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THE FOUNDATIONS OF
MUSICAL ÆSTHETICS
MODERN PIANOFORTE
TECHNIQUE

By
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THE SIGN OF A GOOD BOOK

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THE FOUNDATIONS OF MUSICAL ÆSTHETICS

CHAPTER I

INTRODUCTORY

THE word "æsthetic," which originally meant perception by the senses, has had its meaning particularised so that it usually is associated with perception of a specific kind. In this sense it is applied to the appreciative attitude of the discerning mind towards the beautiful in art and in nature.

Philosophy has spent not a little time and trouble on the attempt to formulate and define the essential nature of the beautiful; but what one regards as beautiful, another will either lack interest in or even positively dislike, and such attempts, therefore, have not been particularly successful.

This conflict of tastes is particularly noticeable in the case of the Art of Music. One age

has its ideals which are often—if not usually—opposed to those of the succeeding generation; people in one country will take pleasure in a type of music which appears incomprehensible to those of another; and, even in the case of individuals of the same time and place, what one may admire and love another will abhor and detest.

In the case of Music, therefore, it seems well-nigh hopeless to attempt to formulate or define what is the “beautiful,” and I have no intention in this little book of trying such an unpromising task. Each of us has his or her own ideas of what constitutes musical beauty, and in most cases the criteria on which our judgments are based are not themselves fixed but are in a state of flux and development.

Many people, it is true, seem obliged to adopt a fixed standard of artistic value to which they refer and on which their artistic judgments depend, and strenuously endeavour to prevent any change in, or deviation from, the rigorous formulæ which regulate their musical thinking. An enlightened and progressive attitude is, naturally, for such, an impossibility, and the inevitable and necessary developments of Art pass unnoticed or misunderstood.

Some æsthetic standards, however, are neces-

sary, and if they are allowed to share in the inevitable process of development—if they are living, not dead—assist that process by giving it both direction and progressive energy.

It is not even necessary that the musician should be able to formulate clearly what are the conditions and factors in a work in virtue of which it appeals to him as beautiful or the reverse. To reduce these æsthetic values to a clean-cut statement of relations intellectually apprehended, would, by that very act, tend to induce reference to dead and mechanical standards. The feeling of the beautiful is something which is intuitive, and which neither needs to be explained, nor can be explained, in terms of reason. In fact, it is something apprehended immediately, “perceived through the senses,” and can no more be “explained” than those sensations which we call heat, cold, sweet, sour, etc.

The Art of Music as practised in countries which owe their culture and civilisation to Western Europe is the outgrowth of a body of doctrine and dogma which is extremely elaborate and complex. But for the fact that much of it is obviously derived from convention and custom rather than from natural law, it might almost be called a Science. It is very doubtful,

however, if the feeling for the beautiful in Music is more keen in the case of the individual expert in the niceties of this quasi-science than in him who is entirely ignorant of its laws and conventions.

The pleasure which the expert derives from a musical work may probably be a feeling more complex than that experienced by one who is without any technical knowledge, but in many cases it is distinctly affected by the purely intellectual satisfaction one derives from the dexterous solution of technical problems.

However, just as the complete realisation of the Art-work cannot be reached by intellectual process alone, but demands some immediate response from the sensuous side of the mind, so the appreciation of such a work as *Art* is impossible without some intellectual reaction which enables the perceiving mind to "understand" the work presented. Otherwise it would be possible to create Art-works composed of things which give rise to tastes, smells and tactile sensations. If a piece of music were apprehended simply as a number of sensations of hearing, simultaneous and successive, the result to the hearer would be on a par with the condition in which a gourmand is left after traversing a more or less elaborate menu.

This intellectual process, however, need not be a self-conscious one, *i.e.*, a process in which the mind examines, compares and catalogues the sensuous effects exhibited in the Art-work. In most cases there is a background of reference of which the mind is not immediately conscious.

Even in the most extreme cases where there is an entire lack of what one might call technical knowledge, appreciation of a musical work implies the presence and influence of certain limiting and defining categories of musical thought in the mind of the hearer. Some of these seem to rest on natural law in the sense that they are in conformity with the physical facts which give rise to musical sound, or with the way in which the human mind works; others, *per contra*, seem to be neither natural nor necessary, but have been implied by the various courses which the development of the musical sense has taken.

The function or purpose of these categories—if one may use the word purpose in such a connection—is to unite the purely sensuous materials of Music into a whole, more or less coherent and consistent. This function in the earliest stages of the Art was probably filled by what may be called the principle of Emotional

Consistency. The very earliest attempts of man to produce a musical work were no doubt co-ordinated and controlled by this fundamental principle, and it is no less operative now than it was in prehistoric times.

This primitive principle, however, has been supplemented by other principles which pertain more to the intellectual side of the mind. In all cases where musical art exists, even in a rudimentary state, its materials have been in some way codified and arranged so as to become capable of being placed in relations intellectually apprehended, so presenting features which the mind can seize, remember and recall, and becoming, therefore, in the process capable of idiomatic and consistent treatment.

These supplementary principles are of two kinds; of which the first is concerned with relationship between musical sounds from the point of view of Pitch, the second is concerned with relationship from the point of view of Duration or Time.

From this broad and general classification are derived and developed the special principles which regulate and co-ordinate modern musical thought. The particular kind of musical perception which we call the "æsthetic" perception implies a reference of the

Art-work to these regulating principles. These principles, therefore, are the Foundations of Musical Æsthetics.

CHAPTER II

MUSICAL SOUND

THE study of the nature of musical sound and of the relationships other than those of purely an æsthetic kind, which exist between different musical sounds, has occupied a good deal of the attention of the physicist, and a whole department of science—Acoustics—has grown up which has for its object the investigation of the facts and problems involved.

The student will find in the bibliography at the end of this book a list of works which he may consult for full and detailed information on this subject. The following résumé of the facts and the accepted theory is included for the sake of the general reader.

The word Sound, as usually employed, means the sensation we experience when the nerves of the ear are excited.¹ It is also used to

¹ The physiological processes which accompany the sensation of sound are very obscure and are not fully understood. The progress from what we call a sensation to a perception is essentially psychical rather than physiological, and the nervous impulse

denote the cause which excites this sensation. Between what are called Noises and Musical Sound there is a distinct difference which is universally appreciated. The physical facts upon which this difference depends may be set out as follows:—When a sonorous body is in a state of vibration these vibrations when transmitted to the ear give rise to the sensation of sound. In most cases the transmitting medium is the air, which is set into vibration by the sonorous body. In the case of *noise* these atmospheric movements are irregular, in the case of musical sound they are regular and periodic. That is, in the case of musical sound the vibration is a movement which recurs regularly at equal intervals of time. Helmholtz's definition of musical and unmusical sound is—"The sensation of a musical tone is due to a rapid periodic motion of a sonorous body; the sensation of a noise to non-periodic motion." (Sensations of Tone, Chap. I).

which is first generated in the organ of hearing no doubt undergoes profound changes in its passage up to the higher centres in the brain, where it becomes a perception. So that, although there is, at least, one plausible theory formulated to explain our perception of the qualities of sound, based on the anatomical structure of the aural apparatus, there is little doubt that this by itself is not wholly adequate, nor that, in the end, our appreciation of the character and qualities of a sound is what (for lack of a better name) we may call *psychical*. That is, it involves much more than a mere impression—there are interior processes which cannot be expressed in physiological terms.

A regular vibration system possesses:

- (a) A definite Period,
- (b) A constant Frequency,
- (c) An Amplitude,
- (d) A characteristic Mode.

The Period of a vibration is the time taken in the execution of one complete vibration; *i.e.*, the time which elapses between that instant when the moving body is at a certain position and the instant when it next occupies the same position and is moving in the same direction.

The Frequency is the number of such periods per second; in musical theory this is generally termed the vibration number; *i.e.*, the number of complete vibrations performed by the moving body, per second.

The Amplitude of a vibration is the extent to which the body moves from its position of rest.

The Mode or manner in which the vibration is executed is of great importance from a practical point of view, and may vary infinitely.

Musical tones differ from one another in

- (a) Force or loudness,
- (b) Pitch,
- (c) Quality or timbre.

These characteristics are directly connected with and dependent on the peculiarities of the vibration system which are enumerated above.

The Force depends on the amplitude of the vibration and is proportional to the square of the amplitude.

The Pitch depends solely on the length of time in which each vibration is executed; or, to put it in another way, on the number of vibrations in any given time. The second is taken as the time-unit, and the number of vibrations per second is called the vibration number of the sound.

Force and Pitch are independent of each other, so that two tones may have the same pitch and differ in force, or may have the same force and differ in pitch.

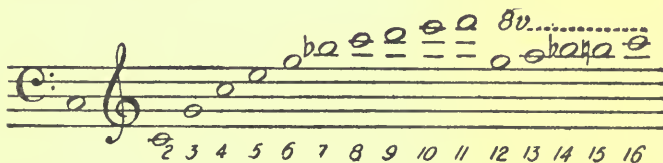
The Mode of vibration is of great importance in the consideration of musical sound because on its character depends what we call the Quality or Timbre of the sound. The infinite variety of Quality which may exist among musical sounds is due to the fact that the sounds produced by nearly every musical instrument are not simple or single tones of one determinate pitch, but are what are called compound tones consisting of an assemblage of such simple tones. In this assemblage

that simple tone which is the lowest, and generally the loudest, is called the fundamental or prime, and by its pitch we judge the pitch of the whole compound musical tone. The other higher simple tones present are called harmonic upper partials, or simply upper partials, or harmonics.

These upper partials occur in a regular series forming with each other fixed intervals in the following order of pitch:—

1. Fundamental tone.
2. The Octave above No. 1.
3. The Fifth above No. 2.
4. The Fourth above No. 3.
5. The Major Third above No. 4.
6. The Minor Third above No. 5 etc.,
etc.

The complete list of the upper partials of the sound written as C on the Bass Staff is displayed in the following scheme :



The note written as B flat in the above is in reality slightly flatter.

The number of vibrations executed in any given time by any of the upper partials of a fundamental tone, relative to each of the vibrations of that tone, is indicated by the figure which shows the position of that upper partial in the series. Thus, the first harmonic of any sound—the second sound in the series and the 8th above the fundamental—has two vibrations to every one of the fundamental; the second harmonic—the third sound in the series and the 12th above the fundamental—has three vibrations to every one of the fundamental: and so on.

It is not necessary that all these upper partials should be present in every musical sound. Those which are present, however, be they few or many, must occupy positions in conformity with the above series; thus, a sound may contain Nos. 1, 3 and 5 only, all the others being absent; or 1, 4 and 8, etc., etc.; but in no case can a tone intermediate in pitch between any two consecutive numbers of the series make its appearance. With certain exceptions every musical sound is in reality a compound of a fundamental tone with a number of upper partials, and the Quality of such sounds depends on

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- (a) The number,
- (b) The order, and
- (c) The relative intensities

of the partial tones which are present.

These three are quite independent of one another, and compound tones which are apprehended as of the same fundamental pitch may differ amongst themselves as regards any or all of these three possibilities. It is therefore obvious that the possible number of different qualities is infinitely great, as alteration in any one of these constituent factors will produce alteration in the quality of the resulting sound.

The various characteristics of musical sound enumerated in the preceding part of this chapter have so far been considered only from what one may call the objective point of view, but it will be useful to glance for a moment at the subjective conditions under which these characteristics are apprehended, so far as it is possible to specify these.

With regard to the force of a musical sound, we naturally and easily conclude that the force is really a measure of the energy of the vibrating system, or of the distance of the vibrating system from our ear.

With regard to duration we as naturally conclude that the continuance of the sensation of

sound depends directly on the continuance of the vibration.

With regard to pitch, however, there is no obvious explanation of the manner in which this is appreciated by the ear, and what are the limits of such appreciation is a matter which is not at all clear or apparent. Helmholtz has formulated the theory that certain parts of the structure of the ear are capable of being sympathetically excited by sound, and that for every degree of pitch there is a locality in the ear which responds and by its response gives rise to the sensation of that particular pitch. This theory would also serve to explain to some extent how the ear appreciates quality or timbre, on the basis that quality is directly dependent on the presence of certain upper partials or harmonics along with a fundamental sound.

It is, however, not unreasonable to suppose that just as the eye has to undergo what is termed a process of "accommodation" in visualising objects at different distances, and just as the subjective feeling of effort or strain involved in the process of accommodation is the measure of the distance, so the physical reaction in the organ of hearing to external stimulus, may involve an effort or strain in the nature

of an accommodation which will serve as an aid to the appreciation of both pitch and quality. Such power of accommodation may be derived from and developed by experience until it becomes automatic, and like most automatic actions does not directly enter into consciousness.

Pitch recognition varies much in different individuals. Some few are said to exist who cannot discriminate at all between high and low sounds. At the other extreme are individuals who have what is called the faculty of "absolute pitch." Between these two extremes come all degrees of pitch recognition.

The ability to recognise "absolute" pitch is, however, really a very long way from being an absolute ability to recognise pitch. Variations in pitch are infinite and the human mind is finite. Pitch discrimination is really a matter of difference of degree, not of kind. Some individuals can recognise pitch to within a semitone or even less. Others cannot identify pitch within much larger limits. What is involved is simply the power of identification, and although some degree of development of this power is necessary to the musician, it is not the sole or even the chief desideratum. What is really necessary is that he should possess a high degree of appreciation of the rela-

tions which exist between the limited number of sounds in our musical system, which are coordinated and formulated into an artistic product in conformity with a definite process of selection. Just as the painter must be able to appreciate truly the relative values of light and shade and colour, and the relations which underlie the lines of perspective—he does not require either to know the absolute distances between the objects of his landscape in terms of some arbitrary standard, or even to be possessed of a particularly keen or potent vision.

Musical sounds considered from the subjective side, are in the first instance sensations. That is, they are the result of the action of certain stimuli on the sense of hearing. As such they are realised immediately and individually, and have no artistic function or value in themselves. It is only when they enter into consciousness as a statement of *relations*, expressed or implied, that they become the subject of artistic arrangement and manipulation.

Just as colour, *quâ* colour, is the sensational description of the effects of light vibrations of certain wave lengths on the sense of sight, so the apprehension of musical sound is simply the reaction set up in the organism to certain physical stimuli.

A single musical sound calls forth a single reaction, which, if it were unique in experience, would have no meaning or value other than its surface value as a sensation. But, because that particular kind of stimulus which gives rise to musical sound may vary infinitely in detail while retaining its general character, we experience a corresponding infinity of musical sensations, all partaking of that general quality which we call musical, but varying amongst themselves as regards details of individual character. The regulation and co-ordination of these differences, and the understanding and expression of the relationships which exist between the various musical sensations are the proper business of the 'Art of Music. Putting it in the most general way, the Art of Music consists in the arranging of successions and combinations of musical sounds of varying pitch, quality, force and duration, according to certain principles some of which seem to be essential and necessary, while others are unessential, conventional and temporary.

CHAPTER III

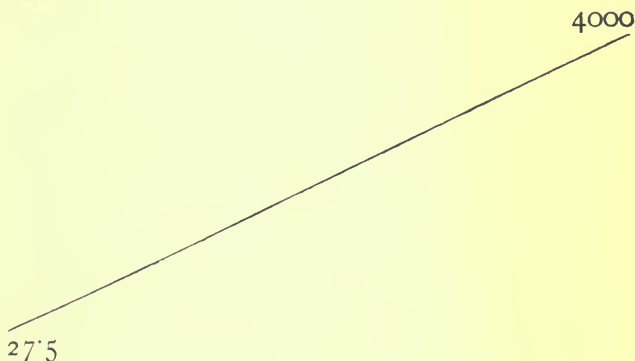
EQUAL TEMPERAMENT

THE relationship between two sounds with regard to pitch is called the interval between them. The number of possible intervals is absolutely infinite. In practice the limitations of the human senses restrict the number of such intervals employed in any musical system.

The limits, for practical purposes, between which musical sounds used in European music are arranged, are, on the one hand, that sound which has 27.5 vibrations per second (the lowest A on the largest pianoforte), and on the other, that sound which has 4,000 vibrations per second, roughly speaking.

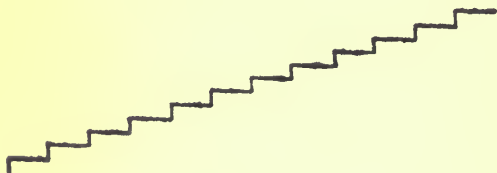
It is necessary to realise that the peculiar characteristic of musical sound which we call pitch is a quality which can be definitely described only as a rate of vibration. Also, that while each separate rate of vibration corresponds to an individual and definite pitch, the number of possible rates of vibration is abso-

lutely infinite. Here, in fact, we touch on that mysterious thing called Continuity, and it should not be overlooked that, although the sounds employed for musical purposes are comprised between definite limits, and associated in definite relations, yet from the inferior to the superior limit the pitch series is in reality continuous. So that to represent graphically the change of pitch from the lowest to the highest sound, we must use a continuous line :
e.g.—



In all musical systems this rise in pitch is arranged in discontinuous steps—which are called intervals—because only by so doing can the mind give definiteness to its musical thinking. The graphic representation of such a

system will, therefore, imply a figure like the following, in which ascent in pitch is indicated by a series of discontinuous steps.



In modern European music these steps are equal, and there are twelve such to the octave; so that each step—or semitone, as it is called—is equal to the twelfth part of the interval of the octave. This system of fixing pitch is called the system of tuning by Equal Temperament.

The interval between two sounds takes its character from the numerical proportion between the rates of vibration of each sound. This ratio is generally stated as a fraction, which is called the vibration fraction of the interval. Thus, the interval of the octave is produced between two sounds the upper of which has two vibrations to every one of the lower. The vibration fraction of the interval

of the octave is, therefore, $2/1$. A ratio of three vibrations of a higher sound to two of a lower characterises the interval of the perfect Fifth, the vibration fraction of which is, therefore, $3/2$; and so on. The musical classification of intervals as concords or discords corresponds to the ratio between the rate of vibration associated with each of the two sounds concerned. The simpler the ratio, the more concordant the interval.

The following is a list of the intervals found within the octave with the vibration fractions of these intervals :—

	Vibration Fraction	Ratio.
Unison	$\frac{1}{1}$	1 : 1
Minor Second	$\frac{16}{15}$	1 : 1.06̇
Major Second	$\frac{9}{8}$	1 : 1.125
Minor Third	$\frac{6}{5}$	1 : 1.2
Major Third	$\frac{5}{4}$	1 : 1.25
Perfect Fourth	$\frac{4}{3}$	1 : 1.3̇
Augmented Fourth	$\frac{45}{32}$	1 : 1.40625
Perfect Fifth	$\frac{3}{2}$	1 : 1.5
Minor Sixth	$\frac{8}{5}$	1 : 1.6
Major Sixth	$\frac{5}{3}$	1 : 1.6̇
Minor Seventh	$\frac{16}{9}$	1 : 1.7̇
Major Seventh	$\frac{15}{8}$	1 : 1.875
Perfect Octave	2	1 : 2

The above scale, however, is not used in modern music to any extent, chiefly because it

is unsuitable for the employment of complex harmonic process. Instead, we use what is called the system of Equal Temperament, in which the interval of the octave is divided into twelve precisely equal semitones. In such a semitone the ratio between the rates of vibration of the two sounds concerned is $1 : 1.059$ approximately¹; so that the ratios of the various intervals in the octave are successively in terms of the ascending powers of 1.059.

The relations between the sounds in the Equally Tempered scale are exhibited in the following table:—

¹ To seven places of decimals—1.0594631

	Ratio
Unison	1 : 1
Minor Second	1 : 1.059
Major Second	1 : (1.059) ²
Minor Third	1 : (1.059) ³
Major Third	1 : (1.059) ⁴
Perfect Fourth	1 : (1.059) ⁵
Augmented Fourth	1 : (1.059) ⁶
Perfect Fifth	1 : (1.059) ⁷
Minor Sixth	1 : (1.059) ⁸
Major Sixth	1 : (1.059) ⁹
Minor Seventh	1 : (1.059) ¹⁰
Major Seventh	1 : (1.059) ¹¹
Perfect Octave	1 : (1.059) ¹² or 1 : 2

To the scientific mind there is something repugnant in the fact that our musical system

is based on what is essentially a compromise, and every work on Acoustics bewails the necessity. However, what the artistic side of Music is concerned with is the use of sounds in certain broad relations of combination and succession in such a way as to outline and express, not definite relations of quantity or value, but the fluctuations of human emotion, which cannot be stated either quantitatively or qualitatively. Much of this desire for what is called true intonation is based on the assumption that consonance in the mathematical sense of the term is in itself a thing of beauty; and that the more vigorous stimulus to the sensibility which the so-called roughness or discordance makes is in itself undesirable and unpleasant—assumptions that the musician would probably hesitate to endorse. The most perfect consonances are just those which from a musical point of view are dull, vapid and uninteresting; and the suffrages of any modern audience would clearly indicate which is now felt as the more “beautiful” of the two—the simple concordant harmony of the ancients, or the highly coloured texture of modern dissonant music.

CHAPTER IV

TONALITY AND SCALES

A SINGLE sound is an acoustical fact, and the entire series of sounds which forms the basis of our musical system is, from this point of view, simply a collection of facts. Before these sounds can be used for artistic purposes it is necessary that they should be conceived in such a way (as far as pitch is concerned) that they combine to form a complex whole. The unifying principle under which they are so combined is called the principle of Tonality.

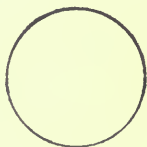
The facts of Pitch and of Pitch differences are objective; they exist apart from the mind which perceives them; but this feeling of Tonality which unifies and co-ordinates these pitch differences, is not identical with the musical sensation but accompanies this sensation and arises out of it by the *subjective* reaction of the mind.

The feeling of Tonality arises when we view

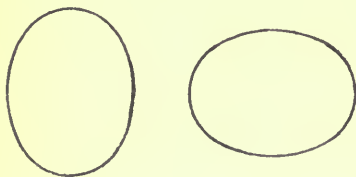
a collection of sounds of different pitch as one whole, bound together in relations which are rendered definite and consistent by the fixation of one central point to which these relationships are all referred.

Perception or recognition of anything as a whole implies reference of each element or part of it to some fixation point, which, however, need not be in the foreground of consciousness. This fixation point need not be in the actual focus of attention at any one time, but may exist as a back-ground of reference only. The relationship of the separate parts or elements to this fixation point unifies the whole.

As an illustration of this principle let us think of the figure of a circle. We call up a mental picture of a figure so constructed that in it there is one point such that all lines drawn from this point to the circumference are equal.



If we call up pictures like these:--



we realise that these figures are not circles, without definitely formulating as a reason that there is no such central point.

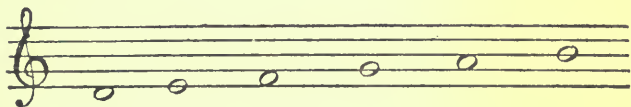
In music the single sounds of different pitch are the elements or parts, and these elements or parts are unified into a whole and displayed in some consistent relationship one to another by reference to one single sound as a fixation or central point. This central point is chosen arbitrarily, and may be changed at will; but at no time—if the feeling of Tonality is to be clear—should there be any doubt or confusion as to its identity. This is the principle of Tonality; and in some form or other it must be operative in any musical system which is logical and consistent.

Any sound, therefore, considered with reference to the principle of Tonality makes itself felt in a way conditioned by the relationships which exist between it and the Tonal

centre. Conversely, the change in the Tonal centre implies a corresponding change in the manner in which any sound impresses the mind.

In a succession of musical sounds each member of the succession in turn comes into and moves out of the focus of attention, but the unifying of such a succession from the point of view of pitch is accomplished by the fact that each sound is referred to some fixation point or tonal centre, and is realised according to the relations subsisting between it and this centre.

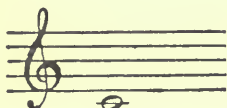
Thus, if we take a succession of different sounds:—



we can produce a distinct number of different impressions, according as we regard each different sound in turn as the fixation point or tonal centre of the whole. For example, by loading any one of these sounds with extra emphasis or tone, we can strongly direct the attention towards the sound so emphasised, and the whole succession tends to form one individual group centred round this strongly

accented sound. By changing the sound emphasised the succession can be made to suggest a series of different tonalities.

As another illustration of the same principle take the sound:—



and refer it in turn to a succession of different keys or tonalities, C, B, A, etc., etc. In each case the single sound C is accompanied by a specific feeling which is extra to the sensation of definite pitch, and which is different in each case. This specific feeling is caused by the different relations exhibited between this sound C and the central sound of each new tonality.

A point of considerable importance is that this feeling of Tonality and the manner in which it appeals to the musical sense are not fixed and definite for all time, but are subject to the process of evolution and development. If we examine music composed in the course of the last 600 years we cannot fail to observe signs of this process of evolution. From the earliest times, even in the dim ages of which we have no record, some such unifying principle must have been at work, and in the

musical system which immediately preceded ours and from which our modern system developed we can trace the active influence of some such principle of tonality, although it was felt and expressed in a direction differing from that in which we now realise it.

In the music of the early Middle Ages the principle of tonality manifests itself under a form purely melodic. That is, the relation of the component sounds of a work to the apprehended centre of gravity is always successive, never simultaneous. From the operation of this principle resulted the diversity of "modes" which characterised ancient music. The different modes, of which there was a comparatively large number, owed their individuality to the reference of a fixed series of sounds to various members of this series, in turn, as the tonal centre. The monochord, which was employed for the purpose of training singers, served to "standardise" the intervals which were used in artistic music, and the sounds which formed these intervals collected into a consecutive series constituted a scale which could appear successively in the different modes by the simple expedient of taking a different member of the series as the centre of gravity of the system.

It is possible even for us who have our minds saturated with harmonic conceptions to realise something of the operations of this principle. Thus, if we arrange the white notes of the pianoforte in such a way that each is successively realised as the centre of gravity of the whole series, we can group the other sounds so that their mutual relations are understood by reference to that particular sound which for the time being is regarded as the tonal centre. Naturally, the chosen centre must be insisted upon and confirmed, otherwise the more usual arrangements of our modern system will tend to re-assert themselves.

The ignorance of this principle and the vicious tendency to regard tonality through the limitations of the major and minor scales are responsible for the maltreatment of much of the old folk-music which was invented by a people ignorant of these essentially harmonic schemes. The following setting of an old Scottish tune which the arranger has made to end outside of its proper tonality is a shocking example of this musical "Procrustes' bed":—



Tonality, according to mediæval music, and music which is invented or composed by people without harmonic prepossessions, must be real-

ised as stated melodically. The very first beginnings of harmony were not the result of conscious or directed endeavour, but arose accidentally as a by-product of operations directed to quite other ends—and it is doubtful if the human ear, at this period, could adequately realise the harmonic effect of even the simple common chord. In the earliest harmonic music there was not so much an attempt to harmonise a melody as to perform the same or different melodies at different pitches. In all probability, at first, the performers were for the most part unconscious of any harmonic effect at all.

Eventually, with the development of the art of Counterpoint, musicians acquired considerable skill in the combination of different melodic lines, but the individual parts which composed the musical structure were combined on what may be described as *negative* harmonic principles. That is, the conscious effort of the composer was that these parts should combine in such a way that dissonant combinations were either avoided altogether, or that such discords as did occur should have a purely ornamental function, and be capable of solution by melodic movement.

In the best examples of these works the oper-

ations of the principle of Tonality are still felt melodically. Each part or voice conforms to a tonal scheme which, centring round a particular sound, in the series, is realised as a definite mode. It was even possible for more than one mode to be employed simultaneously.

However, with the development of the harmonic sense which followed the perfecting of the contrapuntal method, the composer eventually reached a point where it is obvious that there was an embryonic realisation of the relations between chords as chords. The first effect of this new power of realisation was to lead to harmonic experiments, which often appear crude and tentative, but the modern realisation of Tonality, which binds into a consistent and proportioned whole both the successions and combinations used in music, is not apparent. On the other hand the composer had evolved *some* realisation of harmonic relations, although the fact that this is confined to the relations of only such combinations as appear in *immediate* succession makes these works sound to our ears somewhat vague and incoherent.

The principle of Tonality in modern music is chiefly realised in connection with harmonic relationships which it controls and defines. It serves not only to connect up the constituent

notes of individual chords, but to control the relationships of successions of such chords. With reference to the first of these two functions, there are certain natural facts which confirm our system and enable us to regard it as founded on something more authoritative than mere custom and convention.

It is a fact, as has already been pointed out in Chapter II, that most musical sounds are not simple and single, but when they occur are almost invariably associated with other sounds of different pitch. These subordinate sounds, or harmonics, or upper partials, form what is termed the Harmonic Series of the fundamental sound from which they are generated. Reference to p. 12, where the complete Harmonic Series of C is given, will show that the first two subordinate sounds in the series, excluding the octave and double octave of the generator, are the fifth and third from C. The summation of these three sounds gives us what is called the Major Common Chord. In the formation of this chord the three individuals, C, E and G, "fuse" into and form an entity which is felt as single and individual, not merely as the aggregate of these three sounds. Similarly, the other sounds which occur in the Harmonic Series may be combined to form chords, and

practically all the characteristic combinations of modern music can be obtained in this way.

The Harmonic Series presents a whole system of sounds which is based on the generator and in which the determining factor with regard to any one sound is the relationship it bears to this one fundamental sound. From this point of view, therefore, Tonality is implied in every single sound.

However, when we come to consider this principle of Tonality from the point of view of harmonic successions we find it is strengthened by association with a further important principle, viz., that of Progression. This principle, stated briefly, is that every sound in the limits of a definite tonality is naturally attracted to and tends to progress either directly or indirectly to the centre of the tonal system—the key-note and its derived harmony. Musical confirmation of a tonal centre necessitates progression to that centre, and the degree of relationship between any sound in the system and the centre of that system is measured by the tendency of this sound to proceed to the tonal centre.

Now, every sound most naturally tends to proceed to that other sound in the Harmonic Series of which it is the first “foreign” upper

partial, viz., the fifth¹. So, any chord tends most naturally to proceed to that chord which is derived from the note a fifth below the root of the first. Thus, the harmony derived from the note G tends most naturally to proceed directly to the harmony derived from the note C; the harmony derived from C tends to proceed to that derived from F; and so on.

Writing the twelve sounds of our system so that each note is placed next to that note to which it is in this sense most closely related, we get a scheme like the following: this succession may be described as *the scale of relationship*.



The sounds arranged in the above sequence present the note C as the centre point of the tonality, which is thus seen to be a structure in equilibrium round this centre point, the

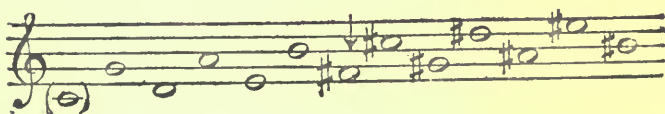
¹ The term "foreign" is used here because the *first* upper partial, the octave from the fundamental, introduces no new element into the series.

balance being maintained by the equal distribution of sharper and flatter sounds on either side of the centre.

The last sharp, F sharp, and the last flat, G flat, have the same pitch in the system of equal temperament. This sound is on the extreme limits of the key, and its tendency of progression to the key centre is very slight. Its chief function is to assist in defining change of tonality; appearing as F sharp when the change is to the sharp side, and as G flat when the change is to the flat side.

Although the B on the sharp side and the D flat on the other are near the limits of the tonality, yet the *melodic* connection between these notes and the key-centre (to which they act as leading notes—the one upwards, the other downwards) is very pronounced.

The choice of any other sound as key-centre will show a corresponding re-arrangement in the functions of the constituent notes. The following is the scheme arranged round the centre F sharp:—



While the sounds in the key have the natural relations just indicated, the notes employed in that scheme which we call a scale are simply a selection from the twelve notes of the key. This selection may be made according to any desired system; some seem to be more natural than others. The Major scale, for example, seems to most of us moderns to be derived from a peculiar necessity of the musical sense. But this is certainly not the case; only our harmonic prepossessions contrive to make us think this. In fact, the making of scales seems to be almost entirely a matter of taste, and the only difficulty for the modern composer which limits his choice is the solution of the nice problems in harmony raised by the use of these unusual scales. Even that difficulty is fast vanishing with the general loosening of harmonic necessity which is characteristic of modern practice. In fact, one of the most popular of these new scale forms is just that in which no single sound in the whole selection can progress to its nearest relative, because that relative is omitted. If the student will look again at the notes of the key of C as written out on p. 39, he will notice that the omission of every alternate note will produce that favourite scheme of the modern composer—the

Whole-tone scale. Of course, such omission at the same time eliminates that note to which every note of this scale would most naturally tend to progress in accordance with its acoustical relationship. However, this peculiarity suits the characteristic fluidity—if it is not the cause of it—of most music written in this formula.



CHAPTER V

HARMONY

IN the preceding chapter it has been stated that the feeling of tonality, or key, in modern music is a realisation of relationships between the twelve sounds with which our system of tuning provides us. These twelve sounds are unified into one whole by the relationships which they severally bear to one central sound. This whole is organised so that each sound fills a place and function relative to this tonal centre different from that occupied by any other sound.

The tonality, therefore, may be likened to a constellation in which we find a definite centre sound with eleven other subordinate sounds grouped round this centre, each occupying its own particular place in the system and filling its own particular function. Between this central sound and the others, and between each of these others, there are definite degrees of relationship, and the order of the

relationships is indicated by the arrangement of the sounds grouped round the central sound.



The key, therefore, is realised as a structure in equilibrium which is stable as long as the special relationships of the subordinate sounds to the tonal centre are maintained. If these special relationships are interfered with the whole tends to break up and re-crystallize round some fresh centre.

Just as, in the limits of the tonality, there are degrees of relationship between individual sounds, so there exist similar degrees of relationship between the harmonies derived from these individual sounds. As the closest possible relationship exists between two sounds next together in the above series, i.e., between two sounds which are a fourth or a fifth apart, so the closest possible *harmonic* relationship exists between the harmonies built up on two such sounds. This fact is independent of the particular quality of the harmonies involved, or of the simplicity or complexity of the particular combinations.

To put it concretely, any harmony derived from the sound G is related in the closest possible manner to the harmony derived from C, and also to that derived from D; and so on.

As in the case of single sounds *this relationship is felt as a tendency to progression*. A first chord progresses when it is immediately followed by another chord, and although in most modern music any one chord may be followed by any other, there are, in practice, certain limitations which are generally observed. These limitations arise from the fact that the *relationships* which exist between consecutive harmonies must be realisable if the progression is to sound logical. If the relationship is so obscure that it cannot be realised, or realised only with great difficulty, the progression will tend to sound illogical, until familiarity has established and confirmed the relationship. For this reason new progressions take time to be understood generally before they become absorbed into the commonplaces of musical expression. For this reason, also, no limit can be set to the development of musical resource in this direction. The vast majority of musicians will always find the commonplaces of expression adequate for their needs; and the mind which is indi-

vidually perceptive will always light on hidden treasure in the shape of undiscovered harmonic truth.

It must, however, be borne in mind that relationships between sounds are felt not only harmonically but also melodically. Certain individual constituents of a harmony may possess certain melodic tendencies, in virtue of the relationships existing between them and the rest of the combination. This is the case with all kinds of discords, but particularly with those discords which we call unessential. The nature of these unessential discords is such that they form unstable constituents of what are otherwise stable combinations. They were invented and chiefly used in the days when the only relationships distinctly apprehended were *melodic* relationships; before tonality in the modern sense, as conditioned by harmonic relationships, was developed and realised.



In the above progression, the chief determining factor is the necessity for simplifying

and clarifying the complex harmonic relations by melodic movement. Thus at + the G which appears and adds complication to the harmony finds its solution in the melodic progression to F, one of the simple constituents of the harmony.

Such extraneous notes—the first discords to be consistently used by the early composers—filled the purpose of decoration or melodic embellishment, supplying that element of “progression” which in the earliest music was lacking in the harmony as a whole. In fact, this feeling of logical and necessary progression is mostly lacking in old music, in which harmony was an accidental circumstance resulting from the endeavour to perform two or more melodies simultaneously; or, if it is present, is only realised and stated melodically; i.e., the relations of single sound to single sound are present, but no feeling for harmonic relation, as we understand it, is traceable.

The conception of key or tonality as a connected system of related sounds revolving round a definite centre, and permeated by this principle of progression to that centre was absent from the minds of the early composers, who regarded music from quite another standpoint.

Such are the fundamental features of the early contrapuntal style as compared with modern idiom, and these conceptions are still maintained to some degree in the exercises in strict counterpoint which the student is called upon to perform. Strict counterpoint is an attempt to construct music from which the two modern principles of rhythmic balance and harmonic differentiation are excluded. The advantage of such exercise is often not obvious to the student who is apt to rebel at what he considers the artificial dullness of counterpoint. But in principle the practice of counterpoint is of considerable value, especially in modern times when the musical idiom in vogue owes so much to, and is so much influenced by the all-pervading pianoforte, in that the task set is, roughly speaking, to "melodize" a succession of harmonies without the complication which is added by the necessity of observing the principles of rhythmic balance and of definite harmonic progression.

As this little book does not attempt to deal exhaustively with any of the subjects introduced, but has the pretension rather of giving a general presentation of the main facts on which modern musical art is based, no endeavour need be made to indicate the complex

and elaborate theory of harmony which we owe to Day and Macfarren, and which is the foundation for most of the teaching in this country.

The chief fact in harmony is the "common chord," and the effective treatment of the "common chord" inside the limits of tonality is the first principle of harmonic discrimination.

All the elaborate and highly complex details of treatment which are embalmed in the text-books can be reduced to one or two very simple and general principles.

The first of these is that no combination of sounds—no chord, as we call such—has any musical significance in itself. Such musical significance as it possesses depends entirely on the fact that *it either initiates, continues or completes a movement*. This is emphatically the case in rhythmically conceived music, in which harmonic progression occupies a comparatively secondary place.

In the second place, this harmonic movement is executed with general reference to the tonality as a whole, and with specific reference to the place or function in the tonality of the particular harmony concerned. In other words, the progression of any harmony is conditioned by (1) the relationship existing between it and the centre of the key system; and

(2) by the fact that it is concerned either with the initiation, the continuation or the completion of progression.

This is a matter which for the most part has been ignored by the text-books, which as a rule are content to isolate a number of combinations, freeze them into immobility, and then proceed to lay down laws according to which they are supposed to be treated.

It is rather curious and instructive that this dogmatic statement of the so-called "rules of harmony" is made most authoritatively in the case of the more complex dissonant combinations. The treatment of the simple common chords is mostly dealt with vaguely and the formulation of precise rule is reserved for the complex dissonances. But, as a matter of musical fact, the more complex combinations are in reality only decorated and ornamented forms of the simple chord, and the implicit function and relations of the former with regard to the tonality are identical with the function and relations of the simple chord on which they are based.

To illustrate this point: the Dominant triad in the key has the special function of suggesting immediate progression to the key-centre, towards which it stands in the closest relation-

ship. Similarly, any of those elaborate combinations which by association with this Dominant chord partake its character, share its relationships and tendencies.

The order of harmonic relationship viewed from the key-centre corresponds to the order of relationships which exist between the individual notes of the tonality illustrated and dealt with in the preceding chapter.

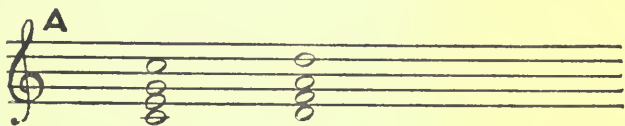
The connection between two harmonies is direct and immediate when they are derived from notes the one of which is a fourth below or a fifth above the other. Thus, the harmony derived from G is immediately connected to that derived from C, and also to that derived from D. The tendency of progression towards C is stronger than towards D, because the note G is the first foreign upper partial of C. Such progression may be termed Centripetal, because the feeling is progression towards the centre. Progression from the harmony of G to that of D, however, is Centrifugal and is away from the key-centre. The former of these is the more natural because of the attraction towards the key-centre. In the case of the latter the progression is maintained against this attraction, and therefore, this type of progression requires a definite output of

musical energy which prevents it from sounding so natural or necessary as the other.

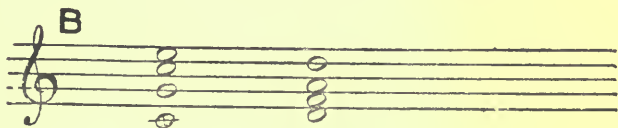
Harmonies derived from sounds separated by other intervals than these are less directly related and their juxta-position tends either to produce an effect somewhat inconclusive:—



or to create an implicit—if not an explicit—feeling of contradiction.

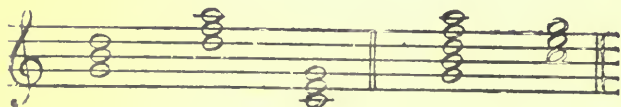


In this latter case care must be taken to counteract this feeling of key contradiction by special manipulation of the melodic progressions.



However, even in the case of such a progression as the last, harmonies not directly related can be forced into a kind of direct connection

by the use of what may be called chord-fusion. By this term is meant the simultaneous employment of more than one simple chord. Such simple chords then blend into a more complex combination which may take on itself the character and relationships of either of the original simple chords. Thus, the chord of G is the nearest relative to that of C, while the chord of D is related only indirectly to that of C; if we fuse the chord of D with that of G we produce a complex dissonant combination which in virtue of the presence in it of the harmony of G is directly related to the harmony of C:—



This fact of chord-fusion renders possible the logical use of any combination of the notes of the key. As the chief fact in the idea of Tonality is the implicit and explicit tendency to progress to the key-centre and as the direct progression to this key-centre takes place only from the Dominant harmony, such chord fusion is mostly carried out on the basis of Dominant harmony. But it is equally possible

on other basses, and so long as the dissonant combinations so formed receive an appropriate solution, and so long as the relationships in the tonality are clearly observed and attended to with reference to progression, such combinations are mostly quite satisfactory.

Proceeding a step further in the consideration of musical relationship brings us to another special feature of modern music—modulation. Just as the single notes of our system enter into definite and consistent relations with one another, and just as the harmonies derived from these notes form specific relationships which define and fix tonality or key; so corresponding degrees of relationship exist between the various aggregations of single notes and harmonies which have been co-ordinated into a series of keys or tonalities.

These degrees of relationship are strictly parallel to those established between the single sounds and harmonies of any one key. Just as the closest relationship exists between a note and those other notes from which it is separated by the intervals of a fifth and a fourth respectively, so the closest relationship between keys are these in which the tonal centres of each key are separated by the above intervals.

Similarly, as in the case of single notes the

degree of relationship gradually diminishes as we proceed from the key centre outwards in both directions; so, a precisely parallel and analogous modification of relationship proceeds as we move from the *key* whose central point is C to the *keys* whose tonics are successively the other notes in the scale of relationship.

At this point it is necessary to interpolate a caution to the reader to avoid confusing the terms key and scale.

There is only one key or tonality associated with each tonal centre but there are possible a very large number of scales. The scale is only a *selection* of the notes of the key; and, while the mode of selection has a very important influence on the effect of any piece, it has practically no influence on the general principles of relationship formulated above.

The term key is a comprehensive term which includes the whole material of the system; the term scale is a term applied to a particular mode of selection of this material. The two modes in common use at present are the Major and Minor scales; but the only reason for the prevalence of these in modern music is the fact that the solution of harmonic problem is easier and more apparent in these two modes than in any other.

Modulation in the proper sense of the term, takes place, therefore, between *keys*, not between scales. To go from *one mode* of a key to *another mode* of the same key, is like changing from one room to another of the same house; to go from *one key* to *another key* is, on the contrary, a radical change involving a fresh scene and a fresh outlook.

This fact of key relationship is used by the modern composer for the purpose of giving shape or "form"—as it is called—to his work. According to the practice of the early classical composers only changes involving very simple relationships were commonly used. But the modern composer allows himself—as in the use of harmony—practically any change he likes.

This side of the matter will be dealt with more fully in the later parts of the book under the consideration of the principles of musical form.

CHAPTER VI

THE RHYTHM OF CONTRAPUNTAL MUSIC

So far, the matters dealt with in the preceding chapters have been concerned with those principles of musical thinking which refer to relationships between musical sounds from the point of view of pitch. But the relationships which exist between sounds, considered from the point of view of Time or Duration, are of at least equal potency and significance in the scheme of modern musical art.

Æsthetic principles concerned with time relationships between sounds are the basis of what is called Rhythm in music; and the systematic combination of these with principles dealing with Pitch relationships constitutes the essentials of that side of musical construction which is termed musical Form. Modern musical art is practically the result of the combined and simultaneous operation of these two contrasted "codes"—as they may be called—the one relating to sounds as they occur in

pitch, the other to sounds as they occur in time. The discovery and full formulation of these "codes" of æsthetic principles were long and tentative processes, during which the musical sense of mankind developed from a condition that can only be described as primitive into one capable of appreciating the subtleties of a very complex art.

Without going into the details of this process of development—a matter somewhat outside the scope of this book—it is proposed in this chapter to give a general sketch of the course which this development has taken, chiefly with reference to the foundation principles of rhythm.

There is no doubt that the chief factor which conditioned the earliest development of musical art was the fact that it was essentially a vocal art. Instrumental music of a primitive kind probably existed from very early times, but it is doubtful if it was ever self-sufficient or independent until comparatively modern times. Such as it was in the earliest times, it was in all likelihood used only as an adjunct to activities which were not in themselves musical, e.g., dancing, hunting, ceremonial functions, etc. The technical limitations of the ancient instruments were, besides, too serious to allow much

liberty or variety in performance; in fact, the only instrument which was sufficiently under control and sufficiently responsive to be used for artistic purposes was the human voice.

So far, then, as the artistic development of music was concerned, it is fairly obvious that the direction in which this extended and the rate at which it progressed were to a very large degree conditioned by the facts that the early musicians were singers, and that their music was composed for and performed by voices.

The time outline of the earliest vocal music was determined by the syllabic quantities of the words which were sung. So long as the musical outline was a simple setting of the words, and so long as the performance was strictly in unison, or by different voices moving strictly in some consecutive or parallel interval such as the fourth or fifth, no special time notation would be necessary. But when the musical outline became more complicated, and when musicians learned the art of combining two or more melodies characterised by contrasted directions or rates of motion, some method of regulating and indicating the relative time values of the sounds had to be used in order to maintain the music in its proper proportions.

The first efforts of the musicians who invented our notation were, from this point of view, confined to the production of such symbols as would indicate clearly very simple quantitative relations; and the music they composed, for which this notation was required, was built up entirely of successive sounds which were rendered continuous and unified into a series by the simplicity of ratio in time value which existed between them.

Sounds exactly the same length stand to one another in a relationship immediately apprehended. Sounds the time values of which are in simple ratio, e.g., 1 : 2 or 1 : 3, present relationships comparatively easily apprehended; and successions of such sounds can be summed up into a continuous unity when some further co-ordinating principle relating to pitch is operative.

The early musicians were so influenced in the choice of the time outlines of their compositions by their realisation of verbal quantities, that some of them of set purpose attempted to formulate regulations for musical rhythm based on the syllabic quantities of the words sung.

A certain Jean Antoine de Baif (1532-1589) wrote some "Chansons Mesurées" which were set to music by contemporary composers. In

these verses de Baif indicated with the signs - \cup the "longs" and "shorts" of each of his lines, and the composers chose such musical values as corresponded to these quantitative signs.

As a specimen of this procedure the following example,¹ quoted by Vincent d'Indy (Cours de Composition Musicale), is reproduced.

The verses with their quantitative indication are:—

Lă bĕl' ărōndĕ mĕsăgĕrĕ dĕ lă găyĕ săizon
 Ēst vĕnŭ, jĕ l'ăy vĕŭ
 Ēllĕ vŏlĕ mŏuchĕlĕtĕs, ĕllĕ vŏlĕ mŏuchĕrŏns.

The musical setting is:—

La bel' A-ronde mesa-gè-re de la ga-ye Saï-zon

Est ve-nû Je l'ay veû, Et-le vo-le mou-chê

le-tes et-le vo-le mou-cherons.

¹ "Le Printemps," by Claudin L. Jeune (Les Maitres Musiciens de la Renaissance française).

The fundamental principles on which this systematization of musical value is based are operative even at the present day, although the strict proportions insisted on by theory are not always observed in practice, being modified by the operation of the modern feeling for balance in structure and determinative progression.

We find, therefore, at the date when counterpoint was the natural and indeed the only means of expression at the command of the artistic composer, that the time outline of music was regulated by a system the chief advantage of which was that it co-ordinated the various melodic lines which combined to form the structure. The sounds in this time outline were related to one another in the very simplest arithmetical proportions, and although these values could be manipulated within considerable limits, they were yet, in the end, all reducible to some statement of very simple proportions.

The musical phrase, in contrapuntal music, was a succession of sounds modelled on words, the individual sounds showing some variety of length, but all lengths related in very simple proportions. It was, therefore, regulated as regards extent by the number of words sung;

as regards outline or syllabic pattern, by the values of the syllables of these words. Between the lengths of the component phrases of a contrapuntal work, there was, consequently, no necessary relation: some might be long, some short. The chief factor in performance was the necessity for the due and proper allotment of time value to each syllable, so that the requirements of harmonic combination might be complied with.

Latterly, no doubt, some greater freedom was used, both in the modelling of the music to the words, and probably in actual performance. Thus, instead of building up the phrase from a series of elementary "longs" and "shorts" each corresponding to one particular syllable, the later contrapuntists showed often a fine sense of melodic decoration and feeling for contrast in the construction of the phrase. Thus the following outline shows a very high development of this feeling for beauty in line:—



With regard to the composition of such contrapuntal works, as a whole, the main principle observed was what may be described as the consistent maintenance of continuity. It must be remembered that the artistic problem to be solved at that time was the combination of simultaneous melodic lines, differing, it is true, as to the time values of their constituent sounds, but all characterised by a similar fluidity and by an equal absence of definite and regular articulation. Each musical phrase conformed to the outline of the verbal phrase which it illustrated. More or fewer words did not matter; the elasticity of the musical outline enabled it to expand or to contract accordingly. The problem of unifying the whole work and of reducing the feeling of discursiveness entailed by the peculiarities of the style, was solved by a self-sacrificing adherence to certain melodic formulæ, and by the more or less persistent recurrence of a limited number of phrases. The principle of Imitation which is inherent in a vocal style of composition was freely used; at first, in a manner somewhat casual and restricted, but latterly, subject to certain definite and characteristic regulations.

The full systematization of the contrapuntal idiom was reached in the Fugue, a form which

has persisted right down to modern times, and which, though mostly associated now with an instrumental medium, was in its origin based on and derived from the conditions and necessities of vocal music. Even in works of this type which were written for instruments, in the details of which the technical character of the instruments exercised a very important determining function, the principle which operated was essentially the principle underlying early vocal music. That is, continuous statement and amplification of statement, with no regular articulation indicating balance and symmetrical design as a whole and co-ordinating all the separate parts. The absence of any definite feeling for tonality based on the co-ordination of the relations in pitch between simultaneous sounds, and the ignorance of the great modern principle of key relationship emphasised the same features in this early music.

These features and the peculiarities of design which they connote are still to be seen in the more modern contrapuntal music. But they are, in such modern music, supplemented by other features of which the early examples were entirely innocent. The radical changes in the outlook of the musician occasioned by

the development of the feeling for key and key relationship and by the adoption for artistic purposes of the principle of rhythmic balance, effected considerable modifications in the contrapuntal practice without absolutely obliterating its idiomatic features.

In a modern fugue, for example, the whole work is knit together and unified by the influence of the principle of Tonality and all that it implies. Variety is provided and maintained by a judicious choice and contrasting use of key changes, or modulation. The subject matter is in many cases rendered definite by being conceived as a rhythmically balanced phrase—a feature unknown in early contrapuntal music—and is often of strongly marked pattern characterised by idioms which are distinctly non-vocal. However, even in such works the main principles controlling development are essentially the principles operative in early contrapuntal vocal music. These are, as previously stated, continuous statement and amplification of statement, imitation by one voice or part of phrases previously sung by another, fluidity of outline, and an almost entire lack of balanced and definite articulation.

Similar characteristics are to be found in much modern music which is not avowedly

fugal. Such works as the Preludes to the English Suites of Bach, and a good deal written by even the most modern composers, are based on structural principles identical with those which underlie the fugal form. Fluidity of outline, the lack of balanced articulation, and the assiduous maintenance of continuity proclaim the near kinship of such pieces to the Fugue, and indicate their descent from the original vocal music of the early contrapuntists.

The problem presented to the performer by such pieces is fairly complicated and admits of no very definite solution. In the next chapter it will be shown how the "elocution" of the rhythmically balanced work is a matter of phrase identification, and how the application of the broad principles of rhythm renders possible this identification of phrase. In this contrapuntal music, however, there are no direct means by which we can always authoritatively decide this important question of phrase outline. Built on vocal idioms which originally owed their phrase outline to the definition of words, modern instrumental music in this idiom has no verbal associations which can serve as a guide to the performer. But, if the performance of such works is to convey

any meaning, there must be present in every case phrase outline and definition of some sort. Due regard must therefore be paid to the contrasts of pitch and of time outline so as to ensure a significant performance. Most of the dislike which the unsophisticated have towards contrapuntal music is traceable to the fact that many performers imagine a fugue is to be "rattled" through from beginning to end without colour or contrast; excepting perhaps an extra amount of emphasis on the reappearances of the subject.

The contour of the melodic line will usually give more or less obvious indications as to "interpretation." The following illustrations may help to make this point clear. If a certain voice or part consists entirely of repetitions of the same sound identical in pitch and in value



we would have an undifferentiated succession which we might divide up in any way, and in no one way rather than in any other. Just as there is no particular reason if we wish to divide up a straight line why we should divide it into any particular number of parts rather than into any other.

But suppose that in the series of sounds there are some sounds which are differentiated from the others by time value :—



or by pitch :—



or by both time value and pitch :—



then such differences, especially if they occur regularly, produce points in the succession which can be regarded as indicative of some shape.

Just as if the straight line referred to above should now become curved:—



Now, although continuity is maintained in the curved line just as much as in the straight,

there are features—chiefly associated with change of direction—in the curved line which lend themselves to the indication of possible articulations. The parts into which this curved line then articulates need not be balanced either in themselves or with reference to each other, but the important point is that by taking advantage of the differences in direction, etc., the line can be reasonably regarded as an aggregate of the several parts so obtained, and can so acquire a character and an individuality of its own.

According to the same principle the characteristic features of any melodic succession can afford indications as to how that succession may be articulated and so acquire an æsthetic individuality, although the parts so articulated may neither be internally balanced nor present any balance with reference to each other.

The fact that, in much modern music which is composed in the contrapuntal idiom, the subject matter is conceived on the basis of rhythmic balance, predisposes the mind of the composer to a development in which this characteristic feature of modern musical thought is more or less prominent. The regular employment of sequential imitation in such works is

also ascribable to the desire of the composer to present this development under conditions which, in their formal aspect, convey this feeling of balance, while at the same time maintaining the continuity of progression. The following examples illustrate these points.

The first four are subjects of fugues by Bach, and it will be felt that the natural articulations which they display are such that the feeling of a *balanced* statement compounded of distinct and individual *balanced* units is maintained in each expression.

The image displays four musical staves, each representing a different fugue subject by J.S. Bach. The first staff is in B-flat major and features a melodic line with a long, sweeping slur encompassing the entire phrase, with smaller slurs under individual units. The second staff is in D major and shows a rhythmic pattern of eighth notes with a long slur over the first part and a shorter slur over the second. The third staff is in D major and consists of a continuous eighth-note pattern with slurs under groups of four notes. The fourth staff is in D major and shows a similar eighth-note pattern with slurs under groups of four notes, ending with a fermata.



The bar-lines in the above have been arranged so that they occur only before the rhythmic climaxes of the several units.

In the examples with which this chapter closes the reader will be able to trace the strong influence which the sequential idea is able to exercise on a development which, although not foreign to contrapuntal idiom, is characterised by a feeling of *balanced* statement and re-statement; a feature added to purely contrapuntal methods by modern practice. The general principles upon which this rhythmic balance is maintained will be dealt with in the following chapter.

Bach: Fugue in A minor

The first system of musical notation shows the first two measures of the first voice (treble clef) and the first two measures of the second voice (bass clef). The first voice begins with a half note G4, followed by a half note A4, and then a half note B4. The second voice begins with a half note G3, followed by a half note A3, and then a half note B3. The first measure is marked with a 'p' (piano) dynamic.

The second system of musical notation shows the third and fourth measures of the first voice and the third and fourth measures of the second voice. The first voice continues with a half note C5, followed by a half note B4, and then a half note A4. The second voice continues with a half note C4, followed by a half note B3, and then a half note A3. The first measure of this system is marked with a 'p' (piano) dynamic.

The third system of musical notation shows the fifth and sixth measures of the first voice and the fifth and sixth measures of the second voice. The first voice continues with a half note G4, followed by a half note F4, and then a half note E4. The second voice continues with a half note G3, followed by a half note F3, and then a half note E3. The first measure of this system is marked with a 'p' (piano) dynamic.

The fourth system of musical notation shows the seventh and eighth measures of the first voice and the seventh and eighth measures of the second voice. The first voice continues with a half note D4, followed by a half note C4, and then a half note B3. The second voice continues with a half note D3, followed by a half note C3, and then a half note B2. The first measure of this system is marked with a 'p' (piano) dynamic. The system concludes with the text "etc." in italics.

*Bach: Forty-eight Preludes and Fugues.
Book II., No. 1.*

The first system of musical notation consists of two staves. The upper staff is in treble clef and contains a melody of eighth and sixteenth notes. The lower staff is in bass clef and contains a bass line with a similar rhythmic pattern. The key signature has one sharp (F#) and the time signature is common time (C). The system is divided into two measures by a vertical bar line.

The second system of musical notation consists of two staves. The upper staff continues the melody from the first system. The lower staff continues the bass line. The system is divided into two measures by a vertical bar line.

The third system of musical notation consists of two staves. The upper staff continues the melody. The lower staff continues the bass line. The system is divided into two measures by a vertical bar line. The second measure of both staves contains a whole note chord in parentheses, followed by the text *etc.*

CHAPTER VII

THE PRINCIPLE OF RHYTHMIC BALANCE

THE *artistic* music of the Middle Ages—by which is meant music other than folk-music—was a sophisticated form of expression developed wholly and solely from the vocal side. Whatever may have been the case in the tunes and “chansons à danser” sung by the people, the feeling for rhythmic balance—arising out of the symmetrically balanced physical movement—was rigorously tabooed by the ecclesiastics who were the professional musicians of these times. The associations of the dance with the profane and ordinary common life of the people disposed the ecclesiastical musician to a method of expression in which this distrusted secular influence could not in any degree be traced.

This result was further achieved by the development of the contrapuntal method of composition, in which the artistic problem to be

solved was the combination of simultaneous melodic lines, varied, it is true, as to the values of their constituent sounds, but all alike distinguished by fluidity of outline, the absence of definite and regular articulation, and the similarity of texture which results from the use of common melodic formulæ. The musical art of this period resembles in its lack of definite design the oriental decorative "arabesques" in which the eye is confused and the attention hypnotised by the multiplicity of interlacing lines, now convergent, now divergent, but without any subordination to a general principle of shape or perspective.

The rise and development of instrumental music, however, were the means of introducing a new and important factor into the situation. As vocal music had attained to a very considerable development before the composer thought of writing for instruments, the natural result was that the earliest compositions for instruments were based solely on the matured vocal idiom. In other words, they were the exact counterpart of the prevalent vocal compositions, only without words. Divested of the words which gave the shape to the music, the effect of such compositions was soon realised to be far from satisfactory; and, after some

considerable time during which composers of instrumental pieces experimented more or less blindly in the endeavour to dig out some principle of design from the technical effects peculiar to each instrument, the eventual solution of the problem was found in the performance of musical pieces types of which had been in existence all along, but which had been unrecognised by the professional composers. These were found in the dance tunes sung and played by the people.

A dance tune, unlike the vocal type of melody, has its root and origin in bodily movement and gesture. In the primitive dances, such movements were, no doubt, of a comparatively obvious and simple type; and, as performed by an assemblage of people either in the course of some mystic or sacred rite, or purely as a social diversion, consisted of the regular and periodic repetition of some series of movements. The simplest of all dances is the March, in which the body of the dancer moves in cycles each of which contains two simple movements. With more complex dances the series of movements is more complex, but all possess this feature in common, that after the series is completed the body of the dancer is in the same relative attitude as it

was at the beginning of the series. In the case of dances performed by one individual the *cyclic* character of the movements need not be so apparent nor so necessary, but in dances in which a number of individuals take part this cyclic arrangement is a necessary condition.

When an assemblage of people performed the same dance at the same time, the task of co-ordinating the movements of the different individuals was probably accomplished by shouts and cries; just as the drill-serjeant co-ordinates the step of the recruits with "Left—Left—Left." These primitive shouts naturally developed into some kind of simple symmetrically balanced song, which derived its symmetry from the regularly balanced movements which it served to co-ordinate.

When the mediæval composer, therefore, had tried vocal idioms as a basis for instrumental composition and had found the unsatisfactoriness of such a method, the most natural and obvious thing for him to do was to fall back on that kind of music probably already associated in some measure with instrumental performance, and write dance music; i.e., music which is constructed on the basis of regularity and balance of rhythmic statement.

The combination of this new principle with

the paraphernalia of the contrapuntal style produced a species of composition in which sometimes the one idiom seems to be paramount, sometimes the other: where certain sections or divisions of the work are conceived on the basis of regular rhythmic articulation, and where in other divisions the natural fluidity of the contrapuntal style re-asserts itself. In many cases the dance shape was adopted in its entirety but by sophisticating the treatment the composer concealed the somewhat obvious origin from which it derived.

In order that a rhythmic progression may be felt as balanced it is necessary, in the first place, that the mind should attend to the progression in a peculiar way; and, secondly, that there should be inherent in the progression certain natural arrangements and proportions which can intuitively be realised as balanced and symmetrical.

Before proceeding to the consideration of the purely musical side of such a progression it is necessary to consider briefly what is implied in both these conditions.

A rhythmic progression is a succession of sounds which unfolds itself in time, and which, in virtue of the definiteness and simplicity of the relations of value existing between these

sounds, serves as a measure of the extent and rate at which time passes. This extent and rate are, however, relative rather than absolute. In such a progression two things are essential: first, the existence of sounds *in succession*; second, the existence of definite and simple relations of value between these successive sounds.

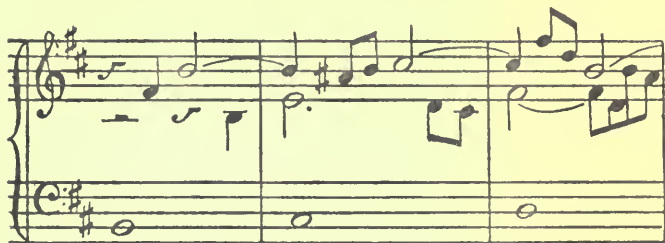
If the sounds of a succession present amongst themselves relations of value which are not definite nor simple the succession ceases to be realised as rhythmical. In European music the relations of value which must exist in order that a progression may be felt as rhythmical are of a very simple nature; viz., representing ratios of 1: 2, 1: 3, 1: 4, etc.¹

The consideration of a series of sounds in succession may be associated with two different forms of mental activity. In the one case the direction in which this activity is chiefly exer-

¹ In oriental music, the development of which has been on lines divergent from those followed by European music, the relative values of successive sounds are frequently very complex, and the oriental musician seems to be able to apprehend the complex proportions implied by such values, and to feel as rhythmical progressions which we at present cannot so realise. (Cf. *The Thought in Music*, Appendix A). Even in our European music these complex relationships in value are met with in what is called "Tempo Rubato," but there the apprehension is assisted by the operation of this very principle of rhythmic balance.

cised may be described as *backwards*; the outlook is retrospective. That is, each sound as it comes into and passes out of the focus of perception has its value and place in the progression assigned to it according to the relations which exist between it and those sounds which have preceded it. No definite attempt is made to forecast to any extent the outline of what is to follow it. To illustrate figuratively: the attention of the listener is like that of a person who is proceeding through a country with his back to the direction of progression. As each object comes in its turn into his field of vision he realises it in its relations to that part of the landscape *which he has already seen*, but forms little or no idea of its relations to that which is still to come.

The simplest musical example of this kind of attention is in the apprehension of the fluid progression typical of counterpoint:—



The apprehension of progressions like the above is almost entirely of the type described. So long as each sound entering the focus of attention stands in easily understood relations of quantity to its predecessors, so long this retrospective attention is satisfied, and the progression can—from this point of view—come to rest at any point.

Contrasted with this is that type of activity in which the attention is directed chiefly forwards. The act of attention is now projected so that it extends to and culminates at a point

in the progression which lies in the future. Each sound entering the mental focus, besides being stored up in the memory in its relations to what has preceded it, is realised chiefly in the relations which exist between it and this point of culmination or crisis. The musician, in this case, is aware of the point of crisis in a way analogous to that in which the person who aims and throws a missile at any object is aware of the object at which he aims and also of the trajectory which his missile will describe.

This type of mental activity is that which chiefly characterises the apprehension of modern music in which the basis of design is this principle of Rhythmic Balance. In this the co-ordinating factor is supplied by the fact that the musical intuition grasps in one act of thought a progression embracing a number of sounds arranged so as to convey the feeling of symmetry and balance. The following are examples of such balanced groups, each arranged round and culminating at its definite point of crisis:—



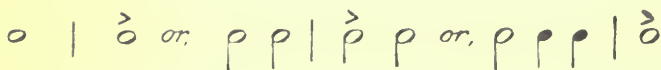
Such groups are felt as balanced because they are symmetrically arranged around a nucleus. This nucleus is generally called the Accent. As this nucleus or culminating point is felt to be the climax of the group, and as it is natural that such should be the most forceful point in the group, the word accent has come to be understood as mainly indicating extra emphasis or loudness. In connection with rhythmic progression, however, accent refers to the *position* of this nucleus, which may or may not be the loudest point in the group.

Such balanced groups are compounded of two equal but contrasting elements, the one preceding the nucleus, the other succeeding it.

These elements are called beats or pulses, and while they are identical as regards quantity or value, they differ in quality, which difference is indicated by calling the one strong, the other weak. The weak beat is that which precedes and leads to the accent; the strong beat bears the accent.

It must be realised that what we call accent is a special *quality* which characterises a certain "place" in the progression. Rhythmic progression is essentially continuous and does not dwell on or delay at this "place" which is no sooner reached than it is quitted. The accented place, like the mathematical point, has position but no magnitude. In the balanced group which coheres round the accent, therefore, some value must always precede and some value must always succeed the accent.

This balanced group is the unit of musical thought: it may vary infinitely as regards outline, and in one and the same piece to a limited degree as regards dimension. In the simplest primitive form of unit the value which precedes the accent is exactly equal to that which follows it.



But, so long as the total value remains the same, any value can be transferred from the one side of the accent to the other.



A musical work in which this principle of rhythmic regularity and balance is the basis of design, consists of a chain of such units or phrases, so arranged and of such dimensions as to give the effect of continuity with more or less regular articulations. Each unit is identified with its own accent, and these accents are so arranged that they occur either at regular intervals or at intervals which present simple relations of value.

The distinction between the rhythm of modern music and that of the contrapuntal idiom is, therefore, twofold; in the first place, in rhythmically balanced music every accent is associated with a symmetrically balanced group or unit; secondly, the occurrence of these accents is either regular or in accordance with a scheme based on simple relative values. If two successive accents are separated by a certain interval of time, any change in the dimension of the interval of separation will be such

that the new interval presents, relative to the old, the simplest possible proportion: *e.g.*, 1 : 2, 2 : 1, 1 : 4, etc.

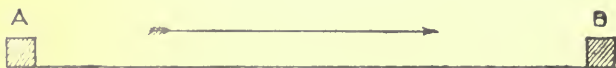
It is, therefore, possible to indicate graphically the rhythmic outline of modern music in some such manner as the following:—



The figures on the curve show the points which correspond to the accents of the five units which make up this example.

The essential nature of rhythmic progression is best exemplified by the following illustration, which I quote from my *Principles of Phrasing and Articulation in Music*.

Suppose A and B are two jetties in a river which flows in the direction of the arrow, from A to B. A person floating down the river with the current from A to B, will have a feeling of *departing from A* so long as he keeps his eye and attention fixed on A.



But if he shifts his attention to B, his feeling with reference to his progression will be one of *approach to B*.

Substitute, for the flowing river and the jetties A and B, the continuous flow of rhythmic progression between two consecutive accents. The change in the direction of the attention from a preceding to a succeeding accent may take place anywhere between the two. Usually this change takes place at a point conditioned by what has preceded the first accent. But the composer can, by manipulation of the musical outline, so arrange that this change can take place practically anywhere after the first accent is quitted. In this way, even if a piece is composed of units of the same dimension, variety can be secured and the monotony of mechanical change can be avoided.

The rhythmically balanced unit or group is the ultimate fact in the analysis of design in modern music. From a practical point of view this analysis is of the utmost importance, because these units are the ultimate "phrases" of a work, and the correct "phrasing" in performance is simply the indication, by means of tone and time-inflexions, of the points of articulation which join the component units of a piece. The indication of these does not

necessarily break up the continuity of progression, but only serves to explain the meaning of the music by insisting on the outlines of the structure. Just as it is not necessary to lop off the hand in order to use the articulation or joint at the wrist.

In the case of the early composers who employed this characteristic idiom, the units which compose their works are generally simple in outline rather than complex, and variations in size, while not infrequent, are mostly confined to such as are comparatively simple.

The following example illustrates this point:—

Haydn: Sonata in F.



The bar-lines are arranged in the above to indicate the rhythmic accents.

The course of development, however, which has led to modern music has affected this factor of musical effect as much as the others.

The internal arrangement of the component units of a work has tended to become more highly organised and more complex; and the contrasting variations in dimension between the individual units in one and the same work have become more pronounced. In place of the simple Augmentation to double the dimension, or Diminution to half the dimension, variations in size of a kind very much more complex have become a frequent characteristic of the modern rhythmically conceived work.

As an example of the possibilities of such variations in the hands of the modern composer, the following Prelude of Chopin is appended. The notation and barring employed by the composer have been modified in order to show the grouping and arrangement of the units. The barline in this transcription of the Prelude is used only where these rhythmical accents occur. There are, therefore, just as many barlines as there are phrases or units. The slurs are employed to show the exact dimensions of each unit, and where two units of different dimensions occur simultaneously each is designated by its own appropriate slur.

Moderato Chopin *Prelude No. 23*

p delicatissimo

The first system of musical notation for Chopin's Prelude No. 23. It consists of two staves: a treble clef staff on top and a bass clef staff on the bottom. The treble staff contains a series of eighth notes with slurs, while the bass staff has a few notes and rests. The dynamic marking *p delicatissimo* is written below the treble staff.

tr

The second system of musical notation. It continues the piece with two staves. The treble staff has slurred eighth notes, and the bass staff has notes with a trill marking *tr* below the first measure.

The third system of musical notation, consisting of two staves. The treble staff continues with slurred eighth notes, and the bass staff has notes with slurs and a final flourish at the end of the system.

The first system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat (B-flat) and a common time signature (C). It features a melodic line with eighth notes, slurs, and accents. The lower staff is in bass clef with a key signature of one flat and a common time signature. It contains a few notes and rests, including a double bar line.

The second system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat and a common time signature. It features a melodic line with eighth notes, slurs, and accents. The lower staff is in bass clef with a key signature of one flat and a common time signature. It contains a few notes and rests, including a double bar line.

The third system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat and a common time signature. It features a melodic line with eighth notes, slurs, and accents. The lower staff is in bass clef with a key signature of one flat and a common time signature. It contains a few notes and rests, including a double bar line.

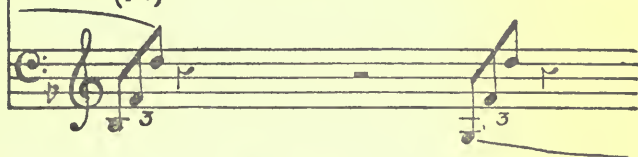
The first system of music consists of two staves. The upper staff is in treble clef and contains a melodic line with a series of eighth notes, some of which are beamed together. The lower staff is in bass clef and contains a bass line with a few notes, including a whole note and a half note.

The second system of music consists of two staves. The upper staff is in treble clef and contains a melodic line with a series of eighth notes, some of which are beamed together. The lower staff is in bass clef and contains a bass line with a trill (tr) over a note, followed by other notes.

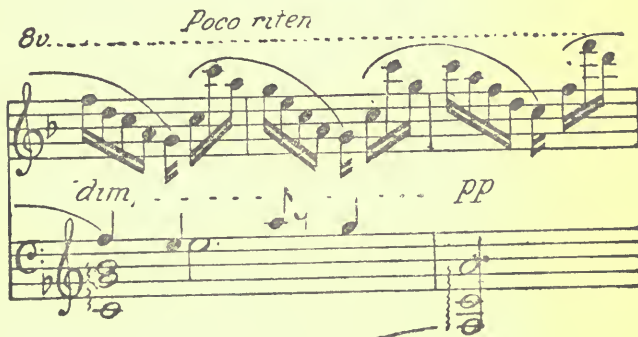
The third system of music consists of two staves. The upper staff is in treble clef and contains a melodic line with a series of eighth notes, some of which are beamed together. The lower staff is in bass clef and contains a bass line with a triplet of eighth notes, followed by other notes.



(A)



8v



8v

Poco riten

dim.

pp

A. Tempo.

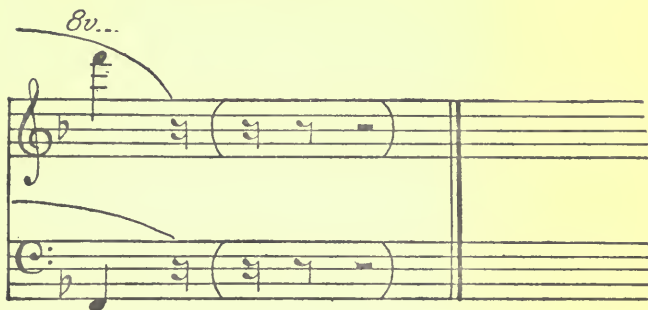
Two staves of musical notation. The upper staff is in treble clef and contains a melodic line with eighth notes, slurs, and accents. The lower staff is in bass clef and contains a bass line with a trill (tr) and eighth notes.

Co. -----

Two staves of musical notation. The upper staff continues the melodic line with slurs and accents. The lower staff continues the bass line with slurs and accents. The word "dim" is written above the first few notes of the lower staff.

B

Two staves of musical notation. The upper staff continues the melodic line with slurs and accents. The lower staff continues the bass line with slurs and accents. The word "Smorzando" is written below the lower staff.



The two points in the above marked respectively A and B would probably in actual performance receive an interpretation in which the simple schemes indicated would be somewhat modified. The feeling of the largely conceived progression in the left hand part at A would probably obliterate the small articulations of the right hand progression, and the whole passage would be swept along under the impetus of the larger rhythmic oscillation towards the climax at the "A Tempo." In the indication of this largely conceived rhythmic oscillation the most important factor is that balanced inflexion of time which is termed *Tempo Rubato*. By means of this necessary element of artistic performance the progression from and to accent can be indicated, and the shape and meaning of the phrase made clear.

At B it is possible and, perhaps, preferable, to regard the whole concluding passage as leading up to an accent which has no sound associated with it. This view certainly finds corroboration in the pregnant dissonance which never receives any overt resolution.



CHAPTER VIII

MUSICAL FORM

THE expression "Musical Form" has to a certain type of musician all the sacred associations of "that blessed word Mesopotamia." As too often used, the generalisations which constitute it are employed as a kind of musical decalogue invested with some kind of sacrosanct authority, and the final verdict of a damning criticism is reached by reference to its laws and ordinances.

However, a little consideration of historical process will show that like every other element in artistic production, this so-called Musical Form, in so far as it is vital and effective, has been, and is in a continual state of evolution and development.

Briefly put, the Form of any musical work is that principle or method employed in arranging the component parts of that work in virtue of which the work becomes a vital and

organic unity. In the very earliest period of musical history, before self-sufficient instrumental music existed, the Form of a work was primarily dependent on the words which were the basis of the structure. Roughly speaking, the scheme employed by the composer of that period was as follows:—A musical phrase, arranged as regards outline to fit the verbal phrase, was invented—or, as often as not, borrowed—due attention being paid to such matters as quantity and pitch. As the work progressed and the words of the text changed, new musical outlines moulded on new words appeared, and this principle continued until the piece came to an end.

As Key, in our sense of the word, was not at this time realised by musicians, there is, in such works, neither modulation nor key-development. The unity of the work from the point of view of pitch is secured by the general predominance of certain melodic relationships, implied by consistent use of one so-called mode throughout. The chief place with regard to design was taken by the principle of melodic Imitation. Just as the discovery and invention of harmony arose from the endeavour on the part of different voices to sing the same tune at the same time, so the chief character-

istic of the mediæval composer's scheme from the point of view of design was the consistent performance by different voices of the same melody at *different* times.

As time went on the development of the technical skill of the composer in the direction of harmonic combination was accompanied by a fuller and clearer systematization of this principle of melodic Imitation. Just as the casual and fortuitous combinations of melodies which formed the crude and primitive Diaphony and Descant became systematized into a supple and expressive art of Counterpoint, so the casual imitations which were the earliest attempts at design became systematized and regulated into the art-forms which are known as Canon and Fugue.

The Canon was a piece of music in which the principle of Imitation was rigorously and consistently maintained throughout; as can easily be understood, it was therefore incapable of much artistic development. The very rigour and strictness which operated in Canon prevented it from ever assuming much importance as an artistic structure, because along with all the limitations imposed by any one principle of design there must exist a possible freedom for development, else that prin-

ciple will become reduced to a barren and mechanical formula.

The developments possible within the limitations of canonic form are concerned rather with the management of the *mechanism* of imitation than with the intrinsic musicality of the idea or mood expressed. Consequently, the enumeration of the different ways in which this rigorous imitation may take place practically summarizes all there is to be said about Canon as a principle of musical design. The chief of these were:—

- (a) Canon direct at various intervals,
- (b) Canon inverted, or by contrary movement,
- (c) Canon by augmentation,
- (d) Canon by diminution,
- (e) Canon by retrograde movement,
&c., &c.

Besides the above there were what might be called "Puzzle Canons," the solution of which had to be sought for. These last were termed *Ricercare*—from the Italian verb, to search into, to investigate—a term which eventually came to be applied to a species of composition which stands midway between the Canon proper and the Fugue. The stringency

of the Canon, the difficulties attending its composition, and the comparative poverty of the musical result, led composers to vary the strict imitations by the use of contrasting counterpoints and other effects. The result was a loose style of composition free, it is true, from the more mechanical restrictions of the Canon, but without any special or distinctive feature which might serve as a general principle of design. This type, however, was essentially a form of transition and its chief interest is that it indicates the course of development which led from the strict Canon to the more highly organised and more elastic Fugue.

To enter into the technical details which characterise Fugal form would be beyond the scope of this book; the reader who is desirous of studying these will find them fully classified and tabulated in the text-books. It is necessary, however, to indicate the manner in which Fugal form and the idioms associated with it which originated in the principle of melodic imitation, are connected to and influenced by the great principles of design which are operative in modern music.

The origin of the two great conditioning principles of design in modern music—definiteness of Tonality, and rhythmic balance in

statement—dates from the period when the characteristic features of Fugue were in the process of becoming systematized and regulated. To the operations of these two principles is due the difference between the highly developed Fugue of the later composer and the invertebrate imitative discursiveness of the work of the earlier composers.

Under the operation of the principle of Tonality, the Fugue, as a whole, acquired a unity and a symmetry which were unknown to the loosely constructed pieces in the modal idiom. The change from a central tonality to contrasting and subordinate keys, the identification of whole sections of the work with one such key, and the final convincing reassertion of the central tonality, provided a shape in which the compromise between unity of idea and mood and diversity of detail and interest was effectually maintained.

In place of the mechanical application of the principle of imitation which was a necessary result of the rigorous methods of Canon, there was substituted a scheme in which this imitation alternated with passages designed to afford relief, in which the fancy and æsthetic feeling of the composer found scope for their exercise. While the changes of Tonality, and

the statement of the subject matter in these various tonalities, served to supply the main supporting pillars of the musical structure, decorative passages, mostly of relevant matter, provide relief and variety and maintain interest.

Although the more modern composers allow themselves considerable freedom in this respect, these key changes were, in the case of the classical Fugue, almost invariably confined to tonalities which stand to the centre key in some very close relationship.

As the essential basis of musical form with reference to the broader lines of design depends on this principle of Sequence of Tonality, it may be useful here to re-state the facts underlying this principle.

The basis of relationship between sounds rests on acoustical fact, and just as individual sounds are felt in certain relationships in conformity with these facts, so harmonies derived from such individual sounds, and the complex centralised systems (which we call keys) grouped round such individual sounds, stand to one another in similar relationships.

In the case of Fugue, a form which attained its highest development at a time when this realisation of musical relationship was at a

comparatively early stage of its evolution, the key relationships which outline the design of the whole work were at first of a nature comparatively simple.

The influence of the other principle of design which characterises modern music—rhythmic balance of statement—is to be seen mainly in the organisation of the subject matter of Fugue. As has already been pointed out, the contrapuntal idiom which pervades this class of composition is, in a sense, antagonistic to this principle of rhythmic balance. Where the necessities of the contrapuntal idiom regulate the structure, this principle is therefore in abeyance; but in the organisation and elaboration of the subject matter its influence is particularly noticeable. Also, in these decorative and unessential passages termed Episodes, the prevalence of the sequential method is a tribute to the desire on the part of the composer for symmetry and balance.

The development of instrumental music resulted in the adoption for artistic purposes of the rhythmic outlines and idioms of the Dance tune. These became the basis of a type of instrumental music which eventually developed into the Suite. In its artistic form, however, the original Dance tune was moulded and de-

veloped so that although in each case the characteristic idiom and title was preserved, yet the whole movement departed from the primitive simplicity of the tune which was actually danced to, and became a sophisticated and distinctive piece for independent performance.

The Suite consisted of a group of such instrumental pieces generally based on dance idioms. The members of this group were bound up together by the fact that each is in one and the same key, and they follow one another in such a way that there is a more or less gradual transition of mood and movement, affording artistically calculated contrasts. Each of these pieces or dances is built on the same design or form. They differ amongst themselves not in regard to their shapes considered as wholes, but in the patterns and outlines of the units out of which they are constructed. These idiomatic patterns give each dance its individuality, and the reader will find details of each in any text-book or dictionary of music.

The principles of construction exemplified in the general design or shape of these dance movements are very simple. The question of shape from the larger point of view is essentially a question of Key relationship and pro-

gression; *i.e.*, movement *out from* a tonal centre and movement *back to* that tonal centre. The manner in which this progression is accomplished gives rise to all the variety of the so-called Forms.

The very simplest solution of the problem is that in which the musical statement moves from the tonal centre to a contrasting subordinate key, and having reached this point of contrast moves back more or less directly to the original centre. Such a progression evidently divides into two parts, in the first of which movement is centrifugal, *i.e.*, away from the key centre; and in the second of which movement is centripetal, *i.e.*, back to the key centre. This is essentially the scheme underlying what is called Binary or Two-Part Form.

The following little piece is a neat example of this scheme:—

Bach No. 10 of Twelve Little Preludes.

The image shows a musical score for a piece by J.S. Bach, identified as No. 10 of the Twelve Little Preludes. The score is written for a single melodic line in treble clef and a single bass line in bass clef, both in 3/4 time and the key of B-flat major (one flat). The piece is in binary form, consisting of two measures. The first measure shows a centrifugal movement, starting on a whole note G4 and moving through a series of eighth notes (A4, B4, C5, B4, A4, G4) to a half note F#4. The second measure shows a centripetal movement, starting on a half note F#4 and moving through a series of eighth notes (E4, D4, C4, B3, A3, G3) to a whole note G3. The piece concludes with a final whole note G3 in the bass line.

The first system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat (B-flat). It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The lower staff is in bass clef with the same key signature. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The system is divided into three measures.

The second system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The lower staff is in bass clef with the same key signature. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The system is divided into three measures. The second measure of the upper staff has a first ending bracket labeled '1' and the second measure of the lower staff has a first ending bracket labeled '1'. The third measure of the upper staff has a second ending bracket labeled '2' and the third measure of the lower staff has a second ending bracket labeled '2'.

The third system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The lower staff is in bass clef with the same key signature. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The system is divided into three measures.

The fourth system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The lower staff is in bass clef with the same key signature. It begins with a half note chord (F, B-flat) followed by a series of eighth notes: F, G, A, B-flat, C, D, E, F. The system is divided into three measures.



Obviously, the very simplicity of this scheme prevents its employment on a very large scale without considerable modification. Consequently, when composers came to construct pieces on a larger scale the primitive simplicity of this Binary Form was modified and developed. The process of development eventually culminated in that Form which is called the Sonata, and the nature and character of the subordinate forms can perhaps be best realised by consideration of the process which ultimately led to the Sonata.

The term Sonata and the collateral terms Cantata and Toccata were originally employed as descriptive not of the form or shape of a musical composition, but of the particular method of performance which it required.

Cantata was something sung—performed by the human voice;

Sonata was something played by a violin or *bowed* instrument as opposed to

Toccata, which was something played on an instrument with keys or "touches."

The modern use of the term Sonata, on the other hand, connotes a certain form or shape of composition, and has little reference to the type of instrument on which such composition is performed. With the exception that the presence of the word Sonata in the title or description of a work almost always implies the use of a keyed instrument; *e.g.*, pianoforte or organ. This keyed instrument may be solo or may be used in conjunction with some other single instrument; violin, flute, etc.

The term Sonata is not applied to compositions written for more than two instruments, although in form or design such compositions may be precisely similar to such works as usually are associated with this title. Such works are termed Trios, Quartets, Quintets, etc., according to the number of individual instruments required for performance. This numerical nomenclature has been extended as far as nine; when a piece requires more than nine single instruments some vague and indefinite term, such as, Serenade, would probably be used.

Historically, the Sonata derives from the same origins as the Suite; *i.e.*, it had its root in the dance tunes and songs which, transcribed for instruments, formed the first and earliest self-sufficient instrumental music. While, however, in the Suite the dance origin is never lost sight of, but is preserved both in the titles of the movements and in their shapes and characters, in the very earliest examples of the Sonata these dance titles are abandoned, being replaced by a simple indication of Mood or Tempo—Allegro, Adagio, etc., and the outlines of the shape are altered and modified so that the original squareness of the dance tune is obliterated, and the music moves in cycles which at one and the same time are freer and more susceptible of development.

In these primitive Sonatas, also, the germ of a more highly organised and developed outline begins to appear. The invariable type of movement found in the dance form was that outline which has been described under the name of Binary Form, in which two equal parts are united, similar in idiom and contrasting only, or chiefly, in tonal progression. From this simple Binary Form the more highly organised Ternary or Three-part Form developed, and on the basis of this latter was

constructed that type of fully developed movement which in modern music is associated with the term Sonata.

The origin of this Ternary Type is to be found in certain movements of the Suite in which the initial idea or subject is reintroduced in the tonic key just before the end of the movement. Sometimes this "rudimentary recapitulation" is so imperceptible as to be scarcely noticeable; and it is further concealed by the fact that the subjects of these movements are often so indefinite as hardly to merit that name.

The characteristic outlines of this "Sonata on one subject" (as this variety of Ternary Form may be called) are displayed in the following scheme:—

- (1) Exposition beginning in the Tonic key modulating to a related key.
- (2) Middle Section consisting of modulations and developments based on the initial idea, with a progressive return to the tonic key,
- (3) Recapitulation of the initial idea, without modulation; concluding cadences or Coda confirming the tonic key.

The foregoing outline subjected to certain developments produced what may be termed "Ternary or Sonata Form with two subjects." The second subject, at first tentatively introduced, eventually became systematised and fixed as an essential feature in this design. In the Exposition of the "Sonata on one subject," as the music approached the related key in which this first part closes, the composer got into the habit of introducing a secondary idea or figure. The introduction of such an idea was no doubt suggested by the fact that the change of key could be made more definite and more distinctly perceptible when stated in terms of a new musical phrase or subject. This idea, which at first was quite secondary and little more than cadential emphasis, eventually developed into a real second subject of distinct character and pronounced dimensions.

The general scheme of the design so produced may be summarised as follows:—

- (1) Exposition, consisting of (a) Principal Subject modulating towards a related key by means of a transitional passage; (b) Second Subject in related key, generally composed of three distinct elements.

- (2) Middle Section made up of fragments of the Subjects arranged in a very variable order with regard to modulation and constituents.
- (3) Recapitulation, without modulation to the relative key, consisting of (a) Principal Subject in tonic key with transitional passage directed towards the Tonic; (b) Second Subject with all its elements transposed to the Tonic key.

As far as the lines of definition are concerned the above scheme is essentially the design of the modern Sonata Form, but these early works differ from the modern examples in two chief points. These are: first, the poverty and indefiniteness of the subjects; and, second, the fact that the middle section lacked organisation and was based more on the effect of contrasting modulations than on development of subject matter in the real sense of the term.

The modern composer, with few exceptions, is not content to base his work on the first subject which comes into his head—or under his fingers—but will spend much time experimenting and looking for subjects of a distinctive

nature. Such striking and impressive subjects do not come by chance and in this connection there is nothing more instructive than to examine the careful and laboriously calculated touches and alterations by means of which Beethoven moulded his subject matter into that form which satisfied his artistic sense as the best possible. The highest invention is really a kind of divinely ordered criticism, and those musical ideas which often seem most spontaneous and most "natural" have reached that "naturalness" by the unremitting exercise of a nice criticism which has chosen only the suitable and rejected remorselessly the unsuitable elements.

The term "Development" as used generally in music means the orderly and logical growth and transformation which a musical idea undergoes when it is employed to outline progression. In this sense the process of building up the complete musical statement from the original unit is a development of that unit—a development which may take place in two different directions, indicated by the fact that a thing will suggest either its like or its opposite.

In connection with the Sonata and that particular section of it with which this term is

associated, the word development generally has the first of these two meanings. Sometimes an idea is developed by being contrasted with an entirely new idea—in which case we say that the development is, or contains, an Episode; but the general signification of the word is that an idea progresses to something which is obviously related to itself, but which as obviously differs from it in some particular.

As the musical idea is stated in terms of Rhythm, Melody and Harmony, there are three directions in which development can take place; besides which any two or all three of these may be affected.

The three factors of effect can each be treated in three different ways :

- (a) By Amplification, or Augmentation,
- (b) By Elimination, or Diminution,
- (c) By Superposition.

An important factor in development which is contingent on the work as a whole and not on its separate ideas is the main progression of the tonality inside of which these other factors take their place. This is, perhaps, the particular feature of the so-called Development Section which is most apparent and

noticeable in the majority of works. Practically, the whole of the Exposition is stated in the limits of two tonalities—the tonic and the contrasting related key in which the second subject appears. In the Development Section of the modern Sonata, however, there is always a more or less logical progression through a number of different tonalities, not necessarily in any close relationship to the main key of the movement, along with which proceed the developments, properly so-called, of the subject matter.

In this direction is manifested the real æsthetic value of the development, and in this the form shows itself most fertile and affords most scope for the artistic sense and feeling of the composer. The tonal movement which characterises the Exposition and the Recapitulation of the Sonata Form is on the whole of a direct nature; but that which is found in the Development is what might be called “oscillatory”—progression now to a sharper key, now to a flatter, with the emotional results which follow such fluctuations. In fact, it is usually at this part of the work that the approach to the real climax of the whole is realised. With the re-entry of the Tonic key after this series of tonal oscillations, the composer reaches a point where he generally has said all there is to say,

and his main business, in most cases, from this point, is to get back to the emotional level at which the work started and complete the circle by finishing there.

Besides differing from the more primitive Sonata in these two main directions—interest of subject matter and organisation of development—the modern Sonata shows other results of the evolutionary process to which it has been subjected. These chiefly concern the details of structure, such as the transitional passages uniting the salient subject matter, and the concluding passages or cadences which at first served mainly the purpose of key definition.

Just as the establishment of the Fugal Form means Bach, so the systematization of the Sonata Form on modern lines is associated with the name of Beethoven. In his hands these subordinate and secondary features of design, which previous composers had been accustomed to regard as comparatively unimportant, and which they had frequently treated in a very perfunctory fashion, became integral parts of the structure, and not infrequently present an interest, both technical and musical, second to no other part of the work.

The transitional passages, besides effecting change of key, usually contrive to link up or-

ganically the two contrasting subjects, so that the continuity of progression is unbroken and the diversity of key and subject matter are not obtained by the sacrifice of the unity of the movement.

The Recapitulation, which, so far as subject *matter* is concerned, is a repetition of the Exposition, in the hands of Beethoven was made the vehicle for modifications of *manner*, which materially improved the old "necessary formality" of repetition, of which one is so conscious in the earlier Sonatas. By the introduction of various kinds of alterations in the outline and treatment of the subjects, curtailing here, expanding there, he contrived to maintain interest and to invest the re-statement of previously heard matter with a new significance. Finally, with that insight into musical possibilities which was his distinguishing characteristic, he elevated the Coda—originally a comparatively uninteresting and unimportant feature—into what is sometimes a section of the movement equalling in dimensions and as interesting structurally as any of the other sections. In many cases this Coda became what may be called a second or "terminal development," differing from the central development chiefly in the direction or trend of the key movements.

This trend, in the case of the Coda, is controlled by the fact that the whole of this section is realised as focussed on, and moving to the final close, and the evolution of musical idea and mood is determined by this main fact.

The direction of development in Sonata Form since the time of Beethoven has been two-fold :

- (1) In the broadening of the basis of the tonal arrangements and contrasts, which supply the skeleton of the structure ;
- (2) In the further elaboration and accumulation of material or subject matter.

The modern composer has evolved a sense of key relationship which permits him to use and to appreciate key successions and contrasts which would have sounded strange and unconvincing to the musician of one hundred years ago. At the same time diversity and complexity of subject matter to a degree unknown at that time is the usual feature of all modern works which are written in Sonata Form. What remains intact, however, and what must so remain, except in the case of music which is

purely impressionistic, is the threefold basis on which Sonata Form is established :

- (1) Statement,
- (2) Development,
- (3) Re-Statement.

In the preceding pages the term Sonata Form has been employed consistently as indicative of the shape or design of one particular kind of movement. In modern practice, however, the word Sonata is almost always associated with a work which contains more than one distinct movement. In some cases these movements are connected (occasionally on the basis of subject matter common to all); but the plan generally followed is one in which each movement is complete in itself and based on subject matter peculiar to itself. The shape or design, however, of each movement is nearly always modelled on lines which approximate more or less to those which characterise the forms described in the preceding part of this chapter.

There are, however, many cases of individual movements which are of an amorphous nature, deriving their special features of design from indefinite origins, of emotional rather than

formal significance. In some cases the relics of the old contrapuntal idiom are to be met with, either in the shape of regular and formal Fugal writing, or in some design which essays to combine the characteristic features of both the contrapuntal and the modern method.

For details of the less important shapes the reader is referred to the text-books which are devoted to this subject.

In every case, however, the shape which characterises any and every movement is the result of a solution of the artistic problem which the composition of each work presents to the composer. That is, how to combine into an organic unity the separate components of any one work; and how at the same time to maintain continual variety and interest with regard to both matter and manner: in short, how to combine unity and multiplicity. While the problem remains ever the same, the solutions become more and more difficult. As the Art develops the materials increase in complexity and heterogeneousness, and the conventional formulæ which served as a basis for the artistic aspirations of an earlier age become less and less adequate for those of later times.

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There is a very large number of text-books of various sorts dealing with the special subjects of Harmony and Counterpoint, but with few exceptions they are only part of the apparatus of Pedagogy, and are distinguished neither by a philosophical nor scientific outlook. Amongst the most important exceptions are:—

Day, Alfred.—*A Treatise on Harmony*. Edited by G. A. Macfarren. London, 1885.

Stainer, J.—*A Theory of Harmony*. London, 1871.

Hull, A. Eaglefield.—*Modern Harmony, its Explanation and Application*. London, 1915.

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MODERN PIANOFORTE TECHNIQUE

PART I

CHAPTER I

INTRODUCTION

IN the study of the pianoforte, whether from a professional point of view, i.e. in order to become a pianist capable of playing any and all works, ancient or modern, of any school whatever ; or merely as an amateur, desirous of procuring for one's own personal satisfaction the exquisite joy which a really good rendering of a musical composition gives one, the question of Technique occupies a predominating position. But let us first consider what the word "Technique" really means.

The common idea of "Technique" is the use, or abuse, of the fingers for the *rapid* execution of passages and series of notes.

This is a totally fallacious interpretation of the term. Let us rather interpret "Technique" as "appertaining to the movements of the fingers."

The scientifically correct movement of the fingers is just as necessary in a *cantilena* as in any brilliant passage. Every effort called forth in the execution of a musical work necessitates therefore a greater or smaller amount of finger movement.

It is necessary to separate very definitely the *science* from the *art* in musical execution. Although the two branches of musical interpretation are intimately wedded, each one is quite distinct from the other, and they should be studied separately. I have devoted a few short chapters to the *art* of musical interpretation towards the end of this book, but my principal object is to explain the *science* of pianoforte playing. This *science* is none other than what is known as *technique*, or the movement necessary to produce the sounds which, taken collectively, go to make up the musical interpretation. Whether these movements be slow or rapid, robust or delicate, the necessity of their being as perfect as possible remains the same. And for this reason: When the movement of a finger, or

series of fingers, is almost completed, the finger or fingers come into contact with the keys of the instrument; from this contact we obtain *Touch*. On the correct quality of this contact between the fingers and the keyboard depends the TONE which we shall produce from the instrument. We see, therefore, that the correct movement will necessarily lead to the correct tone and correct quality of tone.

A long experience has taught me that musicians, both teachers and students, generally neglect the fundamental principles governing technique, or as I shall now call it, "the movement of the fingers." These are identical with the laws of Nature which govern all things that have movement, from an aeroplane or motor-car engine to an eyelid. In all this mechanical action the question of obtaining a minimum of friction and expenditure of force, with a maximum output of energy is of primary importance. One cannot lay too much stress on this principle. Music teachers rarely propound this theory to their pupils. They usually content themselves with telling their pupils to move the fingers or the wrists, without explaining these movements; and the result is that during

years of study, just when the pupil should see the reason for every effort he puts forth, he is left to grope in the dark. The result is, naturally, a great waste of time.

Hans von Bülow, undoubtedly one of the greatest pianists and pedagogues of the nineteenth century, once said that three things were necessary for a pianist. Firstly, "technique"; secondly, "technique"; thirdly, "technique." If technique were only to be regarded as one of the necessary adjuncts in an acrobatic performance on the pianoforte, these words of a great master would be sheer nonsense. But those who remember this artist know that he never strove after effect for effect's sake, but that he employed all his powers as a means to the end of a perfect interpretation of each and every work he performed. This is exactly what the word "technique" should mean to us: *the art of playing the right note at the right time in the right way.*

It is evidently very necessary to devote a great part of one's time to a most careful study of technique in all its divers phases; but the precept "*qualitas non quantitas*" should never be lost sight of. Unfortunately this is too often the case; the idea seems

generally prevalent that practising a considerable quantity of finger exercises, scales, and chord passages daily will develop the fingers in the right way. This is not the case. In this, as in everything else, excess is harmful. Even when practising the most elementary finger exercise, full attention should be concentrated upon one's every movement; and the brain should be constantly on the alert. This mental effort cannot be continued indefinitely, nor even for any considerable length of time. After a certain amount of concentrated attention the brain becomes numb and the work in general suffers from a want of self-criticism. To avoid this, I have found it very useful to divide one's practice time into periods of fifteen to thirty minutes each, with a general average of twenty minutes per period, followed by a period of rest of from two to five minutes. With this system one is able to practise several hours per day, retaining one's mental and physical energies practically at the same level till the end. It would be a mistake to think that only the fingers and the wrist need be developed. All the muscles, from the tip of the finger to the shoulder need to be trained with patience and care. The road is

long and weary, never uninteresting; and only those who have the will-power to go the whole distance may hope to become perfect pianists.

We have seen that the production of Tone is entirely dependent upon Touch which, in its turn, is the direct result of Technique. Consequently, if the Technique is carefully developed, we shall generally find that the Tone is good.

I have noticed that very many teachers make their pupils play everything *fortissimo*. Finger exercises, scales, chord passages, studies, everything has to be "hammered out" by the poor pupil. This is a most illogical way of practising and can only lead to a thoroughly bad execution of any work that the pupil may attempt to play. The fundamental idea,—quite erroneous, by the bye—of these ill-advised teachers seems to be that this constant *fortissimo* develops and strengthens the muscles, and brings in its wake a powerful tone. As a matter of fact it does nothing of the sort. The continual effort tires the muscles and the nerve centres, and the continual noise numbs the brain.

Another mistaken notion is an abuse of *legato*. Most teachers insist on their pupils

playing everything *legato* from the very commencement. This error on the part of the teacher has, as a result, a certain "stickiness" or want of clearness in the pupil's touch. This is exactly what the pianist must avoid most sedulously. Clarity of touch is most essential; it can only be obtained by a strict observance of the following two rules: (1) The fingers should be lifted *as high as possible* in order that the *attack* may be *free*; (2) Practise everything in *finger staccato*. This will give us many advantages; among others, a notable saving of energy.

The principle of a maximum output with a minimum expenditure of energy is the fundamental principle in all good machinery; and as the fingers, wrists, and arms are simply so much machinery brought into service for the *expression* of musical ideas, this same principle must apply, and should never be lost sight of. In our case economy of energy expenditure means the strict avoidance of useless movements.

Let us take as an example the playing of passages in octaves. I have often noticed that quite good players expend two or three times the energy really necessary to do the work. There is a movement of the fingers,

of the wrist, and of the arm ; whereas a simple movement of the wrist would be quite sufficient.

It is a curious fact that in the majority of books of studies, the proportion of studies for the development of the *right* hand is *at least* 75 per cent. I have even found it work out at over 90 per cent in certain cases. I am only referring to studies where there is absolutely no trace of usefulness whatever. Many, or most books of finger exercises show a similar want of forethought on the part of their authors. Both hands should be developed simultaneously and equally.

Before I discuss the various details of pianoforte technique, I should like to speak about the *way* in which one should practise.

I have noticed that the majority of students waste an enormous amount of time. I do not wish to infer that these pupils sit before their instruments without working, but that the work is not carried on on *scientific* lines. Hours are spent where minutes would often suffice ; and the student is very often discouraged by the meagre result obtained. There is a want of scientific organisation in the work ; the student neither gets to the *crux* of the matter soon enough, nor does he

know how to set about it. Practising should be carried out on a purely *scientific basis*, and with *concentrated* effort. Generally speaking, neither the one nor the other is the case. This question, also, will be treated in detail later on.

It is not essential to practise an unlimited amount of finger-exercises or to go through a large number of monotonous studies. The great thing is to make a *very careful selection* of exercises and studies which will meet the requirements of each student individually, developing his technique in some particular direction and correcting certain of his faults.

Let me give two examples to illustrate my meaning : One of my old pupils at the Liège Conservatoire, a boy of very moderate intelligence and rather lazy, possessed very marked natural ability for playing shakes. All other details of technique were of very inferior quality. In this case it would have been a serious waste of time to give him exercises or studies in which the development of the shake was the principal object. Another of my pupils had a hand peculiarly adapted to octave-playing. It would have been useless, in this instance, to have spent much, or even any time on wrist exercises and studies.

Most teachers recommend playing finger-exercises, scales, and chord passages with both hands together. For several reasons this is a grave mistake. The pupil requires to concentrate all his thoughts on the movement of every finger, paying particular attention to (1) the way the finger is going to strike the key ; (2) the way in which the key has been struck ; (3) the way the finger is lifted from the key. He cannot hope to give the same concentration of thought to two fingers at once, especially when they are separated by so great a distance as an octave or more. As he cannot possibly keep his sight fixed on both continuously, he will have to look from one to the other ; in this way *at least* half his movements will escape observation, with a consequent loss of time and waste of valuable energy. For this reason all purely finger work, i.e. exercises, scales, chord passages, and even the more difficult passages in such works as sonatas, etc., should be practised at first by the hands separately. Let us not forget for a moment that one can only do one thing at a time properly.

A great economy of time and energy will be effected by a most careful selection of such

exercises and studies as have a direct bearing upon the pupil's shortcomings.

In concluding this Introductory chapter, I should like to repeat a piece of advice often given to beginners, and which more advanced students would do well to bear in mind: Practise slowly and patiently. Let thoroughness be the first consideration. Lastly, what is worth doing, is worth doing well.

CHAPTER II

POSITION AT THE INSTRUMENT

It would be hard to exaggerate the importance of a perfect position at the instrument. As a matter of fact many pianists, nowadays, prefer taking their chairs or stools with them, when on tour, to relying upon finding more or less suitable seats provided for them. The perfectly adjusted seat is essential. Should it be too high, the weight of the body is thrown on to the arms and hands in a great measure. If too low, this most inconvenient position will practically deprive one of all strength. The general idea was, formerly, and is still extant, that the arm from the elbow should be strictly on a level with the keyboard, and the fingers, when bent, gave a second horizontal line from the second joint of the middle finger to the bend of the elbow.

Certain teachers, more concerned with the amount of noise their pupils should get out

of the instrument than with perfect pianoforte playing, insist on a high seat for their pupils in order to obtain an incline from the elbow to the fingers. By this means the weight of the forearm is thrown on to the hand which, consequently, loses a great proportion of its freedom of movement. When to that is added a bending forward of the body the whole effect is disastrous so far as the freedom and lightness of the touch is concerned.

In a book published several years ago, a Parisian pianist claimed advantages for a change of seat: i.e. a low seat for practice and a high one for performance. This idea is equally faulty.

There should really be no difference between one's position at the pianoforte when practising and when performing in public. An altered position at the instrument will evidently give us altered circumstances, however slight the change may be. Habit is second nature, says the proverb; we should therefore endeavour to obtain as great a similitude between the circumstances accompanying a public performance and those of our practice hours as is possible. This is quite possible as regards the *position* at the instru-

ment. With a little care and forethought we can always obtain the same height of seat.

The ideal seat should give us such a position that both in passages where strength is required as well as in delicate work the result obtained may be a maximum output with a minimum expenditure of energy. For this reason I have found the following position the most advisable: The height of the seat will be such that the outer curve of the elbow will be from one to one and a half inch *below* the level of the keyboard; consequently, there will be an extremely slight incline *upwards* from the elbow to the fingers. This position will effectually prevent the touch becoming rough or harsh, without interfering with the freedom of the fingers. We shall in this way obtain a quality of tone which is always good, both in the *fortissimo* and *pianissimo*.

CHAPTER III

POSITION OF THE HAND

THIS is a most important detail, and must be looked to very carefully. Let me, once again, repeat the maxim that must of necessity be the basis of all good mechanical movement: *a maximum output for a minimum expenditure of energy.*

There can be no absolutely hard and fast line as regards the *curve* of the fingers when playing, on account of the very varied formations of finger nails. I have found that even among members of the same family the formation of the finger nails varies very much. As the nail should *never* come into contact with the key, the question of the curve of the finger will depend greatly upon the formation of the nail. And here let me add that the nails should *invariably* be kept *short*.

The fingers should be curved so that the tips come into contact with the keys. Be-

ginners, especially, should be very careful to strike the white keys as near the centre as possible, having regard to the width of the keys. They should carefully avoid playing near the edge of the keys. The proper point of *attack* for the finger is quite near the black keys. The best position can easily be fixed in the following manner: An ordinary lead pencil is laid on the white keys, against the black keys. The fingers are then moved forward so that they rest on the white keys, touching the pencil *lightly* with the *nails*. The pencil is then removed. In this position, although the fingers are sufficiently distant from the black keys to leave them perfect freedom for playing on the white keys, they can, nevertheless, play on the black keys without necessitating a forward movement of the arm. This is a very great advantage, about which I shall speak in detail in another chapter. The space left free when the pencil has been removed from the keys should be left free by the pupil. In former times pupils were taught to keep their fingers very much bent. Undoubtedly, this system offered certain advantages; but these are easily outweighed by the fact that there was a marked absence of freedom of touch, and also that

a certain "stickiness" was inevitable. One can employ this touch upon rare occasions, when the character of the composition or of some particular passage calls for it; but pupils would do well to adhere strictly to the normal position in the beginning, i.e. the hand flat, in a straight line with the arm, the fingers *slightly* curved, the hand being held easily and entirely without stiffness.

Many of my readers will doubtlessly have noticed that the hands of no two persons are exactly similar; for this reason I refrain from laying down a hard and fast rule with regard to the position of the hands on the keyboard. It is essential that the teacher should first learn to know the pupil and become well acquainted with any existing peculiarities of his hands, before fixing the position of the hands that the pupil should adopt definitely. This will save a lot of time eventually, and lead to very much more satisfactory results later on.

CHAPTER IV

EXERCISES FOR EACH FINGER TAKEN SEPARATELY

THE most elementary finger exercise is that in which each finger is taken separately. This should be practised in the following manner and with the *greatest possible care*: All movements should be strictly *perpendicular*; oblique movements should be avoided. Only two movements are allowed, the one ascending, the other descending. These should be *sharp, swift, and without hesitation*, the hand and arm meanwhile remaining absolutely quiet. The *curve* of the finger, as far as the second joint, must be identically the same, whether the finger be raised or lowered. It is a common error with beginners to straighten out the finger when on the key and to give it a most pronounced curve when lifted. The index finger (2) needs especial care. Most pupils lift this finger obliquely over the *middle finger* (3). It should therefore be watched most carefully for the

purpose of correcting this error. It will be found that with most pupils the thumb rubs against the hand whilst ascending and descending. This friction naturally represents an unnecessary expenditure of energy, which can be easily avoided by giving the thumb a slight curve at the *first joint*. I should like to add that the hand should be held at a sufficient height above the keyboard to enable the thumb to come into contact with the key at the rounded corner of the nail only, not make the contact with the entire side of the thumb.

The *ring and little fingers* (4 and 5) should also be watched very closely. The muscles of these fingers are naturally weak ; especially so in the case of the *ring* finger. The number of appliances that have been invented with a view to strengthening this finger is legion. Two of these I should like to mention for the delectation of my readers. The one was a thick, heavy ring in lead weighing about three ounces. This had to be worn at all times. The other was a thin brass rod with adjustable elastic bands and rings to put the fingers through. This could only be used on upright pianos, as the rod rested on the candle sconces. Both these appliances, as

well as so many others, are equally useless, and equally harmful. There is grave danger in forcing this finger. Once the muscles are lamed it may take years to get them right again. A gentle assistance of Nature and a careful exercising is the only means of developing this finger so that it may become useful. The only *reasonable* way to strengthen the ring finger is by lifting it with the other hand. The tip of the finger is grasped on either side of the nail, gently but firmly, by the thumb and index of the other hand. The finger is then lifted up sharply to its maximum height, held there and then brought down with a rapid movement, the thumb and index retaining a constant grip. This should be repeated several times in succession. The fault of the little finger (5) is that the whole side of the hand is apt to fall with its downward movement. To cure oneself of this, two or three fingers of one hand are placed *under* the outer side of the other, the thumb being placed *above*, maintaining a slight, even pressure throughout. It will be seen that by this means the side of the hand will not drop, the finger only moving. There is generally no radical fault to be found with the middle finger.

I much prefer Chopin's choice of a series of five notes for finger exercises (*e, f#, g#, a#, b#*) to the habitual *c, d, e, f, g*. The position of the fingers is more satisfactory.

I intend describing *in extenso* the manner of practising this first exercise:—

The fingers are placed on the above-mentioned notes and depress them gently, but firmly. The thumb is then lifted as high as possible with a *sudden* movement. It remains at its maximum height for the space of two, three, or four seconds and is then brought down *very smartly* on to the key. After an equal lapse of time these two movements are repeated twenty, thirty, or forty times. Great care must be taken to keep the hand quite steady during the ascending or descending movements of the fingers. The short period succeeding each movement should be utilised for criticising the movement just made so that any fault may be corrected next time. The same process is repeated with each finger in turn.

I have found the two following variations of this exercise especially useful, though they should, however, only be practised when complete mastery of the original form has been obtained: The fingers rest on the keys

as before. Then the upward and downward movement of each finger is executed without a rest, and as rapidly as possible; i.e. the finger is lifted as high as possible (as in the preceding exercise) and without remaining lifted is brought down again *immediately*, the hand remaining motionless. The ring and little fingers are assisted by the other hand as before. This variation naturally suggests the following one: The same keys are held, as before; then the finger is lifted to its maximum height, where it remains for two or three seconds. It then descends *rapidly and lightly*, delivers a very light blow (*pianissimo*) and is raised *immediately*, without remaining on the key. This last exercise will introduce us to the *finger staccato* which I shall treat more fully later on.

Although very much more difficult than the preceding exercises, the following one undoubtedly helps to develop the technique very rapidly:—

The fingers are placed on the same keys. They are then lifted up, one after the other till all the fingers have been lifted to their maximum height. *They remain so throughout the exercise.* It will then be found that there is a marked tendency to raise the hand,

wrist, and arm. This must on no account be allowed. Each finger will then strike the key *staccato*, very lightly and very rapidly, the hand being maintained *motionless*. Naturally, in this exercise the ring and little fingers will not be helped by the other hand; nor will they require help.

After having made progress with these *one-finger* exercises, we can now proceed with the *five-finger* exercises.

Before going further, I should like to say a few words about our system of fingering. As far as I have been able to ascertain, England is the only country in the world which has a fingering absolutely its own and which is used nowhere else. This is the fingering: + 1 2 3 4.¹ Practically everyone in England also uses the so-called Continental fingering: 1 2 3 4 5. As a matter of fact we are compelled to do so as we use a large amount of music published on the Continent, where the latter fingering exclusively is employed. Personally, I prefer this latter for various reasons; and shall therefore use it throughout this book.

The prevailing system of annotating finger exercises is very faulty. They tend to an

¹ This system of marking is fast becoming obsolete.—EDITOR.

unequal development of the fingers. They also tend to interest the pupil in the *sounds* he produces from the instrument, instead of keeping his mind solely concentrated upon the *movements of the fingers*. I therefore simply indicate the *fingering* of the exercise, leaving it to the pupil to employ any series of five consecutive notes he pleases. The movements of the two hands will be in *contrary motion*, but the work done will be *precisely the same for both hands*. All combinations of fingering will prove useful, and it will enhance the interest of his work if the pupil write his own exercises. The following examples will serve him as a model :—

1 2 3 4 5 4 3 2
 1 3 5 3 4 2 5 3
 2 1 4 2 5 3 4 2
 3 1 5 4 2 4
 4 5 1 2 5 3 etc.

They should be practised hands separately and on various series of five keys, black keys included. Each exercise should be repeated several times.

CHAPTER V

THE "SHAKE"

THE next step will be, quite naturally, the exercising of two fingers. This will suggest the "shake," which is a more or less rapid alternating of two consecutive notes. This is a most important branch of technique. As a matter of fact, the "shake" is to be found in compositions of practically all epochs and all schools. To this must be added that it is very conspicuous, and invariably attracts attention, whatever the other hand may be playing at the same moment. It consequently forms a most essential part of our technique. I need only give one example to prove this: It would be quite impossible to give an adequate rendering of the Rondo of Beethoven's Sonata in C, op. 53, without a perfect shake; and as this Finale is the climax of the entire work, an unsatisfactory execution of this part would spoil the effect of the whole, however

brilliantly the opening movement may have been played. Even in the opening movement we find two shakes,—one towards the end of the first half, the other near the end of the movement,—which are of the greatest importance.

The shake should be practised with the utmost care from the start. The fact of having a well-developed and perfectly balanced shake will materially help other branches of technique; but I do not find that other branches of technique will help the shake.

It is useless to try to obtain a rapid shake at the beginning. We shall find that in this as in all else velocity will come with practice. *Evenness* is the first consideration, and the initial work should be done slowly, so that each and every movement of the fingers may be watched attentively. Both fingers should be raised alternately to the same height and care should be taken to strike the keys with the same strength. As in all else, upward and downward movements should be swift and the keys should be struck lightly.

I consider it advisable to employ the same notes for this exercise as for the first; viz.

e, f#, g#, a#, b#; the hand lies better than on *c, d, e, f, g*. Let us take, as an instance of the manner of practising, the alternating of the thumb and index.

The remaining three fingers are pressed lightly on the keys;¹ the thumb and index are raised to a similar distance from the keyboard. The thumb strikes its key with a swift downward movement, the rest of the hand remaining motionless. A *very slight* rest on the key suffices. Synchronous with the upward movement of the thumb, the index will make its downward movement, and great care must be taken that the tone produced be of the same quality and volume as in the case of the thumb. The alternation should be carried out with great regularity. Whilst practising the shake 1-2, the fingers 3, 4, 5 should rest on the keys. For the shake 2-3, 1, 4, 5, should remain down. The shake 3-4 should be practised in two ways; firstly, with 1, 2, and 5 down; secondly, with 1 and 2 down and 5 lifted. The shake 4-5 should also be practised 1, 2, 3 down, and 1 and 2 down and 3 raised. When this has been done, the shake should also be practised with all fingers raised.

¹ That is, depress these keys silently.

The movement should be very gradually accelerated; I have found the following a good plan for effecting this:—

The image displays six numbered musical exercises on a five-line staff. Exercise 1 consists of four quarter notes. Exercise 2 features two groups of three notes, each with a slur and the number '3' above it. Exercise 3 shows two groups of eighth notes. Exercise 4 contains four groups of three eighth notes, each with a slur and the number '3' below it. Exercise 5 is a continuous eighth-note pattern. Exercise 6 shows four groups of six notes, each with a slur and the number '6' below it, followed by the text 'etc.'.

CHAPTER VI

THE SCALE

How many of the numberless pianists stop to consider the immense importance of this, the most elementary passage or series of notes? Very few, I fear. Yet, from whatever point of view we consider it, it is worthy of interest. It can be defined as an uninterrupted or consecutive series of notes arranged either diatonically or chromatically. We may safely consider it as the basis of all technique. As the foundation of all passages it claims our undivided attention; and we should certainly not consider the playing of scales as a disagreeable duty, to be avoided if possible, or else to be got over as quickly as possible.

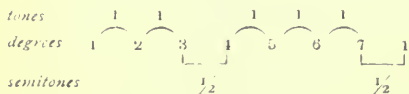
The chief *desiderata* of scale playing are equality of touch and evenness of tone. If one's hand be examined one will find that each of the five fingers differs from the other four and possesses its own characteristics. The thumb is a cumbersome member of the hand,

the little finger is the most delicate of all, and so on. It is extremely important that this natural difference of structure be effaced in order to obtain an homogenous execution. No one note must be louder than the rest ; nor may there be a difference in the volume of tone between any two notes. The index finger is naturally clumsy ; this must not become apparent in a well-executed scale. And it is especially after passing the thumb under the hand that the clumsiness of the index makes itself felt. I have often noticed that at this particular moment one of two things happens : Either the index does not liberate the key smartly enough and is not lifted high enough ; or, alternatively, if the pupil's attention is concentrated on lifting the index, the passage of the thumb under the hand is delayed. Either fault must be corrected.

Here a word may be said concerning the numerous books of scales on sale in all countries. As far as I have been able to discover, nearly every firm of music publishers in Europe publishes at least one such book. Personally, I never recommend any of these books of scales to my pupils as they undoubtedly complicate rather than facilitate the pupil's task.

It is the master's duty to explain the scale and, later on, all the possibilities of the divers variations, to the pupil. On the other hand, if the pupil have the endless varieties before him, that most editors delight in, he will be muddled and discouraged. In the initial stage of scale playing the whole attention should be concentrated on correct movements of the fingers.

By far the better plan is to interest them in their work, whilst simplifying it as much as possible. I employ the following system, and the results have invariably been extremely satisfactory: I begin by explaining to the pupil the *formation* of the scale, both major and minor. (I consider it advisable to let the pupil study the *harmonic* minors for a considerable time on account of their *regularity of construction*, before allowing them to play the *melodic* minors.) As an instance of this, I employ the following scheme for the major scales, and a similar one for the harmonic minors:—



Very few words will suffice to explain this

diagram to a pupil of average intelligence. He is then told to form major scales beginning on all notes in turn.

The next step is to explain the place for the thumb in each scale. The *general* rule in scales containing three or more black keys, is that in the right hand *downwards* and the left hand *upwards* the thumb is placed on white keys immediately preceding black keys. The pupil must also note that every octave of the scale has the same fingering.

The teacher should avoid giving the pupil the fingering of scales *ex cathedra*. It is a very much better plan to let him try to find the correct fingering himself. One can be quite certain that after having experimented with various fingerings, which will invariably prove faulty, the pupil will of his own accord choose the correct fingering as the best he can find. Time and again writers and compilers of instruction books, and other works on the pianoforte, have tried to invent another fingering for the scales. But all their endeavours have ended in failure.

Indubitably, in some rare cases we meet with exceptions where the classical fingering, though quite possible, is not quite as good as one we may invent for that particular in-

stance. We find a case in point in Liszt's *Spanish Rhapsody*, p. 10. But these cases are extremely rare.

As a direct result of a conscientious study of scales, we shall obtain a marked suppleness of the fingers and perfect equality of tone. By an addition of rhythmical accents, which must necessarily be very light, and given solely from the fingers, i.e. without a downward pushing movement of the hand, the flexibility of the fingers will be developed to a further degree even ; it will also help to place the movement of the fingers under the will power to a greater extent.

This question of rhythmic accentuation of the scale should be kept as simple as possible. Accents on the first of every four, or eight, notes amply suffice. Should any other grouping of notes be necessary in any particular work, a few minutes' attention to this special case will be all that is necessary.

In my opinion, based on long experience, all categories of technical exercises should deal with generalities only and should try to avoid complicating matters. Writers and compilers of books of technical exercises endeavour to deal with every sort of technical difficulty that can be found in existing works

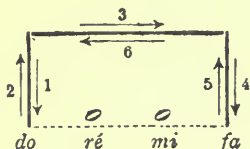
or that may present itself in the future ; in which effort they fail signally. Hence the useless complications one encounters in these books.

* * * * *

In the preceding chapters I have spoken at length of the movement of each finger individually. These movements were in a perpendicular line—the only way in which the fingers, with the exception of the thumb, can move. But the thumb is so constructed that it has a horizontal as well as a vertical movement. This peculiarity of the thumb, and this only, enables us to play scales rapidly. We may safely say that if the thumb were not capable of horizontal movement, our entire pianoforte literature could not exist. In series of notes where the hand is motionless, the movement of the thumb is *perpendicular* ; in scales or passages its movement is *horizontal*. The whole question of scale playing depends on a correct use of the thumb ; without an easy and perfect motion of the thumb, a fluent scale is not to be thought of.

As the passage of the thumb is the most important point in the scale, I consider that a few preparatory exercises for the thumb

are fully justified. The first exercise I give my pupils may be illustrated by the following diagram:—



The explanation of this exercise is the following: I am taking it for the right hand, and the notes chosen are *c, d, e, f*. Naturally, when practising this exercise in the left hand, the same movements will be made, but in contrary motion.

The index is placed on *d*, the middle finger on *e*. These keys must be held, gently but firmly, throughout the entire exercise by way of a support to keep the hand steady. The thumb is placed *lightly* on the *c* without depressing the key. As indicated in the above diagram, this position is the *starting point*. The thumb then presses down the key (arrow 1); returns to its first position (arrow 2), but is *not* lifted above the level of the keyboard; passes under the hand as far as *f*, in a perfectly straight, horizontal line (arrow 3); presses down the *f* (arrow 4); rises to the level of the keyboard but *not higher* (arrow 5); returns *on* the keyboard

to the starting point (arrow 6). During this exercise the hand must remain *quite motionless*. There are six movements in all, and it will be found helpful to count aloud, from 1 to 6 whilst practising this exercise. The movements denoted by the arrows 3 and 6 should be executed as smartly as possible. After each movement there should be a slight break.

When practising the above exercise, as well as in the case of the following one, and, generally speaking, when playing scales, one is tempted to tilt the hand towards the little finger. This should be rigorously avoided. When the pupil has made satisfactory progress in the above exercise, he should extend the interval of the jump; i.e., taking the right hand still as an example, the *three* fingers, 2, 3, 4, should be held down on *d, e, f*, and the thumb should pass from *c* to *g*. Subsequently 2, 3, 4, 5, should be held on *d, e, f, g*, and the thumb pass from *c* to *a*.

This exercise might be followed advantageously by the following:—

M. D. 1 2 1 2 1 2 1 2 1 2 1 2 1 2 etc.

M. G. 1 2 1 2 1 2 1 2 1 2 etc.

N.B.—It is not intended that the two hands be played together.

* * * * *

We may now consider the preparatory work as having been accomplished ; we can therefore proceed with the study of the scale proper. This is of such importance that a detailed description of every movement required for the correct execution of a scale will be of considerable help. Let us take one octave of *C* major ascending.

The thumb is placed on *c*, the other fingers are lifted up, and the elbow is held slightly away from the body so that the arm is free. An imaginary line, drawn from the elbow to the tip of the middle finger should form an *angle of 60 degrees to the keyboard*. The thumb *presses* the *c* gently. The index then strikes the *d* with a swift and light movement. *At the same instant* the thumb is raised to the level of the keyboard, *not higher*, and passes under the hand in a strictly horizontal line, passing along the *e* and stopping *on* the *f*. The middle finger strikes the *e* with the same swift and light movement. Synchronously, the index finger is lifted to its maximum height. [At this moment of

the scale there is always a great temptation to lift the thumb and *strike* the key instead of *pushing* it. Needless to say, this would disturb the evenness of tone of the scale and would, consequently, be incorrect.] The arm then moves slightly outwardly, carrying the hand with it in order to take up its new position over the succeeding notes, arm and hand maintaining a constant angle of 60 degrees to the keyboard. At the same instant that the index strikes the *g*, the thumb is lifted to the level of the keyboard, and passes to the *c*, or as near to it as possible. And thenceforth, without interruption, a gentle, continuous outward movement of hand and arm is maintained, the thumb is placed on the *c* ready to depress the key, whilst the middle and ring fingers play respectively *a* and *b*. The thumb is then in position to *push down* the *c*. Any outward jerking of the hand and arm must be strictly avoided.

A certain number of the movements described above are also employed in the descending scale, naturally in the opposite direction, such as the movement of the arm and that of the hand as it passes over the thumb. If the ascending scale has been properly studied, the regular movement of the arm towards the body ought not to offer

any difficulty. The most difficult moment in the descending scale is when the hand passes over the thumb; and great attention should be given to it. As a matter of fact, the whole secret of the perfect scale lies in the correct passing of the thumb under the hand in the one direction, and the perfect passage of the hand over the thumb in the other.

A short analysis of this latter movement will prove useful: The thumb is placed on *c*. Simultaneously, hand and arm move towards the body, strictly maintaining an angle of 60 degrees to the keyboard. As the hand passes over the thumb, the latter bends slightly at the *second joint*, and pivots slightly on the key. Care will be taken not to lift up the outer side of the hand, which should remain strictly horizontal.

A simple way of correcting the bumping of the thumb,—a fault often met with in pupils who have suffered from careless teaching,—is the following: The hands are played separately, as a matter of course, right hand ascending, left hand descending at a *very moderate* pace. All other fingers will attack the notes *mezzo forte*, the thumb playing *pianissimo*. Every time there will be a slight break before the thumb plays.

Long experience has shewn that the best method for teaching a beginner the scale is to practise first *one* hand only, in the direction in which the thumb passes under the hand ; i.e. right hand ascending *or* left hand descending. One must not lose sight of the fact that the correct study of the scale is just as much a mental as a mechanical or physical exercise ; consequently, the brain has to be educated with regard to the movements of the fingers. This can be effected much more easily by reducing the mechanical part of the work to a minimum, i.e. by employing one hand only. If great care is brought to bear on this work, in a comparatively short time the various movements of the arm, hand, and fingers should become almost automatic, and then the work of the other hand will be practically *nil*.

When the playing of scales, hands separately, has proceeded for some time quite satisfactorily, at a very slow pace, the speed may be augmented, but only very gradually. By successive stages we arrive at a moderate speed. It is then time to play the hands together. When doing so, *similar* motion is preferable to *contrary* motion. In a few scales, the fingering of both hands is

the same ; but, on the other hand, the *sounds* produced by the fingers of both hands playing simultaneously are different, and are apt to disturb the pupil's attention. In *similar motion* the notes are the same ; and, therefore, they do not attract an undue amount of attention, which one can, consequently, devote entirely to the fingers. The hands should not be separated by more than one octave. The system adopted by several teachers, of leaving an interval of *two* octaves between the hands, is very bad ; the eyes having absolutely no control over the fingers.

After a thorough study of the scales in octaves it is advisable to proceed with the study of the scales in *tenths* and *sixths*, the fingering of the scale being invariably strictly adhered to. For example, in playing *C* major in tenths, the left hand will start on the *first* degree whilst the right hand will begin on the *third* degree of the scale, i.e. *e*. We start with the little finger on *c* in the left hand in *C* major ; therefore that is the finger with which we start when playing this scale in tenths. In the right hand, the classical fingering for this scale gives us the middle finger for *e* ; therefore this is the finger with which we

start our scale of *c* major in tenths. The same rule holds good when playing scales in sixths. In this variation of the scale certain coincidences in the fingering ought certainly not to fail to interest the pupil. They will also prove helpful in simplifying the fingering for him. Let us again take *c* major as an example. The fingering for an octave is :—

r.h. 1 2 3 1 2 3 4 1 etc.
l.h. 3 2 1 3 2 1 4 3 etc.

It becomes evident at once that the thumb of one hand always comes together with the middle finger of the other hand. The index as well as the ring fingers also invariably come in pairs. Most of the scales in sixths, both major and minor, contain similar coincidences.

When the student finds that he can play any or all the major and minor scales fluently and rapidly, I strongly recommend his practising them *all*, both major and minor, with the *c* major fingering. By this method, the gain in independence and flexibility of the fingers is both rapid and remarkable. This uniform fingering should be employed for the study of all scales, major and minor, in octaves, tenths and sixths.

CHAPTER VII

THE SCALE IN " FINGER-STACCATO "

IN a previous chapter I dwelt on the necessity of developing *staccato* playing. Few more favourable opportunities offer themselves to the student for the development of a sound *staccato* touch than scale playing. Not only is it useful for a general development of the fingers, but it must be considered as a splendid preparatory training to the numerous *staccato* passages found in the works of all periods. The position of fingers and hand in *staccato* playing have been fully explained in a former chapter. It is necessary to warn my readers once again that as soon as there is no longer any support for the hand (and this is the case in *staccato* playing, where *all* the fingers are lifted and remain lifted from the keys), there is a marked tendency to raise the hand also. This lifting of the hand must be avoided most diligently.

In the *staccato* scale, the lateral movement of the arm must be carried out with great

regularity, as the evenness of the scale depends largely upon the constancy of this movement. The passing of the thumb under the hand is not quite of the same importance here as in the *legato* scale. In the latter scale the thumb *remains* on the keyboard, whereas in the former the thumb, after having passed under the hand, is lifted up towards the palm of the hand, which it touches lightly. The movement of each finger will be rapid and light, and the hand will remain perfectly motionless.

CHAPTER VIII

THE SCALE IN THIRDS

WE rarely, if ever, meet with passages or scales in thirds earlier than in the compositions of J. N. Hummel and his great contemporaries, Muzio Clementi, Cramer, etc. Even the greatest master of all time, Beethoven, uses this mode of musical expression very sparingly. But from the time of Hummel, and when composers realised all the possibilities that scales and passages in thirds opened out to them, they were employed more and more widely. Without any effort of research I can cite as examples of the successful use of passages in thirds, the first movement of Hummel's Concerto in *b* minor, divers studies of Clementi's *Gradus ad Parnassum* and other works by the same composer, and several compositions by Cramer and Czerny. Later on we have Chopin's Study in thirds (*g* sharp minor),

Schumann's *Toccata*, works by Liszt, Saint-Saëns, and others too numerous to quote.

The fingering of the scale in simple notes did not have to traverse a long period of evolution until it was definitely fixed as we know it to-day. It was the master mind of J. S. Bach who decided definitely the fingering of these scales, and since then no better fingering has been discovered.

Not so with the scales in thirds. In spite of a most diligent search through music and literature on music, I failed to discover any effort at systemizing the fingering earlier than the second half of the nineteenth century. This is the more extraordinary as the principle on which this fingering is based is very simple. It may be summed up in these words: *The little finger is used once in each octave.* This can be further simplified by the following system of grouping, so far as the *major* scales are concerned:—

In the *right hand* the little finger is placed on the *fifth degree* in *C, G, D, A, E,* and *B*; on *g* in *G flat, D flat, A flat, E flat, B flat,* and *F*. In the *left hand* on *a* in *C, G, D, A, E, B,* and *F sharp*; on the *sixth degree* in *D flat, A flat, E flat, B flat,* and *F*. Evidently,

in the scales of *G* flat and *D* flat, the little finger will be placed on the *g flat*.

I have only spoken of the major scales, as it is comparatively rare to meet with minor scales in thirds. Another reason is that we are here more concerned with the *principle* than with the *details*. This does not mean that the student should neglect practising minor scales in thirds. Taking the above-mentioned principles as a basis, he should find out for himself the correct fingering of the minor scales and endeavour to group them systematically.

The *position* of the hand in the scale in thirds differs very materially from that adopted in the scale in single notes. There is no passing of the thumb under the hand, nor does the thumb remain on the keyboard. The *direction* of the hand is also changed. Ascending in the right and descending in the left, the hand points *outwards* ; consequently, as the hand and arm should invariably form a straight line, the elbow will be held against the side of the body. The chief difficulty in the scale in thirds lies in passing the hand over the finger (either the fourth or fifth) in one direction, and over the thumb in the other. In both cases the straight line of the

arm and hand should remain unbroken as far as possible ; this will greatly depend upon the natural construction of the hand.

The importance of the scale in thirds fully justifies my describing its every movement in detail throughout an octave, both ascending and descending. The scale of C major played by the right hand, will again form the pattern.

The initial notes taken will be *c*, *e*. The elbow is held against the side, the hand pointing outwards. All fingers, including the thumb, are raised. Care should be taken to lift all the fingers the same distance from the keys. *C* and *e* are struck by 1 and 3, *d* and *f* are played by 2 and 4, *e* and *g* by 3 and 5. As soon as these last two notes have been struck, the *third* finger is raised smartly, the *fifth* finger retaining its hold on the *g*, the hand is tilted over the fifth finger *as much as possible*, so as to bring the first and third above the next notes, i.e., *f* and *a*. Through the tilting of the hand, we shall find that the fifth finger no longer stands upright on the key, but that it is lying on its side. At the moment that 1 and 3 strike *f* and *a*, the fifth finger *slides* off its key and is then lifted up to the level of the other

raised finger. In this way the little finger will make a circular movement; which is intended to be the case. Then follow *g* and *b* (2 and 4). As soon as these notes have been struck, the second finger is raised, the hand tilted so as to bring 1 and 3 over *a* and *c*, and at the same time that *a* and *c* are played, the fourth finger, which will be lying on its side on the key in the manner as the fifth was previously, slides off the *b* and is then lifted. 2 and 4 are now in position to play *b* and *d*. Again the hand passes over the fourth finger in the way just described, and 1 and 3 play *c* and *e*.

In the descending scale, the passing of the hand over the thumb is very much easier. The elbow is held well away from the body, as in the scale in simple notes, though the angle formed by the line of the arm and hand to the keyboard should be more acute: 40 to 45 degrees instead of 60.

When playing scales in thirds containing several black keys, the outward direction of the hand should be much more marked in the right hand ascending, and the left hand descending, than in those scales where there are fewer black keys.

CHAPTER IX

THE CHROMATIC SCALE IN THIRDS

As in the case of the ordinary scale in thirds, there has been no dearth of fingering for the chromatic scale. In fact this chromatic scale offers abundant scope for theorising in fingering. During my researches I have met with at least four different ways of fingering this scale. And after having studied them all most conscientiously, the conclusion was forced upon me that the writers had never tried to use these fingerings for rapid execution. I consider that the following fingering is the only practical one, allowing of a very rapid execution of the scale:—

The image shows two musical staves in treble clef, each with a chromatic scale in thirds. The first staff is in G major (one sharp) and the second is in G minor (two flats). Above each staff are two rows of fingerings: 'm. d.' (right hand) and 'm. s.' (left hand). Fingerings are indicated by numbers 1-5. Some notes have an 'X' above them, indicating a specific fingering choice. Slurs are used to group notes in the left hand.

Staff 1 (G Major):

m. d.	3	4	3	4	5	3	4	3	4	3	4	5	3
	1	2	1	2	3	1	2	1	2	1	2	3	1
m. s.	2	2	1	2	1	2	1	2	2	1	2	1	2
	4	3	5	4	5	4	3	4	3	5	4	5	4

Staff 2 (G Minor):

m. d.	3	5	4	5	4	3	4	3	5	4	5	4	3
	2	1	2	1	2	1	2	3	1	2	1	2	3
m. s.	2	1	2	3	1	2	1	2	1	2	3	1	2
	4	3	4	5	3	4	3	4	3	4	3	4	3

As will be seen, the principle of having the fifth finger on definite notes in each octave has been maintained ; but instead of *once* per octave as in the ordinary scales in thirds, it comes *twice*. This, it will be seen, is for the right hand ascending and the left hand descending. In the opposite direction the fingering is entirely changed.

CHAPTER X

THE ARPEGGIO

I AM perfectly well aware that practically all instruction books and books of that species devote much time and space to "broken chords" and "chord passages." I myself have spent numberless hours practising them. And then, as now, I have often asked myself whether all these efforts are justified. Is the development of the fingers by this means in direct ratio to the expenditure of time and energy? Cannot other and more rapid ways of developing the fingers be found? The fact that I devote no chapter in this book to chord passages may be regarded as my answer to these questions.

The case of the *arpeggio* is quite different. The reasons why we should practise them most carefully are many. They ensure a rapid development of the fingers. They are constantly met with in all sorts of compositions. There are other reasons; but these two may suffice.

Teachers should endeavour to simplify, as far as is possible, the study of the arpeggio, for their pupils. The relationship between the scale and the arpeggio is very evident, and the pupil should be made to understand this thoroughly. As a straightforward succession of notes there is not much difference between the simple scale and the arpeggio. One might almost be tempted to describe the arpeggio as "a scale with some of the notes omitted, and having *three* notes to the octave instead of *seven*." There is also a certain analogy between the two in the way of playing them. Here, as in the scale, the passage of the thumb is of vital importance, and, naturally, the passing of the hand over the thumb calls for an equal amount of attention.

The same principles govern the execution of the arpeggio and the scale. There must be an absolute evenness of tone and avoidance of bumping of the thumb, which should not be distinguishable, as regards the volume of sound produced, from the other fingers. The elbow should be kept slightly further from the side than in the scale, thus enabling the angle of the arm and hand to the keyboard to be from 45 to 50 degrees, whereas

it will be remembered that 60 degrees was prescribed as the correct angle for scale-playing. It is absolutely essential to adopt an angle of from 45 to 50 degrees in arpeggio-playing for reasons which will presently appear.

In the scale, the intervals between two consecutive notes played by the thumb are a fourth and a fifth. With hand and arm held at an angle of 60 degrees, the thumb can jump this interval without necessitating any movement of the hand. But in arpeggios, the interval between two consecutive notes played by the thumb is almost invariably an octave. We must endeavour to find a position of the hand and arm which will permit of this jump with little or no movement of the hand. Naturally, the construction of the thumb counts for a good deal in deciding the angle of the arm. Some people's thumbs are considerably longer than others. The longer the thumb, the less is it necessary to hold the elbow *away* from the side. As for the other notes, whereas in the scale the interval between one note and the next is either a tone or a semitone, in the arpeggio it is a third or a fourth. The principle of passing the thumb is the same in the arpeggio as in

the scale. There should be a *continuous forward movement* of hand, arm, and elbow, sufficiently slow to allow of the finger striking the key vertically, carrying the hand on from key to key and entirely eliminating all jerkiness on the part of the thumb. As soon as a finger has struck its key, the curve of the finger should be flattened out; this will materially help the forward movement of the hand.

It used to be a general rule to avoid carefully the placing of the thumb on the black keys. Even nowadays many teachers adhere to this old-fashioned and obsolete way of fingering. The result is a complication of fingering. Uniformity in the fingering is far better, and gives more satisfactory results. Neither can I see that it makes arpeggio-playing more difficult, with a correct touch. I therefore recommend the adoption of *the same fingering for all arpeggios*, whatever the notes may be, with the fingering as shown on page 56.

The manner of practising arpeggios will be the same as for the scales; i.e., hands separately, very slowly at first, fingers well lifted, etc. When the pupil has mastered the initial difficulties, he will group the notes in

fours, giving an accent on the first note of every group, with a compass of *five* octaves. This will continually vary the notes on which

The image displays two rows of musical exercises for arpeggiated chords of the seventh. Each exercise is written on a single treble clef staff. The first row contains four exercises, and the second row contains two. Each exercise consists of an upward arpeggio followed by a downward arpeggio. Fingerings are indicated by numbers 1-5 above or below the notes. Accents are placed on the first note of each group. Below the notes, the fingering sequence for the entire exercise is written as a continuous line of numbers.

Row 1, Exercise 1: Upward arpeggio (1, 2, 3, 1, 2, 3), Downward arpeggio (5, 3, 2, 1, 3, 2). Fingering: 5 4 2 1 4 2 1 2 4 1 2 4.

Row 1, Exercise 2: Upward arpeggio (1, 2, 4, 1, 2, 4), Downward arpeggio (5, 4, 2, 1, 4, 2). Fingering: 5 4 2 1 4 2 1 2 4 1 2 4.

Row 1, Exercise 3: Upward arpeggio (1, 2, 4, 1, 2, 4), Downward arpeggio (5, 4, 2, 1, 4, 2). Fingering: 5 4 2 1 4 2 1 2 4 1 2 4.

Row 1, Exercise 4: Upward arpeggio (1, 2, 4, 1, 2, 4), Downward arpeggio (5, 4, 2, 1, 4, 2). Fingering: 5 4 2 1 4 2 1 2 4 1 2 4.

Row 2, Exercise 1: Upward arpeggio (1, 2, 4, 1, 2, 4), Downward arpeggio (5, 4, 2, 1, 4, 2). Fingering: 5 3 2 1 3 2 1 2 3 1 2 3.

Row 2, Exercise 2: Upward arpeggio (1, 2, 4, 1, 2, 4), Downward arpeggio (5, 4, 2, 1, 4, 2). Fingering: 1 2 3 1 2 3 1 2 3.

the accent falls. This can be done either hands separately or together.

As regards the fingering of chords of the seventh, 1, 2, 3, 4 are employed.

After having acquired a thorough practice in the playing of arpeggios of all common chords and chords of the dominant seventh, the following exercises of the arpeggio, based on irregular intervals, will be found most helpful for a further development of the fingers. They should be played starting from all twelve keys, hands separately and hands together.

The image displays six rows of musical notation, each containing one or more staves of arpeggio exercises. The exercises are written in treble clef and feature various rhythmic patterns and fingerings. The first row shows four staves with fingerings like 1 2 1, 5, 2 1 2, 1 2 3, and 5 3 2 1 3 2. The second row has four staves with fingerings such as 1 2 3 1 2 3, 5 4 2 1 4 2, 1 2 3 1 2 3, and 1 2 4 1 2 4. The third row consists of four staves with fingerings like 1 2 4 1 2 4, 5 3 2 1 3 2, 1 2 4 1 2 4, and 1 4 1 4. The fourth row has three staves with fingerings such as 1 2 1, 5, 1 2 3 1 2 3, and 5 4 2 1 4 2. The fifth row contains two staves with fingerings like 1 2 3 1 2 3 and 5 4 2 1 4 2. The notation includes slurs, accents, and 'etc.' markings to indicate continuation of the exercises.

Before proceeding to other details of technique, I wish to warn the pupil against the custom of playing a great number of different scales and arpeggios daily. Whatever the time devoted to scale and arpeggio practice may be, it must necessarily be limited to a strict proportion of the time at one's disposal.

It is a very much better plan to practise a very few scales and arpeggios daily, but to practise them thoroughly, than to cut up the time devoted to this into small portions. I am of opinion that one major and its relative minor practised thoroughly, hands separately, hands together in octaves, tenths and sixths, *staccato* as well as *legato*, and their arpeggios as designated above, will amply suffice.

CHAPTER XI

THE DOUBLE MOVEMENT

ALL details of pianoforte playing treated hitherto have been concerned with such movements of the fingers as were accompanied by little or no movement of the hand. This might lead beginners to think that everything should be played with a quiet hand; which would be a fallacy. On the contrary, the movement of the hand plays a very important part in pianoforte technique; I shall only cite as example the correct employment of the *wrist*.

But before I proceed to discuss this branch of technique, I should like to make a few remarks on certain faults I have met with, and which concern, equally well, the work I have described up to the present and the details of technique I shall describe later on.

One of the most common faults met with,—not only in pupils, but also in pianists of a certain standing,—is the *double movement*.

There is not the slightest necessity for this. It arises from various causes. It may be simply a nervous tic, similar to the twitching of the mouth, or to stuttering, etc. Or it may denote merely a certain hesitancy in the *attack*. In any case it is a grave fault which must be guarded against carefully from the beginning, and promptly eradicated. This is especially the case when striking a chord or a series of chords. The normal way of playing a chord is by striking the notes with a sharp downward blow. With the double movement the action of the hand or fingers is very much more complicated, and quite uselessly so. The hand is lifted; it then descends; the fingers *feel* for the keys; the hand is lifted again; and, finally it descends to play the chord. We therefore have an upward and downward movement which has been unproductive, and consequently wasteful. Nor must we think that this preliminary feeling for the keys ensures the playing of the correct notes. On the contrary. This searching for the keys begets hesitancy; which invariably leads to incorrect playing. It also has a directly detrimental influence on the *tone*. It is also diametrically opposed to the fundamental principle which should govern

our technique: There must be absolutely no useless expenditure of energy.

A very little thought and calculation will prove to us the necessity of avoiding the double movement. Any important musical work will be found to contain several thousands of notes. Practically, each of these notes requires an upward and downward movement. But if, instead of one composite movement we employ two, the number of useless movements may be counted by *hundreds*; hence, an appreciable waste of energy. This fault cannot be corrected, like so many others, by any definite exercises. The only way to eradicate this habit is by constant vigilance and unremitting attention.

CHAPTER XII

ON THE NECESSITY OF AVOIDING THE FORWARD AND BACKWARD MOVEMENT WHEN PASSING FROM THE WHITE TO THE BLACK KEYS

THERE is another way in which much energy is wasted, and against which the student must be warned. This is the habit of employing a forward and backward movement of hand and arm when going from the white to the black keys. In a previous chapter I pointed out the necessity of holding the fingers on the white keys quite close to the black keys, so that the finger could strike the one and the other without the slightest movement of the arm. If the pupil has observed this rule very carefully, there is little or no danger of his contracting the habit to which I allude.

Considered from any point of view whatever, this habit is bad. It carries with it a vast waste of energy ; it is clumsy and very

ugly ; one seems to be rowing in a boat rather than playing the piano ! A very simple experiment will enable us to gauge the waste of energy of this movement : Move the arm *swiftly, parallelly* to the keyboard. However swiftly this movement be executed, it is neither inconvenient nor disagreeable ; and the body receives no shock. Now move the hand and arm *swiftly* backwards and forwards *once*. There is a jar throughout the entire body and the effect is most disagreeable. This should convince everyone that the movement is bad.

It is especially in the playing of octaves that this habit is perceivable. But the temptation to move the arm backwards and forwards should be strenuously resisted.

CHAPTER XIII

THE DEVELOPMENT OF THE HAND BY THE DISJUNCTION OF THE FINGERS

I HAVE often heard the most extraordinary opinions put forth by teachers when examining children, especially so at the numerous entrance examinations of divers music schools at which I have assisted. In most details concerning the pupil who is examined, the opinion given can be relied upon. But it is when examining the hand that a very great majority of teachers make mistakes. They are apt to attach too much importance to the *size* of the hand and its *stretching* power. The child (for they are mostly children whom one sees at these entrance examinations) is asked to play an octave or a series of octaves. If the child fail to do so, he or she is generally refused admission on the ground that the hand is too small, and that nothing can be done with such a hand! This is a grave mistake. No one can foresee how a child may

develop in size. I have known cases where a child has suddenly developed after his or her fourteenth, and even sixteenth, year. The only sure indication of future development of the hand, or the contrary, can be found in the degree of elasticity of the *knuckle joints*. Here we may discover the secret of Nature's intentions as regards the future development of the fingers. There is a vast difference in these joints between children of the same age. With some children these joints are supple and elastic; consequently, capable of development. With others, these joints harden at a very early age, and the probability of the child's developing a good technique is practically hopeless.

It is undoubtedly an advantage to the child to have a tolerably large hand with long, tapering fingers; but this must not for one moment be considered a *sine qua non*. The great consideration, from a pianistic point of view, is not so much the length of finger as the *breadth* of the hand and the stretching power between the fingers. This is the vital point; and it can be much improved by practice.

A certain amount of care must be taken in the teaching as well as in the studying of exercises intended to develop this stretching

I. 1 2 3 2 3 4 5 4 3 4 3 2

M. D.

II. 1 2 3 2 3 4 5 4 3 4 3 2

III. 1 2 3 2 3 4 5 4 3 4 3 2

IV. 1 2 3 2 3 4 5 4 3 4 3 2

V. 1 2 3 2 3 4 5 4 3 4 3 2

VI. 1 2 3 2 3 4 5 4 3 4 3 2

VII. VIII. IX. X. XI.

XII. XIII. XIV. XV.

A. 8. I. 1 2 3 2 3 4 5 4 3 4 3 2

II. 1 2 3 2 3 4 5 4 3 4 3 2

III. 1 2 1 2 - 3 2 3 4 5 4 3 4 3 2

IV. 1 2 3 2 3 4 3 4

V. 3 2

VI.

VII. VIII. IX. X. XI.

XII. XIII. XIV. XV.

The image displays fifteen numbered musical exercises (III to XV) for the left hand, written on a single bass clef staff. Each exercise consists of a sequence of notes with specific fingerings indicated by numbers 1-5 above the notes. Exercise III includes a sequence of fingerings: 1 2 1 2 - 3 2 3 4 5 4 3 4 3 2. Exercises IV, V, and VI show simpler patterns. Exercises VII through XV are more complex, involving various rhythmic values and fingerings, with some exercises (VII, VIII, IX, X, XI) featuring multiple measures and some accidentals like flats and naturals.

power of the fingers. Nature must be *helped*, not *forced*. Too much stress cannot be laid on this point. Excess must be avoided, especially an *excess of fatigue*. If the exercises are practised properly, a very few minutes' work should bring on a feeling of tiredness in the knuckle-joints. The hand must immediately rest. The alternating of the hands will give the requisite amount of rest to each hand in turn.

I have found the foregoing exercises very useful and amply sufficient; they should be practised daily with great care.

CHAPTER XIV

THE WRIST

THE correct working of the fingers forms a most vital part of pianoforte playing, and we have hitherto studied the details of this part of pianoforte technique. But there are other details which, if not quite as important as the finger work, are yet of capital importance. Perhaps first and foremost amongst these is the development of the wrist. Its influence on every branch of pianoforte technique cannot be exaggerated.

It is a great mistake to think, as many teachers certainly do, that by advising a pupil to procure some book on octave playing and listening now and again absent-mindedly to a scale in octaves or some other wrist exercise, the teacher has done all that is necessary. No greater mistake could be made. The initial instruction is of the greatest importance. Upon this depends the correct *movement* of the wrist, as well as the correct

position of the hand, arm, and fingers. Every detail is of importance, and must be attended to with great care. A well-developed wrist will influence the touch, even in *legato* passages, and make the *tone* very much more beautiful in everything one plays. It will practically do away entirely with that clumsy playing that is commonly known as "playing from the arm."

It is useless to start practising any wrist exercises until the nerves and muscles of both wrist and arm are well under control. A short but severe course of discipline or arm-drill will be found adequate. I therefore recommend the following exercise: The arm is held out straight and *lightly*. The horizontal line must run from the shoulder to the finger tips. During this exercise the arm must remain motionless. The hand is then raised *from the wrist*, as high as it will go, and so as to form *as nearly as possible a right-angle to the arm*. There it will remain for a few seconds. The hand is brought down slowly from the wrist until it is again *as nearly as possible at a right-angle to the arm*. After a short interval the hand is brought up again. *The descending and ascending movements must be executed very slowly*, for

herein lies the whole gist of the exercise. The fingers should move as little as possible ; I am well aware that they cannot maintain an absolutely straight line with the hand when the hand is down. The great point is to execute both the upward and downward movement in *continuous* motion and with a perfect absence of jerks. This exercise should be repeated until fatigue sets in ; and as a proof that the movements have been done properly, both hand and arm should be quite free from a feeling of tiredness, or from any pain whatever, slight or acute ; the fatigue should only be felt in the wrist. This exercise is of course practised with one wrist at a time. A pupil of ordinary intelligence should be able to master these movements perfectly in four or six days.

Should there be any difficulty about maintaining the arm motionless, it should be rested *lightly* on the back of a chair, in such way that the hand and wrist be entirely free.

CHAPTER XV

EXERCISES FOR THE WRIST

ELSEWHERE I have already spoken of the extreme importance we should attach to developing to the utmost degree the flexibility of the knuckle-joint. It will simplify matters to a very great extent if pupils will bear in mind that there is really no extraordinary difference between the movement of the finger and that of the wrist; but that, on the contrary, there is a great similarity between the two. If we apply the remarks made in a previous chapter on the ascending and descending movements of the *fingers* to the *wrist*, the whole thing is practically explained. To continue the parallel between the two,—we need only consider that the finger movement comes from the *third* joint, counting from the tip of the finger, whereas all wrist movements come from the *fourth* joint, counting in the same manner.

In order to obtain the maximum benefit

from one's work, the fingers as well as the arm should be motionless. There is a great natural temptation to move the fingers towards the notes when the hand descends, and *vice versa*; but this should not be tolerated, as it will influence the attack on the keys and act detrimentally on the tone; in the same way, it would be a mistake to straighten out or alter the curve of the finger at the moment of striking a key from the finger. The fingers retain their habitual curve during wrist exercises, and should steadily maintain that curve.

As the wrist exercise, in its initial stages, is only intended for the training of the wrist, it is a great mistake to start work by playing octaves. The *middle finger* only should be used. It should describe a gentle curve, slightly in front of the line formed by the other fingers. The hand is raised as high as possible. The descending movement will be *slow*, and without jerks. Arm and wrist should be held sufficiently elevated to enable the hand to describe almost a semicircle before the finger reaches the key. There must be no resting of the finger on the key. As soon as the finger has pushed down the key, which should happen when the hand is at its

lowest point, the upward movement begins, *slowly* and *regularly*. This should be repeated several times, until a feeling of tiredness sets in. No good is to be obtained from forcing the muscles. Therefore, as soon as fatigue is felt, the hand must be rested.

The next exercise will be the same series of movements but executed *rapidly* in *staccato*, i.e. without remaining on the key. In this exercise especially, one must be very careful that the arm remains motionless.

These two exercises will teach us the elements of wrist *staccato* and will go far towards a proper development of the wrist. They will also have taught the pupil the *exact* movements, based upon a minimum expenditure of energy. But it is evident that they do not suffice. The pupil should now turn to some good collection of exercises and studies for the development of the wrist, and practise a certain number of the examples given. There are a great number of these books published. Practically all contain extracts and examples taken from the great masters. Among those which I am acquainted with, I consider the Kullak and the Loeschhorn "Schools of Octaves" the best. Of these two I prefer the latter, as it is much more concise

than the former, albeit containing all that is essential.

As a general rule in the playing of octave passages, the thumb and little finger are employed on the white keys, and the thumb and ring-finger on black keys. In octave passages, more perhaps than in passages in single notes, very great care should be exercised not to play on the edges of the keys, but well forward towards the black keys. It is only by this means that the forward and backward movement of the arm can be avoided.

CHAPTER XVI

THE PEDALS

IT is quite a usual thing for both teacher and pupil to neglect the necessary precision requisite for the use of the pedals. In nine cases out of ten (even in ninety-nine out of a hundred), the pupil is simply told to "use the *loud* or the *soft* pedal" without being told how or when. He uses it "by ear," and the effect is very often unsatisfactory. He also ignores the resources of this adjunct to the pianoforte. There should be a definite comprehension on the part of the pupil, and it should be carefully explained to him, that the purpose of the right pedal is *not* to help augment the noise that the fingers make, nor is the left pedal intended to prevent the tone produced being heard by anyone more than three feet away from the instrument. The possibilities that a scientific use of the pedals offer to the pianist are quite different. They are a great and necessary assistance in pro-

ducing and increasing the variety of "tone-colour" of any musical work.

All first-class editions contain careful indications of the places where one or other, or both pedals should be used ; but at best these are only general indications. It is almost impossible to describe with mathematical precision just where the pedal should be put down and where it should be lifted. Certain laws govern the use of the pedals, and pupils should, therefore, have these explained most carefully to them. Musical instinct alone will not suffice.

Let us first take the pedal which is opposite the right foot, and which is erroneously called the "loud" pedal. The purpose of this pedal is to *sustain* or prolong the sound of any notes. This pedal is called the "damper pedal," because by depressing it the dampers, or small blocks of felt (which prevent the strings from vibrating when the key is at rest) are raised. Within certain limits the strings continue to vibrate and, consequently, to sound, as long as the pedal is held down. The purpose, therefore, of this pedal is the *prolongation* of the sounds produced, *not* their augmentation. As a matter of fact, this pedal is just as useful in

pianissimo as in *fortissimo* passages, and helps to make the tone more velvety.

Certain rules have to be observed in the use of the pedal. The free working of the foot is essential; and this can best be obtained by taking the pedal with the point of the foot, not lower than one-third of the length of the sole. The foot must not leave the pedal. As regards the changing, or lifting of the pedal, the general rule is that the pedal should be changed with each change of harmony. Let me illustrate my meaning by an example. (The pupil should experiment with other examples in the same manner; he will find them without difficulty.)



This would be quite incorrect. If one wishes to group the notes so as to use the pedal as much as possible, the following grouping would give the result required:—



But unless there were some particular reason for this, the better way of using the pedal would be thus :—



Exactly as in the case of the fingers, the movement of the foot must be under the absolute control of the will. The few preliminary exercises given on pp. 80, 81 should be sufficient, if practised carefully, to ensure a certain independence of movement between the hand and foot.

These exercises are played in the following manner :—

The note is played, and immediately *after* having played it the pedal is depressed. Then follow the one or more notes to be played whilst the pedal is held down. At the same instant that the note where the pedal is to be released is struck, the pedal is raised and brought down *smartly but silently* as soon as the note has been struck. As a result, we shall obtain a perfect *legato*, even in a series of chords or octaves ; this could not possibly be obtained by any other

means. This is one of the principal uses of the pedal. But this is far from exhausting the list of effects which it enables us to obtain.

When a series of notes or chords, all belonging to the same chord, terminates a work, the pedal may be held down from the beginning of the series to the end. Both in a "*fortissimo*" or a "*morendo*" ending, the effect will be much enhanced. In the case of a "*morendo*" termination the pedal will be held down till *after* the last note or chord has been played and the hands lifted from the keyboard; then only will the pedal be released *very slowly*. As examples of this, the ending of Mendelssohn's "Songs without Words," Nos. 37, 43, and 48 may be quoted.

Particular attention should be drawn to the use of the pedal in *pianissimo* passages. One can obtain effects of extreme beauty by combining the damper pedal with a delicate and *non legato* touch. At the same time it is noticeable that in spite of the dampers being lifted, the detachedness of the notes is clearly in evidence.

This pedal is also very useful for laying a slight stress on certain isolated notes as in Chopin's Study op. 25, No. II. In this and similar places there is a certain risk that a

The image displays a musical score for piano, consisting of five systems. Each system contains a treble clef staff and a bass clef staff. The first system is marked with a '1.' above the treble staff and includes a 'Ped.' (pedal) instruction above the bass staff. The notation includes various rhythmic values, accidentals, and dynamic markings. The second system continues the piece with similar notation. The third system is marked with a '2.' above the treble staff. The fourth and fifth systems conclude the piece with more complex rhythmic patterns and dynamics. The score is presented in a clear, black-and-white format on a light background.

system of accentuation carried out solely by the fingers might easily give exaggerated results, and would lead to a certain uncouth-

The image displays five systems of musical notation. Each system consists of two staves: a top staff for the piano and a bottom staff for the pedal. The piano parts are written in treble clef with a key signature of two flats (B-flat and E-flat) and a common time signature (C). The pedal parts are written in bass clef with the same key signature and time signature. The notation includes various rhythmic values, accidentals, and dynamic markings. The first system begins with a piano part starting on a whole note G4, followed by a series of eighth and sixteenth notes. The pedal part starts with a whole note G2. The second system includes a first ending bracket over the piano part. The third system features a double bar line in the piano part. The fourth system continues the melodic development in the piano part. The fifth system concludes with a final double bar line in both parts.

ness in the interpretation which would be unpleasant.

As a general rule the pedal should be

changed with each change of harmony. But there are noteworthy exceptions to this rule, where it is advisable not to do so, where the composer may wish to obtain the effect of a rushing mass, such as a wave or a gallop past of cavalry. In these cases, no series of *distinct* notes would adequately depict the idea. A very good example of this is Moszkowski's Study in G flat, op. 24, No. 1, entitled "The Waves." In this study there are several descending chromatic scales in the bass which represent a very good imitation of the sound of waves on a beach. These chromatic scales should generally be played beginning *forte* with a *diminuendo* and slight *ritardando*, the damper pedal being held down during the entire scale. Another example is the ascending chromatic scale in the final movement of Beethoven's "Sonata quasi una Fantasia," op. 27, No. II.

In the course of his studies, the pupil will meet with many other similar examples; the two mentioned above by no means exhaust the subject. But they suffice amply to make the meaning clear.

CHAPTER XVII

THE LEFT PEDAL (SORDINO)

THE attention given to this pedal is generally inadequate. Its uses and possibilities are rarely, if ever, explained to the pupil. Two books on pianoforte technique with which I am acquainted, although carefully written as regards a great number of subjects, make no mention of the way to use this pedal. It is treated as a negligible quantity. Small wonder then that a great number of pianists use this pedal both incorrectly and insufficiently.

The general idea is to employ this pedal in *pianissimo* only. This is a great mistake, as the effect produced by its use is the *muting* of the tone. One can, therefore, often obtain a happy combination of tone-colour by the use of this pedal in *forte* passages.

The pupil should not be in too great a hurry to use this pedal. Let him first learn to rely on his fingers only for delicacy of

touch, and when this has been achieved, the tone produced by perfectly educated fingers will be of great beauty. Then, and not till then, the *sordini* pedal will be used correctly.

PART II

CHAPTER XVIII

HOW TO PRACTISE A WORK

IT has been my endeavour, in the preceding chapters, to convince my readers of the necessity of obtaining a maximum output with a minimum expenditure of energy ; and I think that I have explained quite clearly that this can be done by placing all movements of fingers, hands, and arms on a scientific basis. As all the movements which go to make up the production of musical sound are purely mechanical, they must, of necessity be governed by certain laws of Nature relating to such mechanical movement.

The same theory should be applied to studying a work. This, also, should be placed upon a scientific basis, and follow certain rules which I shall endeavour to explain. One of the palpable advantages of

my system of study is a very great economy of time in mastering a work. This is a most serious consideration on account of the vast literature of the pianoforte, and the very great number of works a pianist must necessarily include in his repertory. Therefore, a systematic method of study is a *sine qua non*.

The study of a work should be treated in three distinct ways, which are as follows:—

1. As an exercise.
2. As a study.
3. As a work of art.

Let me explain my meaning. All those passages which appear more or less difficult should be practised very slowly, at first the hands separately, then the hands together. The exact value should be given to every note, and the greatest care taken to avoid anything resembling incorrectness. Only the correct note is to be considered, nothing else. Neither style, interpretation, nor speed are of the slightest consequence at this stage; the entire effort must be centred upon the *correct note*. To this must be added that everything must be played pianissimo. This is the first stage, and is a direct preparation for the next. Having arrived at that point

which is termed "note perfect," we can proceed to the next operation. The correctness of the note presenting no more difficulty, we must seek to obtain the necessary speed, gradually accelerating the *tempo* until we can perform the passages quite fluently, with ease, and *more rapidly* than they are intended to be played. We still maintain a constant *pianissimo* at this stage. It will be found that after a very short time technical difficulties will seem to disappear. Thus we should by now be able to play the entire work correctly, and rather more rapidly than a perfect interpretation would require, but *all* in *pianissimo*. We have, therefore, arrived at that stage where the technical difficulties of the work we are studying have been perfectly mastered by us. We can then give our *entire* attention to other details. This brings us to the third part of the proceedings which consists of the study of the work in hand from an artistic standpoint. All our efforts, and the concentration of our entire brain power, will be brought to bear upon the endeavour to obtain a beautiful interpretation in which every note will be played perfectly in relation to the others, in which speed and tone-colour will be nicely balanced,

in which a perfect proportion will be observed between the phrases.

If these few rules be observed the pupil will find that every good musical composition is an object of absorbing interest ; a *live* thing, not a *dead* one. He will discover an infinite variety of detail that will call forth all his powers of imagination to interpret. Pianoforte music will become for him a live language, not merely a succession of sounds, meaningless and without interest for anybody. It will really be the art of expressing his thoughts and feelings through the medium of a musical instrument.

CHAPTER XIX

FINGERING

WHETHER a composition present any difficulty of execution from a technical point of view or not, a good fingering is essential. This should be definitely fixed at the start and thenceforth should be always adopted. Neither should it be changed except under very exceptional circumstances.

A continual changing of the fingering can but be prejudicial to a good interpretation. For this reason : The act of playing a series of notes belongs to the category of voluntary movements brought about by the action of our will-power ordering a series of well-defined movements of certain muscles. The education of our will-power in this direction is a most important matter. This education can only be carried out by the reiteration of the same series of movements. By playing a certain series of notes over and over again, always employing the same fingering, the

brain will automatically group notes and fingers, and the mental effort will practically be reduced to a minimum as regards this part of the execution. And whilst one lobe of the brain is *subconsciously* occupied in directing the group of muscles with regard to the production of sound or series of sounds pure and simple, the rest of the brain is at leisure to devote itself to the *manner* of producing them. Not so if one is in the habit of constantly, or even occasionally, changing the finger. In this case the efforts of the *entire* brain must be concentrated on directing the series of muscles which will produce the sounds ; nothing can be done subconsciously, everything must be done with the fullest attention. There is, therefore, in this instance, no possibility of giving undivided attention to the necessary tone-colouring or expression. It will be easily understood that if we add to this effort still another one, i.e., the care of artistic effect, the work to be performed by the brain is too great to be done with adequate efficiency, and a perfect interpretation can neither be expected nor hoped for. Let me give a simile : It is often quite easy to *find* one's way from one place to the other or from one town to the other,

though we go by six or seven different routes on as many occasions. But it is quite a different thing to *know* the way; this can only be effected by going the same way continually. In like manner, the employment of various fingerings will prevent our becoming quite efficient and will lead to a very serious wastage of energy and brain power.

The principal which has governed our work hitherto, i.e., the minimum of effort for the maximum of output, should not be lost sight of when adopting a fingering. In fact, generally speaking, all fingerings should be based upon this rule.

When writing a fingering the position of the hand should be the easiest possible, by which is meant the most natural. Therefore care will be taken to discover the most convenient grouping of the notes; and if this be done properly, certain groups of notes will almost automatically be coupled with certain groups of fingers. Let me take as an example of my meaning the following passage, and endeavour to explain the process by which I shall obtain the most satisfactory fingering:—



The first thing to be done is to find out how to group the notes so that there may be a minimum of movement of the hand. Then, again, we must choose between *extension* or *contraction* of the hand. The latter is the better of the two in this particular instance, as it will facilitate the playing of the passage.

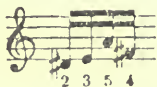
The following fingering would be quite incorrect, in spite of the fact that the hand retains the same position throughout this grouping of the notes:—



We find, here, a clumsy extension of the hand between the fourth and fifth fingers, whilst, on the other hand, the contraction between the thumb and index at the beginning is equally annoying. Evidently, I do not wish to infer that the extension between the fourth and fifth fingers, or the contraction between thumb and index should be generally avoided. For the moment I am only discussing the above passage.

But we can see at a glance that it is quite possible to play the first eight notes of this

passage without displacing the hand. It is evident that the *c* may be considered as the *lowest* note of the group, not the *b*; the highest note is, of course, *a*. We now place the outside fingers, 1 and 5 on *c* and *a*, and find that 2, 3, and 4 fall naturally on *d* \sharp , *e-f*, *g*. This shews us that the *second* finger (index) will be taken on *d* \sharp . Either 3 or 4 would do for *f* \sharp ; but as we have also the *e* to play, this must necessarily take the third and *f* \sharp the fourth fingers. The second half of the group would therefore be fingered thus:—



The first four notes, *c*, *b*, *c*, *f*, will then offer very little difficulty; the natural fingering will then be 1, 2, 1, 4, giving us this result for the group:—



The next group will consist of the following *six* notes, the fingering of which is too obvious to require discussing.



We then have a slight displacement of the hand, bringing the thumb over *c* and the little finger over *a*. The immense advantage of playing on the white keys close up to the black keys will at once become apparent. We are able to place the thumb equally well on the black and white keys, and there will be neither doubt nor difficulty about the fingering for the following eleven notes :—



We can see quite easily that the remaining seven notes form two groups. It is equally apparent that the first *three* of the seven are to be grouped thus :—



Only the last four notes remain, giving us the choice between two fingerings :—



The choice of fingering must necessarily be ruled by the continuation of the passage. If the following notes were—



the fingering would have to be—



But in the event of some such passage as this—



where the next note is played by the thumb, the fingering would be—



The fingering and grouping for the entire passage would read as follows:—



Let us consider one more example, taken from the "Alla Mazurca" of Lucia Contini, p. 4.



The same process will be applied as in the preceding example, in order to obtain the most practical fingering. In this case we must not forget to include a law of æsthetics in our consideration of the fingering, namely, the question of accentuation. We are hardly concerned about the first note, *f*#, which is a long note, and being at the beginning of the phrase, is quite easily accentuated. *E*#, the first note of the next bar, requires our attention. As we must necessarily have a change of position of the hand, it is logical to place the thumb on the *e*#, thus ensuring an accent almost automatically. The following notes

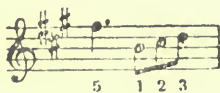
will then find their respective fingering quite easily :—



It now remains to find the fingering for the first bar. This could be played quite well thus :—



but if we place the *thumb* instead of the index on the *b*—



we shall have the middle finger on the *d*, and it is easier to pass the thumb under the middle than under the ring finger. We therefore obtain the following result :—



I have given some rules about fingering in general, but there can be no question of laying down rules which will meet all eventualities. The number of possible combinations of notes is so vast that no human mind could grasp the meaning of the result if worked out mathematically; therefore we consider this number as limitless. All that can be done in this matter is to show the pupil *how* to arrive at the desired result, and *reason, logic, labour, and patience* will guide and help him to resolve difficult questions of fingering.

But even if it were possible to lay down a sufficient number of rules to cover all eventualities, the pupil would still be compelled to exercise his powers of reasoning, because of his personal aptitudes and the peculiarities of his hand.

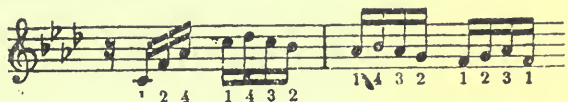
Every one of our fingers has qualities and defects peculiar to itself. These various qualities should be exploited scientifically. (I am almost tempted to speak of the *personality* of each finger.) Whilst taking count of the innate qualities of each finger in particular, equality of tone produced should, nevertheless, not be lost sight of. A conscientious student will consequently look after the

general development of the hand whilst still cultivating the natural tendency of each finger in particular. However paradoxical this may seem, it is a fact that must not be lost sight of. We wrestle with Nature from the very beginning of our studies, in order to develop uniformity of touch; and the entire technical training of our fingers has that trend, in spite of the fact that some are heavy; others are clumsy; others, again, are agile. In short we seem to wish to sacrifice characteristics to uniformity.

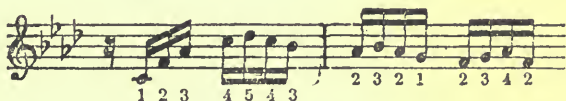
Chopin perhaps more than any other master mind in the world of musical creation, realised the vast possibilities of utilizing the characteristics of the fingers. We note this in his *Nocturnes* especially, but also in many of his other compositions. To anyone opening the pages of the *Nocturnes* for the first time the fingering appears decidedly odd. We often meet with passages where the fourth finger passes over the fifth or the fifth passes under the fourth. All such fingering should be respected, as the Polish Master wished it so and not otherwise.

But sometimes we meet with passages where the exigencies of accentuation, especially, require a very special fingering. A

notable example will be found in the chief motive of the *Finale* of Beethoven's *F minor Sonata*, op. 57. In an ordinary way an easier fingering could be found for



than that which I have given, and which is generally employed.¹ But in reality no other fingering is adequate. Undoubtedly



would be easier to play considered from an ordinary point of view; and if it were only a question of playing the notes without consideration as to colour or accent, the latter fingering would be the more practical. It would ensure both equality of tone and rapidity of movement. But it is exactly the equality of tone that we must prevent. Without variety and wealth of colour, this passage and, consequently, the entire movement which

¹ *Vide* von Bülow's edition of this sonata.

is built upon it, will lose practically all its beauty and dramatic expression.

Let me describe in detail, as briefly as possible, the expression that is required for the proper execution of this passage; the pupil will then better understand the necessity for this fingering. (I should here like to remind the pupil that there must be a reason for everything he does, and that everything should be carefully reasoned out.)

In the first three notes of this passage, *c, f, a flat*, we have a *crescendo* culminating on the first note of the next half of the bar *c*. This, being the first note of the second half of the bar, will naturally take a slight accent; but as it is also the culminating point of the group, the accent will, of course, be more marked than it would otherwise be. The following three notes, *d flat, c, b flat*, though *slightly* softer than the accented *c*, remain moderately strong. The next note, *a flat*, takes a marked accent as first note of the bar, and then follows a gradual *diminuendo* throughout the remaining notes. Von Bülow's fingering cannot be improved upon for this passage. The passing of the thumb on to the *c* and, later on, on to the *a flat*, gives us, automatically, precisely the accents we

require. I should wish to add that precisely the same fingering should be adopted for this motive throughout the movement, whatever the notes may be. For several reasons there is a great advantage in adopting a uniform fingering for any recurring passage (i.e. series of notes), even if this passage recur in different keys.

Precision of fingering is especially indispensable in works such as the last Sonatas of Beethoven, where each note requires its exact value, its exact strength, in order to enhance the dramatic power of the whole.

It is undoubtedly quite a good thing to endeavour to perfect one's technique whilst practising some musical work; and any work may offer a certain interest considered as a study; but it would be quite fatal to musical expression in art to consider technique as an *end*. It is only a *means* to an end, not an end in itself.

As a general rule, the easiest fingering obtainable should be adopted, except in certain cases such as that cited above with reference to the last movement of Beethoven's op. 57. It should never be forgotten that the perfect interpretation of a work requires that all the technical difficulties should be

thoroughly overcome, and that the execution of all passages should appear *easy*; no technical difficulty should be *apparent*. For this reason, all passages should be practised at a higher speed than that really required in the interpretation of the work.

CHAPTER XX

THE "FORTISSIMO"

MANY pianists, and also a very great number of pupils, consider the *fortissimo* a synonym for "noise," and even for brutality in playing. The usual thing is that the performer *thumps* the instrument as hard as possible wherever he sees "*ff*" marked. I have often asked myself: Why this savagery on seeing this sign? Why this forgetfulness of all decency in art? Why should the simple "*ff*" arouse all the latent brutality of the human species, just as a red rag held before a bull goads that animal to madness? And I have never been able to find an answer which exactly fits the question. But it is very evident that a very large percentage of performers lose all sense of *proportion* when playing *fortissimo*.

It must be borne in mind that *fortissimo*, in precisely the same manner as *forte*, *piano*, and *pianissimo*, are not definite indications of dynamic strength of tone, but merely

denote a certain relativity among themselves. Let us employ the term "*volume of tone*" instead of the words "strength" or "loudness" or "noise"; we shall then have a much clearer idea of *proportion*. *Pianissimo* would mean "the least possible volume of tone" and *fortissimo* "the greatest possible volume of tone." Then, again, we must take into consideration the spirit and epoch of the composition we are playing. It should strike everyone as a self-evident fact that the *fortissimo* of a Mozart Sonata or Concerto is a very different thing from the *fortissimo* which we meet in Liszt's *Second Hungarian Rhapsody*, in the Schubert-Tausig *Military March* or in other similar works by modern composers.

Under all circumstances whatever the player should endeavour to produce as beautiful and fine a quality of tone as possible from the instrument. The secret of beauty and nobility of tone in *fortissimo* lies in the *attack*, whether in single notes or in chords.

When playing chords *fortissimo*, care should be taken not to attack the keys with the full force of hand or arm. A *direct blow* should be avoided, as it only leads to *noise*, not to fullness of tone, and is the worst possible way of producing sound. On the contrary, the

blow should be retained ; the result would be rather more a powerful and swift *pressure* (leverage) than a *blow*.

It very often happens that one is tempted to play a series of *fortissimo* chords from the arm, i.e. with a firm wrist. Provided certain precautions are taken, there is no reason why it should be avoided. One should be careful to avoid the accumulated weight of hand and arm, added to the swiftness of movement, becoming a *direct* striking force. This would be the direct cause of the very disagreeable noise generally produced under the guise of *fortissimo*. The *weight* alone of the arm amply suffices ; and instead of the harsh blow we shall obtain a weight-leverage upon the notes. The result will be a majestic and very sonorous volume of tone. (Example : Chopin's Prelude in C minor.)

There is very little else to explain as regards the *fortissimo* of the *fingers*. *Stiffness* of the fingers should be avoided, and both hand and arm should remain motionless. A harsh blow, whether delivered by a single finger or by several fingers, will automatically produce a harsh tone. Consequently, the *fortissimo* must be produced, in this instance, by a strong and swift pressure of the finger rather than by a sharp blow.

CHAPTER XXI

“ LEGATO ” PLAYING

As I consider the *staccato* touch more interesting from a *pedagogical* point of view than the *legato* touch, I have spoken almost exclusively of the former up to the present.

The pupil will already have noticed that by following the advice laid down in the first part of this volume, his touch will have become light, and free from effort, and his tone crystalline and brilliant. When a perfect *staccato* touch has been acquired, the study of the *legato* touch offers little difficulty to the student. In perfect *legato* the touch should remain limpid although the notes be tied to each other, i.e. there is no break between any two notes, but a perfect continuity of sound. In *legato* as well as in *staccato*, *stickiness* of touch should be avoided. The finger should be lifted in the same manner as before, with swift movements, the only difference being,—as I have just said,—that as one note is released the next one is played. I can, therefore, safely aver that a

perfect legato touch can be easily obtained when staccato playing has been mastered ; but it is a matter of much greater difficulty to learn the *staccato* when one has been in the habit of playing everything *legato*.

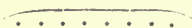
Chopin's works, more than those of any other master perhaps, require a perfect *legato* touch ; but his works equally require lightness, limpidity, and brilliancy. It is immaterial whether we turn to his *Bercense*, his *Ballades*, his *Sonatas*, his *Studies*, or any other of his compositions. We feel instinctively that the *legato* required is extremely near to being a *staccato* touch. All passages should therefore be practised staccato at first until completely mastered. Very little effort will then be required to transform the touch into a perfect legato of the precise quality required in the rendering of Chopin's works.

But too often the pianist's touch is only a parody of *legato*-playing. Clearness, freshness, and brilliancy are totally wanting. Instead of the notes being bound to each other, they appear to stick together and apparently the keys are only released because the fingers are wanted for other keys. The whole effect is muddy and most disagreeable to the listener.

CHAPTER XXII

THE "PORTAMENTO"

THE *portamento* (Engl. "carried") is one of the most graceful features of pianoforte playing. The sign employed



denotes sufficiently that it is related both to the *staccato* and *legato*. Its characteristic is a caressing tone of great tenderness. Numerous examples of *portamento* playing exist, but one of the finest and most instructive for us is the following:—



Coming after the four-part (introductory) variation as it does, the new theme had to be introduced, whilst being linked to that which precedes. Beethoven admirably understood

the necessity of avoiding sudden and unexpected effects here, as being incompatible with the nature of this part of the work. This short scale was, therefore, indispensable from an æsthetic point of view. Let the student try the effect of this passage both in *staccato* and *legato*. He will find that, if played *staccato*, the effect is too harsh, and that the *crispness* of the tone does not at all suit the general character of either the preceding or succeeding ideas. He should then try the same passage in *legato*. He will quickly come to the conclusion that when played *legato* it is insipid and equally ill-fitting. Having tried both these ways, he will feel convinced that the precise effect is only obtainable when played *portamento*.

Generally speaking, *portamento* playing is better fitted for short passages than for long ones. The principal reason for this lies, very probably, in the fact that the tone produced is somewhat flabby.

This half-detached, half-bound touch which we term *portamento* is obtained through a judicious use of the *fore-arm*. Practically the entire series of movements employed is totally different from those necessary in *staccato* and *legato*. For these, the attack must be ener-

getic and decided; whereas in the *portamento*, this is not the case; on the contrary, all movements should be gently executed. Taking any key and any finger as an example, the following is a detailed account of the various movements attending the striking of this key:—

There is a descending movement of the hand and fore-arm until the finger takes contact with the key. The finger then depresses the key whilst hand and fore-arm *continue the downward movement without a break*. There must be absolutely no stiffening of the wrist or arm. In this lies the secret of good *portamento* playing. Having played the note, the fore-arm rises, *dragging* wrist, hand, and finger upwards. The result is that the key is both depressed and raised very much more slowly than in either *staccato* or *legato* playing; and in raising the finger the damper falls more gently on to the strings, causing this softness of tone peculiar to the *portamento*.

Few, if any, of the great composers have realised the possibilities contained in the *Portamento* to the same degree as Chopin. Especially in his *Nocturnes*, the caressing tone of the *Portamento* has been used liberally. Here we meet with several passages which

begin slowly and *portamento*, becoming gradually faster and less *portamento* until they terminate in a few rapid notes quite *legato*. The accompaniment of the second Study, Op. 25, is also a very fine example of *portamento* playing. The caressing tone of the bass added to the passages in triplets in the right hand gives this Study a certain dreamy character that is quite unique.

CHAPTER XXIII

THE "CANTILENA"

I HAVE gone into the details of finger action and the rapid motion of the fingers at great length, and have endeavoured to impress on my readers the tremendous importance of what is habitually known as a *perfect technique*. The reason I have done so is that perfect finger motion or *technique* is the *basis of all real pianoforte playing*.

The case is precisely the same when we learn a language. Anyone can manage to stumble through a certain number of sentences, or carry on a conversation haltingly. But in order to speak, or even to write, that language *fluently*, i.e. without any *apparent* effort, the technique of that language must be acquired. And the technique of a language is the knowledge of, and ability to use, the words of that language correctly, with the correct pronunciation and at the correct time.

The case is the same for the pianist. Anyone can stumble through a Sonata of Beethoven or Chopin or through some such work as Balakireff's *Islamey*. But between that and a *fluent* rendering, there is a world of difference. We must have perfect control over our fingers; they must do everything the brain orders them to do, and must be *capable* of doing it. But, especially (and this can never be insisted upon to too great an extent), the fingers must be so highly developed, must be under such perfect control, that only a very small part of brain-power is necessary to direct their movements (and that with little apparent effort on the part of the performer), thus leaving the major part of the mind free to devote itself to the *intellectual* side of the execution. When this happens we usually have perfect execution. It is this perfect mastery of all necessary movement,—and the elimination of all unnecessary ones,—that is so absolutely essential to fluency. Failing this, an artistic interpretation is out of the question. For the fingers are the *means* of expressing either one's own musical thoughts or those of others; and *fluency*, or the want of it, will make precisely the same difference between one pianist and

another as it does between a first-rate and third-rate orator.

But that of branch pianoforte technique which deals with *rapid* movements of fingers and wrist or, in other words, with *velocity*, is not the only one. There are other categories of *technique* (according to the definition of the word at the beginning of this book), which must likewise be studied. Among these the art of producing a *singing* tone from the pianoforte ranks very high.

I shall mention, and endeavour to describe, other touches in succeeding chapters. But, for the moment, the art of producing a "singing tone" or, as it is known generally, of playing a *Cantilena*, must receive attention.

We have seen that a bright, crisp touch will produce a tone possessing similar qualities. From this we may logically conclude that if the finger attack the key less vigorously, with less speed, the tone produced will likewise be less vigorous, i.e. less brilliant; in other words, the tone-colour obtained would be less brilliant; consequently softer. This logical deduction is quite correct. *Pressure* (weight) on the keys, rather than *attack*, will give us the soft and mellow tone we require in the *Cantilena*. This quality

of touch is very analogous to that of a string instrument. There, also, a beautiful singing tone is obtained by pressure of the fingers and of the bow.

It is neither necessary nor useful to quote examples of *Cantilena* passages. They can be found in compositions of all times and all schools. Their number is practically unlimited, and both master and pupil will easily find adequate examples. It will also be of more practical value to the pupil if he search for the examples himself. I am well aware that a considerable number of studies and, even, collections of studies have been composed or compiled with a view to instructing the pupil in the art of obtaining a singing tone ; but I am not very partial to this class of work. It is much better for the pupil to think for himself as far as possible and to exercise his ingenuity and independence as far as is possible. A few such studies, or even only *Cantilena* passages carefully selected and practised with great attention, will be better than spending hours wading through some one or other of the numerous volumes just mentioned. But the choice of the *Cantilena* passages intended for study should be made with extreme care. We meet with

them in Clementi's *Sonatinas*, as well as in very complicated works ; and it is advisable that the pupil invariably choose examples of which he can *play the notes with perfect ease*. He will then be able to concentrate his *entire attention* upon the *production of tone* and on the *quality of tone*. It is precisely the quality of tone produced which will mark the success of his efforts, as well as the amount of attention and will-power he concentrates upon the tone produced.

CHAPTER XXIV

ÆSTHETICS

I MUST again speak about the similitude that exists between a concrete language and our abstract language,—music. Before being able to use a language *expressively*, it is necessary to possess a more or less intimate knowledge of its idioms, of the rules that govern that language and also a good vocabulary. In short we must first master the *technique* of the language before it can be used *adequately* to express our best thoughts freely and with precision.

It is precisely the same thing in music. Whether it be musical composition, which may be quite well compared to literary composition, or executive music, which has its parallel in oratory, a perfect mastery of the various rules governing the language is essential. If we are to give a perfect interpretation of any work, we must possess a perfect knowledge of all the details of pianoforte technique.

It is especially in executive music that it is so very essential to obtain a perfect mastery of all the rules and details of technique. When writing, whether it be a literary or a musical work, hesitation and research are immaterial, time is a secondary consideration. But in a musical rendering, equally as in a speech, hesitation and research are out of the question. There must be absolute fluency, for expression and effect are inconceivable without it.

In the chapter on the manner of practising, it was stated that only at the third, or last, stage, should the æsthetic side of the composition be studied. I propose to devote some attention to this complex subject in the following chapters.

The word "æsthetics" covers a very large number of important subjects of very diverse character. But the three principal considerations are: (1) The general character of the work; (2) tone-colour; (3) varieties of touch used.

One must never lose sight of the fact that each and every detail is of importance in the intellectual work of studying a composition from an æsthetic point of view. No detail, however slight, should be disregarded;

nothing should be considered *easy* of execution. The state of mind brought about by underestimating the difficulty of rendering a work will almost always bring with it negligence of interpretation. True, it may be quite easy to play the *notes* of any work quite correctly and without effort ; but that is the purely *mechanical* side of pianoforte playing ; the *intellectual* side represents something quite different. It is according to *how* it is performed, that a thing is easy, or difficult. Let us take those two well-known and well-worn compositions : Liszt's *Second Hungarian Rhapsody* and Beethoven's *Sonata quasi una Fantasia* in C sharp minor, Op. 27, No. 2. How often have we heard these two works played by amateurs whose technical ability scarcely sufficed for playing one of Mendelssohn's *Songs without Words* ! On the other hand, a truly great artist will expend considerable effort on the rendering of a technically simple *Adagio* by Mozart.

When approaching the intellectual side in studying a composition, our first effort should tend towards deciding precisely for ourselves its *general character*. (And here I should like to outline for teachers my own system as regards the pupil's better com-

prehension of the work. It is briefly as follows :—

The pupil, having learnt the notes and mastered the technical difficulties is able to give a *colourless* rendering of the work. I then let him endeavour, by his own efforts and imagination, to discover its *general character*. He is first told to decide for himself whether any of the sentiments, love, joy, grief, yearning, despair, etc., are depicted. The next step will be the qualifying of this sentiment, and the endeavour to say something more definite about it. Gradually the whole story or picture will open before the imagination, and the pupil is then told to try and communicate his ideas to others through his interpretation of the work. I wish to add that my system does not reduce all music (whether purely abstract or not) to programme-music; it merely makes it a *living thing* with a meaning for the pupils).

It is not necessary that the meaning conveyed by any composition should be the same for every pupil, or for every pianist. On the contrary, if this were the case, *personality* would be non-existent. Neither is it necessary that a composition whose general character is tragic, should be tragic through-

out. Or that a composition which is generally joyous should not contain one or more infinitely sad passages. Naturally, such deviations from the general character will practically only be met with in works of some length; in short compositions there would neither be time nor scope for such strong contrasts.

It is a good plan to decide the general *tempo* of a composition from the commencement; but should the work be composed of more than one movement, the approximate *tempo* of each will be decided separately. It stands to reason that after the *tempo* has been decided upon, it will undergo numerous modifications. Firstly, there will be continual modification of *tempo* within the work, or part of the work, itself, some passages being slower, some faster, in accordance with the expression required by the development of the work and ideas of the composer. Secondly, there will be *evolution* of thought on the part of the performer. He will gradually modify his ideas as to the general significance of the work, of its style, of its interpretation, and this evolution will naturally bring in its wake a modification (sometimes radical, sometimes only slight) of the general *tempo* or various

details. I regard this evolution of ideas as a good sign—a proof of progress in the study of the work.

A discussion of the *rationale* of programme music would be quite foreign to this work. In this category of compositions, composers give a definite intimation of their intentions. This is the case in such works as Beethoven's *Pastoral Sonata*, Op. 28, in his *Adieu, Absence et Retour*, Op. 81a, in Schumann's *Fantasiestuecke*, Op. 12, and in numerous works from Bach to the present time. Naturally, in such cases the executant's chief aim is to interpret as faithfully as possible the composer's definite intentions.

But it is more especially in the interpretation of abstract music (i.e. compositions where the author has not stated his intentions definitely, and in which he has not endeavoured to depict some precise subject) that we must try to discover the musical intentions of the work. A notable example of this is Brahms' *Second Rhapsody in G minor*, Op. 79. I have heard many pianists play this work; but few succeeded in bringing out its innate beauties, the vast store of poetry it contains. The vast majority merely played notes, and still more notes, brutally

played in the *fortissimi*, scarcely audible in the *pianissimi*.

It is undoubtedly permissible to modify the *tempo* during the course of performance, and it is, even, advisable. Few compositions could bear being played in a perfectly even *tempo* from start to finish ; but these changes of *tempo* whether great or small, should never be made only for the mere sake of altering the *tempo*. They should invariably form part of a carefully thought out plan of artistic interpretation. A change of *tempo* will almost invariably influence the balance of the entire composition ; and this balance between the various parts or passages is a question of paramount importance.

* * * * *

We now come to the question of “ expression ” in music. This is obtained by varying the volume of sound from *fortissimo* to *pianissimo*. In most languages the French word “ nuance ” is employed to convey this meaning. The word “ nuance ” simply means a tint or shade of colour. Personally, I prefer the word “ colour ” as being more definite in meaning.

Although each and every detail is of importance in interpretation, scarcely any detail

is quite so important as "tone-colouring." Briefly defined, it consists in the art of giving to every note its precise dynamic value, exactly as the note should sound.

At the first glance, the term "colour" may seem strange, when applied to an art that has solely to do with impressions produced on the brain through the sense of hearing. But a moment's thought will convince us that the term is perfectly justifiable. There is another very great advantage to be derived from the use of the word "colour" in preference to any other: it appeals more strongly to the imagination of the student.

Painting, which is only another form of Art, produces impressions on certain nerve centres, and they, in their turn, influence the brain in certain directions; this result is obtained through the medium of the *retina* working on the brain. The *retina* is excited in different ways by the various colours presented to it. The same procedure takes place in the functions of the ear. The impression caused by music, or sound of any description, is transmitted to the brain in precisely the same manner, but through the medium of the *ear* instead of the *retina*. But the effect on the nerve centres and on the brain are identi-

cal. When, therefore, we apply such terms as red, yellow, blue, green, violet, etc., either to a musical composition or to a performance, the inference is that such composition or performance produces precisely the same impression on the brain that that colour would produce.

We often notice that the same portrait or landscape, painted by two different artists, varies very much as regards interpretation although the outlines may be similar. This diversity of ideas is quite permissible and shows personality in the interpretation. This same personality must and should exist in the interpretation of a musical work. At the same time, as a hard and fast rule, the composer's text should be rigorously respected. This text does not comprise solely the notes, but also all indications of *tempo*, phrasing, accentuation, as well as all expression marks or, rather, signs to denote the comparative volume of sound required. However numerous these indications may be, the performer will invariably find it necessary to complete them, failing which his interpretation will lack personality.

We meet with practically the same conditions in the drama. Take, for instance, such

well-known tragedies as *Hamlet*, *Othello*, *Macbeth*, *King Lear*. The title rôles of these have been played from time immemorial by the great tragedians, and invariably with perfect respect to the text. Yet the various interpretations have been most diverse, and despite the fact that the original text has been scrupulously adhered to, the *personality* of the actor has enjoyed a large measure of free play. Precisely the same state of things exists as regards the rendering of the master-works of pianoforte literature. Almost everyone will remember having heard Beethoven's last Sonatas, Schumann's *Symphonic Studies*, or some of Chopin's more important works performed by our great artists. How vastly the interpretations vary !

In the case of Bach's compositions, the circumstances are not the same. In most of Bach's works, if not in every one of them, only the bare notes are given. Neither *tempo*, nor any other indications of the composer's views on the rendering of the work, are given. The executant must, first of all, obtain some idea of the general character of the work, and then proceed to discover for himself the adequate colouring. There must be complete and perfect concordance between

the general character of a work and the colouring employed. If this be disregarded, the effect will be comparable to a picture in which the colours are ill-assorted.

This brings us very naturally to the question of the extraordinary divergence of opinion between the various musicians who have edited Bach's "*Well-tempered Klavier*." No two editors seem to think alike on any one point! Even the reading of the various ornaments differs in each edition! As for the very varied opinions expressed with regard to the *tempi*, the phrasing and the colouring, apparently no rules are followed, but the whole scheme seems to be the outcome of more or less happy imaginativeness. Let it be so. The pupil may turn this state of things to his benefit by a careful study of the general character of the prelude or figure which he wishes to play, and by very careful thought as to the manner of playing it. It may not be in accordance with the indications of any one of the numerous editions. No matter! But if all proportions have been thought out, we shall have a truly *personal* rendering; which is infinitely better than a characterless imitation of another person's ideas.

Over and above the details of the tone-colouring just mentioned, there is the *fundamental* or *Key* colour of the work or movement. Every one can easily prove this for himself. It will be amply sufficient to take the first eight or sixteen bars of a few compositions and transpose them. Let me give a few examples :—

Take the D flat *Nocturne*, Op. 27, No. ii, of Chopin. Play the first phrase *as it is written* and then transpose it to F. Or the first phrase of the second movement of the *Sonata Pathétique*, and after playing it in the original key of A flat, transpose it to A and to G. It will at once become evident that the great master's choice of tonality was not left to accident, but was very carefully premeditated.

Note Beethoven's choice of the key of C for his *Sonata*, Op. 53. He chose that tonality on account of the clearness of its colour, which might almost be likened to azure. The technical difficulties would hardly be greater if the work had been written in B or G instead of in C ; but if we transpose the first page into either of those keys, we shall at once see that their tonal colour is not appropriate to the general character of the work.

Almost all the compositions of our great masters prove the truth of this statement about the choice of key as adapted to the general character of a work ; and the pupil will do well to select numerous examples for himself. Lavignac, in his book, *La Musique et les Musiciens*, says :—

“It was not by chance that Beethoven chose the key of E flat for his *Eroica Symphony*, or F for his *Pastoral Symphony* ; but in accordance with that mysterious law which imparts to each tonality its special characteristics, its special colour.” A little further on in the same book, the author gives a list of keys and the colours which correspond to them. We need not necessarily all be of the same opinion as regards the precise equivalent in colour of each key ; neither is this important. The only point that is really of any importance is that we should feel and appreciate that each tonality has its special physiognomy and character.

In a certain School of Fine Arts a pupil asked the master how he had to mix his colours so as to obtain a certain shade. The master promptly answered “with brains, sir” ; and this answer is equally applicable in music. The pupil must learn to “mix his

colours" in music by experiment and by giving concentrated attention to the subject. The teacher can shew him the way, but cannot possibly indicate that by using a certain touch or a certain amount of tone in any particular passage he will obtain the desired effect. Even could he do so, it would be to the detriment of the pupil's personality. The work is purely intellectual; and as in all intellectual work, its source must be in ourselves.

The only practical way of learning tone-colouring is by *thought*. By this means alone can we arrive at a satisfactory result. When the opportunity offers itself of hearing a performance by a really great artist, it is advisable to study the works we are going to hear beforehand so as to possess a tolerably good knowledge of them. We can then give our undivided attention to every detail of the performance, comparing the effects produced by the artist with those produced by ourselves, accepting some suggestions, rejecting others. Pupils should study compositions, *without the instrument*, in the following manner: The pupil first studies the work in the way I have already described. By the time he has completed the *second* stage he will, if

he possess a moderately good memory, know the *notes* of the work by heart. He should then think out, without the aid of an instrument, the *tempo*, phrasing and expression that should be employed, i.e., as he would wish to hear it played by *someone else*. Each and every detail should be reviewed in this manner, and thought out in *various ways* until the pupil is satisfied that he has found the best interpretation. If he then try to realize his ideas at the pianoforte, he will have the immense advantage of knowing *before-hand* what he is seeking to obtain, instead of spending hours at the instrument for the same object. It is, further, quite a good plan to begin by slightly exaggerating all colouring, playing the *forte* a little too strongly, the *piani* a little too delicately, and so on, and then gradually smoothing all colours down to their proper proportions.

It is absolutely essential to pay the strictest attention to everything which we play. For it is only by concentrating one's entire attention upon every passage, every note played, that we can appreciate the precise effect obtained, and, consequently, interpret the same passage in divers other ways, so as to be enabled to compare the results of our various

experiments. Thus only shall we be able to choose the best.

As a *general* rule, ascending passages are usually played with a slight *crescendo*, *descending* passages with a slight *diminuendo*, thus :—



Should more than a slight *crescendo* or *decreasing* be desired, or should the contrary effect be necessary, the composer usually intimates this. When the author wishes a smooth rendering without either augmentation or diminution of the volume of sound, the conventional term "*sempre piano*" or "*sempre forte*" is indicated; except when the character of the passage clearly shews that an even rendering is imperative. But these indications of expression can in no way convey to us the *intensity* or *degree* desired by the composer; this must be decided by our own judgment. And even the addition of the words "*poco*" or "*molto*" will not assist us very materially to form a precise idea of the author's intentions in the matter. It is, and will remain, a question of personal judgment which each one must decide for himself.

When studying the works of the old masters, we must not lose sight of the fact that the instruments they possessed cannot be compared with those we now have as regards richness of tone. The brilliant tone-colouring in which we may indulge (and justifiably so) in the *Finale* of Schumann's *Symphonic Studies* or in his *Toccata* would be totally out of place, were we to employ them in Bach's *Italian Concerto* or Domenico Scarlatti's *Capriccio*. But the student must not infer from this that they are mono-chromatic. Far from it. In the majority of classical works there is a beauty and richness of tone-colour which is often wanting in those of our modern composers. But the colouring, though variegated, and often brilliant, should be slightly attenuated.

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We possess three means by which we can produce tone-colour; viz., by the fingers, by the use of the damper pedal, and by employing the *sordino* pedal. But it is not advisable to rely to too great an extent upon the pedals for producing the desired colour, especially at first. It is far better to obtain the colour necessary to a good interpretation by means of the fingers only, and by varying

the touch. The slightest change of touch will alter the tone produced ; and it is this fact that we must turn to the best advantage in our employment of tone-colour.

We shall obtain some very interesting and perfectly correct results by the process of logical deduction as applied to variety of touch. Let us, first of all, take the particular touch described in the initial chapters of this book. It is composed of the following movements : (1) The finger is lifted to its utmost ; (2) it is brought down as rapidly as possible ; (3) the movement is purely a finger movement ; (4) the hand remains absolutely motionless. What is the result ? A quality of tone which is clear, neat, and free, and which I should describe as *azure*. Four conditions must exist in order to produce this tone. If, now, we modify any one, or more than one, of these conditions, logically there will be a smaller or greater modification of the tone produced.

Let us proceed to modify the conditions of touch in their order : Instead of lifting the finger as high as possible, we shall start from a position in which the finger is lifted about *half-way*, i.e. so that a horizontal line is formed from the second joint to the elbow,—

the hand, wrist, and arm remaining motionless. A note struck from this position will have a different colour from the first way of playing it. The tone will be harsher ; also, this manner of playing is more fatiguing than the first.

If we maintain this position of attack, i.e., holding the arm, wrist, hand, and finger in an horizontal line down to the second joint of the finger, and then modify the touch by attacking with a *slow* movement instead of a rapid one, the tone will again be changed. It will sound hesitating and flabby and will be the musical equivalent of *mauve*.

A third modification, i.e., a movement of the finger with joints held stiff, is not employed. The tone produced would be entirely unsatisfactory.

By another combination of movements we obtain an attack through the medium of the wrist combined with that of the finger. The resultant tone would necessarily be harsh and brilliant, and the impression created would be translated, chromatically, by *vermilion*.

I have just touched upon this question of different combinations of the muscles in tone-production, in order to prove the importance

of each detail, and to what extent tone may be influenced by these various combinations. Very great care must be exercised, and the fingers must always be kept well under control; otherwise, the result of negligence will be the disfigurement of whole passages through an inappropriate touch.

If the sound be produced by a *simple pressure coming from the hand*, and without the least stiffness of the finger, we shall obtain a very velvety tone which may be compared to a *bluish grey*. This is precisely the quality of tone required in the opening bars of Chopin's *Berceuse*. This is, perhaps, the most serviceable touch we have for passages where a tender, full, yet soft tone is required. Nevertheless, it would be a serious mistake to think that when we had succeeded in producing a fine singing tone, it could be used under all circumstances where a *cantilena* presented itself. This fact will be better understood by watching a sunset after a fine summer day. The general colour-impression is red; but the sub-colours or tints change constantly and can scarcely be counted. It is the same with the singing tone. There is a vast difference between the colour required in the opening bars of

Chopin's *Berceuse*, his *Nocturne* in F#, Op. 15, ii, Beethoven's *Adagio*, Op. 31, ii, from the 31st bar onwards, the opening bars of the *Adagio*, in his *Sonata*, Op. 13, or in MacDowell's "*To a Water Lily*." There is, or, rather, there should be, no analogy of colour between any two of these *cantilene*.

If we examine the extremity of the finger, we shall note that the tip is hard and that the end of the finger-bone is protected by a hard covering of tissues and skin, and that immediately above it there is a soft, cushion-like swelling of fatty substance. It is this cushion that we bring in contact with the key in *cantilena* passages, whilst exercising great care as to the tone-colour produced. In this difference of colour, the *fore-arm* is an important factor.

The influence of the fore-arm is very marked in the different combinations of touch; to a great extent it serves as a *regulator*. By raising it slightly above the normal position, or by an almost imperceptible lowering, we instantly obtain a change of touch, and, consequently, a change of colour.

A good example of this is Chopin's *Study* Op. 25, ii. The right hand should play with

a very light touch and extreme delicacy from beginning to end. The only way to obtain a satisfactory result is by holding the fore-arm a little higher than in the normal position. This will cause the attack to be made with the extreme tips of the fingers, which will barely come in contact with the keys. But should we, in this same study, hold the fore-arm somewhat *lower* than the normal position, the result will be a sticky touch, just the contrary to what Chopin desired.

The tone produced is again quite different when we hold the fore-arm low, even if we employ the fingers and hand as described above. Then the style of playing will be quite *legatissimo*, and there will be a certain stickiness about it. Undoubtedly, this style of touch can, and may, be used, but with great cautiousness.

The student will easily discover the advantages and possibilities of the finger and wrist staccato and the *portamento* for himself.

In Chapter XVI I have spoken about the pedals, and have endeavoured to explain the best employment of them. The use of one or both pedals simultaneously with one or other combination of touch will open up still new

fields of tone-colouring. The “*sordino*” pedal should always be employed with caution, as certain kinds of touch would become thick and muddled if used in combination with this pedal.

The “*sordino*” pedal invariably softens the tone,—makes it, in fact, more velvety. It is not at all essential that its use should be exclusively reserved for *piano* or *pianissimo* passages. In *forte*, and even *fortissimo* passages it is equally efficacious ; but in this instance it must be used very cautiously indeed. In this latter case, its use would be much more appropriate in short passages, or for a short series of disjointed notes or chords, than for a lengthy passage of several bars’ length, or for a long *cantilena*. The number of examples of *forte con sordino* that we encounter in the works of the great masters are comparatively few ; which is a proof that this particular process of tone-colouring must not be abused. The example shown on page 141 is perhaps one of the best of its judicious employment.

I have only been able to indicate some of the numberless combinations possible, to shew the path the student should take. Every combination of muscles will give us

a different kind of touch ; and this, in turn will produce a different tone-colour with each different method of attack employed.

But apart from the action of the fingers, much depends on the quality of the instrument. With some instruments an infinity of colour and tints may be obtained, whereas other instruments will not possess the same wealth of resources. The student will there-



fore find it necessary to study his instrument, in order to exploit its resources to the utmost.

For several reasons, which must be apparent, it is not possible to describe exactly what touch should be employed for any particular passage. Firstly because the appropriate tone-colour or tint can only be considered in relationship to the whole scheme of colour. Secondly, because there is an

extraordinary difference between one player and another, and between one instrument and another.

One need only play the same work on instruments of different make, and listen intently in order to remark an appreciable difference in the colour produced. We may, therefore, safely conclude that identical causes will not inevitably produce the same effects.

I will conclude this chapter by advising that the *personality* of the executant be always kept *alive*, even, and especially if, he be a student, and developed as much as possible. Undoubtedly, the laws which govern æsthetics must be obeyed and respected; but this fact need not necessarily exclude research as regards interpretation and colouring.

CHAPTER XXV

THE RUBATO

THE Italian word "*rubato*" means *to steal, to take*. The musical term is justified by the fact that the term implies, musically, the *taking* (of time) from one part of a bar and giving it to another part of the same bar without lengthening that bar. The two halves of the bar thus become of unequal length, according to the exigency of the rhythm. This is the strict meaning in the musical sense of the term. It must be definitely understood that an unequal lengthening or shortening of bars, i.e., accelerating one bar, slowing down in the next, bears no relationship whatever to *rubato* playing. Everyone possesses a tendency to *rubato* playing, and this tendency may be cultivated in the right direction without very great effort.

When it is employed judiciously, the *rubato* is a very great help to interpretation ;

in fact it is one of the principal factors in execution. It brings with it a certain suppleness of execution. In this perhaps more than in any other detail of pianoforte technique, there is great danger in exaggeration. And, unfortunately, we meet with many pianists who do not possess a precise notion of the merits and dangers of *rubato* playing. The result is that their interpretation of a work is often little more than a burlesque.

Let us compare a musical execution, i.e., the performance of a musical composition, to the recitation of a poem ; or, even, to a simple conversation between two persons. In reciting a poem, or in ordinary conversation, a certain natural rhythm will exist. This rhythm will cover a longer or shorter period of time according to the circumstances of the poem or of the conversation. But in spite of the fact that the rhythm is generally maintained, there will be inflexions of the voice, there will be words or parts of phrases that are uttered more quickly or more slowly than the rest, in accordance with the sense of each word or part of a phrase, thus infusing *life* into the words we utter. This hastening or retarding is the *rubato* of speech. It will be found of more general usage in the conversa-

tion of the peoples inhabiting the Southern countries of Europe, such as the Spanish, Italian, and Southern French, whose natures are more impulsive than North Europeans. These peoples employ the *rubato* to a very great extent ; one might almost be tempted to say that their use of it was excessive.

Precisely the same ideas hold good as regards a musical recitation, or performance of a musical composition through the medium of our hands and fingers. No law of musical æsthetics forbids the use of *rubato*. On the contrary, everything indicates that its use is vitally necessary in the interpretation of a musical work ; and we should employ it liberally and generously. But we must beware of exaggeration which, in *rubato* playing, is most harmful to the character of a work and may often border on the ludicrous. A composition in which all the details have been perfectly mastered and thoroughly digested may be rendered ridiculous through an abuse of *rubato*.

Chopin's works are so intimately bound up with the *rubato* style, that it would be almost impossible to mention the word without thinking of him. His works, perhaps more than those of any other master, have been

ill-treated by *rubato*, and perhaps less than any other master's compositions has *rubato* playing been understood in connection with them. In his works pianists, both professionals and amateurs, delight in *rubato* to their heart's content! Times without number have I remonstrated with performers about their exaggeration of *rubato* in Chopin's works. The answer is invariably the same: In Chopin's works there must be *continuous rubato*. This is sheer stupidity. Undoubtedly, Chopin's tone-poems require *rubato* playing, but it must be used, not sparingly, *but with discretion*.

It is quite possible that Chopin, whose sensibility was developed to an extraordinarily high degree, felt intuitively, more than any other great composer perhaps, the power of the *rubato* as a means of expression. Precisely for this reason, *excessive rubato* must be avoided in playing his works. Especially in his *Berceuse* and *Ballade* in A flat, the majority of pianists seem to lose entirely their sense of proportion. Both tone-poems require *rubato*, but not an indiscriminate abuse of it. Why, for instance, employ the *rubato* from the very beginning in the *Berceuse*? It is both unnecessary and illogical. A perfectly regular

melody, both as regards the note-values and the rhythm, flows placidly through the opening bars, and the accompaniment is equally placid and regular. There is, consequently, no reason why these opening bars should be played otherwise than in strict time. Exactly the same thing holds good in the *Third Ballade*; not *rubato*, but a great and infinite variety of tone-colouring is required.

One of the oldest examples of *rubato* playing is the *Andante* in Bach's *Italian Concerto*. I do not think Bach was acquainted with the musical term as we employ it now-a-days; but that matters little. He undoubtedly employed the *rubato*, even if only instinctively, and the internal evidences of some of his works,—especially this *Andante*,—prove this. Throughout the entire movement the right hand performs a very free recitation which might almost have been written for a *coloratura* singer. The entire recitation is practically composed of passages in semi- and demi-semiquavers. From the very first notes of the movement we feel that this narration *must be declaimed with great freedom*. Now turn to the accompaniment in the left hand. From beginning to end it is composed of quavers, is perfectly regular, one might

be tempted to call it somewhat stiff; and here the internal evidence clearly points to the necessity of playing it strictly in time. Consequently, the right hand plays a recitation which requires very great freedom of expression, whereas the accompaniment in the left hand is almost mathematical in its regularity. These two seemingly incompatible styles,—severity of rhythm on the one hand and great freedom on the other, can be wedded together by means of the *rubato*.

Not only in the works of Bach, but in the compositions of all schools and all times we feel that *rubato* is necessary, in greater or less degree, to instil *life* into the composition. But it must invariably be employed judiciously and with the utmost caution; otherwise we risk making the work appear grotesque.

CHAPTER XXVI

CHOOSING AN INSTRUMENT

MOST students, or those acting for them, purchase their instruments without sufficiently considering the various conditions required in a pianoforte for practice purposes.

A not unusual custom is to buy a second-hand instrument in which the purchase price is the first consideration, and, very probably, the only one. Yet this should be the very last thought when buying a piano. The question of *touch* should be the first and foremost consideration, and everything else should be subsidiary to this.

Few are the pupils who have not suffered from the antiquated fallacy that the touch of an instrument intended for study should be heavy in order that the fingers may acquire strength. It would be difficult to make a greater mistake. The touch of a pianoforte used for study purposes should be

very similar to that of an instrument for concert use. It will not be harmful if the instrument on which we practice is *very slightly* heavier in touch than the concert pianoforte, but the difference must only be very slight. In the latter case the weight at which the key is made to fall should be 75 grammes or, roughly, $2\frac{1}{2}$ ounces. It is therefore advisable to choose an instrument for practice having a touch with a resistance of 85 grammes or 3 ounces. This margin in the weight will be found amply sufficient. In examining a very great number of pupils' instruments I have often found that a weight of 90 to 110 grammes, or $3\frac{1}{4}$ to 4 ounces, was required to press down the key. Useless expenditure of energy and over-excitation of the nerves and muscles!

Measuring the weight required to press down a key is an extremely simple operation. For the black keys, as these protrude, coins are very carefully and gently piled on to the end of the key until a sufficient weight is obtained to depress the key. For the white keys, any weights that do not overlap the key are useful. This operation should be gone through on several keys.

Another important factor is *equality of*

touch. The importance of this can hardly be overestimated.

One often sees the instrument placed on isolators. This is not to be recommended. Firstly, the tone of the instrument is modified and gives one a wrong impression of the sound produced. Secondly, the position of the player is bad, and to remedy this he should have a stool or chair, raised by just so much as the height of the isolators, and, also, a very broad footstool precisely the height of the isolators so that the command of the pedals may not be impaired.

CHAPTER XXVII

THE EMPLOYMENT OF MECHANICAL MEANS FOR DEVELOPING AND STRENGTHENING THE FINGERS

IN every walk in life, in all work undertaken, Man has invariably sought to facilitate his task by the use of mechanical devices. The pianist is no exception to the rule ; and the labour-saving appliances which have been offered him constantly, under pretence that they would obviate the necessity of long hours of careful and legitimate study, are legion. The oldest apparatus of this sort that I know of is the "guide-mains" (in English : "guide for the hands"), which consisted of an horizontal bar, approximately the length of the keyboard, and two rests for the hands which could be regulated so as to maintain the hands at the desired elevation above the keyboard, always remaining in the same place ; the whole apparatus was attached to the piano with screws. Then

there are the leaded rings which are to be worn whilst practising, and even away from the instrument! These are supposed to strengthen the fingers. Evidently, the inventor of this apparatus seemed totally ignorant of the fact that in pianoforte playing strength must be derived from suppleness of the muscles. There exists also a system of bar, springs, and rings to pass the fingers through. The object of the springs is to wrench the fingers up and away from the keys!

I feel small inclination to enumerate all the silly inventions I have seen and that have been presented to me for facilitating the work of my pupils. All, all of them are harmful, and can only tend to one result, namely, the laming of the muscles. Only the development of the muscles by serious study, with a free hand is of use. Every kind of mechanical appliance will cause over-exertion and over-excitement of the muscles. This overstraining of the muscles very often leads to pianist's cramp, a complaint which takes months, and sometimes years, to cure—when a cure is possible.

CHAPTER XXVIII

BAD HABITS

I SHOULD consider myself guilty of gross negligence if I did not devote a few lines to warning my readers against some of the various bad habits most pianists contract, either through unconsciously imitating others, or through neglecting to exercise a severe control over themselves. Contortions and all inelegant movements must be absolutely avoided. Nothing should shock either the eye or ear during a performance. Every inelegant movement is absolutely *bad form*, and we are all perfectly well aware that *bad form* is a thing to be avoided. In previous chapters I have spoken at great length about waste of energy. My remarks applied to superfluous movements of the arm, hand, and fingers. In the present instance they must also be taken to apply to the entire body from head to foot. For two separate reasons useless movement of the body is bad. Firstly, movement of the body

necessarily means expenditure of energy ; secondly, movement of the body may possibly thwart movement of the fore-arm or of the wrist. Nor must we forget that these contortions make us appear ridiculous to others.

* * * * *

I shall endeavour to enumerate some of the principal bodily contortions that I have noticed in a large number of cases :—

Instead of sitting up, with head well erect, the body is bent and the head thrown forward, precisely as though the performer were taking part in a bicycle race.

Swaying of the body to such an extent very often, that one is tempted to wonder how the performer manages to retain his seat, and one speculates on the chances of seeing him slide off the stool. Naturally, while such thoughts occupy the mind, appreciation of the music is out of the question. There should be little or no movement of the body, which should be held upright.

Other performers, again, keep the mouth slightly open whilst playing. This is the cause of grimaces, especially when a difficult passage is met with. The mouth should invariably remain closed, and breathing should be done through the nose.

A very prevalent and most ungainly habit is the constant withdrawal of the hands from the keyboard, whether the rest be long or short. The effect on the public is simply comical and the repeated movement shows very bad taste.

We should remember that, once a key has been struck, nothing in the world can modify the sound produced, nothing will improve the tone if the touch has been faulty. It is, therefore, as foolish as it is useless to give an after-pressure to the key, to lift the arm or wrist, or to make any other movement after the note has been played.

As the damper pedal (Right Pedal) is in use practically the whole time we are playing, it is distracting and unrestful to withdraw the foot and leg continually. The foot should remain on the pedal during the entire performance of a work. The case is not identical for the *sordino* pedal, whose use is of relatively rare occurrence.

It is not enough that the interpretation of a work be good, even beautiful. Not only the ear, but the eye also must be charmed. Each and every movement should be graceful, with the grace of naturalness. There is no room for affectation in music.

CHAPTER XXIX

THE ART OF PHRASING

I HAVE already compared music to literature. Both possess their rules of grammar ; both possess very definite forms of composition ; and we express our thoughts or feelings, whether abstract or concrete, through both these channels. Expression is given through a series of longer or shorter sentences or phrases, more or less isolated the one from the other. These sentences or phrases are separated from each other by punctuation.

We often meet with writers and orators who appear to be unacquainted with the rules of punctuation. Clearness of expression suffers through this ignorance of these elementary rules of writing and speaking. If such be often the case when expressing one's thoughts in a *concrete* language, how much more difficult is it to give utterance to one's ideas in the *abstract* language of music.

Clarity of delivery, precision in phrasing,

are indispensable to the perfect interpretation and comprehension of a work. Undoubtedly, it is most necessary that a musician should acquire a very sound knowledge of this branch of his art ; but I must hasten to add that natural musical *instinct* also counts for much.

It would be possible to lay down some more or less definite rules concerning the art of phrasing ; in fact, I am acquainted with one treatise on pianoforte playing in which an entire article is devoted to this subject. But, inevitably, these rules confuse the student much more than they assist him, on account of the vast multitude of exceptions one meets with. Musical *instinct* is the best and safest guide, and, in most cases, a reliable one.

Let us study the great divergence of views on one subject as an example of difference of opinion between very able musicians ; and this will be a very good proof of the futility of laying down a lot of rules on phrasing. Bach's *Well-tempered Clavier* is one of the best examples to be found ; and let us take as example the third fugue, in C sharp, of the first book.

It is a well-known fact that Bach wrote the *notes* only, marking neither *tempo*, phras-

ing, nor colouring. This he left to the musical *instinct* of the performer. He thus prepared the field for controversy. If we examine half a dozen different editions, we shall find that *they all vary*. This goes on throughout the forty-eight preludes and fugues. In the fugue mentioned, the subject, according to one editor, should be played *legato*, i.e., smoothly, and quietly. According to another editor, the subject should be *staccato* and very bright throughout the entire fugue.

Beethoven is probably the composer who has given us the most careful, most deliberate, and most detailed indications as regards phrasing. As a proof of this one need only compare a few *good* editions; and it will be found that there is very little difference between them. When playing Beethoven's works, therefore, and especially in his Sonatas, all indications of punctuation and tone-colouring should be faithfully rendered.

I purposely use the word "punctuation" in order that my readers may constantly keep the analogy that exists between a verbal declamation and a musical performance before their minds. But, whereas the orator generally finds the necessary punctuation marks in the text, the musician must very

often supplement the meagre directions given by the composer. Take, for instance, Schumann's works, and let us look at what is undoubtedly the best edition extant, the one published by his wife. Now turn to the *Toccata*. Throughout dozens of bars we do not meet with a single indication of phrasing. Yet, it is evident that this composition must be divided up into phrases.

In ordinary speech, the end of a phrase is marked by a rest or pause of greater or lesser duration. This rest permits of the speaker taking breath, and allows the hearer to grasp the sense of the phrase just pronounced. The same thing applies to the musical phrase or sentence. The momentary discontinuation of sound allows the performer to think of what he is playing, and facilitates the understanding of the composition in its divers parts and phrases by the listener.

This cessation of sound need not necessarily always exist *de facto*. It may be *simulated*; by this I mean that we can have the *illusion* of an interruption without this being really the case. This is brought about, either by a slight dying away at the end of the phrase or sentence, or by slight accentuation at the

commencement of the new phrase, or by both these means.

How do we determine just where a phrase begins and where it ends?

At the beginning of this chapter, *musical instinct* was mentioned. It is this instinct which must guide us. But this instinct in itself and in an unschooled and uneducated state, although it may suffice in simple instances, will not suffice to decide complex questions of phraseology for us. This can only be obtained by training in this branch of musical science; and the best results will be obtained by careful study of the best annotated editions of the great masters. It is well to begin with simple works, such as Schumann's *Scenes of Childhood*, his *Album for the Young*, and Mendelssohn's *Six Pieces*, Op. 72. All these pieces are short, easy to understand, and their phrasing is very obvious. After having studied these compositions, one can proceed to study something more complicated. Beethoven's easy Sonatas for instance; and these, in turn, may be followed by more complicated works.

CHAPTER XXX

THE ART OF CHOOSING SUITABLE STUDIES AND WORKS FOR PUPILS

MANY teachers have the very bad habit of giving their pupils a collection of studies and then insisting on their being practised in the order in which they exist and from cover to cover. Evidently, this system,—if system it be,—is much easier for the teacher than if he chose each study thoughtfully and with due attention to the wants of the pupil. There is a consequent waste of time and energy on the part of the pupil. As a matter of fact, I only know of one book of studies which can be practised in their regular order with real benefit to the pupil; that is Clementi's *Gradus ad Parnassum* in Tausig's edition. And even there one often obtains a better result by choosing the studies for the pupil.

This system of admitting all the studies of a collection or book as being of equal value and equally useful has two gross faults of

pedagogy. Firstly, in the best collections (and Czerny's books of studies rank among the best), we meet with studies embracing all branches of technique, so ordered as to present variety. In following the order indicated, the pupil will play one or two studies on the scale, one or two on the arpeggio, and so on. This system presumes that the pupil will acquire all details of technique with equal ease. It naturally follows that the pupil often begins the study of some new branch of technique before he has sufficiently mastered the one he was practising. Secondly, as each pupil presents a case having its own particularities and peculiarities, as well as certain natural aptitudes, and as former progress must be taken into account, the teacher should exercise great care in the order in which the studies are to be practised, with due regard to the aptitude of each pupil in particular.

In every collection of studies that the teacher gives his pupil, a very careful selection should be made. The teacher should, also, take great care that his teaching is perfectly progressive and well calculated to meet the pupil's wants.

Certain books of elementary studies,

specially written for children, such as Czerny's 25 *Easy Studies*, Op. 748, and 160 *Short Studies* of eight bars, Op. 821, contain studies in double notes, wrist-studies, arpeggio studies, as well as some for the shake. As a general rule, these should not be practised. At this stage (i.e. when the pupil is merely a beginner), it is more advisable to treat these branches of technique as exercises, in the manner prescribed in previous chapters, practising the hands separately. This is infinitely better than distracting the pupil's attention by an utterly useless accompaniment.

From the very beginning, the æsthetic side of pianoforte playing should be developed equally with the mechanical side. *Original* compositions of all shades, serious or light and of all degrees of difficulty are not wanting. I am perfectly well aware that most teachers of beginners have the reprehensible habit of giving their pupils "Albums" containing fragments of arias from operas or similar things. The result is most unsatisfactory from an æsthetic point of view. It is very important to give the pupil compositions of all schools, ancient and modern, both serious and light.

Some teachers go to the other extreme.

They give the pupil a book of Sonatinas or Sonatas, perhaps those of Clementi, Kuhlau, Mozart, and insist on the pupil practising several of these in succession. This is also a grave mistake. Inevitably all the Sonatinas of Clementi or Kuhlau, for instance, will partake of the same character. This monotony of style and character in the compositions practised will engender weariness and want of interest in the pupil.

As regards the degree of technical difficulty of works given to the pupil, these should be, as nearly as possible, of the same difficulty technically as his studies. Just as these latter require a *technical* effort to master them, so the works studied should require a parallel *mental* effort. All thorough teaching of pianoforte playing should move along this twofold way.

One other detail. Most teachers differentiate between the pupil who intends studying music as a future profession, and the pupil who will remain an amateur. This is a flagrant injustice to the latter. With the former, the teacher will do his best ; but with the latter he will usually take things easily and avoid any kind of severity. The stereotyped argument in such cases is : " What

does if matter ; it is no use worrying the pupil, as music is only for his pleasure." These teachers forget the good old English saying :—

“WHAT IS WORTH DOING, IS WORTH DOING WELL.”

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