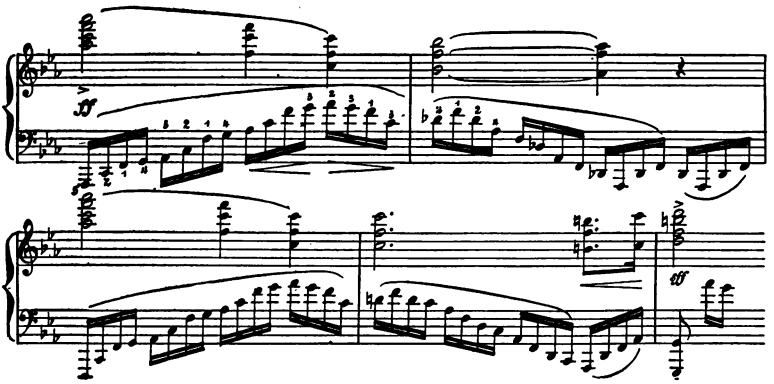
In the first three of the last four measures of this period, the dominant seventh-chord of each measure, played with the right hand, stands out strongly and determines the bass note, which is always the third of this chord. In the first of these three measures the dominant seventh-chord is formed on G♯. The notes of G♯ major triad with one auxiliary note fill



the first and fourth beats of the passage work, while the second and third beats give the C♯ harmonic minor scale unembellished. The second meas-

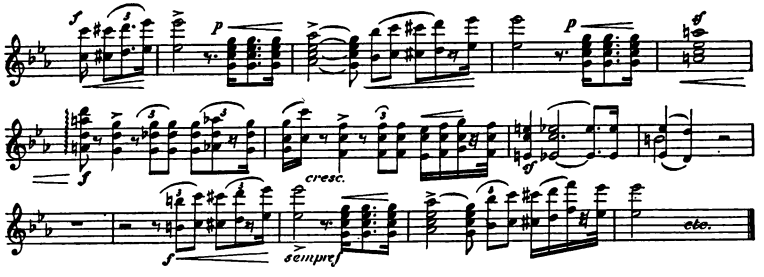
ure repeats this passage one step higher, written a diminished third higher, the dominant seventh-chord being built on B♭ and the scale part of the passage giving E♭ minor. The third measure gives us the dominant seventh-chord built on C, and the F minor scale furnishes the material for the scale passage which carries us to the end of the fourth measure.

The transitional state of the harmonic architecture of the last eight measures has prepared us for the climax in the next period.

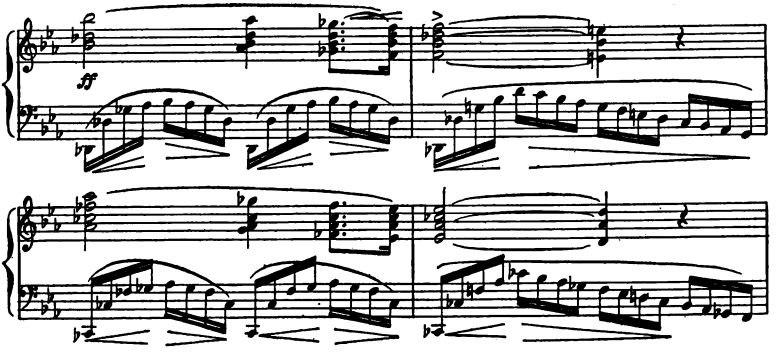


The melody, in two short phrases of two measures each, carries the passion of despair to the hearts of the listeners. The harmonic basis is found to be in the key of F minor. Against this surges the left-hand passage which, when ascending as in measures one and three of the period, sweeps through the arpeggio of the F minor triad for three octaves and more. As in the arpeggio on the chord of C minor, described earlier, the second is used as an auxiliary note. In the second measure it descends by an arpeggio on the D♭ major triad. In the fourth measure it descends by an arpeggio on a chord of the seventh built on D, having a minor third, a diminished fifth and a minor seventh. This particular kind of chord is found only on the seventh of the major scale and the second of the minor scale. Our keynote is unmistakably C minor, since we are led directly from this chord to the dominant seventh on G. With this chord we find ourselves beginning the fiery passage of eight measures that first led to the theme. When we finally reach the arpeggio on the chord of C minor, we find the next sixteen measures essentially the same as the corresponding measures in the beginning of the study. But the force of action seems to have increased and the grief expressed seems to be more poignant. This is shown in the melody in two different ways. The octaves that lead to

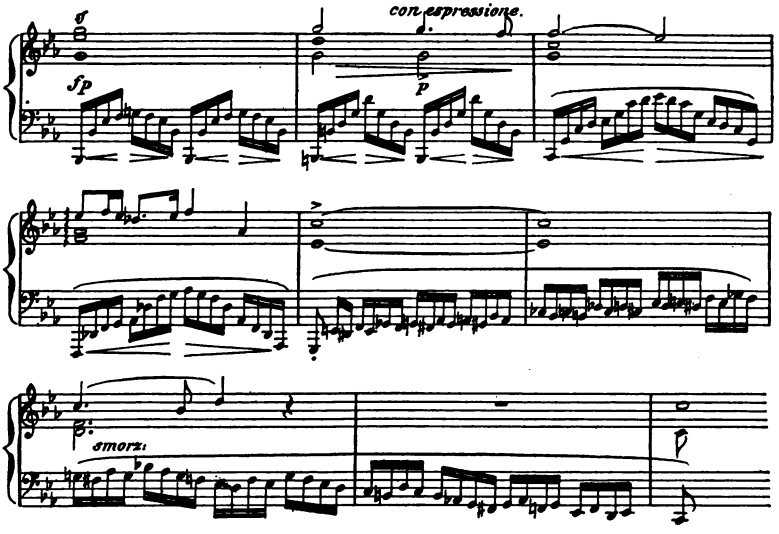
the principal notes of the phrase on the first beat of the measure ascend by the chromatic scale instead of the diatonic scale.



The rhythm of these phrases is changed, since the number of notes is increased. The other phrases give oft-repeated chords, which indicate uncontrolled agitation. In the next four measures, the last four of the period, all agitation has disappeared. Resignation and grief sing through the two short phrases of two measures each. The second of these phrases with its accompanying left-hand passage is a sequence of the first, one degree lower.

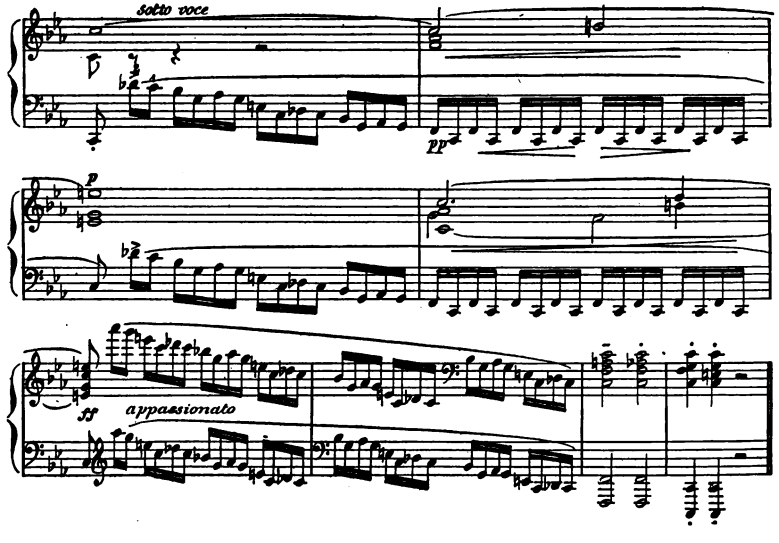


In the next period of eight measures, which is shown on the next page, the melody expresses a more quiet mood as it approaches the close. The harmony begins with a six-four chord on E♭ and prepares to pass directly to C minor. But it is carried by a beautiful progression of the melody to the D flat major triad before settling on G for a six-four chord as a preparation for the dominant seventh. The chromatic passage which follows G, the bass note, is constructed like one found earlier in the study. It ascends for two measures, when it is carried into a new figure of sixteenth-notes, which is played three times on descending thirds. In the last half of the last measure the passage descends the C minor scale by seconds.



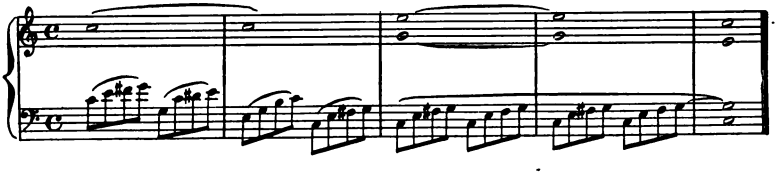
In the last four measures the melody sings as though a prayer were breathed through it, — at first softly and sadly, but hopefully, since each time it ascends to C accompanied by the major chord on that note. The triumphant closing of the theme is followed by an appassionato passage for both hands one octave apart which descends through four octaves. Four sharply defiant chords, ending on C major, bring this remarkable study to a close.

Closing Period



The structural forms of the passage work present no difficulties to the pupil who has been taught to analyze with a view to obtaining a mental grasp of the material in compositions chosen for study. Analysis has shown the entire passage work to be most skillfully built from scales, both diatonic and chromatic, broken chords, arpeggios and many different figures used as sequences. In fact, much of the technical difficulty in the execution of the Étude arises from the rapid shifting of the many varied forms. The notation of these, as carried through the various keys, may be more or less confusing, but it is found that few auxiliary notes obscure the basic material. There is no intention to minimize the difficulties to be met in the execution of the foregoing study; difficulties exist which can be overcome only by a finished technique and a well-poised musicianship.

Basic Material in Chord Forms. — With daily practice of technical exercises such as scales and chords, broken chords and arpeggios, the pupil involuntarily adjusts the hand to the keys as in the study of these exercises. The study of the distances and intervals with which he becomes acquainted in this practice lays the foundation of the habits to be acquired. Through the position of the hand over the keys, one can easily strip a chord form of its auxiliary notes and fill in again at will. The result is wholesome, and the chord, representing pure basic material, stands out clearly as the nucleus of a thought group. Music is so manysided that a pupil seldom learns this by himself with any degree of definiteness. It is still more difficult for a pupil to recognize chord forms in a mass of notes. Without analysis there is no requirement in the study of pianoforte music that tends to focus the attention in this direction. Chord forms, like chords, should be read as a unit and the pupil should be taught to analyze them, not only for the purpose of establishing definitely the chord and the auxiliary notes employed, but to cultivate the habit of discernment. There is no better way to meet this need than to find exercises having a peculiarity of arrangement that will answer the purpose. One of the simplest of chord forms is found in an exercise from Lecouppey, Op. 17, a small collection of helpful and interesting studies for the young called " The Alphabet."

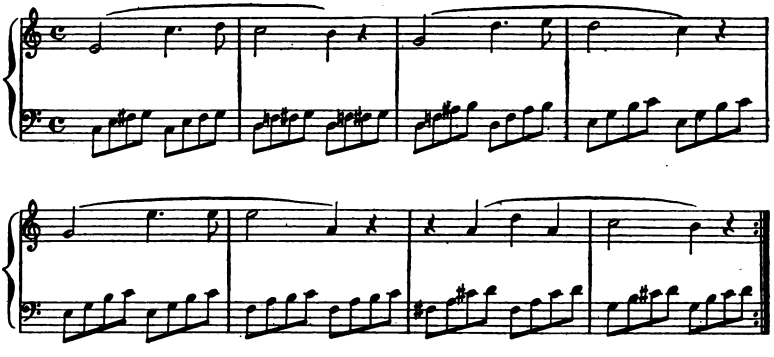


The extract given above shows the last five measures of this study. A pupil who has been taught basic material systematically will not fail to

find the chord and the peculiar position of the auxiliary note, if his attention be directed to these particular points.

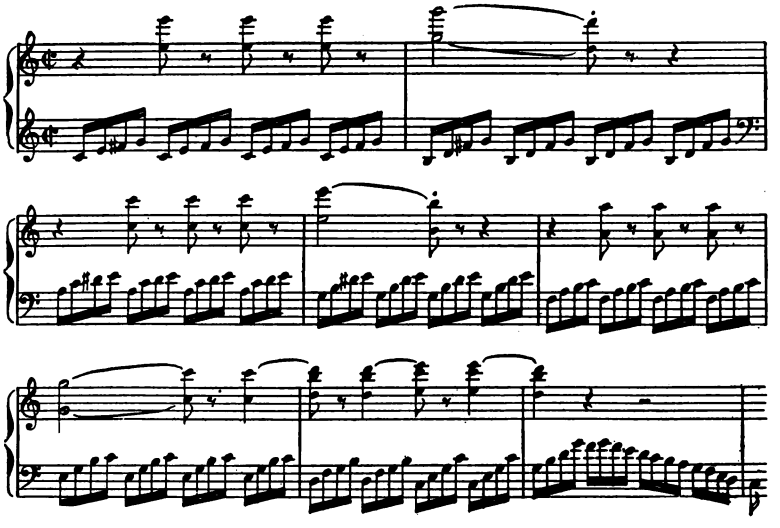
Through analysis the pupil will learn that the third note of each group of four eighth-notes is an auxiliary note, and that its position is always one half-step below the last note of the group. When he has established the fact that the chord is C major, and has noted the different positions of this chord and their order and repetitions, the intellectual process is over. The five measures hinge on one scientific base, *a single chord.* The same peculiarity of construction is used throughout the study, but, as the harmonic background of the theme, the chords are required to change often.

The First Eight Measures of the Study



In the eight measures we find five different chords. We may consider the material proportionately difficult to acquire. But the succession of the chords establishes a peculiarity that may be used to advantage in teaching the study, and one that should be noted in the analysis. We find that with each change of the chord the first or lower note ascends one degree, except in the seventh measure, where this regularity is changed to a chromatic half-step. Three of these chords belong to the family group of C major as found in a simple cadence. They fill the first six measures. The two remaining chords belong to the key of G major, in which the first part of the study ends. In the analysis of all chord forms, the position of the hand over the keys materially aids the mental calculation. If given a cue, through the tactile sense the hand involuntarily finds what it has learned as a unit in the technical exercises.

In a study from Czerny's "School of Velocity" we find the following:

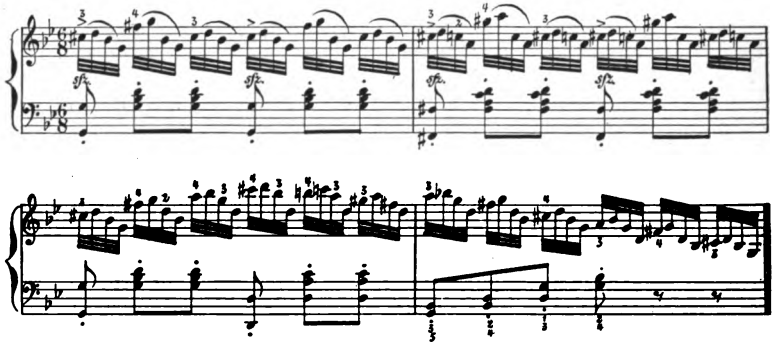


The construction of the chord form for the left hand is the same as in the Lecouppey study, except in the seventh and eighth measures, where we find pure basic material. It may be observed that with each change of chord, the first or lowest note descends one degree until the eighth measure is reached. Both Lecouppey and Czerny chose rhythms with which it was necessary to use the octave position or an auxiliary note with a three-part chord. For the most part, Czerny has taken pure basic material to work into his studies, but we find an adequate number which give constructions similar to the foregoing for both the left hand and the right hand. In the playing of such studies, assistance comes quickest through recognition of the material one is accustomed to play. Czerny's studies seem designed to develop endurance as well as velocity and finger dexterity. They also require great watchfulness on the part of the pupil. For in changing his figures without warning and often requiring a sudden contraction or expansion of the hand, he has set pitfalls for the fingers. It is surprising how much simple, but valuable, technical work he has crowded into a single study.

Chord Form Showing the Auxiliary Note at the Beginning of the Group

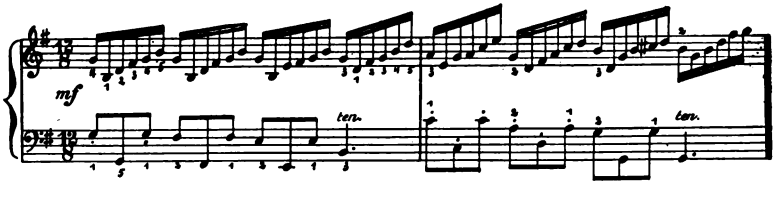
The example given below is taken from a Cramer study. It shows a chord form with the auxiliary note placed first in the group. The last three notes constitute a chord which agrees with that found in the bass. In each instance the auxiliary note is found to be a half-step below the upper note

of the chord. This arrangement is used throughout the study, which comprises twenty-eight measures. The four measures given below constitute the first period. In these four measures only two chords are represented: the chord on the tonic or keynote, and the dominant seventh-chord. In



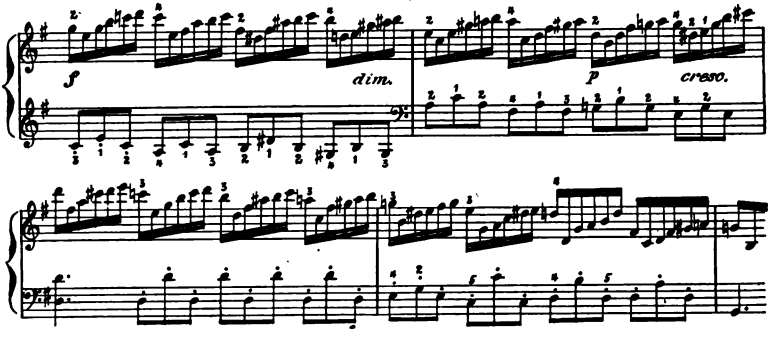
general, pupils find the notation of this study confusing. This would not be the case if they could recognize the structural basis, and it might be supposed that a pupil prepared for Cramer would be able to do so; but this will not be possible, unless he has been taught to build and recognize chords.

Example Taken from a Cramer Study Showing an Extended Chord Position with Auxiliary Notes

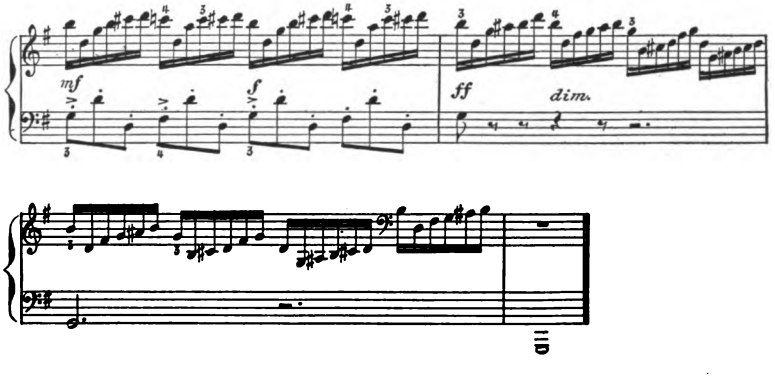


The study from which the above is taken offers difficulties which, as in other studies of its kind, can be essentially lessened by a recognition of the material used. In the two measures shown, the chord in each group stands out clearly with one auxiliary note. Later in the study two auxiliary notes are often found in a group, particularly in those groups that do not embrace an octave. These notes are not found to hold to any one position in the chord groups. The two measures shown can give no idea of the rapidly changing harmonies found later in the study. In every instance each group of six sixteenth-notes should be read as a thought group

with the hand in position prepared to play the notes comprising the group, otherwise the material will prove to be most elusive. It is only through analysis that the pupil will observe in the beginning the beautiful melodic progressions. Perhaps the most interesting progression is found in the example given below.



In this we recognize a sequence, made up of two groups of six sixteenth-notes, which appear in four different positions, thereby filling two measures. In the last two measures we find that the chord groups descend without interruption. The tones represented by the first note of each group show the descending scale for one octave with an omission of one degree. The last two groups in the fourth or last measure give us a six-four chord followed by the dominant seventh, a progression with which the pupil should first become familiar through its use in building the cadence.



Two chords furnish the material used as the nucleus of the different groups found in the last four measures of the study. These are easily recognized as the chord on the tonic or keynote, and the dominant seventh-chord.

The average pupil, untrained in chord building and in analytical work, finds a task before him when he begins the study of this Étude. So much attention is necessarily directed to the reading and the technical requirements that the musical significance is lost to him. What interest can an unintelligible mass of notes arouse in a pupil? True, some beings vibrate with the sound of a single note, or sway with the suggestion of rhythm in connection with tones, or wait expectantly in anticipation of a progression. There are others with indomitable wills, though less gifted musically, who, determined on a point, will find a way through all obstacles that may be overcome by will, energy and perseverance. The majority of pupils, however, cannot find a way out by themselves or by ordinary methods. Should they be left to stumble on, dulling their musical sensibilities by meaningless sounds, and finally falling by the wayside? Should those of the first class, those in the minority, be left to grope in darkness unnecessarily, thereby wearying the body and retarding the success that awaits them? There are such depths of knowledge round about us and such beauties in the art world that it seems a pity to waste time and energy in misdirected effort. Much can be done for all, the gifted and the less gifted, by engaging their interest and helping them cultivate penetration in analytical study after first fitting them out with the essentials. Through analysis, musical forms unfold like a flower, displaying symmetry and beauty, and lie before us like an open book.

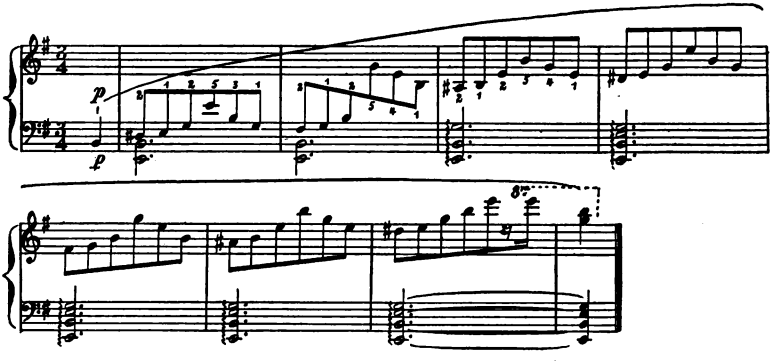
Systematic Memorizing. — It has been said that no branch of music study is so barren of results as that relating to practical musicianship and memorizing, and that pupils consume too much time memorizing a composition. Practical musicianship is the only base upon which the student can build a rational system for comprehending and retaining music. It is precisely what the majority of pupils lack and what they most require. They need the assurance of knowledge that comes through the acquirement of practical musicianship. This in itself is composure; it suggests concentration and allows conscious control. The foregoing chapters have aimed to show that practical musicianship may be readily acquired and that in the process the mind should be the great factor. This precludes any process that does not appeal to the intellectual faculties. The aim is to raise the student from "the level of a parrot to the height of an intelligent, thinking being," as one discerning critic has declared. It is not enough that we teach pupils to think; we should teach them to originate thoughts that are valuable to themselves, and how to utilize them after having obtained them. It is not a question of teaching them to think more, but of teaching them to think rightly, and to learn to separate the

essentials from the nonessentials. The result will be a better system of study. Efforts will yield more, because there is, back of all, a mental consideration which determines methods. While knowledge is considered to be of inestimable value to the student, method of study and consequent habits acquired are of still greater importance.

The real test of any method of study is the final result: the ultimate hope of all music students is to play the instrument of their choice. The piano student need never be left in doubt as to progress, for it is not required that he study long before realizing that progress is made. The advanced pupil and the adult find beauty in study and are content with progress: they are filled with wonder as their musical horizon broadens. They work for the satisfaction derived and for the love of art, or for the wholesome effect music may have on their being. But youth does not choose to study for the mere pleasure of studying. To him the crowning success of study is to play. Seldom is this desire found to be a selfish one, for it is engendered in the home life. It is a point upon which all parents are firm. To play, and to play before others, is the tangible result of study. In most instances it is considered the sole compensation for the outlay of time and energy. To the child whose desire to study music may not have been made manifest, and to those who oppose the decision that they study, some stimulus is necessary for their musical existence. To ambitious youths bent on reaching a certain goal, it is not enough that study time becomes pleasanter. They trust to their own enthusiasm to bring them through, but they are ready to throw themselves on the crest of the wave that will carry them farthest. Herein lies our hope to interest such students more deeply. There are gifted adult students who, in memorizing, have used their musical intuition to the exclusion of all other processes. They need but a single failure to prove the futility of depending on that alone. There exists a class of students, hard working and conscientious, who, without systematic study leading to this end, would never be able to enjoy the satisfaction of playing a composition through from memory. It is not necessary to wait for final results to prove the value of a rational system. Its efficacy may be recognized at each step. Take for an example the first period of the Chopin posthumous Waltz in E minor, a composition frequently heard in the classroom.

The student may read the extract away from the instrument as he would read a sentence from a book, and, from this first single impression should be able to play it without notes. In the process of playing he has four separate factors as his assistants. The eye recognizes the form; the ear makes sure the correctness; the mind accepts it as built on a scientific base; and,

finally, the hand follows the mental cue more easily through the aid of the tactile sense developed in the practice of similar forms. Each factor is strengthened by the presence of others, while the time required to make the impression is comparatively short. The particular arrangement chosen by Chopin is so simple that we wonder why we never thought of it ourselves. The first impression fixes, not necessarily the name of the chord (E minor), but the fact that it is formed by E, G and B. The different positions are noted with the one auxiliary note beginning each group.



Lastly we observe the fingering, whereby the hand on the last note of each group is thrown into a new position as a preparation for the beginning of the succeeding group. The whole composition lends itself admirably to comprehensive analytical study. Sequences, which appear in easy figures or short phrases, are found to constitute its chief constructive element, the material being taken directly from the simple harmonies used. These two facts tend to make the composition easy to comprehend and proportionately easy to memorize. Since much of our technique is gained through the practice of chords, chord forms or figures constructed from chords are more easily played than those not so generally used.

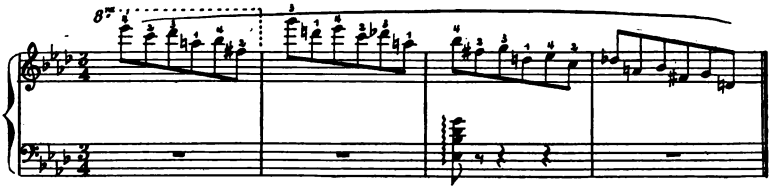
Amateur pianists are charged with many shortcomings. One accusation commonly heard is that they have a habit of forgetting the base when playing from memory. Pupils are inclined to give more attention to the melody than the accompanying parts, with the result that the leading of the bass is not carefully noted. As a consequence, association, one of the strongest points in a judicious method of memorizing, is lost and through indefiniteness only a blurred impression is made. In the Chopin Waltzes the basses are modest parts, but they have decided tendencies. The full importance of their influence will not be observed by the pupil without analysis and without due attention to them when understood. The bass is not chosen

merely to give rhythmical motion and harmonic background to brilliant passages and lyric forms. It oftentimes carries beautiful melodic progressions that should sing with gentle persistence, while never interfering with the charm of the principal themes. We find just this kind of bass in the E minor Waltz. I believe Rubinstein is credited with having said that women could not play a waltz bass. This remark (probably made while the great artist teacher was in an intolerant mood) would indicate that he found, particularly among his women pupils, a tendency to an inartistic manner of playing such basses. A pupil aims to give out the beauty with which he is duly impressed. The quest for beauty in a particular part, where it is not found on the surface, will create an interest in the part; and recognition of its substance always tends to make memorizing an easy and agreeable task.

Few students cultivate penetration to such a degree that they can find at all times a means of gaining impressions of the difficult points that can be depended upon to carry them safely through a composition when playing from memory. Coöperative work by teacher and pupil in this direction is essential as long as they bear that relationship. The teacher holds the vantage ground and her viewpoint is a broad one. She sees where the failures occur and whence they come. She has experience acquired through her own study and from watching the failures and successes of other pupils. Each lesson-day she turns to the work with a freshened mind, while the pupil, lacking all these advantageous points, is fettered by practice to the one idea usually gained from the first impression. For these reasons the work of the teacher is quite as significant in this particular as in directing the development of technique and musicianship, and in assisting in the cultivation of the wonderful art of interpretation. A suggestion now and then in doubtful places may add just the trick of color that may be needed to impress indelibly some passage and to place the pupil on more friendly terms with the scientific base upon which the passage was constructed.

Without suggestions from the teacher, pupils are inclined to fall into the habit of depending upon memorizing by rote, thereby wasting valuable time. Gifted players would be quite content to work on in the old way if the teacher could not bring absolute proof in favor of a rational system. It is a good idea to let them work on a composition in their own way for a few days and watch the result of their efforts. On one occasion a young woman, who had made a very broad assertion of her ability to memorize, returned with a dejected air. She was expected to play from memory the first two pages of Moszkowski's "Valse brillante," in A♭ major, though

she had volunteered to do more. She humbly announced that she was uncertain of the descending passage beginning with the fourth measure of the introduction and continuing throughout four measures.

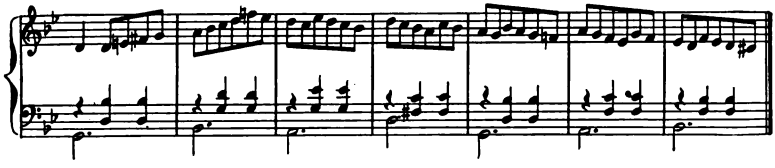


When shown, she readily saw that the single chord in the bass, the dominant seventh-chord on E♭, held the key to the passage. She recognized that the first note of each beat was a part of this chord and that these notes, separated from the others, formed a descending arpeggio on this chord throughout three octaves, and would necessarily be the same in each octave. The note on the last half of the beat was found to be a half-step below the following note. The next point considered was the fingering. It was found that two alternating sets of fingers were used, four and two, and three and one. When each fact was noted, the passage became a fixed product of the mind and stood out as clearly as the chord itself. The composition is admirably constructed for surprising results in analysis. With the exception of a few sequences the material contains little else than that grouped about simple chords. So ingeniously has the composer worked out his ideas that the nucleus, in places, appears only in hazy forms. A little brushing away leaves the chords clearly outlined. In this and some similar compositions, a well-trained hand gives wonderful assistance, both in the execution and in the recognition of the material, inasmuch as the fingers from force of habit unquestioningly accept intervals to which they have been trained. On the other hand, fingers inclined to sprawl, and uncertain of intervals and distances, will find remedial results from its practice. One must agree that sound musicianship, penetration and a well-trained hand are needed for the execution of such a composition.

Memorizing Forms at Variance with Rhythm. — Forms or technical figures, however simple, prove to be more or less elusive when found at variance with rhythm. Godard uses one as a sequence, which will serve as an illustration.

The ascending scale is clearly that of G melodic minor, beginning with the fifth. The descending passage gives a series of four eighth-notes to be played in three-quarter meter. This sequence of four descending

notes on each degree of the descending scale can be memorized as quickly as all the facts are noted.



Young players would recognize the sequence more easily if written in two-quarter or four-quarter meter.

A marked rhythm at variance with construction of the figure, when carried steadily by the bass, can be counted upon as a disconcerting factor. Concentration and independence of the hands, with the assurance that comes from thoroughly knowing the material, can overcome all these difficulties.

In the works of Chopin and Sinding, passages are found where sequences are not only obscured by variance with rhythm, but are interwoven with other material so as to be almost unrecognizable. The outline of each figure is simple enough in itself, but the combinations prove a difficult task for the memory.

Individual Treatment of Basic Material in Creative Work. — Mozart, a master of musical forms, never leaves us in doubt as to material or meaning. The purity and simplicity of his compositions fill us with wonder. Many of his themes are chosen directly from the purest harmonies; they are easily analyzed and may be as readily memorized. His compositions, however, are not easy to play, for it is difficult to acquire an adequately clean technique. Then, too, while his compositions appear simple, they are made more difficult of execution by requiring a fingering peculiar to themselves.

The compositions of Haydn are not laid out on so broad a scale as those of Mozart, and are not so full of sensuous beauty, but they impress one as possessing a rare geniality and good humor. His forms are purely classical and the material employed is not obscured.

With Beethoven, thoughts and emotions were of first importance; means or forms of expression were subordinate. What he had to say required freedom, and rules of construction never interfered. For these reasons the forms of Beethoven are not so clear as those of Mozart, but his material is never obscured. It needs no illustration within these pages to show this. We find that he uses a great variety of keys, with the result that there is a frequency of modulation, but the material remains definite.

Knowing ultimate points to be gained, association, tendencies and progressions remain the ready allies of musicianship when memorizing his masterpieces.

From these facts we are assured that judicious memorizing is possible to every thinking, rational being, since the first requirement, control of the mind, is the very quality through which we become such beings. Any rational system for memorizing depends in some degree upon analytical work. Every difficulty and combination of difficulties can be made to yield to analysis. Concentration and musicianship have been found to be the equipment for analytical work. Playing from memory depends upon the player's ability to control mind and fingers.

From the forms of Bach, written in contrapuntal style, to the colossal style of the Russian school and the suggestiveness of the new French school, as found in the compositions of Debussy, is a wide range of creative work. The variety of subjects, rhythms and harmonies seems infinite as we pass from one composer to another. With a few simple rules for construction, together with laws of rhythm, man's mind has expressed in music all moods, all fancies and all ideas. Though music, as it is understood at the present time, is the youngest of all the arts, it has expressed the whole gamut of human emotions.

Will and Musicianship. — It is possible with a well-grounded musicianship to catch, through musical notation (inadequate as it may sometimes appear), all that these great minds would express. The power to comprehend this art lies within, for it is the brain that brings into conscious and orderly relationship the impressions that are communicated to it, as the light-waves reflecting the symbols of musical sounds strike the retina of the eye. Through musicianship these symbols take on tangible form; they are compared, classified and recorded, and they may carry the message to the mind as though actually heard. Particularly should rhythm be known without the aid of outward agents; it must be felt and come from a preconceived notion; when made to conform to an outward force, it is only a crude imitation. In the matter of reading and in recording impressions a pupil learns to know himself, learns his powers and how to use them; he will learn, too, that in the acquirement of musicianship he is strengthening natural gifts by making each purpose more definite.

In the execution of a creative work, faithfully produced, lies the greatest art of the student, for the whole individual organism is called upon to help make itself; besides the assurance of ready knowledge and a well-controlled body, there must be the active response of a conscious desire to attain. In fine, it is essentially a matter of will and attention, and the achievement

will be determined by the power that enables the student to gain control over his mind. From outward agents attention, in general, is held by the interest we may find or hope to find; but concentration, which is the result of sustained attention, is possible only when the subject-matter lies clearly outlined before the mind in some form or other. The more attention we give a subject, the more mastery we have over that subject, and in this effort the greatest faculties of our being must become involved. The ultimate aim of a message requires that spontaneity which comes from the power to think and to feel at the same time. In playing it is not demanded that attention should always be held to every detail of the work as in the beginning, for the working-out of these details is presumed to have been established through judicious practice; it is even expected that attention may from time to time pass into marginal consciousness. The importance of conscious effort in study, however, cannot be too strongly emphasized, affecting as it does the ultimate result of study. Direct application of consciously recorded and classified knowledge, simple movements in active response to preconceived ideas and the control or effacement of self in the expression of ideals that embody the best within us, are acquired only through the habits of daily study. These habits influence the whole career and their import is observed in the assurance of mastery of the knowledge possessed and of the faculties involved in its use. In laying the foundation for such an art, the assimilation and retention of material are matters of the utmost importance; it is essential, in the mental discipline involved in fixing ideas, that each physical operation be the result of a distinct executive effort or action of the mind governed by mental deliberation. In this way sound musicianship may be built up and made efficacious by advantageous use through an appreciation of knowledge and self-possessed power.