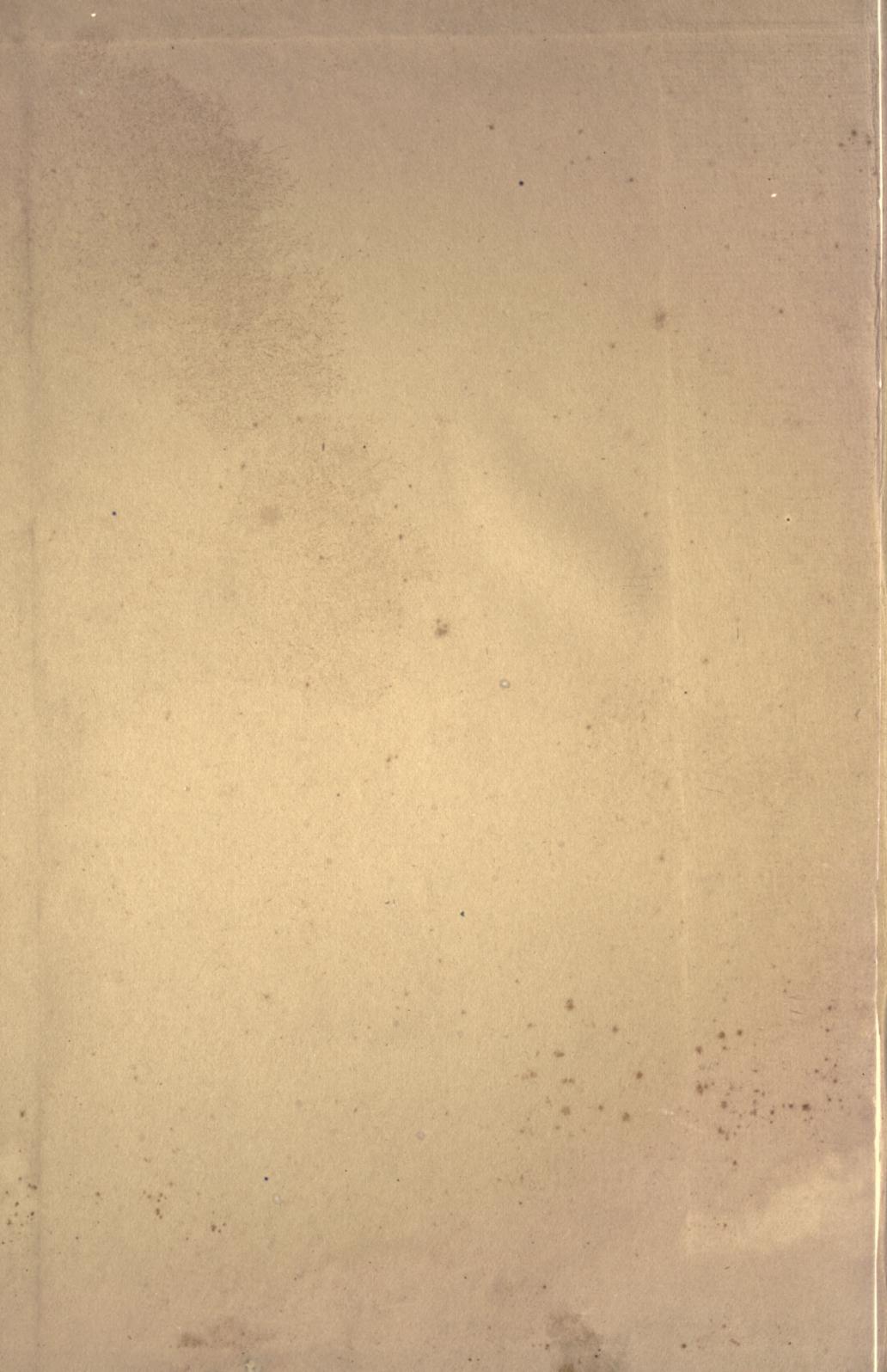


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RICHTER'S
MANUAL OF HARMONY
J.C.D.PARKER.



W. J. McNally

RIGHTER'S

MANUAL OF HARMONY

PRACTICAL GUIDE TO THE STUDY

OF HARMONY

CONCERNING THE THEORY OF HARMONY

BY FRANCIS BRIDGES

NEW YORK

J. C. GARDNER

1881

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RICHTER'S

MANUAL OF HARMONY:

A

PRACTICAL GUIDE TO ITS STUDY:

EXPRESSLY PREPARED FOR THE

CONSERVATORY OF MUSIC AT LEIPSIK

BY

ERNST FRIEDRICH RICHTER.

TRANSLATED FROM THE EIGHTH GERMAN EDITION

BY

FACULTY OF MUSIC
J. C. D. PARKER.

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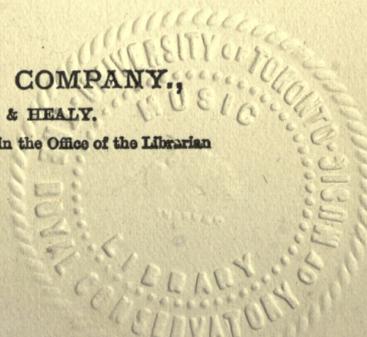
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PREFACE TO THE FIRST EDITION.

THE chief motive for the publication of this system of Harmony is given on the title-page. It was to furnish pupils through their course of study in musical theory with some aid in illustrating and reviewing the principles brought before them. The essential qualities of such a book the author believed to be these: *that it contain the substance and fundamental features of musical theory in as condensed and complete form as possible; that it present these outlines together with practical directions and hints, to prepare the way for later attempts in composition.*

The book comprises, scientifically speaking, no theoretical treatise upon Harmonics, but although, like every system of Harmony it rests upon a firm foundation, it is devoted only to *practical* ends, which with the scanty means now accessible it might be difficult to reach upon abstractly scientific principles.

There has indeed been hitherto an eager inquiry for mathematical precision in musical rules, especially among the young, who, naturally opposed to an authoritative creed, would fain have everything so clear as to be beyond a doubt; while on the other hand they are ever fearful of learning to know and comprehend the blooming life of art by the anatomical knife; nor is it to be denied, that in this regard there is a gap in musical literature, which no one has yet been able completely to fill. All attempts of this kind have thus far failed to produce a really tenable scientifically musical system, in accordance with which all phenomena within the domain of music shall be constantly regarded as *necessary* deductions from a *single* fundamental principle; and all that the philosophers, mathematicians and physicists have achieved in the matter is indeed worthy of notice, but has been on the one hand too disjointed to form a complete whole, and on the other too abstract, less serviceable for music than for other purposes, and whatever

comprehension of musical matters it may have displayed, having but little reference to the essentially musical, which for the musician is the chief point in question. But all that has been laid down in musical manuals as a scientific basis has thus far failed to hold good, partly because as the result of individual and learned research it was also unable to form a complete system with infallible deductions, and partly because as a fanciful structure it was wholly wanting in scientific support.

(It may be permitted here to call attention to a work which may be able to fill an evident gap; *The Nature of Harmonic and Metrical Laws*, by M. Hauptmann.)

Yet rightly considered, this want is felt only by the riper and cultivated musician, who loves to busy himself with theory; but for the less advanced scholar is not so detrimental as to affect his immediate progress; and the skepticism above alluded to is to a certain extent no more to be heeded, than that childish disposition, which from overweening curiosity would fain come at the primal cause of everything by questions that can seldom be answered intelligibly enough to conform to the precise stage of his progress. In his early course the musician has to direct all his energies to his technical formation, as it will cost him time and trouble enough to reach the point whence he may with greater ease meet his peculiar position as artist. It concerns not here to ask *Why*, but more nearly *How*; to learn from experience and from the best models the necessity of certain principles, not to calculate it; afterwards, when culture, knowledge, capacity and calling demand, it will be time to search out the *why*, and all the knowledge acquired by experience will be an assistance not to be despised in discovering the musical laws of nature.

With this practical object in view, the author has endeavoured to give in a simple and clear manner an explanation of Harmony, and of the results of observation and experience; and as he intended the book for *study*, to let the truths contained in it work for themselves, without wishing to procure for them by a very learned garb or winning form, a large *circle of readers*.

It comprises the whole doctrine of Harmony with hints of a rational method of making exercises for its more thorough knowledge, and for the skillful use of all the fundamental principles. These exercises extend as far as the beginning of contrapuntal studies; the science of counterpoint itself will follow in a later volume.

A word in conclusion to the young student, serious indeed, but well-meant.

A far distant goal is to be reached; it is really this, that art has to achieve. For this is needed an intense, untiring activity to grasp the fundamental principles of music, and to give vital shape to what is acquired and recognized. They will be bitterly deceived, who, filled with the works of our great masters, endowed with poetic minds, suppose they can pluck the blossoms, without learning thoroughly to know and test technical means; who adhere to the idea that the sacred charm of beauty which overhangs a work of art must suffer by the analysis of material, or that the natural forms of the latter could never be developed into that essential beauty. No talent has ever reached that height at which alone artistic efforts are successful, without thorough knowledge (which for it indeed was easier to attain than for the less gifted.) Practice without theoretical intelligence is not the mark of the artist, it is merely the working of instinct, which will make the want of a thorough culture continually perceptible. An ingenious thought cannot dispense with form, and this it is which must be recognized and learned. If this indeed comes often of itself with the invention, it is important in music more than elsewhere, to analyze the thought logically as it were, to remodel it into new shapes, and to change it in the most varied manner. The knowledge of these things and skill in their use the man of talent must acquire, and it can only be done when one is at pains to recognise musical laws and what others have already discovered long before, and seeks to imitate and further develop it. Earnest, persevering effort, and above all a rational method for unfolding to maturity and for the creation of vital works of art, will with musical capacity surely lead to the goal.

PREFACE TO THE SEVENTH EDITION.

THE methodical arrangement of subjects has been retained in the former editions of the Manual. I have been the less induced to make any alteration from the fact that, apart from my own experience, the book has been found useful in more enlarged circles, as is proved by the editions so quickly following each other. Having endeavoured, however, in each new edition, to introduce improvements and additions in the exercises and explanations, I have bestowed much care in revising the present one also. It contains, nevertheless, no essential changes, so that with the exception of the first three, all the previous editions, specially the sixth, can well be used with this—a great advantage in schools where the book is introduced.

PREFACE TO THE EIGHTH EDITION.

THIS edition also contains no important alteration, only that I have endeavoured here and there by improvements of style to contribute to the better understanding of single passages. For the friendly recognition of my labours, as is best shown by the rapid succession and marked increase of editions, affording me a pledge of the utility of my unpretending book, I have to express my special gratitude.

ERNST FRIEDRICH RICHTER.

LEIPZIG, *February*, 1870.

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INTRODUCTION.

Of the elementary requirements included in the general science of music, a knowledge of which must be assumed at the commencement of the study of harmony, that which stands in the closest relation to it, the doctrine of Intervals, will be primarily discussed in a brief and concise manner.

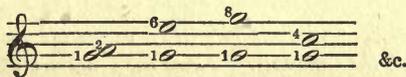
Doctrine of Intervals.

By *Interval*, *Intermediate Space*, is meant the relation in which one tone stands to another in respect of distance.

The length of distance is immediately determined by the number of degrees on which they stand apart from each other, and according to this rule, that the lower tone be considered as on the *first* degree, and the higher be numbered according to the diatonic degrees lying between.

REMARK. — By diatonic degrees is understood the series or succession of tones represented by the scale of any major or minor key.

Take for example *g* as the lower tone on the first degree, then the *a* above is on the second, the *e* above on the sixth degree :



The numbering of degrees thus resulting is expressed as follows :



Generally we count only to the *Octave*, and begin the series again with the tones beyond, and so on with each new *octave*; so that the *ninth* degree becomes a *second*, the *tenth* a *third*, the *eleventh* a *fourth*, &c.; in like manner the *fifteenth* becomes an *octave* again, and the *sixteenth* a *second*.

Reasons, however, which find their explanation in the harmony system and in theory generally, sometimes give occasion for naming tones lying above the octave according to the actual number of degrees. The series of intervals from the octave up will therefore receive the following double designation:



Longer distances of two tones are simply reduced to their relation in the lower octave.

More Exact Designation of Intervals.

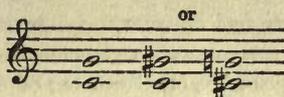
It is easily seen that the above representation of intervals is based upon the diatonic scale of C major, and that the relations of the intermediate tones are not touched upon. These are based in like manner upon the *first* tone of the diatonic scale, whilst any tone of the scale may be taken as the lower one; by which the tones of the different degrees become changed, and also in these slight variations will appear.

In order to obtain a clear view in these manifold variations, the following rules may be observed:

The series of Intervals exhibited above, where the lower tone is the FIRST tone of the major scale, and the series itself forms the scale, serves as the basis for determining all the intervals. These intervals are all called MAJOR, some PERFECT.

No chromatic alteration of these tones, whether upper or lower, changes either the number or the name of the degree; only a more exact designation becomes necessary.

For instance, if a sharp be prefixed to the Fifth ♯ , it will still be a Fifth, only a more precise designation is necessary, as it is evidently become a different Fifth from the original one.



Now, as such changes of intervals arise by raising or lowering them chromatically, the following terms are used, serving to denote them more closely.

1. *Seconds, Thirds, Sixths, Sevenths, Ninths*, which result from the major scale by taking its first tone as a basis, are called *major*; *Primes, Fourths, Fifths, Octaves, perfect*.

2. Lower the upper tone of the *major* intervals a half degree, and we get *minor* intervals.

3. Raise the upper tone of the *major* and *perfect* intervals a half degree, and we have *augmented* intervals.

4. Raise the lower tone of most of the *perfect* and *minor* intervals a half degree, and *diminished* intervals result.

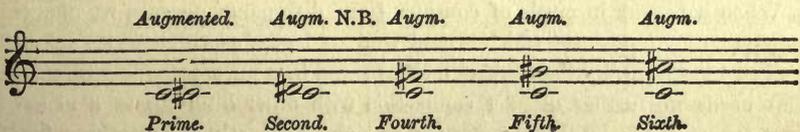
To 1.



To 2.



To 3.



N. B. — Augmented thirds, sevenths, and ninths do not occur in harmonic relations. Augmented octaves are to be regarded as augmented primes.

The former are also called *perfect consonances*, the latter *imperfect*.

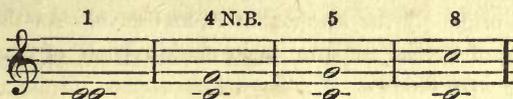
Dissonances are the *major and minor second, major and minor seventh, and all the augmented and diminished intervals*.

Hence results the following table:

I. CONSONANCES.

a. *Perfect.*

The perfect *prime*, perfect *fourth*, perfect *fifth*, perfect *octave*.



N. B. — The peculiar relation of the fourth will be explained later under the system of harmony.

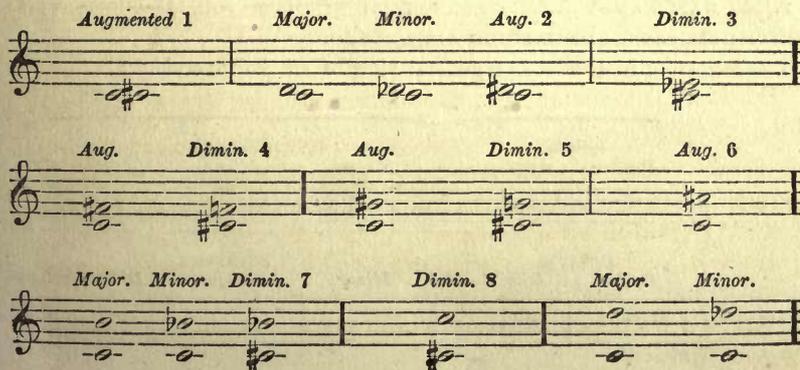
b. *Imperfect.*

The major and minor *third*, the major and minor *sixth*.



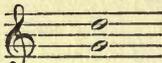
II. DISSONANCES.

The augmented *Prime*, the major, minor and augmented *Second*, the diminished *Third*, the augmented and diminished *Fourth*, the augmented and diminished *Fifth*, the augmented *Sixth*, the major, minor and diminished *Seventh*, the diminished *Octave*, the major and minor *Ninth*.



Transposition (Inversion) of Intervals.

As was indicated above, in determining intervals we reckon generally from the lower tone. When there are reasons, however, for determining the relation of two tones reckoning from the upper, we term them: *Inverted intervals*.

For example,  *d* is the Fifth from *g*, but *g* the *inverted Fifth* from *d*. It is easily seen that the interval is not hereby changed.

It is, however, otherwise when the upper interval is *transposed* below the tone which was originally the lower, that is, an octave. As this transposition is a matter of special importance in certain kinds of composition, an explanation may here follow.

The diatonic major scale thus transposed will assume this form :

Upper intervals. 1	2	3	4	5	6	7	8
							
Lower intervals. 8	7	6	5	4	3	2	1

This gives the following series of numbers :

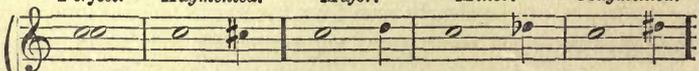
1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1

that is: by inversion the *Prime* becomes an *Octave*, the *Second* a *Seventh*, &c.

With the inverted major scale as a basis, the following may be observed of all the intermediate intervals.

1. All PERFECT intervals when transposed an Octave, remain PERFECT.
2. All MAJOR intervals become MINOR, all MINOR MAJOR, the AUGMENTED DIMINISHED, and the DIMINISHED AUGMENTED.

The following table affords a general view of all the inversions :

	PRIMES.		SECONDS.		
	Perfect.	Augmented.	Major.	Minor.	Augmented.
ORIGINAL INTERVALS					
	OCTAVES.		SEVENTHS.		
	Perfect.	Diminished.	Minor.	Major.	Diminished.
INVERSION OF THE SAME					

THIRDS.			FOURTHS.		
Major.	Minor.	Diminished.	Perfect.	Augmented.	Diminished.
SIXTHS.			FIFTHS.		
Minor.	Major.	Augmented.	Perfect.	Diminished.	Augmented.
FIFTHS.			SIXTHS.		
Perfect.	Augmented.	Diminished.	Major.	Minor.	Augmented.
FOURTHS.			THIRDS.		
Perfect.	Diminished.	Augmented.	Minor.	Major.	Diminished.
SEVENTHS.			OCTAVES.		
Major.	Minor.	Diminished.	Perfect.	Diminished.	
SECONDS.			PRIMES.		
Minor.	Major.	Augmented.	Perfect.	Augmented.	

An exact, thorough knowledge of this essential transposition of intervals is not only important for exercises in double counterpoint, but facilitates a comprehension of, and insight into, simple harmonic structure, wherefore the study of it is strongly to be recommended.

A few remarks may follow here.

The reason why in the first table of intervals (p. 16) all *diminished* intervals were formed by raising the lower tone a half degree, and not by lowering the upper, can be clearly seen from the above table of inversions. Since diminished intervals result from augmented by transposing an octave, this formation comes of itself. For instance: the augmented fourth

must necessarily produce the following diminished fifth:

Likewise the *perfect* fourth belongs originally to the consonances, since by transposition it is changed to the perfect fifth, just as the perfect fifth can produce only the perfect fourth; and in general, a dissonance can never result from a consonance by transposition. Mention is here made of this, because in special cases, which will be noticed hereafter, the fourth has to be regarded like some of the dissonances, which in former times induced many theorists to pronounce it merely a dissonance.

Likewise it becomes clear that the augmented octave, as well as the ninths, cannot be transposed, as they can never fall below.

Other kinds of transposition, as into the Tenth and Twelfth, which produce entirely different results, may be passed over here, as they have no influence upon our immediate studies.

Since a complete and thorough knowledge of all the intervals is indispensable for the studies in harmony which follow, written exercises in them, as well as oral solution of given intervals, will greatly facilitate a proper conception of them, and should be repeated again and again.

SYSTEM OF HARMONY.

COMBINATIONS of tones, sounded simultaneously, and composed of different intervals according to certain fundamental principles, are called in general terms: *Harmonies, chords.*

The science of Harmony points out the nature and kinds of chords, and teaches their natural treatment. This consists in the proper, natural connection of chords one with another, i. e. in the transition, resolution, bleeding of a chord in and with the following.

SECTION I.

THE PRIMITIVE HARMONIES AND THE CHORDS DERIVED FROM THEM.

Among the different chords which may serve as the harmonic groundwork of a composition, we may easily distinguish such as appear *independent* without a determinate relation to others, from those which clearly point to a connection with other chords, consequently are *not independent*. Consonant and dissonant chords.

To the former belong most of the *Triads*, to the latter the *Seventh-chords*. Both kinds form the *primitive harmonies* from which all the remaining chords are derived.

CHAPTER I.

The Triads of the Major Scale.

A *Triad* is formed by a combination of three different tones. The lowest of these is called *fundamental tone*, to which are added its *Third* and *Fifth*, for example:



But these triads, formed from *c*, *g* and *a*, exhibit another difference in their intervals. While the triads of *c* and *g* are formed here with *major Thirds* and *perfect Fifths*, the triad of *a* contains a *minor Third* and *perfect Fifth*.

A triad with a *major third* and *perfect fifth* is called a **MAJOR TRIAD**, one with a *minor third* and *perfect fifth* a **MINOR TRIAD**.

Remark. — The explanation of other sorts of triads cannot follow until later.

As the diatonic scale makes up the substance of a key, and forms the groundwork of the melodic series, so also the triads, which are built upon the different degrees of the scale, will form the essential part of the *harmonic* substance.

Natural connection of the triads of a key.

The triad based on the first degree of a key must indeed be the most important, as fixing the key; with it, however, stand others in the *closest* relation, serving to explain its position.

Viewing the triad in its natural form as third above third, the *Prime* appears as the fundamental tone, the *Fifth* as the highest tone, the summit as it were.



Remark. — Any further addition of a new interval would either alter the chord or double tones already present.

The chord which stands in the closest relation to this must indeed as an independent chord lie wholly outside of it, but yet rest upon one of its tones. This tone can be found only in the extreme limits of the chord, namely *c* and *g*. Therefore *G*, which is here the *fifth*, will become the *root* of the nearest related triad, while *c* in like manner will form the summit, the *fifth* of the other, whose root would be *F*.

The connection of these three chords can be best seen in this form :



In these three chords, standing in the closest connection, it is especially to be remarked that their tones include the entire scale; that they form the outlines of the key, and that they are and must be the most frequently used in practice, if the key itself is to be clearly and distinctly represented.

On account of their importance, special names have been assigned them. The first chord, resting on the first degree of the scale, is called :

THE TONIC TRIAD,

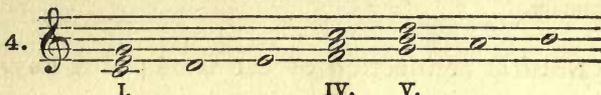
the second, on the fifth degree :

THE DOMINANT TRIAD,

the third, on the fourth degree :

THE SUB-DOMINANT TRIAD.

Let these three chords be ranged in their order in the scale, and they will appear thus, without showing their inward connection :



and they are also seen to be all major triads.

Application of the above Harmonies.

In applying these three chords, we will use here, as also with chords to be treated of later, *four-part harmony*.

Remark. — The theoretical connection of chords can be, it is true, well represented in its manifold relations, with three parts. It would however keep us longer from our practical object, and may therefore be left for special treatment. Four-part harmony will ever maintain its importance as the foundation of all kinds of composition.

Every harmony is regarded not as a mere mass of tones, as often appears in Piano-forte compositions, but we divide its ingredients into *four special parts*.

The upper part is called *Soprano*, the lowest *Bass*, the two together the *extreme parts*; that next below the Soprano is termed *Alto*, that over the Bass, *Tenor*, both together the *middle parts*.

The following is an arrangement of these parts in score, and the triad appears thus :



For the three upper voices special clefs are used, which are better adapted to their compass than the Violin clef employed above, and of which we shall speak hereafter.

To obtain an easier survey of the parts, we will adopt in our next exercises the Piano-Forte arrangement of parts, and not take a separate staff for each voice.

The distribution of parts in No. 5 will stand thus :

6.

SOPRANO.
ALTO.
TENOR.

BASS.

These different parts will be considered in a double relation : first in reference to the progression of each part by itself, then in its relations to the other parts, both of which must be *pure* and *well-constructed*.

The result of these two conditions constitutes *pure part-management*.

This *purity* of harmony and progression is attained by seeking and practising what is *natural* and *in accordance with law* in the connection of harmonies.

Hence arises what we term *pure part-writing* or *severe style*, which imposes rules and laws resulting from the nature of music itself, and whose observance will afford the surest basis for a subsequent free use of the materials of composition. *Exercises in this style render the judgment keen, cultivate the sense of what is true and correct, and enlighten the taste.*

Remark. — So far as every composition should be the result of a right use of all available means and of the *purity* (that is, natural expression) wrought thereby, the term *pure part-writing* in the general sense would as a matter of course require no farther explanation. In the narrower sense, however, something more is implied, which might be more closely and better indicated by the synonymous expression : *strict composition, strict style*, in contrast with the *free style*, which in its real meaning, as opposed to the pure, is not to be understood as *impure* writing; for this, however often it may occur, is in all cases to be indicated as *false*, whereas the free could in the main be founded upon what is legal in the pure.

As was hinted above, by the term *pure part-writing* in the narrower sense is understood

such as in the natural development of all the relations of tones allows the fewest deviations from what is legal, and only such as do not affect what is essential and fundamental.

If the idea of pure part-writing is thus in general determined, yet its limits are not yet drawn; and it is precisely this that creates all the more difficulties for the beginner, since the limits are very differently fixed by theorists themselves. This difficulty has induced many of them, especially some of the more modern, to say no more of pure part-writing or strict style, but generally to commence at once with the free style and learn the harmonic laws incidentally. Whether this compliance with youthful impatience, which does not love to busy itself with the abstract, this tendency to premature living creation, before the organic is developed into a creative faculty, can bring anything to real maturity, is not to be farther investigated here.

It is to be hoped that those who follow the views of this book and let their studies conform thereto, as well as all who have to go through a *strict* school, will be convinced that their freedom for future work will by no means be lost by what is *forbidden* them, but, based on natural principles, will develop all the more fully and powerfully. Real mastery has ever learned to reach the greatest intellectual strength when under restraint, whereas the wildest fancies frequently give evidence of mental disease and weakness. On the other hand the scholar cannot be warranted, where *rules* are at stake, in making use of principles based upon exceptions, such as may perhaps be found in the best masters, or in general in wishing to produce compositions, when his business is to perform exercises theoretically well.

The three chords thus far found, when applied in four-part harmony, will lead to remarks and observations, from which certain principles and rules are to be established.

Since triads contain but *three* tones, one part (interval) must be doubled, when four are to be used.

Each interval of the triad may be doubled,

but in most cases the *root* is the best adapted for this purpose, more seldom the fifth and third, and the last, in many cases to be pointed out later, not at all. All doubling is to depend on a good and correct progression of parts.

To accomplish the connection of two triads, the following rule is to be observed:

When there is a tone common to two chords that are to be connected, it is retained IN THE SAME VOICE.

7.

The musical notation shows two examples, 'a' and 'b', of triads connected in four-part harmony. Example 'a' shows a C major triad (C-E-G) in the treble clef and a C bass line. Example 'b' shows an E minor triad (E-G-B) in the treble clef and an E bass line. The common tone G is retained in the same voice (the second voice) between the two chords.

In example *a* we find *c* common to both triads; the Sopiano, which had the first *c*, retains it also as fifth in the next chord. So in example *b*, where *g* in the alto makes the connection.

The other parts move to the nearest tone, as in *a* the Alto from *g* to *a*, the Tenor from *e* to *f*, &c.

When no tone is found common to two chords, the parts must be moved independently in such a way, that no one shall appear in PARALLEL FIFTHS or OCTAVES with another.

In order to explain this faulty progression more fully, we shall first premise what is necessary concerning the movement of parts relatively to each other.

The movement of parts with respect to each other.

One part can progress with another in

direct motion (motus rectus),
contrary motion (motus contrarius) and
oblique motion (motus obliquus).

Direct motion takes place, when two parts ascend or descend simultaneously, e. g.



Two parts move in *contrary motion*, when one ascends, and the other descends, e. g.



Oblique motion occurs, when one of two parts remains upon the same tone, while the other moves, e. g.



These three kinds of movement occur *promiscuously* in chord connections. Thus in example No. 7 *b*. the direct motion appears between Soprano and Tenor, contrary motion between Soprano, Tenor and Bass, and oblique motion between the Alto and the rest of the parts.

The above-mentioned *faulty* progression in *parallel Octaves* and *Fifths* can only appear in *direct* motion, as for instance when two parts move thus by steps or skips :



This is equally a *fault* with *all the parts* :

The following harmonic progressions contain both errors :



In example *a*. there are parallel octave movements between Soprano and Bass, in example *b*. between Alto and Bass, and in example *c*. between Tenor and Bass. Parallel Fifths appear in *a*. between Alto and Bass, in *b*. between Tenor and Bass, and in *c*. between Soprano and Tenor, as well as between Soprano and Bass.

The mechanical *means* of avoiding these and similar erroneous progressions, is, for cases like the above, the *employment of contrary and oblique motion in the parts*, *i. e.* the voice which already stands an octave or fifth from another, must either move in contrary motion thereto, or, if the following chord contains the same tone, remain stationary. The other voices then pass to the tones nearest them in the new harmony.

Thus in example 12 *a*. three voices must move, one remaining still ; in *b*. and *c*. contrary motion of all the parts to the Bass is to be employed, for instance :



Remark. — The reason for this *prohibition of the octave* (that of the unison is included) can be easily found in the *necessary independence of the parts*. To discover the reason for prohibiting the *progression by fifths* is not so easy, however much one is convinced of its necessity, and great pains have ever been taken to express it clearly and definitely. Let the following view of this subject be examined.

If every chord-formation presents for itself an independent *whole*, which, however else it may be shaped, yet in respect to its root and fifth principally, unites itself as it were into a *circle* (the Seventh as an addition is here out of the question), and if harmonic connections are only produced when two chords become in a manner merged into and identified with one another, it is obvious that two chords with their extremes, fifth following fifth, do not become thus merged, but, when placed side by side, appear without any relation to each other. This is easily seen by comparing the following formations:



Sevenths form essentially no new chord, nor can they be conceived of as outside the circle of the primitive chord; they only serve to mark more definitely the relations of two chords, and to render the harmonic connections closer and firmer.

Now wherever the *perfect fifth* appears, it will carry in itself its character of *demarcation*, and whether the other component parts of the chord (the contents as it were of the fifth) or an added interval like the seventh, lie above or below it, the unpleasant effect of the succession of *two perfect fifths* will always be traceable to the *lack of connection*, to their isolated nature.

While speaking of the fifths of triads, it may be observed further, that in the case of *perfect fifths* which arise from added sevenths, the law of preparation partly indeed of itself prevents parallel fifths; but in the case of the progression of such a seventh, forming a perfect fifth *with another voice*, to a succeeding perfect fifth, the unpleasantness and want of connection will be equally perceptible, just because this lies only in the *second fifth*, which appears without connection, for example:



But as far as the diminished fifth is concerned, which in the Dominant Seventh chord under certain conditions can appear even unprepared, its entrance without preparation even in parallel fifths perfectly justifies the views above expressed, since whenever it *follows* the perfect fifth, its connecting character is maintained, but when it *precedes* it, the latter,

to say nothing of farther laws of progression, at once *departs* from the uniting circle of both harmonies.

Compare the following passages :

16.

Though passages like the following are often found in compositions of the stricter style·

17.

It is to be understood that the doubling of the diminished fifth (the *f*) requires a double progression of the same, and the consecutive fifths are justified as lying in the middle parts, but that the following progressions could not be called pure :

18.

partly because they are too conspicuous in the upper part, partly because the above condition of a necessary double progression is wanting, although passages like that in No. 16 c., are often met with.

It becomes clear here also, why parallel fifths resulting from passing notes in many cases do not sound as disagreeably as those discussed above, wherefore many theorists allow them as faultless ; this however is not to be admitted unconditionally, since many of them are based upon other false progressions (for example, upon concealed fifths) and it is not to be denied that, when widely dispersed and of sufficiently long duration, their unpleasant effect is obvious.

This is not the place to treat further of these relations, and much might be said upon many points, as for instance the progression of the fifth in the augmented chord of the Fifth and Sixth, which would lead us now too far away. We shall be led back to this point in our practical exercises by individual matters.

If the meaning of the above explanation be too obscure for the beginner, it will nevertheless with his advance in knowledge and practice and his necessarily oft-repeated study of the whole harmonic system, be soon understood.

The faulty progression of parts thus far mentioned, we call *open fifth and octave progression*.

When in *direct motion* between two parts the *second* interval forms a *fifth* or *octave*, it is *concealed*, e. g. :



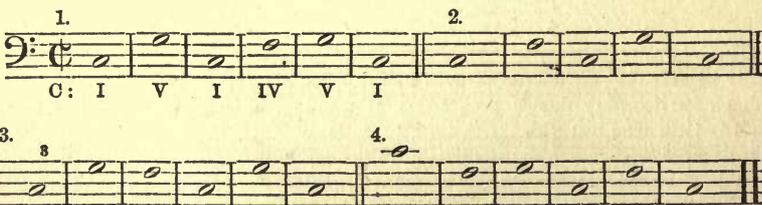
Open parallel fifths and octaves are never admissible for harmonic connections; respecting the value or utility of *concealed* fifths and octaves we shall speak hereafter (chap. 17)*; for the present this must be left for oral instruction, as, in general, with a *proper* conception of the exercises, there will be no immediate opportunity for errors of this kind.

Remark.—The beginner will do well in writing his first exercises to pay no attention whatever to *concealed* fifths and octaves, because, by too anxiously avoiding them, the first principles of chord connection are violated, and other errors, much worse, may easily arise. Many things will in the sequel bring us back to this point, and be especially examined and discussed.

Exercises.

The use of the three principal triads musically in connection, observing the rules thus far established, will be the next exercise.

We will select for this purpose some Bass progressions like the following :

20.  Exercise 20 consists of four bass progressions, each in C major. Progression 1: C (C-E-G) -> I (F-A-C) -> V (G-B-D) -> I (F-A-C) -> IV (D-F-A) -> V (G-B-D) -> I (F-A-C). Progression 2: C (C-E-G) -> I (F-A-C) -> V (G-B-D) -> I (F-A-C) -> IV (D-F-A) -> V (G-B-D) -> I (F-A-C). Progression 3: C (C-E-G) -> I (F-A-C) -> V (G-B-D) -> I (F-A-C) -> IV (D-F-A) -> V (G-B-D) -> I (F-A-C). Progression 4: C (C-E-G) -> I (F-A-C) -> V (G-B-D) -> I (F-A-C) -> IV (D-F-A) -> V (G-B-D) -> I (F-A-C). The chords are labeled C, I, V, I, IV, V, I below the staff.

Remark.—These and all the lessons that follow, serve to indicate the manner and method to be pursued in our practical exercises. They should always be continued as long as the subject in hand renders needful.

The disposition of the three upper parts to be added in the first chord will lead us to further important remarks.

We have already seen in example 5. that the disposition of the voices in a chord may vary greatly. This disposition of the voices is called the *position of the chord*.

Close and Open Position.

A chord is in *close position*, when the three upper parts lie so near each other that neither the Soprano nor Tenor, if transposed an octave, would fall between the other two, though the Bass be far removed. e. g.

12.

The first position of the chord *a.* is so changed in *b.*, that the former *e* of the Tenor is given to the Soprano an octave higher; in *c.* the case is the same with both tones *g* and *e*; in *d.* the *c* of the Soprano is reversed and put an octave lower. In all the transpositions the distribution is changed, but not the close position.

It is otherwise when the chord appears in *open position* (also called *dispersed position*), which is the case, when either the Soprano can be placed between the Alto and Tenor, or the Tenor between Alto and Soprano, so that the close position shall result therefrom. e. g.

22.

In *a.* the chord appears in open position, by placing the *g* between Alto and Soprano in close position, *b.*, likewise in *c.* and *d.* In *f.* the *g* of the Soprano in the chord *e.* is put an octave lower between Alto and Tenor.

But the following disposition of the parts (No. 23) would not be an open position in this sense, for by transposing the Tenor the disposition of the

upper parts is not changed, *b.*, and only the transposition of the Soprano would give the true open position, *c.*

23.

Although the open position renders the chord fuller, yet it should not be always used, and for our first exercises is not compact enough to be clearly seen, so that at present we shall give them in close position.

Remark. — It will always be better to write the examples at first in close position, and not to use the open position until later, commencing with the exercises in the second and third section, where it will be seen of itself to be needed. Beginning with the open position the scholar continually stumbles upon difficulties, which it cannot be his immediate object to overcome, and are therefore much better avoided.

Usually the different positions do not appear singly, but occur promiscuously, according as the movement of the parts requires.

When the position of the *first* chord is determined, those following are no longer so free as regards distribution that any can be taken at pleasure, but it is governed by the rules already given on pages 13 and 14 for connecting chords.

This chord connection and movement of parts in the first exercise No. 20 can proceed thus :

24.

C: I V I IV V I

The natural relation of these chords to each other becomes clear in the above simple example, if their connection be closely observed; but especially from the last two chords may be seen the close connection, how one completes the other. The sensation of return, of rest, of satisfaction, which lies in this combination, renders it suitable for forming the *close*. This form of cadence through the dominant chord, which inclines to the triad of the tonic, is called, when the latter falls upon the rhythmical accent or on a good place as to time, *the authentic cadence*.

25.

V I

Another form of cadence, which is formed through the Sub-dominant triad, as above in No. 20, 4th example, is called the *Plagal cadence*.

26.

IV I

Of these and other kinds of cadences we cannot speak at length until later.

In order to become familiar with the succession of chords which arises, when the Bass moves by degrees (as in example 24 F—G), it will be well to write out the succession IV—V and V—IV in different positions and keys.

The triads of the remaining degrees of the Major Scale.

All the triads of the remaining degrees of a scale belong, to be sure, to one and the same key, but do not point to it so decidedly, as e. g. the chord connection V—I.

These triads are called, to distinguish them from the principal triads,

COLLATERAL TRIADS.

They are formed upon the second, third, sixth and seventh degrees of the scale.

27.

II III VI VII°

The triads of the second, third, and sixth degrees are seen to be *minor triads*, as their *thirds* are *minor* and their *fifths* *perfect*.

The triad of the seventh degree is essentially different from the rest,

since it has beside the minor third a *diminished fifth*; it is therefore called the

DIMINISHED TRIAD.

As an easy mark of recognition we take for the minor triads small letters to number the degree on which each is built, to which we add an ° for the diminished triad, as above VII°, a method of numbering introduced by the theorist G. Weber.

Now the triads of the major scale collectively will stand thus :



Remark. — The beginner must be very cautious lest he regard all these chords, when they appear, as *tonic* triads, an error which greatly obstructs the understanding of harmonic connections. As long as C major is the prevailing key, the incidental triads of *G*, *F*, of *d* etc. are merely the chords of the several degrees belonging to it (the key of C major,) and we are not speaking of *G* major, *F* major, *d* minor, since these keys do not appear independently.

Hence arises an ambiguity in chords, which it is well to heed. Every triad can belong to various keys. The C major triad may be :



If therefore, in connection with this chord, we speak of *C* major (meaning, according to ordinary usage, the key,) this is true only in the first case, where the C major triad occupies the *first* degree, but in all other cases is incorrect.

Application.

In connecting these chords with each other, as well as with those previously found, no new rule is immediately necessary: much that is new, however, will appear as we proceed.

The Bass can move either by *skips* or by *degrees*.

In the former case there will always be connecting tones (degrees common to *two* successive chords;) in the latter, the parts must move in contrary motion, according to the above rule (p. 27,) in order to bring out the natural connection of chords.

a. The Bass moves by skips.

30.

a. b. NB. better.

c.

II IV II V

II VI etc.

Skips in the Bass, as in these examples from the second degree, can be managed similarly from all the remaining degrees, so that tones common to the two chords shall remain in the same voice.

In many cases, however, there are exceptions to this rule.

In example 30 at NB. there is a progression of parts formed according to the above rule, which contains a concealed octave between Tenor and Bass, and which is decidedly improved by the progression which follows. Though the local connection of tones be wanting in the latter case, yet there is still an inward connection, since the *d* of the Soprano in the first chord can easily be conceived of as doubled in the lower octave, by which the connection becomes at once evident, as in 31:

31.

Remark. — The reason why precisely this tone should be conceived of as doubled, since such might be the case with any other, is based upon the fact that it is the *fundamental* tone, that, in fact, which gives the entire chord its determinate character.

The unpleasant effect of the above-mentioned concealed octave consists in this, that the upper part moves a whole tone; and the effect is still more startling when the octave is contained in the extreme parts, as in example 32 in a.

32.

a. b. c.

By the contrary movement of the Bass in *b*. the progression can be improved, also by the contrary movement in example *c.*, although even here there is a succession of concealed fifths between Soprano and Tenor. (See the remarks under example 34.)

Remark. — In the cases given above, we are not speaking of absolute errors. When we have entire liberty as to the movement of the parts, much can be avoided which we cannot escape under other circumstances, e. g. in handling a *cantus firmus*, a motive; or when other reasons exist, important as regards the composition. The corrections are here cited only from an absolutely theoretical standpoint. Of the concealed fifth in 32 *c.* we shall speak more particularly under No. 34.

The unpleasant effect of the concealed octave vanishes at once, *when the upper part moves a HALF TONE*, e. g.

33.

Example 33 shows a two-staff musical score. The treble staff contains a series of chords: a triad of G4, B4, D5 (F#4), followed by a dyad of G4, B4, then a dyad of G4, D5, and finally a dyad of G4, B4. The bass staff contains a series of notes: G3, B2, D3, G3, B2, D3, G3, B2, D3, G3, B2, D3.

b. The Bass moves by degrees.

Here contrary motion is constantly to be employed, e. g.

34.

NB. 1. better.

Example 34 consists of three systems of two-staff musical scores. The first system shows a treble staff with chords: G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4). The bass staff shows notes: G3, B2, D3, G3, B2, D3, G3, B2, D3, G3, B2, D3. Roman numerals I, II, II, III are placed below the bass staff. The second system shows a treble staff with chords: G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4). The bass staff shows notes: G3, B2, D3, G3, B2, D3, G3, B2, D3, G3, B2, D3. Roman numerals III, IV, IV, V are placed below the bass staff. The third system shows a treble staff with chords: G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4), G4, B4, D5 (F#4). The bass staff shows notes: G3, B2, D3, G3, B2, D3, G3, B2, D3, G3, B2, D3. Roman numerals V, VI, V, IV, II, I are placed below the bass staff. Annotations 'better:' are placed above the treble staff in the second and third systems. 'NB. 2.' is placed above the treble staff in the third system.

Remarks upon these Chord Connections.

In all the progressions used in NB. 1 and similar passages which follow, it is better to double the third in the second chord, in order to avoid concealed fifths. Their unpleasant effect is even more prominent, if the chords appear in open position, e. g.

35.

The progression in *b.* is preferable.

If these concealed fifths occur in the middle parts, they are, under certain circumstances, sooner to be allowed, not being so prominent.

36.

In NB. 2 the doubling of the third in the second chord is not always to be resorted to, since in general the doubling of the seventh degree (in example 34 the *b* of the second chord) is to be avoided.

Of the use of this tone, called the *leading tone*, we shall speak more at length in the exercises which follow.

Exercises to be written out.

37.

The fourth exercise gives occasion for some remarks.

The progression of the Bass here in the first four measures proceeds in a regular, consistent manner. Such a regular harmonic or melodic progression is called a *Sequence*.

This consistent progression of the Bass requires also an equally regular movement of the other parts.

If we harmonize this passage on the above established principles of connecting chords by means of stationary tones, e. g.

38.

this object will not be attained; on the contrary, the progression must proceed in such a manner, that the first chord in the second bar shall be in the same position with the first in the first bar, so that the connecting tone *d* does not remain in the same part.

39.

NB.

I V II VI III VII°

So in the first exercise, on account of the sequence, concealed octaves, of which we spoke above, are allowable, if they are not in the extreme parts.

In the third measure in exercise 4. we find a chord not heretofore used.

The Diminished Triad.

It is based upon the seventh degree of the major scale, and is less independent than the triads thus far found, as it points distinctly to one progression, caused by the dissonance, the diminished fifth.

The natural progression of diminished intervals can in general be conceived of thus, that either both tones approach each other one degree (*a.*), or that one or the other moves while the other remains still (*b.*, *c.*), a method of progression which only becomes plain in a real chord connection.

40.

In the third which follows the diminished triad (*d.*) the triad of the first degree *c* appears incomplete, the fifth being omitted.

Since according to the relations of intervals heretofore explained (pp. 18, 19) as regards inversion (transposition,) an augmented fourth results from a diminished fifth, so their progression must likewise appear in an inverted manner. See 40 *e.*

The fundamental tone, upon which the diminished triad is based, is called

LEADING TONE.

It appears again as third in the dominant-triad, and as fifth in the triad of the third degree.



Since the LEADING TONE is of itself very distinctly prominent, it is NOT DOUBLED in simple four-part harmony.

So its progression should be to ascend a half degree, when the chord that follows contains this tone.

The necessity of this progression lies in the melodic character of the leading tone, preceding, as it does, the tonic of the scale by a half tone. This is particularly observable in the dominant-triad, if the leading tone be in the highest part; thus *a.* in example 42 is more satisfactory than *b.* and *c.*



This upward tendency is less decided in the middle parts, as in *d.* In many cases in such chord connections, skips in the upper part (in *c.*) are positively unendurable; and skips in the middle parts (in *e.*) are to be employed, when the Bass progresses by *contrary motion.*

In example 39 in the third measure we have the leading tone doubled and progressing *contrary* to the above rule. Both were on account of the *sequence* contained in the example, which allowed no change either of position or progression of the chords.

On the more Complete Formation of Cadences.

The cadence by means of the dominant chord noticed on p. 32 (the authentic cadence) appears in the last examples in a still more definite form.

That is: as the natural relation of the dominant chord to the tonic triad renders the two chords suitable for the formation of the cadence, so there is observable in these examples a still further preparation of the same by means of the *triad of the second degree*, which stands in the same relation to the dominant chord, as the dominant chord to the tonic triad, e. g.

43.

II V I II V I

Besides the triad of the second degree, that of the sub-dominant is also well adapted to this form of cadence, e. g.

44.

IV V I

The *forms of closing (cadences)* which result from this connection of chords will assume a still more definite shape by a use of the chords to be explained hereafter.

CHAPTER II.

The Triads of the Minor Scale.

a. *Principal Triads.*

THE principal triads of the major scale were found upon the *first, fourth and fifth* degrees. On the same degrees we find also the *principal triads of the minor scale*.

The relation, however, in which the dominant triad stands to the tonic chord, as it is seen with special clearness in the cadence-form above shown, necessitates the alteration of one tone of the minor scale.

The *seventh degree*, which according to the signatures of the minor key is always a *whole* tone removed from the eighth degree, is raised chromatically a half tone, so as to receive the character of the leading tone. e. g.

45.

By this means the dominant triad in minor is formed exactly like that in major, thus :

46.

or to speak briefly :

The dominant triad, both in major and minor keys, is always major.

This is plainly seen by comparing the cadence-form of both keys :

47.

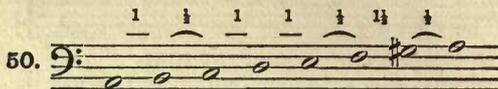
That the sixth degree, however, of the minor scale is in a *harmonic* sense not capable of any chromatic change by raising a half tone, as is often required in a melodic relation, is proved by the plagal cadence *a.* (see p. 33) which cannot be conceived of at all as in *b.*

48.

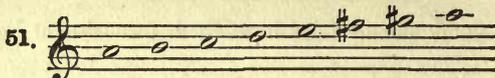
The three principal triads in minor can be represented in their most natural relation, as formerly explained, thus :

49.

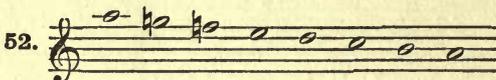
The minor scale, therefore, as a basis for harmonic formations, will stand thus :



Remark. — All other forms of the minor scale, as



or descending :



rest upon melodic conditions, which do not admit of the interval of the *augmented second* found in No. 50 between the sixth and seventh degrees.

Abstractly these forms have no influence upon harmonic formation; yet the harmonic sub-structure reacts upon the formation of the minor scale, as the following examples show :

53.

The last case, where the descending scale has this very interval of an augmented second *b* — *a flat*, which in the sequel we shall carefully avoid in harmonic connections, is explained in this way, that *b* was necessary as a component part of the chord, but *ab*, in order not to destroy the minor character of the passage, which is strikingly the case with *a*, while in the ascending scale (in the first example) this is already perfectly preserved by the minor third *eb*.

b. *The Triads of the other Degrees of the Minor Scale.*

SECONDARY TRIADS.

According to the establishment of the minor scale, the *secondary triads* appear in the following form :

54.

The *second* degree gives a *diminished* triad, as formerly the *seventh* degree of the major scale: likewise a *diminished* triad is found on the *seventh* degree. The *sixth* degree forms here a *major* triad.

The *third* degree brings a new form of the triad.

It has a major third and an augmented fifth, and is called therefore

THE AUGMENTED TRIAD.

From the forced or strong connection of this chord with others of the same key, it can *seldom* appear as the *fundamental harmony of the third degree* of the minor scale. The following examples may prove this:

55.

Example 55 shows six chords in a minor scale, labeled a. through f. The chords are: a. I, b. II°, c. IV, d. V, e. VI, and f. VII°. The augmented triad (VI) is shown in the bass clef.

Of these examples those under *c.* and *e.* will be the most practicable.

The introduction of this chord appears still more difficult:

56.

Example 56 shows five chords in a minor scale, labeled a. through e. The chords are: a. I, b. II°, c. IV, d. V, and e. VI. The augmented triad (VI) is shown in the bass clef.

Its introduction is the most tolerable, when the augmented fifth is prepared, i. e. is already present in the same voice as a member of the preceding chord (in *d.*).

Remark. — There exists something peculiarly foreign in the chords of the third degree as well in the major as in the minor scale, so that this harmony, even when it appears simply as a minor triad as it does in the major scale, can with great difficulty be connected naturally and effectively with other chords, and therefore seldom occurs.

Most of the practical chord-connections indicated above will occur in other relations, and *not* allow the augmented triad to be recognized as the *third degree of the minor scale*. The augmented triad, which is very often used in more modern music, belongs to the *chromatically altered harmonies*, which will hereafter be explained under the name of *Altered Chords*. (See chap. 10, Altered Chords.)

Application.

The principles already developed of harmonic connection and part movement will be valid here also, and what was said above concerning the progression of the leading tone, is eminently applicable to the connection of the principal chords in minor, since the interval of the augmented second from the sixth to the seventh degree in the minor scale, as well as from the seventh to the sixth descending, is to be avoided as *unmelodious*, when the two tones, which include the interval, belong to *different harmonies*. e. g.

57.

Diagram illustrating the connection of chords V and VI in the minor mode. The example shows two parts, a and b, with the bass clef indicating the chord progression: V, VI, VI, V. The treble clef shows the corresponding chord voicings.

In connecting therefore the chords of the fifth and sixth degrees, which very often happens, the leading tone must always ascend, by which in the triad of the sixth degree *the third appears doubled*. e. g.

58.

Diagram illustrating the connection of chords V and VI in the minor mode, showing a sequence of chords: V, VI, V, VI, V, VI, VI, V, VI, V. The treble clef shows the corresponding chord voicings, and the sequence ends with "&c."

Hence it would be impossible to present correctly the example given under 57 b., unless an intermediate tone were used, as thus:

59.

Diagram illustrating the connection of chords V and VI in the minor mode, showing a sequence of chords: V, VI, V. The treble clef shows the corresponding chord voicings.

Remark.—In certain special cases practice deviates from this rule. It will be well, however, to adopt the progression indicated above, for the reason that it should not be overlooked, that every deviation from rules in practice has and should have a stated motive, whereas in numerous other cases the observance of them is still recognized.

Exercises for Connecting the Triads of the Minor Scale.

Remarks upon these Exercises.

A chromatic sign over a Bass note *without a figure*, as e. g. in the third measure of the first exercise, always has reference to the *third* of the Bass. This raising of the third in the dominant chord, as very often happens in minor, is the raising of the leading tone spoken of on p. 41.

In general, when the Bass has the root, the triad is not figured in Thorough Bass writing, and there must be special reasons for figuring with 3, or 5, 8, $\frac{5}{3}$, or fully with $\frac{8}{3}$.

In the third and sixth exercises there is a reason for figuring with 5. The introduction of the triad of the third degree in minor has here been attempted, and it was necessary to indicate the elevation of the fifth, since it forms likewise the seventh degree of the minor scale.

Where a 3 or 5 is given with the *first* chord of some exercises, it has reference to its position. On this point see remarks under exercises (p. 50.)

The principles thus far developed will be verified by filling out one exercise. We take the first for this purpose.

The first principle of chord-connection (through connecting tones in the same voice) is observed here throughout, and therefore in the third

measure (at NB.) the Alto makes the erroneous progression of an augmented second from *f* to *g*♯.

To avoid this error (according to p. 44,) it will be necessary to let the Alto move from *f* to *e*, the Soprano from *b* to *g*♯, and the Tenor from *d* to *b*. thus .



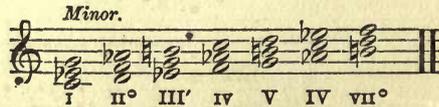
(a connection of chords already explained in No. 31, where the tone-connection did not take place in the same voice,) or: the Soprano retains the *b*, the Tenor descends from *d* to *g*♯, and the Alto from *f* to *e*, by which the close position is left, and this and the following harmony appear in *open* position :



Further remarks, rendered necessary by the difficulties of progression as regards the chords of the fourth, fifth and sixth degrees, are in special cases to be left for practical guidance.

Before we pass on to the further use of triads, we shall give a synoptical view of the chords thus far found as follows.

View of all the Triads of the Major and Minor Scales.



Major triads are found



Minor triads.

in Major: in Minor:

II III VI I IV

Diminished triads.

in Major. in Minor.

VII° II° VII°

Augmented triads.

in Minor.

III'

CHAPTER III.

Inversions of Triads.

Chord of the Sixth, Chord of the Sixth-and-Fourth.

THE use of triads and of all fundamental chords generally, is not limited to this, that the *root*, as in all previous examples, shall lie *in the Bass*; the Bass can also take the *third* or the *fifth* of the fundamental chord. Hence arise transformations of the fundamental chords, which we call

INVERSION, TRANSPOSITION, INTERCHANGING

of the chord.

Remark. — It may well be observed that we are here speaking only of moving the *Bass* into another interval, and that the transpositions before mentioned of the other parts into close and open positions and into various intervals by *no* means change the chord *essentially*

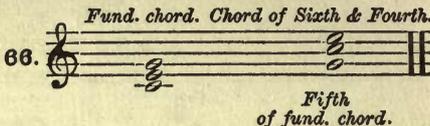
The Triad is capable of *two* inversions :

- a. When the *Bass* takes the *third* of the triad, we have the CHORD OF THE SIXTH.

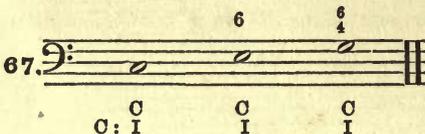
65. Fund. chord. Chord of Sixth.

Third of fund. chord.

- b. When the Bass takes the fifth of the triad, we have the Chord of the SIXTH-AND-FOURTH.

66. 

The Chord of the Sixth is indicated by 6 over the Bass note, the Chord of the Sixth-and-Fourth by $\frac{6}{4}$ over the same, e. g.

67. 

Hereafter to indicate the *root* we shall use the letter, and to indicate the *degree*, as formerly, the number, by which, as may be seen in example 67, only the *position of the root*, not the casual Bass, is to be regarded.

Remark. — As the root of the chord of the *Sixth* and of the *Sixth-and-Fourth* in example 67 is still C and not the Bass notes E and G, so the chord itself will not be based on the third or fifth, but still on the *first degree*, since these are by no means *newly-formed* chords, but only by means of the Bass brought into another position, and are therefore *derived* chords.

Application.

By using the inversion of chords, there results not merely a greater variety in the management of the harmony, but the movement of the parts, especially the Bass, becomes more flowing.

According to the rules given on p. 25 respecting the doubling of one interval of the triad, it will be better in the chord of the Sixth also in four-part harmony to double the *root of the primitive chord*, and the doubling of the Bass tone in the chord of the Sixth (i. e. the original Third) or of the third of the Bass (i. e. the original Fifth) can only take place *when the natural movement of the parts requires it*, or when false progressions can be thereby avoided. In accordance with what was said on p. 39, it may be remarked further that the leading tone in like manner forms an exception to this doubling, when it lies in the Bass.

It need barely be mentioned too, that the distribution of the three upper parts depends only on their movement, but has no other essential bearing upon the chord.

The Chord of the Sixth can therefore occur in the following forms :

68.

The use of the *Chord of the Sixth-and-Fourth* is less frequent than that of the *Chord of the Sixth*, and requires certain conditions, which will be mentioned later. We find it mostly in the formation of cadences. The *Bass tone*, the *Fifth* of the primitive chord, is the best adapted for doubling, and the chord will appear in the following and similar forms :

69.

For connecting these chords with others, no farther mechanical rules are needed than those already given ; in like manner we omit the mere mechanical combination of two and three chords, and exhibit the application of these derived chords in short pieces, which, however insignificant, contain the form of a complete whole, and admit of a better estimation of single cases in their relation to the whole.

Exercises.

70.

7. 8. 9. 10. 11.

Remarks upon these Exercises.

The designating of the fifth in the first measure of example second, as well as all similar indications hereafter, shows the position of the Soprano, consequently that of the first chord. When there is no figure over the first Bass note, it is to be understood that the Soprano most fittingly takes the Octave of the Bass.

The *diminished triad* of the seventh degree appears in the second exercise as a *Chord of the Sixth*. It is in this position that it most frequently occurs. It may be remembered here that the *root* of this chord, being the *leading tone*, is not doubled, instead of which in most cases the third is doubled (the Bass tone in the *chord of the Sixth*.) The movement of parts results at times in the doubling of the fifth also. The diminished triad of the second degree in minor allows the root also to be doubled.

The progression of the diminished triad always depends on the movement of the Bass. The natural tendency of the diminished triad in its fundamental position has been already shown on p. 38.

In most cases the Bass moves thus :

71.

and the other parts as follows :

72.

It follows from the above examples, that the inversion of the diminished fifth, namely the augmented fourth, in *four-part harmony* will not necessarily have the same progression as was given above in *two parts* on p. 38; we see in the first example and others *b* and *f* in the Soprano and Alto moving to *c* and *g* :



The similarity in sound between this chord and the dominant-seventh-chord, which is to appear later, frequently induces beginners to make the diminished fifth *descend*, even when by inversion it has become an augmented fourth; this, as the above examples show, is only and solely necessary, when actually as a diminished fifth it lies *above* the root, and a progression like the following



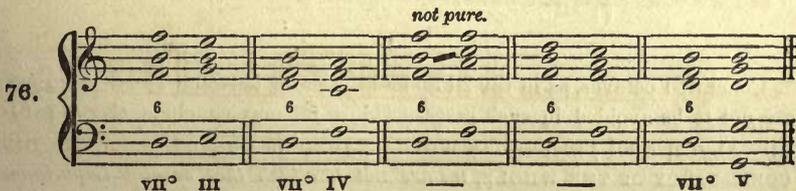
is wrong on account of the parallel fifths.

Remark. — It may here be observed further, that parallel fifths, of which one is diminished, and the other perfect, are allowable, *if the diminished follows the perfect fifth, but not the reverse.* e. g.



Compare also Remark on p. 28.

The progression of the parts in the diminished triad takes a different form, when the Bass passes to any other chord than the tonic triad. A few chord connections may follow here :



better : *not :*

not :

and others.

The diminished triad of the second degree in minor admits of a different treatment, since its root may be doubled. See p. 50.

A succession of *two or more chords of the Sixth*, when the Bass moves by degrees, as in exercise 70. No. 3 and others, will compel one or more parts to move in contrary motion to the Bass. e. g.

77.

The series of chords of the Sixth in the 5th and 6th exercises in No. 70 can be harmonized indeed in different ways, but it will be best, when the regular Bass progression is retained in the other parts also, e. g.

78.

Concealed octaves, as in the 2d and 3d measures between Tenor and Bass, are not to be avoided in such cases. Hence we may conclude, *that to INDIVIDUAL abnormal progressions, WHEN PLACED IN COMPARISON WITH THE CONSISTENCY OF THE WHOLE, we are not to attach that special importance*

which is otherwise their due, since the formation of details, though to be as perfect as possible, will always be subordinate to that of the whole.

Remark. — Without doubt the principle just laid down can be easily misunderstood by the beginner; yet its statement was unavoidable, and, to escape all possible error, it may be added further, that a final decision on these points belongs only to a judgment fully ripened by experience and practice.

The Signs used in Thorough Bass Writing.

The figures and signs in Thorough Bass are called in general, *Signatures*. Some of them have been already explained, as the chromatic sign so often used in minor. The figuring of the *Chords of the Sixth and of the Sixth-and-Fourth* was given on p. 48. A line through the figure (e. g. in exercises 8, 9, 10 under No. 70 through the 6: 6̄) is used when a chromatic elevation of the interval a half degree is needed, instead of which, however, a # or ♯ by the side of the figure is often used (e. g. 6# or 6♯, 5♯). Other figures will be explained hereafter with their respective chords.

Formation of Cadences by means of the Chord of the Sixth-and-Fourth.

In the exercises 70 we find, through the inversions of the triad, an extension and more determinate form of the cadence previously cited. It appears namely, that the chord of the Sixth-and-Fourth of the tonic triad before the dominant chord leads directly to the close.

79.

C: I V I

The triad of the fourth or second degree often precedes the Chord of the Sixth-and-Fourth.

80.

C: IV I V I II I V I

While the chord of the Sixth-and-Fourth points so decisively to the close, and has likewise so positive an influence when a modulation into foreign keys takes place, its appearance is equally flat under other circumstances, so that its proper use is dependent upon certain conditions, which will be discussed hereafter.

CHAPTER IV.

Seventh-Harmonies. Chords of Four Tones.

SEVENTH-HARMONIES are based upon the triads. They result from the addition of a third to the fifth of the triad, forming a seventh from the root :



Beside the different kinds of triads, the different kinds of sevenths also will produce a variety of Seventh-harmonies.

General Properties of Seventh-Chords.

Seventh-chords are not as independent as most of the triads, but point directly to one progression, so that they *never alone*, but only *in connection with triads*, produce any effect that is complete or exclusive. On the other hand they render the relations of chords to one another closer, more intimate, and by this property become particularly useful in combining chords and managing the parts.

The Dominant-Seventh-Chord in Major and Minor.

The most prominent of the Seventh-chords, and the one that occurs most frequently, is the

DOMINANT-SEVENTH-CHORD.

also called the *principal Seventh-chord*.

Like the dominant triad it is based upon the fifth degree, and is formed *exactly alike* in major and minor, namely *from the major triad and minor seventh*.



In the fundamental position it is indicated by 7 over the Bass note and in our method of indicating by V_7 :

83. 

C: V_7 G: V_7

The relation, in which the dominant triad stands to the tonic triad, has become generally clear through the cadence formation above exhibited (see p. 33.) The close receives a still more decided character by the use of the dominant-seventh chord.

The following chord-connection will show the form of cadence:

84. 

C: V_7 I a: V_7 I

Remark. — It should be observed here, that the triad which follows the seventh-chord is incomplete; in both cases the fifth of the chord is wanting. The reason of this will appear from what follows.

The inward tendency of these chords to some point of rest, and their consequent union with a triad, is called

RESOLUTION OF THE SEVENTH-CHORD, (*Cadence.*)

When the union of the *Dominant Seventh chord with the Tonic triad* takes place as in No. 84 and similar combinations, it is called a

CLOSING CADENCE.

As regards the movement of the parts, the progression of the intervals of the Seventh chord will furnish some important remarks.

First, we regard the closing cadence as the *regular* resolution of the Dominant-seventh-chord especially.

The Seventh as the essential interval of the chord is, from its relation to the root, forced to a determined progression. Regarding the progression of the Bass, which contains the root, as given, an upward progression of the Seventh will seem impossible:

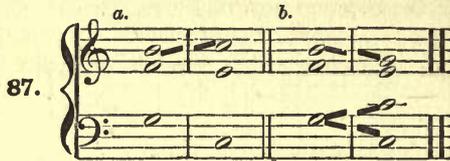
85. 

even if a third part be added, as in *b*; whereas its movement downward is fully satisfactory:



Since the progression of the *root* a fourth upwards or a fifth downwards is already determined, that of the *Third* and *Fifth* of the Seventh-chord remains to be considered.

The *Third* of the *Dominant-Seventh-chord* is always the leading tone of the *Scale*; its natural movement is determined therefore from what has been said heretofore concerning the leading tone (p. 39;) its progression is to ascend a half degree, hence *b*. will not appear as natural as *a*.

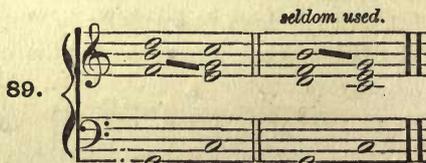


In example 87 *b*. the *Third* is given to the highest part, which makes the strangeness of its progression especially palpable. This movement can be tolerated, if the *Third* lies in a middle part, e. g.



This descent of the *Third* (leading tone) is therefore to be employed under the following conditions:

- a. When it lies, not in the highest part, but in one of the middle parts,
 b. g.



b. When the Bass progresses by contrary motion, e. g.

90.

The reason for the second rule is evident, if we observe the concealed fifths between the Alto and Bass in example *b*.

The movement of the *Fifth* in the Seventh-chord is free. While it for the most part is forced by the Seventh one degree downward, yet there may be reasons for allowing it also to move a step upwards, as is seen in example 88 *b.*, where the *d* in the Soprano is carried to *e*.

If we condense the substance of these remarks, we obtain the following rules for the regular resolution of the Seventh-chord, and for the cadence especially :

The Seventh descends a diatonic degree, whilst

The root moves up a fourth or down a fifth ;

The Third is carried a degree upward, contrary to the seventh, whilst

The Fifth may ascend or descend one degree.

Remark. — With this progression of the Third *contrary to the Seventh* may be remembered what was said before (p. 38) of the root and diminished fifth in the diminished triad. Both intervals occur again in the Dominant-Seventh-chord.

Application.

Except in forming cadences, the Dominant-Seventh-chord, as we have thus far learned to apply it, is seldom used in the middle of a piece, and then only in such places as do not create a sense of complete termination.

This happens, namely, when the Seventh of the chord lies in the upper part, forming an imperfect close, or when the Dominant-Seventh-chord falls upon the accented part of the measure (Thesis,) since in a perfect close (cadence) the tonic triad must fall there (see p. 33.)

Moreover the chord often appears incomplete by the omission of an interval. This interval, however, can only be the *Fifth*, seldom the *Third*, since the omission of the root and the Seventh would entirely alter the chord and make it unrecognizable.

91.

a. b. c. seldom: d.

V₇ I V₇ I — —

In *a.*, *b.*, *d.* the Fifth is omitted, in *c.* the Third, in place of which the root is in all cases doubled, restoring the closest connection with the following chord by sustaining the tone, and thus allowing the tonic triad again to appear complete, which in the former resolutions was not the case (see No. 84.)

Concerning the omission of one interval in the chord we annex the following remark:

From the movement of the parts a chord may appear incomplete; the omitted interval will generally be the Fifth of the fundamental chord.

Exercises.

92.

1. 3 7 6 6 6 4 7

2. 6 6 6 7

3. 3-3 6 6 6 6 7 6 6 4 7

4. 5 6 7 6 4 3 6 4 7

5. 3 6 7 # 6 6 4 6 6 6 4 7 #

6. 6 6 7 # 6 6 4 7 #

These exercises need no further explanation. It has been formerly mentioned that by 7 the Seventh-chord in the position thus far known is indicated, also that the *sharp* under it, or in general any chromatic sign which occurs without a number annexed, has reference to the *Third* from the Bass tone (see p. 55.)

CHAPTER V.

Inversions of the Seventh-Chord.

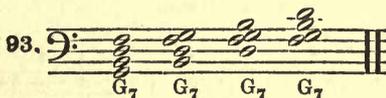
As the form of the triad can be changed by the Bass taking another interval than the root, this can take place likewise with *Seventh-chords*:

The first inversion results, when the Bass takes the *Third* from the root;

The second, when the *Fifth* of the primitive chord lies in the Bass, and

The third, when the original *Seventh* is given to the lowest part.

The inversions in close position appear thus:



A comparison of these inversions of the Seventh-chord with those of the triad shows clearly their analogous positions:



These derived chords take their names from the order of their intervals:

The *first* inversion is called: the *Chord of the Sixth-and-Fifth*,

The *second*: the *Chord of the Sixth-Fourth-and-Third* — or briefly *Fourth-and-Third*,

The *third*: the *Chord of the Sixth-Fourth-and-Second* — or briefly the *Chord of the Second*.

Their figuring in Thorough Bass may be seen above in example 94.

We need only recall the fact here, that with these inversions, as formerly with those of the triad, the only essential point is *the position of the Bass* or lowest part, and that the other intervals may be variously distributed among the upper parts, e. g.

95.

Application.

The regular progression (resolution) of these derived chords is based upon that of the primitive chord.

As the *dissonance*, the seventh, established the progression of that in one direction, so also with the derived chords, where the two tones, root and seventh, either appear again, or by inversion become seconds, the tendency to the same progression will exist.

96.

Progression of the Chord of the Sixth-and-Fifth.

Since the original Seventh also forms a *dissonance*, a *diminished fifth*, with the Bass tone in the chord of the Sixth-and-Fifth, whose progression has been discussed above (p. 38.)

97.

the resolution of the chord of the Sixth-and-Fifth will naturally be as follows :

98.

The progression of the root cannot be here as it was formerly given, as the *G* of the upper part is sustained and becomes the fifth; this, however, is only apparent, for the same progression lies at the foundation of this harmonic connection, as is shown by the figuring $G_7 C$ in example 98.

Beside other causes, the chief reason why the Soprano or a middle part cannot take the progression of the fundamental tones note for note, lies in the character of these parts, which is better suited for the connection and union of harmonies, than for their foundation, which belongs to the Bass.

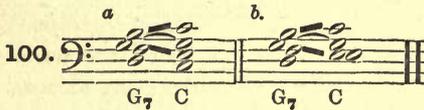
Remark. — Irregular progressions of the root in these cases, such as might result from a freer movement of the parts in certain relations, are not hereby excluded, only there must be an inward connection and relation between the chords.

Progression of the Chord of the Sixth-Fourth-and-Third.

Beside the Seventh and its inversion, the diminished Fifth, or its inversion the augmented Fourth, again appears here :



The resolution of this chord proceeds as follows:



The Bass, the original Fifth, can move in both these ways.

Progression of the Chord of the Second.

This chord has this peculiarity, that the original dissonant intervals, the *Seventh* and the *diminished Fifth*, can only occur in their inversions, as *Second below* and *augmented Fourth*.

The progression of this chord is the following :



The resolution of the *Chord of the Second* therefore is through the *Chord of the Sixth*.

It may be seen from these resolutions, that they are all based upon the natural progression of the Dominant-Seventh-Chord, called above *Cadence*, for throughout we find the root indicated $G_7 C$ or $V_7 I$.

These resolutions therefore will of themselves form *Cadences*, only not of so perfect a kind as those before mentioned, and as those are called *perfect cadences*, so these are distinguished by the name *imperfect cadences*.

View of the Natural Progression of all the Inversions of the Dominant-Seven-Chord in Various Positions.

102.

Diagram illustrating the natural progression of all the Inversions of the Dominant-Seven-Chord in Various Positions. The notation shows the G₇ and C chords in various positions, with figured bass notation (6/5) indicating the intervals.

Continuation of the natural progression of all the Inversions of the Dominant-Seven-Chord in Various Positions.

b. The Chord of the Sixth-Fourth-and-Third.

or :

Diagram illustrating the chord of the Sixth-Fourth-and-Third in various positions. The notation shows the G₇ and C chords in various positions, with figured bass notation (4/3, 6) indicating the intervals.

Continuation of the chord of the Sixth-Fourth-and-Third in various positions.

c. The Chord of the Second.

Musical notation for the Chord of the Second, showing a piano accompaniment with two staves. The right hand plays chords and the left hand plays bass notes. Fingerings are indicated by numbers 1-5. Chord symbols G_7 and C are shown below the first two measures.

Exercises for Using these Chords.

103. 1. $\frac{6}{5}$ 6 6 3 2 6 $\frac{6}{4}$ 7

2. 3 $\frac{4}{3}$ 6 6 $\frac{6}{5}$ 6 8 7

3. 5 3 2 6 $\frac{4}{3}$ \flat $\frac{6}{5}$ $\frac{6}{4}$ 7

4. 5 2 6 $\frac{4}{3}$ 6 $\frac{6}{4}$ 3 6 6 8 7

5. 3 $\frac{6}{5}$ 6 $\frac{6}{4}$ 3 6 \sharp 7

6. 6 $\frac{4}{2}$ 6 \flat $\frac{6}{5}$ $\frac{6}{4}$ \sharp 7

7. $\frac{6}{4}$ $\frac{3}{3}$ 6 $\frac{6}{5}$ 6 $\frac{6}{4}$ \sharp 7

8. 6 \sharp 3 2 6 $\frac{6}{4}$ 3 6 $\frac{6}{4}$ \sharp 7

Observation. — The figures 8 7 in the last measure but one of exercises 2, 4 and 5 mean that the Seventh should not appear at once with the chord, but follow after the Octave.

CHAPTER VI.

Collateral Seventh-Harmonies.

WHILST with the triads *three principal chords* are necessary, in order to establish the key (the relation to the tonic triad being the central point,) with Seventh-chords only *one principal chord* is needed, the *Dominant-Seventh Chord*, the contents alone of which make the key unmistakable, and whose natural progression to the tonic triad represents it.

Remark. — In view of the fact that the *Seventh* of the Dominant-chord is at the same time the *root* of the Subdominant triad, the relations of the two tones *g* and *f* (as roots of the dominant triads) to their common centre *c* (as tonic triad) becomes perfectly clear (see above p. 22. 3.)

Beside this Dominant-Seventh-chord, also called *Principal* or *Fundamental Seventh-chord*, Seventh-harmonies can be formed from the other triads in major and minor, whose relation to a fixed key, to be sure, is undeniable, but by no means so decided as with the former. They are termed:

COLLATERAL SEVENTH-CHORDS.

They are simply to be formed by adding to the triads a *Seventh of the root*.

a. *In Major :*

104. 

b. *In Minor :*

NB. NB. 

We arrive here at the chord formations, which without connection with other chords sound more or less hard and therefore strange, because, as was said before, their relation to a *fundamental key* is not as decided and clear as that of the *Dominant-Seventh-Chord*. Their use therefore is somewhat less frequent, but none the less adapted for giving variety and especial coloring to harmonic progressions.

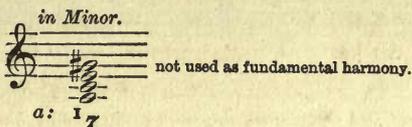
Amongst these collateral chords, the following kinds may be distinguished.

a. Major triads with major seventh.

105. 

NB. Major triads with minor seventh always form dominant chords of the seventh.

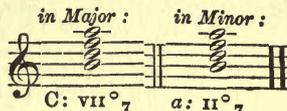
b. Minor triad with major seventh.



c. Minor triads with minor seventh.



d. Diminished triads with a minor seventh.



e. Diminished triad with a diminished seventh.



f. The augmented triad with a major seventh,



as it is found on the third degree in minor, is indeed not impracticable, but for reasons before discovered under the augmented triad, rare and ambiguous

Remark. — We shall find this chord again in the tenth chapter with a different basis.

Use of the Collateral Seventh-Chords in Major.

The *Seventh*, or its inversion, the *Second*, whether *major*, *minor*, *diminished* or *augmented* (the last applying to the *Second* only,) will always in its relation to the root as *dissonance* incline to a progression.

This *natural progression* with the collateral Seventh-chords is none other than that already found with the *Dominant-Seventh*, namely *one degree downwards* towards the root, if the latter descends a fifth or ascends a fourth.

Accordingly while the progression of the principal intervals of the chord is found to be the following:

106. 

with omission of the fifth:

b. of the second degree.

or;

C: II₇ not: not:

without fifth:

not:

c. of the third degree:

without fifth:

not: not: not: not;

C: III₇ VI

d. of the fourth degree (seldom with this resolution.)

not;

C: IV₇ VII^o not;

without fifth;

not;

e. of the sixth degree. without fifth :

not; not; not; not;

C: VI₇ II

f. of the seventh degree. not good : better :

not; not good; better;

C: VII₇ III

without fifth :

not;

Remark. — The progressions here given of all the Seventh-chords are neither exhaustive in their positions, nor have they been presented as including all that are possible.

The difficulty in forming such progressions lies only in the frequent occurrence of concealed fifths and octaves. So all the remarks above annexed, as “not,” “not good,” which refer mostly to the movement of the Bass, so far as it produces those faults in connection with other necessary part-movements, are in many cases to be taken only from the *theoretical standpoint*, whereas in practice, even in the so-called pure composition, such and similar cases must often be judged according to the principles above stated (on pp. 52 and 53.)

As theory hitherto has not succeeded in establishing *positive rules* for all cases of the kind, the true and the false, the admissible and inadmissible in this respect can only be discerned by a *thorough harmonic culture* and a *true musically formed ear*. More on this subject will follow later.

Of the Peculiar Progression of the Seventh-chord of the Seventh Degree.

In the above table, under 110, of the progression of all the Seventh-chords in major, that of the *seventh degree*, similarly to the others, was carried to the third degree, *i. e.* the progression of the root, as with the other seventh-chords, was to ascend a fourth, or descend a fifth. This progression is the less frequent, and is for the most part used only where there is a

uniform movement of the harmony (sequence.) That one occurs oftener, on which the *diminished triad*, to which the *Seventh* is here added, is based (see pp. 38 and 50), namely to the tonic triad.

111.

C: VII° I VII°₇ I VII° I VII°₇ I

That the relation of the *diminished triad to the tonic triad* is not changed by the addition of the seventh, on the contrary is still more positive, is plainly seen by the above example.

It is to be observed also, that when the chord appears in the above position, the *Third* of the following triad must be doubled (see 111 b.,) as otherwise perfect fifths would result (see 112 a.);

112.

or a skip must be made as in b., a movement of the Tenor which not infrequently occurs, and which is very effective notwithstanding the concealed octave.

It is a peculiarity of this chord, that its only satisfactory position is that in which the *Seventh* lies in the *highest part*, whilst the other positions, if not impracticable, are yet more confused.

113.

Remark.—Whether the reason of this lies in the fact, that the *Seventh*, with the progression as above, has the character of the *Ninth* (as many theorists affirm that this chord with its resolution is based upon the *Dominant-Seven*-chord with a *Ninth* added,) which, although resembling that of the *Seventh*, is yet more comprehensive, and does not admit of a middle position, cannot here be further investigated

The Freer Treatment of the Third and Fifth in the Seventh-Chord.

Different progressions of these intervals have already been used in the above chord-connections. The *Fifth* moves in either direction, the *Third* likewise at times a degree upwards, at others three degrees downwards. This was generally in view of avoiding concealed fifths and octaves. Apart from these faulty progressions the *Third* especially may move differently still, whence the part-movement often becomes freer and more independent, e. g.

114.

It is seen in *c.* that this progression is possible in the middle parts also, if the position admits of it.

The progression of the Soprano in *b.* is not good, because a *skip of an augmented fourth* is produced by it.

The step from the *fourth* to the *seventh* degree is called the *Tritone*, because it contains three whole tones. Upon this more in the sequel.

Other progressions of the *Fifth* are only possible, when the Bass also changes its usual progression as fundamental tone, as in general still further progressions of the parts will result, when we seek for other chord-connections than those hitherto employed.

The Preparation of the Seventh.

We have thus far spoken of the progression of the Seventh-chords, but not of their *introduction*.

The harshness of the entrance of many *dissonances* and especially of most of the *Sevenths in the collateral Seventh-chords* renders a careful introduction of them necessary, which consists in *their being prepared*.

A tone is prepared, *when it already exists in the preceding chord IN ONE AND THE SAME VOICE as a harmonic tone*, so that it can be connected by a tie.

Such a preparation of a tone we had previously in the first chord-connections presented, e. g.

115.

We may say here: that the *c* of the Soprano in the second chord is prepared by the *c* of the first chord; also the *g* of the Alto in the example that follows.

But the necessity of the preparation of Sevenths lies not only in the harshness of their effect when they are heard *without preparation*, but specially in the character of the harmonic connection and union of two successive chords, which is eminently peculiar to sevenths, and would not appear without that preparation.

The preparation of the Seventh can be effected as follows:

116.

C: V I₇ IV V I₇ IV IV II₇ V I II V₇ I

C: III IV₇ VII^o V III₇ VI I VI₇ II IV VII^o₇ I

In all these examples the tone, which is connected by a tie with the same tone following, forms the *preparation of the Seventh*.

In forming such a preparation the following rules are to be observed:

a. The preparation falls upon the unaccented part of the measure (Arsis) and must

b. At least be of equal length with the following Seventh: it may be longer, but not shorter, e. g.

117.

Remark.— The preparation of the Seventh forms one of the most important parts of the harmonic system, and is to be managed and practised with great care, because upon it depends the most essential feature of the inner, closest harmonic connection.

Although exceptions on this point also may be found in practice, yet it may repeatedly be called to mind, that they are nothing else than *exceptions*, which cannot disprove the importance of the principle of harmonic union, but can only be judged as a concrete case, caused and intended by reason of its position and relations. (Page 44. Remark.)

These exceptions occur mostly with *minor Sevenths*, as the less harsh, like that of the second and seventh degree, and are always tempered by a good progression.

But the *Seventh of the Dominant-Chord*, also called the *Fundamental Seventh*, forms a special exception to the necessary preparation. It is that whose effect, by its relation to the tonic triad, to the fundamental key, is the least harsh and strange, and does not need preparation in all cases.

The following may be observed as to its farther use :

The *Dominant-Seventh* needs, to be sure, no preparation, but its free entrance requires the presence of the root, if the progression is to be pure and without harshness.

118.

Remark.— The so-called *passing Sevenths*, which naturally as such cannot be prepared are regulated according to the rules for passing notes, which are explained afterwards. Concerning passing sevenths, see Chap. 18.

The Seventh of the Seventh degree, also, in major and minor (in the latter case the diminished Seventh-chord) on account of its peculiar character by no means requires preparation in all cases.

Exercises.

119.

The Connection of Seventh-Chords with each other.

The *progression* or *resolution* of the Seventh-chords in the previous examples was always through the *triad* of the *fourth degree above*, or, which is the same thing, of the *fifth degree below*. Instead of the triad, a *Seventh-chord* also of the same degree may follow.

The progression of the parts undergoes no change by this, only the *Third* of the first Seventh-chord will in this case serve for the *preparation* of the following *Seventh*, therefore not move, but be sustained, e. g.

120.

C: II V₇ I₇ IV

Here the *Third* of the dominant-chord, *b*, forms the preparation of the following Seventh.

The peculiarity of this harmonic connection is, that in *one* of the Seventh-chords the *Fifth* will always be *wanting*. In example 120 the fifth of the first chord was omitted. When several Seventh-chords follow each other, the *fifth* will be wanting in each *alternate* chord.

121.

C: I II₇ V₇ I₇I V₇ VI IV₇ VII^o₇ III₇ VI₇ II₇ V₇

The following rule may serve for harmonic connections of this sort:
 When two or more *Seventh-chords* IN THE FUNDAMENTAL POSITION succeed each other, the *fifth* is omitted in the alternate chords.

Exercises.

122.

Use of the Collateral Seventh-Chords in Minor.

The use of *collateral Seventh-chords in minor* is more limited. Many of them for Chord-connections, as used in major, prove unsuited, or indefinite and ambiguous; others in their cadence-progression result in difficult and unmelodious intervals in the parts.

One form of *Seventh-chord*, as given by the *first degree*, produces no progression analogous to the above, since the following combination is inconceivable.

123.

a: I₇ IV

Remark. — Although progressions can be formed with the above combination of intervals, as thus :

124.

7# 6

yet it would be difficult to prove that this was a progression of the Seventh-chord of the first degree in minor.

The resolution of the chord of the *Second* degree is to the *dominant*, and is very frequently used :

125.

a: II° 7 V not : not : — —

A progression of the Seventh-chord of the *third* degree is not impossible :

126.

a: III' 7 VI not : not : — —

it is, however, *ambiguous*, and might be met with in *C* major oftener than in *A* minor. (See: *Altered Chords*.)

It may here be observed that the *fifth* in this chord, as an *augmented interval*, will always *ascend* one degree.

The chords of the *fourth* and *sixth* degrees are uncommon, as the progression of the parts in the resolution is awkward and unmelodious.

127.

a: IV 7 VII° good : — —

128.

a: VI VII II°

The forced effect of most of the above progressions is undeniable, and makes them of little use. —

The *seventh* degree in minor furnishes an important chord, which is generally known by the name of the

DIMINISHED SEVENTH-CHORD.

A resolution of this chord like that of all the others is impossible, as it would lead to the triad of the third degree, which was found above to be doubtful and ambiguous.

Instead of this, its progression, *as with the Seventh-chord of the seventh degree in major* (see p. 68,) is based upon the *natural movement of the leading-tone*, upon which this chord rests :

129.

a: VII⁷ I c: VII⁷ I

As the *root* of this chord (leading-tone) moves a *half degree*, so also the *Seventh* descends a half degree, while the *Third* and *Fifth* move with the same regularity as with other seventh-chords; but the progression of the *Third* in many positions (130 a.) is to be carefully observed, because it easily leads to a faulty progression :

130.

a. not: b. c.

whereas the position of the *Third* in *b.* and *c.* gives more freedom.

Remark. — The natural progression of this chord, as of the *Seventh-chord of the seventh degree in major*, to the tonic triad, has induced the older harmonists to trace its foundation to the *harmony of the Dominant-Seventh*. They considered a ninth (major or minor) to be added to this chord and the root omitted, whence resulted both chords of the seventh degree.

In referring to what is said later in Chap. 9th concerning the chord of the Ninth, we would state here as the ground of our views, that that assumption as regards Ninth-chords is needless and far-fetched, and that the simplicity of the harmonic system for practical purposes would be preferable to any complicated theory.

As to the use of the diminished Seventh-chord, the following also should be observed:

The diminished Seventh, the smoothest of all, needs no preparation (see p. 72.)

Exercises.

131.

1. 3 6 6 7 7[#] 6 # 7 #

2. 3 # 7 5[#] 6 2 6 7[#] 6 5 6 6 4 #

3. 7 7[#] 6 7 7[#] 6 4 2 6 7 7[#]

4. 2 6 7 7 7[#] 6 5 6 6 4 #

These, and all former exercises in this chapter, whose object naturally was only to learn the *mechanical* use of the chords explained hitherto, and test the established rules and remarks, for this very reason are in their structure somewhat stiff and unwieldy, since the great number of seventh-chords could appear here only in the *fundamental position*, and because the introduction of many of them from our present standpoint, which did not allow us the choice of other means, was difficult and could not but seem forced.

The following may yet serve for their illustration:

The *root* of these Seventh-chords moves throughout a *fourth* or *fifth* as in cadences, as may be seen from the Bass part, only in the third exercise of 122 and 131 there appears to be an exception. In the fourth measure of the third exercise in 122 the Bass tone remains stationary, but the progression of the root is still contained in both chords according to rule: $a_7 - D_7$. The sustaining of the Bass tone was possible here, because we have already become acquainted with, and may therefore use, the *modifications of the Dominant-Seventh-chord*. The case is the same in the fifth bar of the third

example of 131, where the progression of the root takes place A_7-d with a sustained Bass.

In the second exercise of 131 the *Seventh-chord* of the *third degree in minor* is used, and it may be admitted that with this introduction it will not seem unnatural and harsh.

CHAPTER VII.

Inversions of the Collateral Seventh-Chords.

By the inversion of the collateral Seventh-chords are produced *the same derived chords*, which have already appeared with the dominant-seventh, namely: the *Chord of the Sixth-and-Fifth*, of the *Sixth-Fourth-and-Third* and of the *Second*.

The varieties of Thirds, Fifths and Sevenths in the fundamental harmony effect no alteration in the treatment of the inversions. For although the *major Seventh* becomes by inversion a *minor Second*, the *diminished* an *augmented* (see pp. 18, 19,) yet their progression follows in the same manner described above.

132. 

C: I_7 I_7 IV — —

No new rules are needed for the progression of any of these Seventh-chords. That of the *Seventh degree* alone in *major* and *minor* requires some care, as has been already remarked, on account of the easily occurring *open fifths*.

Something may here be added concerning their treatment.

Progression of the Seventh-chord of the Seventh degree in major.

133. 

C: VII_7 I — — — —

All these transpositions of the chord are available, though the last, the chord of the *Second*, finds its degree with most difficulty, since the resolu-

tion into the chord of the Sixth-and-Fourth could seldom take place, and at best as a *passing chord*.

We must not be deceived by the compact form, in which these chords are exhibited in 133, as to their utility; as was mentioned above, it only depends here upon the Seventh lying *above* or *below* the root, and positions of the Chord of the Sixth-and-Fifth and of the Sixth-Fourth-and-Third like the following:

134.

The exercise consists of two staves. The upper staff is a treble clef with a key signature of one sharp (F#). It contains three measures of chords: a triad (F#, A, C), a dyad (F#, A), and a dyad (F#, C). The lower staff is a bass clef with a key signature of one sharp (F#). It contains three measures of chords: a triad (F#, A, C), a dyad (F#, A), and a dyad (F#, C). Below the bass staff are figured bass notations: 6/5 6, 4/3 6, and 6/5 6.

seem consequently more satisfactory, because the Seventh lies *above* the root. The diminished Seventh-chord requires a method of progression like the above. e. g.

135.

The exercise consists of a single staff in treble clef with a key signature of one sharp (F#). It contains four measures of chords: a triad (F#, A, C), a triad (F#, A, C), a triad (F#, A, C), and a triad (F#, A, C). Below the staff are figured bass notations: a: VII 7 I, B 5 6 or: B 5 6, 6 3 6, and 4 2 # 4.

Here also the *third* inversion, the chord of the Second, will prove the least practicable, as is shown by the unsatisfying resolution into the Sixth-and-Fourth, a chord that always requires careful treatment, of which what is necessary will be said hereafter.

That consecutive fifths, which result from the resolution of the chord of the Sixth-and-Fifth and of the Sixth-Fourth-and-Third in this manner:

136.

The exercise consists of a single staff in treble clef with a key signature of one sharp (F#). It contains two measures of chords: a triad (F#, A, C) and a triad (F#, A, C).

are to be considered faulty, has been already mentioned (p. 76.) As to consecutive fifths of this sort compare also p. 29, No. 16, 17 and 18.

With this very manageable chord the position of the root relatively to the Seventh makes no such essential difference, as is the case with the chord of the seventh degree in major; the seventh may lie *above* or *below* the root, the similarity of sound between the augmented second and the minor third always adding softness to the chord, and causing the *former* to be felt as such only in relation to the key.

Exercises.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

CHAPTER VIII.

Seventh-Chords in connection with Chords of various Degrees, other than those before Used. False Cadences.

THE familiar rule, that the Seventh must in the resolution *descend* one degree, is indeed completely confirmed in the chord-connections previously shown; it has, however, as little *positive* authority as other matters, which under different conditions and relations, in the great variety of chord-connections, are subjected to necessary alterations and deviations.

With the movement of the *Seventh*, or its inversion, the *Second*, all depends on the progression of the root. If this, as in all cases presented thus far, is such that without the descent of the seventh no *intelligible* and *satisfactory result* would follow, then that rule would possess full authority.

The progression of the root, however, may entirely annul this tendency of the Seventh; it may either *remain stationary* or even *ascend*, e. g.

138.

This leads us to the possibility of connecting Seventh-chords with chords of *other* degrees than those hitherto employed. We may adduce here a few familiar kinds of chord-connections with remarks, that in trying new formations of this sort we may be able to proceed on critical principles.

We begin with the Dominant-Seventh-chord.

It has been said before that the resolution of seventh-chords as shown thus far is called *cadence*, and that of the Dominant-Seventh-chord, *closing cadence*.

When any chord but the tonic triad, which forms the closing cadence, follows the Dominant-Seventh-chord, the natural tendency towards the close is either *delayed* or else wholly *removed*. The anticipation of the natural result experiences hereby a disappointment, hence these combinations are called

FALSE CADENCES.

In general, therefore, *false cadences* arise, where the progression of the Dominant-Seventh-chord leads, not to the tonic triad, but to *different chords*.

A few instances we shall now explain.

1. *The connection of the Dominant-Seventh-chord with triads other than that of the tonic, where the Seventh descends one degree.*

a. *Connection with the Sixth degree:*

139. *in Major:* *in Minor:*

C : V₇ VI a : V₇ VI

This combination (false cadence) occurs very frequently.

The effect of this progression with the *inversions* of the Seventh-chord is not as decided, and therefore more rare :

140. *in Major:* *in Minor:*

C : V₇ VI a : V₇ VI

b. *Connection with the third degree:*

141. *better position.*

C : V₇ III

Remark. — Trials with the inversions of the chord are omitted here and in the sequel; they are easily made.

This progression is more decided when *modulation* is employed :

142.

C : V₇ a : V

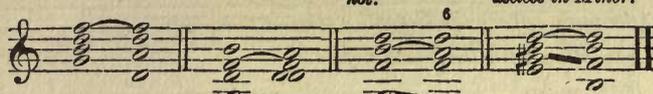
In minor also the connection with the triad of the *third degree* is possible, only the latter as a dissonant chord (through the augmented fifth) requires that something follow.

143.

a : V₇ III' VI

2. *Connection with triads with the Seventh sustained.*

a. *With the second degree:*

144. 
 C: V₇ II 6 not: useless in Minor.
 a: V₇ II^o

b. *With the fourth degree:*

145. 
 C: V₇ IV in Major. 6 6 in Minor. 6 6
 a: V₇ IV 6 6

The connection of the Dominant chord with *Seventh-harmonies* of other degrees, than those we have used, is also possible. A few of them here follow:

146. 
 C: V₇ VI₇ 6th Degree: 2 3d Degree: 6/5 or: 6/5 Minor: 6/5 3d Degree.
 a: V₇ III₇ V₇ a: V₇ a: V₇ III₇ VI

When we modulate into other keys, the possibility of new combinations is greatly increased, e. g.

a. *With descending Seventh:*

147. 
 C: V₇ d: V₇ not: better:
 C: V₇ b: VII^o₇ a: V₇ F: V₇ a: V₇ G: VII^o

b. *With sustained Seventh:*

148. 
 C: V₇ Eb: V₇ C: V₇ Bb: V₇ a: V₇ C: V₇ a: V₇ G: V₇

3. *Connection of chords with the Seventh ascending.*

This case may occur in the ordinary cadence (V₇-I) as well as with other progressions of the Seventh-chord, (e. g. II₇-V.)

a. *By exchanging the progression with various parts.*

149.

The movement of a third in the Bass renders the descent of the Seventh impossible, as the concealed octave caused thereby

150.

is entirely erroneous.

This progression of the root is not to be used in the other parts.

151.

All these instances are faulty.

b. *By sustaining the fundamental tone:*

152.

The root (*G*) serves here as the so-called *sustained part*. (See later. Organ point.) But it must be *remote* from the Seventh, and the following progression would be wrong:

153.

c. *By a chromatic change, and modulation :*

154. 

C: V₇ G: V₇

enharmonic:



C: V₇ G: V₇ V₇ e: VII^o₇ C: V₇ F#: V₇

d. *By contrary motion of the Bass in modulating into other keys :*

155. 

C: V₇ d: V₇ C: V₇ b: VII^o₇ a: V₇ d: VII^o₇ C: V₇ F: V₇
(See above, No. 149.)

The foregoing table of chord-connections gives only an indication of possible combinations. Its object was to call attention to the variety of harmonic progression.

Of the *value* of these and similar combinations criticism can decide only in *special cases*, since their proper use becomes possible only by considering their *introduction*, their *progression*, their *rhythmical importance*, and, in brief, their whole situation.

The particular character of a piece, the part-movement expressly formed with reference to the motive or idea employed, and similar causes, may lead to such harmonic connections; but to use them adventurously, for the production of new and strange formations, in general for the sake of appearing original, might in few cases so succeed that the object would not be perceptible:

Exercises.

156. 

Remark.—The open position in the 5th exercise has reference to a part-movement cited on p. 84; it can afterwards be abandoned.

The Collateral Seventh-Harmonies connected with Chords of other Degrees or Keys.

A few chord-connections with collateral Sevenths may follow here. To cite all cases of the kind would be both impossible and inexpedient.

a. With regular progression of the Seventh.

157. C: II₇ III₇ || II₇ e: V₇ C: III₇ IV₇ || III₇ F: V₇ C: IV₇ G: V₇

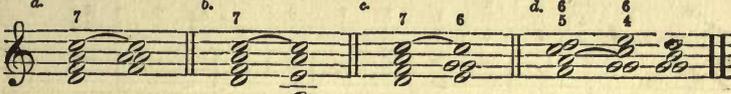
not; *better:* a: II^o₇ III^o₇ VI₇ || IV₇ V₇ || IV₇ V₇ || VI₇ G: V₇ a: VII^o₇ d: VII^o₇ &c.

b. With free progression of the Seventh.

158.  not:
 C: II₇ G: V₇ C: II₇ c: VII₇ C: II₇ a: V₇ C: II₇ d: VII^o₇

Remark. — The reason why the last example is not good, lies in the so-called *cross relation*, an explanation of which follows farther on.

C. *With Seventh sustained.*

159. 
 C: II₇ IV II₇ VI II₇ I II₇ I V

The last succession of chords is often used. It forms a delaying of the cadence-progression of the second degree into the fifth by means of the chord of the Sixth-and-Fourth of the tonic triad introduced between them. The chord of the Sixth also of the same triad often occurs during the resolution of this chord, as in example c.

The *diminished Seventh chord* is often used in like manner:

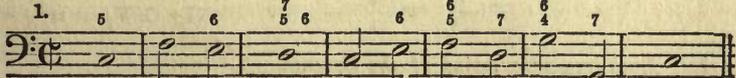
160. 
 g: VII^o₇ C: I V

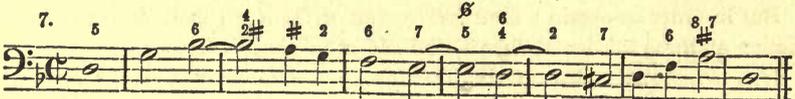
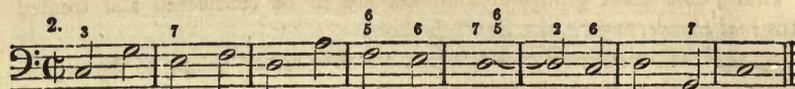
Here also the natural progression is only delayed by the chord of the Sixth-and-Fourth.

The mechanical combination of such successions of chords may be left to individual practice and investigation. Their use will depend upon the insight acquired into the relation and connection of chords, and therefore not be so lightly estimated, as might first appear; in general it will stand about in the same relation to composition itself, as technical studies and preliminary exercises to the practical execution and performance of musical works. Both produce readiness and skill, cultivate the powers, and render the productions of genius possible.

Only it may be further observed here, that for the criterion of such combination the *relation of the Seventh to the root and its progression* will always be found sufficient. If this is pure and the movements of the other parts commit none of the heretofore mentioned errors, the chord connection will be serviceable for particular cases.

Exercises.

161. 



Remark. — Many of the cases above cited could not yet be included in these exercises, because they are based upon modulation, which is hereafter more fully explained. (The sixth exercise affords opportunity for modulation.) So too, many of these examples by the use of modulation would have been smoother and less stiff and strange.

CHAPTER IX.

Chords of the Ninth, Eleventh and Thirteenth.

Most treatises contain lengthy discussions upon these chord-formations. The views, which can be maintained concerning them, are various and will lead to equally *practical* results. It may be said

either, that these groups of intervals are to be considered and treated like *real chords*, as e. g. the Seventh-chord:

or, that as *unessential chord-formations* they either belong to the *suspensions*, or result *incidentally* from one part being sustained.

In the first case, the explanation of their use, especially through their inversions, becomes very diffuse, and, since in four-part harmony one or several of their tones or intervals are always omitted, obscure, because they are then easily confounded with other chords.

In the second case their explanation is very much simplified.

Remark. — Chords of the Ninth, as well as the others above named, are but relics of the old so-called Thorough Bass system, which readily adopted every combination of tones, however casual it might be, as a special chord, and taught its treatment, without arranging the many incidental chord-phenomena under a definite system, and thereby rendered the entire harmonic system difficult and prolix.

Without being able here to discuss farther the intrinsic theoretical grounds for classifying such formations as *incidental*, the possibility of *simplifying the harmonic system* without real practical disadvantage has determined us to take the latter view. (More upon this point in the *second section*.)

But in order to obtain a clear perception of them, we shall show the formation of these incidental chords, and add some observations.

If a *Ninth* be added to the Dominant-Seventh-chord, a chord results which is known by the name of the *Dominant-Ninth-and-Seventh-chord*.



In major we find the *major Ninth*, in minor the *minor*.

In pure part-writing this chord, like that of the Dominant Seventh itself in similar relations, is used with a preparation of the *Ninth* or of the *root*, and cases like the following, where *both* tones enter without it,



are to be condemned for their stiffness and lack of connection.

This preparation can be made thus :

164. *better:*

Musical notation for example 164, showing a treble and bass staff. The treble staff contains a sequence of chords with the annotation "better:" above it. The bass staff contains a sequence of chords with figured bass notation: 9/7, 9/7, 6/4.

How far the first examples may be regarded as Suspensions, the last as other incidental chord-formations, can only be discussed later in Section Second.

Remark.— From the chord of the Ninth in major they derive the *Seventh-chord of the seventh degree*, which we fully discussed before, also the *diminished Seventh-chord* from the Ninth-chord in minor, in order to be able to form their cadence-progression similarly to other Seventh-chords, affirming that these chords are themselves *Dominant-Seventh-chords* with the Ninth added and the root omitted. e. g.

165.

Musical notation for example 165, showing two treble staves. The first staff contains chords with figured bass notation below: C: V₇ V₇ · I. The second staff contains chords with figured bass notation below: c: V₇ V₇ I.

Hence arises in the first this difficulty, that we must accept *two* chords of the seventh degree in major, one, whose natural cadence is the following:

166.

Musical notation for example 166, showing a single treble staff with a chord.

the other as derived from the Dominant-Seventh-chord; whereas it still remains the simplest course to point to the character of the leading tone, upon which the above chords are based.

Many musical treatises admit also *collateral Ninth-and-Seventh chords*, rendering the theory of many harmonic formations still more complicated and equally needless, since none of these tones are to be used without preparation, and hence in their entire treatment and consequences differ in nothing from *suspensions*.

What holds good in practice, as well as in a simplified theory of Ninth-chords, will be in greater measure true of the *Eleventh-and-Thirteenth-chords*.

The singular form of these chords in full is as follows:

167.

Musical notation for example 167, showing a treble staff with two chords. The first chord has figured bass notation 11/7 above it. The second chord has figured bass notation 13/11/9/7 above it.

In pure four-part writing they can of course never be employed, since by the necessary omission of many intervals they will appear simply as suspensions, e. g.



and even with more than four parts they will not differ in the least in character from suspensions, and in the freer style, where they appear without preparation, they may be regarded as *appoggiaturas*.

CHAPTER X.

Chromatic Alteration of the Principal Harmonies. Altered Chords.

The chromatic alteration of one or more intervals of the principal harmonies has a double effect :

either : it results in a modulation,

or : it gives the chord a new form hitherto not used.

Let for example the major triad be changed as follows, and there result

a. *Modulations :*



Through $c\sharp$ the *diminished triad* of the seventh degree in D major or D minor, or of the second degree in B minor,

Through $e\flat$ the *C minor-triad*,

Through $e\flat$ and $g\flat$ the *diminished triad* of the seventh degree in $D\flat$ major and minor, or of the second degree in $B\flat$ minor.

The last two alterations are mere *transpositions* of the same triad into other keys, namely $C\flat$ major and $C\sharp$ major.

b. *New forms.*



Of these the forms *a, b, d, f* can indeed incidentally occur by means of *collateral* (passing) tones, but they have no harmonic value.

Not so with the forms *c* and *e*, which have harmonic (chord-like) meaning. The first form of the triad (*c*) is known as

THE AUGMENTED TRIAD.

This chord we have already found on the third degree in minor (see p. 43,) yet, as has been mentioned, it seldom appears in this position, but oftener as the triad of the first, fourth and fifth degree in major with the fifth raised chromatically.

It is easy to explain as resulting from the passing note (*g*♯) to the following note (*a*), as also its progression is fixed through this tone (*g*♯) as an augmented interval.

171. 

The inversions (transpositions) also of this chord are available:

172. 

Though these chords generally appear as passing chords or with preparation of the augmented fifth, yet they may enter free in a sudden change of harmonies:

173. 

Not only may the *Dominant-Seventh*, which happens the most frequently, be added to the augmented triad, but also the *major Seventh* of the first and fourth degree.

a. *The augmented triad in connection with the Dominant-Seventh.*

174. 

D. In connection with the Seventh of the first degree.

175.

C: I₇ IV

C. The addition of the Seventh to the augmented triad of the fourth degree should be very rare:

176.

C: IV₇ VII°

In all these combinations so far the cadence-progression of the Bass (e. g. V-I I-IV &c.) has been employed; but a few examples may show that the chords here treated may be used with chords of other degrees and a different Bass-progression.

or:

177.

C: V₇ III V₇ a: V C: V₇ d: VII° I C: V₇ g: VII° I

C: V₇ e: V₇ I C: III I₇ d: V C: III I₇ G: V₇

These harmonic connections, sometimes strange and harsh in sound, acquire significance only *through the position* which they assume, and particularly when to a certain degree they are brought about by an *inward necessity*.

If it is the duty of a manual to point out the possibility of such harmonic

formations, its duty is likewise to warn the beginner against overrating the value of such attractions, and in general to advise him, *not to occupy himself purposely with such uncommon harmonic expedients, before he is wholly conversant with the treatment of the simplest harmonies, of simple pure part-writing.* Too early employment of them and a wilful searching for peculiar effects obstructs a clear view and insight into simple harmonic principles, even renders it impossible, and diverts the mind from essential to secondary matters.

Exercises.

1.

2.

3.

4.

Remark. — In the fourth exercise the augmented fifth was used even with the minor triad of the second degree (at NB.) which in this connection does not sound unnaturally. This would correspond with the form *f* above in example 170. Hence it is seen, that with a natural movement of parts many new chord-formations may be obtained.

From the form *e* of example 170: (which is also treated

under the name: *double diminished triad*) there arises a harmony which is much used, namely:

THE CHORD OF THE AUGMENTED SIXTH.

The first inversion of the above chord gives:

179.

From its progression, which is determined by the *augmented Sixth* $eb-c\#$, the original chord here belongs to G minor, whose fourth degree, C minor, through the raising of the root inclines to the fifth degree.

Wherever this chord appears with its natural progression, as shown above in 179, the *last chord* proves itself to be the *Dominant*. This is verified by certain harmonies formed like the chord of the augmented Sixth, the chords of the *augmented Sixth-Fourth-and-Third* and of the *augmented Sixth-and-Fifth*, whose construction is explained farther on.

Remark. — The affinity of the augmented Sixth-chord with those just mentioned, has its origin in the source of the former.

The chord of the augmented Sixth has this peculiarity, that *only its Third* (the Fifth of the original chord) can be doubled in four-part harmony :

180.

Of the other positions of the original chord (the so-called double diminished triad,) the *first* (fundamental) may be used in three parts, though very rarely ; the *third* (second inversion) also in four parts, but only in widely dispersed harmony.

181.

Remark. — The chromatic alteration of an interval of the minor triad is already included in the formations in Nos. 169 and 170, and therefore needs no further investigation. So the chromatic alteration of an interval of the diminished triad will result either in major or minor triads, or formations, which are to be found in the examples above cited.

Thus the form of the triad in No. 170 d. will be like the following as found in C major :

182.

C; VII°

In many books this chord is called : *major-diminished triad*.

Chords of this sort, if they may be called such, usually appear only incidentally in *passing*, and their progression follows relatively to their intervals, i. e. *augmented intervals ascend, diminished intervals descend*, one degree.

The *chromatic alteration* of an interval of the *Seventh-chord* was partially

noticed above, where to the triad chromatically altered the Seventh also was added (p. 92.) This was in the case of the augmented triad :

Among the other *collateral Seventh-chords*, the chromatic alteration of one of them receives a special importance. It is the *Seventh-chord of the second degree in minor*, which in the following form produces chords that are often used.

The chromatic elevation of its *Third*

183. 

gives the following inversions :

184. 

Of these inversions the *second* is the most important, and is much used, the others are rare.

The chord resulting from the second transposition is known as

THE CHORD OF THE AUGMENTED SIXTH-FOURTH-AND-THIRD.

Its progression is based upon that of the original chord, i. e. as the seventh-chord of the second degree leads directly to the *dominant*, so also here it will be the case.

185. 

If the root be omitted in this chord, we have the *augmented Sixth-chord* already found above, whose progression to the dominant finds here its explanation (see p. 94) :

186. 

or as compared with 179 in *G* minor :

187. 

Remark.— It may here be further observed, that the formation of the chord of the augmented Sixth-Fourth-and-Third can be reached also through the *major-diminished triad* mentioned on page 95, by the addition of the Seventh: only that the resolution must be different, since that was taken on the *seventh degree*, while this is found on the *second*.

Instead of the root, the *Ninth* of the original chord may also be added, whence arises the

CHORD OF THE AUGMENTED SIXTH-AND-FIFTH.

Its foundation is the following:

Inversions:

original chord: with ninth: root omitted & third raised: a. $\begin{smallmatrix} \flat \\ 5 \end{smallmatrix}$ b. $\begin{smallmatrix} \sharp \\ 3 \end{smallmatrix}$ c. $2\sharp$

188. 

a: $\begin{smallmatrix} 11 \\ \circ \\ 7 \end{smallmatrix}$

Of these chords, that which results from the first transposition *a.*, the *augmented Sixth-and-Fifth chord*, is the most available: the others are rare.

Its natural progression is likewise to the dominant, but always produces *parallel Fifths*.

189. 

This progression of fifths, not classed among the most offensive, is avoided either by a *previous* resolution of the fifth (the original, above-mentioned ninth as a suspension,) as in the following example (*a.*), or by a movement of the same to the third, whence arises the augmented Sixth-chord (*b.*), or most frequently by sustaining the third and fifth while the Sixth and Bass-tone move, whereby the chord of the Sixth-and-Fourth is inserted before the resolution (*c.*), and can be regarded here as a prolongation of the suspension.

190. 

not: better: c.

Remark.— The addition of the ninth does not entitle this harmony to be pronounced a Ninth-chord; the ninth has here the same character as a suspension as elsewhere, as is clearly apparent from the progression *a.*; the progression in *b.* and *c.* also corresponds

precisely to the treatment of suspensions, so far as (like the fifth in the above chord) they require preparation.

It would follow from this, that this harmony should have been first spoken of together with suspensions themselves; yet mention of it had to be made here, because we are treating of construction, and should not with the above-mentioned views ignore a universal method of naming this harmony.

Exercises.

191.

1. 3 2 6 5 6 6 6# 2 6 7 7# 6 5 #

2. 6 6 4/3 # 2 6 7 6 4 5 4/3 6 4 #

3. 2 7 6 4/3 6 5 6 4 # 4/2 6 7 6 4 #

4. 3 2 6 5 4/3 # 6 6 4/3 6 5 #

In closing this chapter, we survey once more the wide field which it opens for harmonic formations. We have discovered much that is universally known and useful, much has appeared to us unavailable and worthless; yet nothing was manifested in its primitive state; everything was trimmed and subjected to change, to a certain degree, embellishment. This abandonment of *original form* induces us to call attention again to what was said on p. 93.

It was indeed a long time before these harmonic transformations were discovered, and still longer ere they were turned to general use; and much, that has hitherto proved useless, may still in time be brought to perfection; only it is not advisable, from a desire for originality, to direct all effort to the invention of new harmonic forms, or to an exaggerated use of them and a departure from original principles, lest the sound inner kernel be lost.

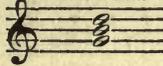
Since all these formations serve rather for the decoration and, we might say, the more elegant carrying out of simple harmonic principles, one must only use them with discrimination, or his work will be overlaid and himself consequently reputed as void of taste.

In closing this representation of all the essential harmonies and their immediate use, we annex further a brief *view* of the same, their *kinds* and *derivations*.

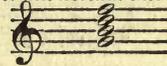
View of all the Chords belonging to a Major or Minor Key.

I. FUNDAMENTAL HARMONIES.

a. *The triad.*



b. *The Seventh-chord.*



A. *Kinds of triad:*

Major, minor, diminished, augmented.

Major triads

of the major scale:



of the minor scale:



Minor Triads

of the major scale:



of the minor scale:

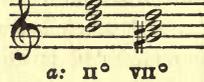


Diminished triads

of the major scale:



of the minor scale:



Augmented triad of the minor scale.



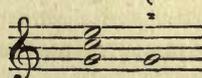
NB The other augmented triads see under II: *Altered Chords.*

Inversions (transpositions) of the triad.

a. *Chord of the Sixth.*



b. *Chord of the Sixth-and-Fourth.*



B. *Kinds of Seventh-chord :*

a. *Dominant-Seventh — or Principal Seventh-chord.*

b. *Collateral Seventh-chords.*

a. *Dominant Seventh-chord (major triad with minor seventh) :*

in major and minor formed alike:

C: V₇ a: V₇ a: V₇

b. *Collateral Seventh-chords :*

1. *Major triad with major seventh*

in major: *in minor:*

C: I₇ IV₇ a: VI₇

2. *Minor triad with minor seventh*

in major: *in minor:*

C: II₇ III₇ VI₇ a: IV₇

3. *Diminished triad with minor seventh*

in major: *in minor:*

C: VII^o₇ a: II^o₇

4. *Diminished triad with diminished seventh (diminished Seventh-chord)*

in minor:

a: VII^o₇

5. *Augmented triad with major seventh*

in minor:

a: III₇

Inversions (transpositions) of the seventh-chords:

- a. Chord of the Sixth-and-Fifth; b. Chord of the Sixth-Fourth-and-Third; c. Chord of the Second:



III. CHROMATICALLY ALTERED CHORDS.

- a. *The augmented triad formed from the major triad:*



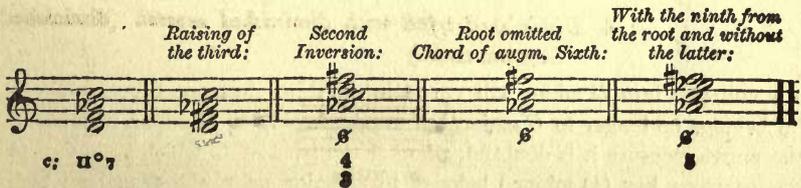
- b. *Chord of the augmented Sixth, formed:*

1. from the minor triad with the root raised (so called double diminished triad):



2. from the Seventh-chord of the second degree in minor (see the following chords.)

- c. *Chord of the augmented Sixth-Fourth-and-Third;*
 d. *Chord of the augmented Sixth-and-Fifth,—both formed from the Seventh-chord of the second degree in minor:*

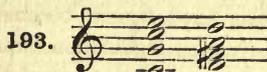


Thus the G-major triad belongs not merely to G major, but is also the Dominant of C major and C minor, the Subdominant of D major, and the sixth degree of B minor.

From this ambiguity it often happens that the modulation can only be recognized from the chords that follow, as in general the decisive modulation itself can only be formed with the Dominant-Seventh harmony and its derivatives.

A musical ear can of itself very easily catch at a modulation: it always conceives of the foreign harmony as belonging to that key which is nearest allied to the prevailing one.

Thus, for example, the major triad of *D* in



viewed independently, would belong to the key of *D* major; but in connection with *C* major it will at once be recognized as the Dominant of *G* major, and the following chords only can determine what key is to predominate.

A few examples are annexed here for practice in investigating modulation; for further discussion of this subject see chapter sixteenth.

Exercises.

194.

1. $\frac{8}{4}$ $\frac{6}{5}$ 7^b 6 $\frac{6}{5}$

2. $\frac{3}{-}$ 6 $\frac{6}{5}$ 2 6 $\frac{6}{4}$ $\frac{6}{5}$ 2 6 7 7

3. $\frac{3}{-}$ $\frac{6}{5}$ 7^b b $\frac{6}{5^b}$ 2 $\frac{3}{-}$ 6 $\frac{7}{3}$ $\frac{6}{4}$ 6

4. $\frac{6}{4}$ $\frac{7}{\#}$ $\frac{3}{2}$ 6 6 $\frac{3}{-}$ 6 7^b $-$ 6 5 $\frac{6}{\#}$

5. 6 $\frac{3}{-}$ $\frac{3}{2}$ 6 $\frac{6}{4}$ $\frac{7}{\#}$ 5 5 6 $\frac{3}{-}$

The image shows five staves of music in bass clef. Each staff contains a sequence of notes with Roman numerals and figured bass symbols above them. The first staff starts with a key signature of one sharp (F#) and a common time signature. The second staff has a common time signature. The third staff has a common time signature. The fourth staff has a 3/2 time signature. The fifth staff has a common time signature. The notation includes various chord symbols such as 6, 3, 6, 6, 5, 7, 7, 6/4, 7, 6, 3, 6, 6, 4/3, 5, 6/4, 3, 6, 3, 7, 7, 3, 4/3, 4/3, 4/3b, 4b, 4/3, 6b, 6, 6, 4, 6, 6, 6, 6, 6, 6, 6/5, 8, 5, 6, 5, 6b, 6, 4, 7, 3, 2, 6, 6, 6/4, 3, 6b, 4/2, 6, 6, 6, 7.

The indication of the modulation can proceed in the manner given in the first exercise, by which the letters denote the key, and the Roman numerals, as usual, the degrees upon which the respective chords are based.

SECTION II.

INCIDENTAL CHORD-FORMATIONS. TONES FOREIGN TO THE HARMONY.

CHAPTER XII.

Suspensions.

THE *simultaneous* progression of each part to the following chord, especially when, as in our previous examples, it proceeds without any *metrical* variety of movement, produces a certain formality and monotony in musical phrases.

A new mode of linking and intertwining chords, and hence an interesting variety of harmonic connection results when the parts do not progress simultaneously throughout; when one or more of them remain in their place, while others are already forming the materials of the next harmony.

The best and most important method of linking chords thus together takes place through the

SUSPENSION.

It is effected by the delay of the movement of a part, which is expected at a fixed time or even necessary, and that too in such a manner, that *that* voice which has to *descend* one degree in order to take its place in the following chord, shall still linger upon the tone of the *first* chord, while the others move to the *second*, and the former shall not pass to the harmonic tone until *later*.

In the following harmonic combination

195.



the Soprano during the entrance of the second chord can remain upon *c* and afterwards pass to *b*, as follows :

196.

Musical notation for example 196. It consists of two staves, Treble and Bass clef, in common time. The Treble staff shows a sequence of chords: a triad of C4, E4, G4; a triad of C4, E4, G4 with a note C5 (suspension) above the G4; and a triad of C4, E4, G4. The Bass staff shows a sequence of chords: a triad of C4, E4, G4; a triad of C4, E4, G4; and a triad of C4, E4, G4. The suspension in the Soprano part is indicated by a horizontal line above the note C5.

So by delaying the Tenor in example 195 a suspension can be formed :

197.

Musical notation for example 197. It consists of two staves, Treble and Bass clef, in common time. The Treble staff shows a sequence of chords: a triad of C4, E4, G4; a triad of C4, E4, G4 with a note C5 (suspension) above the G4; and a triad of C4, E4, G4. The Bass staff shows a sequence of chords: a triad of C4, E4, G4; a triad of C4, E4, G4; and a triad of C4, E4, G4. The suspension in the Tenor part is indicated by a horizontal line above the note C5.

The characteristic feature of suspensions is, that they *form a dissonance* with the harmony with which they appear, and that they thereby effect the harmonic connection, while through the expected resolution of the dissonance they render closer the necessary relations between two chords. In this respect they bear a resemblance to *Sevenths*, since like these as combining intervals they are subject to *preparation* as well as resolution.

To be sure, the dissonance in a suspension does not always consist in an interval's forming a dissonance with some one part: cases may occur, where the suspension as interval forms a dissonance with none of the other parts, but only through situation, position and progression the *character* of the suspension predominates, as in example 197, where the tone of the suspension forms a *Sixth-chord*, and where only the unusual appearance, as well as the whole position of the triad of the third degree, together with the progression of the Tenor, produces the character of a suspension.

The above examples furnish the necessary rules for the formation of suspensions :

A suspension can be formed where a part descends one degree, under the following conditions : it must

1. *be prepared and*
2. *be resolved.*

Thus *three* points will have to be considered in a suspension: its *preparation*, the *suspension itself* and its *position*, and its *resolution* (progression.)

Suspensions before the Octave of the root:

199.

C: V₇ I II I V₇ I V₇ I

before the Third:

C: IV I I V I V₇ IV I

before the Fifth seldom, only in certain positions:

C: I V F: I V₇ C: I V VI I F: V₇

As to suspensions of the fifth, attention may be called to remarks under example 197. Thus the first and third example will be wholly in the character of a suspension. When there is a Seventh in the chord, as in the second example, then the dissonant character of the suspension comes out at once.

That the Seventh can only seldom have a suspension follows from this, that in most cases the latter must be formed by the perfect octave, which of itself is only a doubled interval, but can never be in a dissonant position (a), unless as in the following example b. the octave be *diminished*.

200.

a. b.

In the first case the seventh will be always a *passing* one.

c. *The resolution.*

The *resolution* of the suspension, as was said before, takes place by the *descent of the same part one degree.*

Remark.—Irregular kinds of resolution will be exhibited later.

It is here further to be observed:

The resolution-tone (that which is delayed by a suspension) *must be contained in no other part; only the Bass or lowest part can take it without injuring the harmony.*

201.

In example *a.* the Tenor moves from *a* to *c*, which last is suspended in the Soprano by *d*; in example *c.* the Tenor takes *g*, which has the suspension *a* in the Alto. Both these cases of doubling are incorrect, especially because they are concerned with the *third* and *fifth* of the chord. In the example *d.* at NB. it is the *root* that is doubled. The effect in this case is better, particularly when consistency in the movement of parts requires it, as in the following phrase.

202.

Remark.—It may be further observed here, that the doubling of the root always presupposes a distance of one *Octave* at least, and that to double in the *unison* is incorrect, e. g.

only between Bass and Tenor or in the part lying next to the lowest the suspension may appear even in such close proximity.

The lowest part, usually the Bass, has however, as that which determines the chord, a counteracting influence against the dissonance of the suspension,

so that doubling is admissible, if it be founded on a good movement of parts, e. g.

203. 

The incorrect progression of the Soprano and Bass in the last example becomes clear, if we remove the suspension, as a mere delaying of the movement, by which *open octaves* result.

204. 

The same is the case with *progressions by fifths*, which are covered by the suspension :

205. 

Here, however, the same considerations will govern, as are usually taken into account in cases of *concealed fifths*, since position, situation, and progression will admit of such a part-movement, without the disagreeable effect of fifths being prominent.

We briefly condense these observations in the following rule :

Suspension does not remove parallel octaves and fifths. The following progression, therefore, will be erroneous :

206. 

parallel fifths of this kind, however, are not to be rejected unconditionally, provided the unpleasant succession be counterbalanced by the movement of the other parts, so as not to be too conspicuous. It is impossible to give positive directions on this point; to reject them invariably would be too restrictive.

Suspensions in the Bass, which generally occur before the third of the chord (or, which is the same thing, before the chords of the Sixth or of the Sixth-and-Fifth,) admit of *no doubling in the other parts*.

207. *not:*

Suspensions before the root and the fifth in the Bass seldom prove of use

208. *not:*

The figuring of suspensions in Thorough Bass writing is partially contained in the above examples.

If the suspension lie in one of the three upper parts, the interval reckoned from the Bass is given together with the resolution, e. g. $\frac{5-}{4\ 3}$, $\frac{9\ 8}{7\ 6}$; the other figures determine the chord where it is necessary, e. g. the chord of the Sixth $\frac{9\ 8}{6}$, the chord of the Sixth-and-Fourth $\frac{6-}{5\ 4}$ or $\frac{7\ 6}{4-}$.

If the suspension be in the under part, the *incidental* intervals of the other parts are also indicated by figures, e. g. $\frac{5-}{2-}$, or with the seventh-chord $\frac{5-}{4-}$ the lines that follow denote that the parts retain their tones while the suspension is being resolved.

A suspension in the Bass is also denoted by a cross-stroke over it, and the proper chord placed over the resolution-tone, which in respect to the latter is more distinct, e. g.

209.

In the following exercises the former method is adopted, as most in use.

Exercises.

210. 1. $\frac{5-}{43}$ 7 6 $\frac{6}{5}$ $\frac{76}{5-}$ $\frac{57}{43}$ 2 3 6 9 8

C: I V IV V₇ I II₇ V₇ I

2. $\frac{67}{4\#}$ 6 $\frac{5}{2}$ 9 8 7 $\frac{5-}{4\#}$

3. 3 $\frac{5}{2}$ 7 6 7 $\frac{6}{5}$ 6 $\frac{4}{3\#}$ 6 $\frac{6}{5}$ $\frac{7-}{43}$

4. $\frac{5}{4}$ 9 8 2 6 6 2 $\frac{6}{5}$ 6

5. 5 $\frac{6}{5}$ 9 8 $\frac{76}{43}$ $\frac{6}{5b}$

6. 5 6

7. $\frac{7}{3}$ $\frac{6}{4}$ 2 7 7 6 5 9 8 7 $\frac{6}{5}$ 6 $\frac{65}{44\#}$

8. 3 6 9 8 7 $\frac{6}{5}$ 6 2 6 6 $\frac{6}{4}$ $\frac{6}{5}$ 3 7

9. $\frac{76}{5-}$ 7 6- $\frac{4-}{32}$ 6 $\frac{5-}{43}$ 4 7 6 5 $\frac{6}{5}$ $\#$ 7

In working out these and the following exercises it will be expedient to divide the parts and write each upon a separate staff. This mode of writing

in score affords a better view of the movement of each individual part, beside being generally a useful exercise preparatory to reading from score.

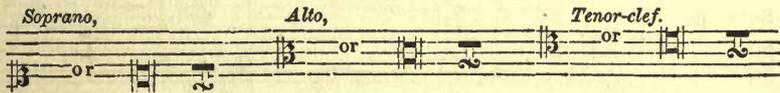
It is, however, necessary here to write the parts, which in pure part writing are always considered as vocal, in the clefs which have always been assigned to them, a knowledge of which is indispensable to every musician. Familiarity with these clefs may soon be acquired by attentive practice and comparison with those already known.

Remark. — A knowledge of the Alto and Tenor clefs is essentially necessary for understanding and reading scores, as many vocal and instrumental parts are written solely or partially in these clefs, and even the knowledge of the Soprano clef, which more rarely occurs, greatly facilitates reading in the case of various instruments, which have a particular pitch.

The clef used for the three upper parts, Soprano, Alto and Tenor, is called the *C-clef*.

For the lowest vocal part, Bass, the F-clef or Bass-clef, which has been employed hitherto, still holds good.

The position of the C-clef always indicates *c* of the third octave, and for the *Soprano* this *c* is placed on the *lowest* line, for the *Alto* on the *third*, and for the *Tenor* on the *fourth*, e. g.



The ordinary compass of the voices in these clefs stands thus :



Remark. — It is interesting to trace the origin of these different clefs from a very simple basis, the so-called *Tablature* (a staff of usually ten lines, on which the parts were all written with especial indication of *those* lines, upon which the three principal tones F C G were to stand,) but a further explanation would carry us here too far.

The easiest method of fixing these clefs in the mind might be, to observe carefully the position of the *C*-triad in the different voices, by which the intermediate and adjacent tones are easily found.

Thus the position of the *C*-triad in full, with the root doubled, will be :

In the Soprano: 

In the Alto: 

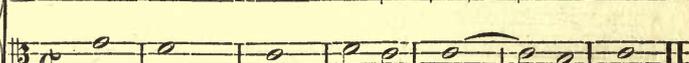
In the Tenor, best in the position of the chord of the sixth-and-fourth: 

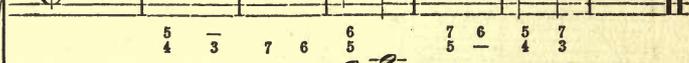
We annex here the first exercise of 210, written out in these clefs :

211.

SOPRANO. 

ALTO. 

TENOR. 

BASS. 

5 4 3 7 6 6 5 7 6 5 4 7

C: C G F G7 C d7 G7 C
I V IV V7 I II7 V7 I

To work out these examples with all due observance of the rules thus far given, requires an easy, somewhat free movement of the part in respect of position, since the necessity of a better distribution of the suspensions often demands a change in that distribution of the parts, which we have hitherto always endeavored to keep as uniform as possible.

Thus it will be clear when to use the *open* position of parts, which must again be exchanged for the *close* position, whenever necessity and expediency require it.

In thus shifting the positions of the parts, these rules must be observed :

The parts, in passing from one to another (differing) chord, must never move either by steps or skips, out of their proper place SIMULTANEOUSLY; only in single cases, where ONE and the SAME chord is transferred to another position.

Either part may leave its position, when one or more are sustained upon one tone.

The 8th exercise of 210, worked out as follows, will make this clearer.

212. NB.

SOPRANO.
ALTO.
TENOR.
BASS.

g — c — 7 a^o d F₇ B_b E_b B_b C₇ F₇
g: I — IV — 7 II^o₇ B_b:III V₇ I IV I F: V₇ I B_b:V₇

6 7 NB. 8 9 10 11 12

D₇ g c F₇ B_b c g c E_b a^o D₇ g
g: D₇ I IV B_b: V₇ I II g: I IV VI II^o₇ V₇ 7 I

Let the following serve to explain this :

The close position, in which this example begins, is in the fifth measure abandoned for the open ; this in turn continues till the close appears again in the eleventh measure.

This was effected by a freer movement of the Soprano and Tenor. The former in the fifth measure moves away from its position to the *Seventh* E_b (at NB.) a skip which may take place if the *root* is already there and remains fixed (as F here in the Bass;) so in the seventh measure it leaves its position by skipping to the fifth g , the rest of the chord *being sustained*, by which the suspension falls into a better place. Finally the close position is again reached by a free and better movement of the Tenor in the tenth measure.

Suspensions from below.

Suspensions from below are to be regarded as such only in a few single cases; most progressions of this sort have originated in the suspension from above hitherto treated, by a *contraction* (shortening) of the same, followed by an upward movement, e. g.

213.

The suspension from below may take place in the progression of the *leading tone*:

214.

and with many intervals, which *ascend* a half degree, especially with those altered chords, that contain augmented intervals by elevation, e. g.:

215.

It should be observed here that, as formerly, the resolving (harmonic) tone can stand *in no other part* but the Bass.

Remark. — The last of the above examples gives us the same combination of tones, which resulted above (p. 64) as the seventh-chord of the first degree in minor, and which was pronounced useless as a fundamental harmony (see p. 74). That, used as above, it is simply to be regarded as a suspension of the leading tone, needs no farther explanation.

Other suspensions, especially those that ascend a *whole* degree,

216. 

in some cases evince of themselves what is unnatural in their progression ; in others are pronounced by theory as not genuine or available in pure part-writing, however often they may find their place in practice. Should these improper suspensions be carried out in the manner above shown (213), incorrect progressions would appear as their base :

217. 

Suspensions in several Parts.

Suspensions may occur in several parts at once :

218. 

Also the chord of the Sixth-and-Fourth often appears as a double suspension, e. g. :

219. 

Freer movement of Parts in Resolving Suspensions.

In our previous examples the preparation, entrance and resolution of the suspension took place through *two* chords, since the parts not concerned remained stationary during the resolution. The same may also take place with *three* chords, by which the change of chord and the part-movement become yet richer and more varied.

This happens when, during the resolution of the suspension, one of the parts, generally the Bass, or several at once, move and form thereby a new harmony.

For instance by progression of the Bass :

220.

6 5 9 6 6 5 6 9 7 6 4 7

C: V₇ I — II₇ V I I IV II₇ I a: VII^o₇ I

By progression of several parts :

221.

a. b. c.

7 3 7 6 9 6 5 4 8 4 3

C: I II V₇ VI I IV VII^o VI I V₇ a: V₇ I

In all these examples the resolution of the suspension follows regularly during the progression of the other parts to a new harmony, of which the resolution-tone forms a part.

Remark. — By way of illustration of the view expressed in chapter ninth concerning chords of the Ninth, it may be remarked here, that many passages, in which the Ninth occurs, and which are recognized by many as Ninth-chords, may be explained in the above manner, as in example 221 b., where the cadence-progression of the roots E-b is easily and far more simply represented as a progression of a *suspended Ninth* by the use of three chords, and leads to the same result, as is likewise seen in all the following examples :

Ninth suspension
with two chords : with three chords : better :

222.

Concerning the unprepared Ninth we shall speak later under Organ point.

As supplement to what was said in chapter ninth it may be further added, that as an argument against independent ninth-chords may be reckoned also the impossibility of transposing them together with the root in such a way that the latter shall be brought into immediate proximity to the Ninth, as may always be done in the case of seventh-chords, e. g.

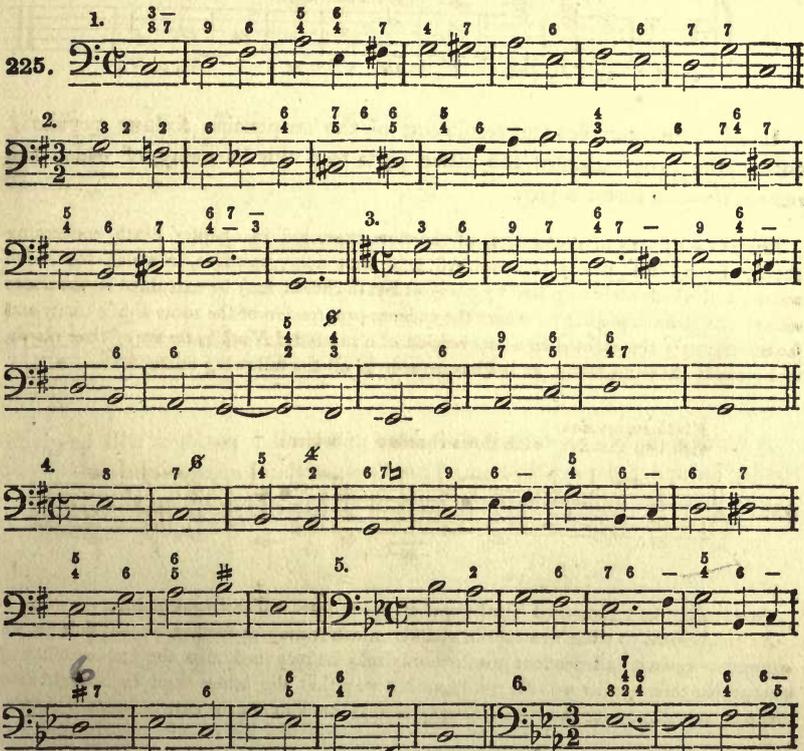
223. 

So four chords may be used with a suspension, provided it stands before a harmonic tone, which is not contained in the other parts, e. g.

224. 

without suspension:

Exercises.

225. 

1. $\frac{3}{8} \frac{7}{9} \frac{6}{5} \frac{4}{7} \frac{7}{4} \frac{6}{7} \frac{6}{6} \frac{7}{7}$

2. $\frac{3}{2} \frac{2}{6} - \frac{4}{6} \frac{7}{5} \frac{6}{5} \frac{5}{4} \frac{6}{-} \frac{4}{3} \frac{6}{6} \frac{7}{4} \frac{7}{7}$

3. $\frac{5}{4} \frac{6}{6} \frac{7}{7} \frac{6}{4} \frac{7}{-} \frac{3}{3} \frac{6}{6} \frac{9}{9} \frac{7}{7} \frac{6}{4} \frac{7}{-} \frac{9}{9} \frac{6}{4} -$

4. $\frac{5}{4} \frac{6}{6} \frac{7}{7} \frac{5}{4} \frac{4}{2} \frac{6}{7} \frac{9}{9} \frac{6}{-} \frac{5}{4} \frac{6}{-} \frac{6}{6} \frac{7}{7}$

5. $\frac{5}{4} \frac{6}{6} \frac{6}{5} \frac{7}{7} \frac{5}{4} \frac{6}{7} \frac{6}{-} \frac{5}{4} \frac{6}{-}$

6. $\frac{6}{7} \frac{6}{5} \frac{6}{4} \frac{7}{7} \frac{7}{8} \frac{6}{5} \frac{6}{4} \frac{6}{-} \frac{5}{4} \frac{6}{-}$

Figured bass notation for the four staves:

- Staff 1: 9 6 7 $\frac{7}{4} \frac{3}{3}$ 2 7 3 6 7 $\frac{5}{4}$ 6 2 $\frac{6}{4}$ 7
- Staff 2: 6 $\frac{6}{5}$ $\frac{5}{4}$ 7 7. 8 6 $\frac{5}{4}$ $\frac{7}{4}$ 2
- Staff 3: $\frac{7}{4}$ $\frac{3}{3}$ 9 3 2 $\frac{6}{5}$ - 6 - $\frac{5}{4}$ 3 8. 3 6 3
- Staff 4: $\frac{7}{4}$ $\frac{6}{4}$ $\frac{7}{4}$ - $\frac{6}{4}$ $\frac{5}{4}$ 3 2 6 $\frac{7}{4}$ $\frac{3}{3}$ 9 6 7 9 6 $\frac{5}{4}$ $\frac{3}{3}$ \sharp

Between a suspension and its resolution other tones may be inserted in the same part.

These may be :

1. Tones belonging to the chord, e. g.

226.

2. Tones foreign to the harmony, appoggiaturas, e. g.

227.

A more complete explanation of these and similar passages will be given farther on under the description of *passing-notes* and *appoggiaturas*.

Passages also occur, where the suspension has no resolution at all, e. g.

usually thus:

228.

They have resulted by elision from the following phrases :

229.  Musical notation for exercise 229. It consists of two staves. The upper staff has a treble clef and contains a melodic line with a dotted quarter note followed by an eighth note, then a quarter note, and finally a half note. The lower staff has a bass clef and contains a harmonic accompaniment of chords. A double bar line is present. After the double bar line, the word "or:" is written above the staff. The melodic line continues with a dotted quarter note followed by an eighth note, then a quarter note, and finally a half note. The harmonic accompaniment continues with chords.

Anticipation.

The anticipation of a tone, which is of less frequent use than the suspension, is the reverse of this, and consists in one or more parts allowing tones of the chord next succeeding to be heard *sooner* than others, and before the *metrical structure* would lead them to be expected.

Where notes are of long duration, and in slow movements, this method of progression seldom or never occurs, since the harshness of the dissonances that appear would amount to unintelligibility; it is generally only in shorter divisions of the measure that anticipation takes place, e. g.

230.  Musical notation for exercise 230. It consists of two staves. The upper staff has a treble clef and contains a melodic line with a dotted quarter note followed by an eighth note, then a quarter note, and finally a half note. The lower staff has a bass clef and contains a harmonic accompaniment of chords. Above the first measure, the text "Anticipation in the Bass:" is written. Above the second measure, the text "in the Soprano:" is written. Above the third measure, the text "in several parts:" is written. A double bar line is present. After the double bar line, the word "or:" is written above the staff. The melodic line continues with a dotted quarter note followed by an eighth note, then a quarter note, and finally a half note. The harmonic accompaniment continues with chords.

The resemblance of this part-movement in its metrical form to that known in the general musical system as *syncopation*, is unmistakable, only that the latter is formed or acquires rhythmical value, not by the anticipation of chords, but rather by their *afterstriking*.

Here also the movement of the parts may under circumstances be freer, e. g. another harmonic tone may be anticipated beside that which was intended for the entrance of the chord, as in the familiar closing phrase:

231.  Musical notation for exercise 231. It consists of two staves. The upper staff has a treble clef and contains a melodic line with a dotted quarter note followed by an eighth note, then a quarter note, and finally a half note. The lower staff has a bass clef and contains a harmonic accompaniment of chords. Above the first measure, an asterisk (*) is written. Above the second measure, the word "or:" is written. Above the third measure, an asterisk (*) is written. A double bar line is present. After the double bar line, the melodic line continues with a dotted quarter note followed by an eighth note, then a quarter note, and finally a half note. The harmonic accompaniment continues with chords.

As the reverse of anticipation may further be mentioned the *afterstriking* of harmonic tones, which so far resembles suspensions, that here also preparation and resolution take place, but differs again essentially, since its character

impresses itself more upon the metrical and rhythmical movement, consequently it always appears also in a longer series, whereas suspensions, whether singly or in greater numbers, appear under totally different conditions.

A series of such delayed tones would be the following in the Bass:

Allegro.

232.

Under this head also would be classed the unison passage in Beethoven's Overture to Leonora (No. 3):

233.

CHAPTER XIII.

Organ-point. Sustained parts.

A PECULIAR variety of harmonies and mingling of the same is produced by sustaining one, and even more parts, upon one tone, and by the chords thus incidentally formed.

We often find, especially in the Bass, as well at the beginning of a piece as in the middle and at the close, where a cadence should appear, a long-continued tone, while the other parts, apparently without any relation to it, continue their harmonic movement.

When this tone lies in the Bass, it is called

ORGAN-POINT;

when such long-continued tones occur in the other parts, we call them:

SUSTAINED PARTS OR SUSTAINED TONES.

Remark. — Many give to these last also the name *Organ-point*, but not rightly.

The tones adapted for sustaining are the *Tonic* or *Dominant*; both at once also occur.

Remark. — Attempts, which in later times have been made with the third of the triad by many composers, sound unnatural and forced.

The harmonic connection as also the progression of the remaining parts during the organ-point still takes place according to the established rules, the lowest of them acting as guide to the harmony, and in general without regard to the sustained tone.

A few examples follow first, before discussing in detail the mode of treating organ-point.

a. *Organ-point on the Tonic:*

234.

The musical notation shows a two-staff system in C major, 4/4 time. The bass staff (lower staff) contains a single, sustained note (C) in the bass clef, marked with a long horizontal line underneath. The treble staff (upper staff) contains a melodic line with several chords. Asterisks (*) are placed above the first, third, and fifth measures of the treble staff, indicating the organ-point. The first measure has a C major triad (C-E-G), the second has a C major triad with a descending bass line (C-E-G-F), the third has a C major triad with a descending bass line (C-E-G-F), the fourth has a C major triad with a descending bass line (C-E-G-F), the fifth has a C major triad with a descending bass line (C-E-G-F), and the sixth has a C major triad with a descending bass line (C-E-G-F). The piece ends with a double bar line.

b. on the Dominant:

c. or:

d. on both at once:

In these examples the chords to which the Bass-tone does not belong harmonically, are marked with a cross.

The following remarks may serve for the treatment of organ-point:

1. *The entrance of the organ-point must be at a time rhythmically marked,*
2. *By a chord, to which the Bass-tone harmonically belongs,*
3. *The last chord of the organ-point must also harmonize with the same.*

The first takes place at the beginning or end of a period or section thereof and upon the *accent*; the second and third usually through the root of a triad, as in example 234 a. c. d., or as in b. through the chord of the Sixth-and-Fourth.

It is further to be observed, that the chords *foreign* to the Bass-tone should not follow one another too frequently, but often alternate with chords to which the organ-point belongs harmonically. This is necessary in order to avoid digressions, which would destroy the character of the organ-point, which lies in the close union of different chord-connections.

Thus the following organ-point would be faulty in this respect :

235.

The part lying next to the Bass, in four-part composition the Tenor, becomes in the case of organ-point the foundation of the harmonic movement. Hence all the necessary progressions will depend upon this voice, even though the organ-point might accidentally belong to the harmony. Thus in example 234 *a.* the progression of the B \flat in the Alto (in the first measure) is determined by the movement of the other parts, and not by the fact that it is the Seventh of the Bass.

If the organ-point be upon the Dominant, as is often the case at the close, there can be no plagal cadence formed upon it, as follows from the third of the rules above cited. e. g.

236.

The plagal cadence may however be used, if the organ-point be upon the Tonic :

237.

The end of the organ-point is to be heeded with full as much care as the entrance. In the above examples this always takes place with a cadence. In this case there is no difficulty, except in passages like that in No. 236. The organ-point, however, may pass sooner into the harmonic movement, and then the third rule must be carefully observed. e. g.

238.

To break off in this manner would not be good :

239.

Sustained Parts.

Sustained upper and middle parts upon one tone after the manner of the above-described organ-point are much less frequent than the latter, and require greater caution in their treatment.

Sustained tones of this sort suit the character of these parts only when the chords not belonging to them appear very seldom, since these parts have not the power to act as a counterpoise against foreign chords, this being the peculiar property of the Bass or the lowest part as that which determines the harmony.

Thus the organ-point in example 234 *a.*, when transferred to the highest part, will sound very unpleasantly in the last measures :

240.

whereas the following, where the Dominant is the sustained tone, is better, for the reason that the last chords of the example belong to the same :

241.

As an example of effective use of sustained parts and continued tones, and for the treatment of the same, may be cited a passage in the "Gloria" of Cherubini's Mass in C major, where the violins hold a long A♭, while the chorus and accompanying instruments below it carry on their peculiar melodic and harmonic progressions; also the D of the violins in the introduction to the Overture "Calm sea and happy voyage" by Mendelssohn-Bartholdy. In both passages chords will seldom be found, to which the sustained tone does not harmonically belong.

Here also may be classed the Trio of the Scherzo of Beethoven's A-major Symphony, which is throughout based upon the A, that appears sometimes as a sustained tone in the upper and middle parts, sometimes as an organ-point in the lowest, and serves as a foundation through the entire piece.

Sustained tones in the middle parts are to be treated with the same consideration as in the highest part. In instrumental compositions they are always proportionately reinforced: in four-part harmony they occur but seldom and not at too great a length. e. g.

242.

Remark. — As supplementary to what has been said of chords of the Ninth, may be added the following.

In the above example *b.* we find, if the sustained tone be reckoned with it, a complete Ninth-chord in inverted position with a regular resolution. It has been already said of Ninth-chords that their transpositions cannot be so used that the root and ninth shall be brought into close proximity, as with the Seventh. That they may occur simultaneously at a greater distance, as above, affords no reason for regarding them as independent chords, when they only occur in the above relations, namely, with a sustained tone, whose character it is to support harmonies which are foreign to itself, as e. g. is the case with the following Ninth, which in reality forms no chord of the Ninth.

243.

When the harmonic progression is to be indicated by figures over the organ-point, they must always have reference to the tone sustained in the Bass, so that in many cases the usual figuring of chords becomes changed.

Thus the organ-point in No. 234 *b.* might be figured in this manner:

244. 

This mode of figuring, being difficult to see readily and at the same time imperfect, is only employed for special purposes, so that in scores, where figuring is used, we often find with the organ-point the words "*tasto solo*," indicating that in the usual organ accompaniment only the organ-point itself is to be given.

CHAPTER XIV.

Passing notes. Appoggiaturas.

UNDER tones foreign to the harmony are especially to be classed *passing-notes* and *appoggiaturas*.

The former result from filling out greater or smaller harmonic intervals with the intermediate tones, e. g.

245. 

The notes marked \times are *passing*, those marked o are *secondary harmonic tones*, that is, so far as we regard the first note as belonging to the triad of *C* or *A*. e. g.

246.

The passing notes under *a.* in example 245 are called *diatonic*, those under *b.* *chromatic*.

Passing notes move from one harmonic note to another; hence they appear not with the entrance of the chord, but after it, in subdivided parts of the measure, and can only be used by successive degrees.

Appoggiaturas on the other hand, are those tones foreign to the harmony which either appear, like a suspension, with the entrance of the harmony (that is, in this sense, on the accented part of the measure,) and be close to the harmonic note (247 *a.*), or, like passing notes on the unaccented part of the measure, serve as a melodic ornament to two notes of the same pitch (247 *b.*)

247.

An appoggiatura, therefore, may enter by SKIPPING, but must be next to the harmonic note, as is seen in the examples in 247.

It is further to be seen from the above examples, that appoggiaturas can be formed as well with the note immediately below the harmonic note, as with that above.

The appoggiatura below the harmonic note, especially if struck upon the accent, has this peculiarity, that it gladly forms a *minor second* to the principal note, by which chromatic tones are produced, as may be seen from 247, and phrases like the following could not be written:

248.

This is especially true of appoggiaturas introduced by skips.

The case is different if they follow one another by degrees, by which they at once assume the character of passing-notes. Thus the following succession of appoggiaturas *a.* need not of necessity be written as in *b.*



Appoggiaturas below, not falling upon the accent, need only at times the minor second. Thus example 250 *a.* need not necessarily be written as in *b.*, while *c.* is not as good as *d.*



This point does not admit of fixed rules, nor are they indeed essential, inasmuch as every musical ear will surely determine what is right.

Remark. — The third of the triad suffers the appoggiatura to be a whole degree, sooner than the fifth or octave. Since in the last case the appoggiatura may appear likewise as the seventh, decision must be made in accordance with what follows.

Appoggiaturas *above* the harmonic note, whether they enter free (by skips) or as in 250, may form *major* and *minor Seconds* to the tone of the chord, because they are always formed diatonically, and are therefore regulated according to the key or modulation.



We often find figures where appoggiaturas above and below the chord-note are used alternately, e. g.

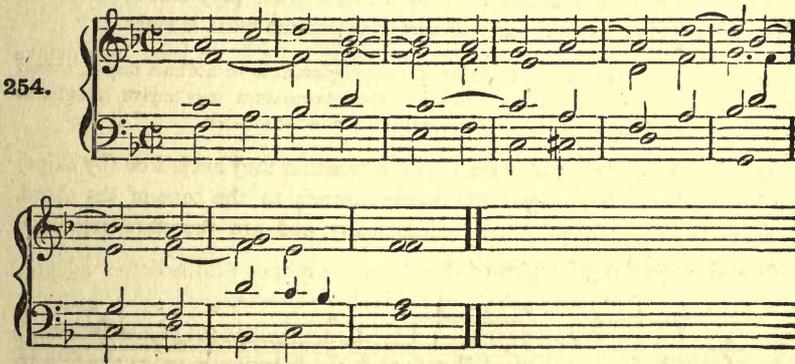


This is the basis of the following embellishment, which often occurs :



Passing notes and appoggiaturas may occur in all the parts. If it be in *one* only by way of preference, this will contrast strongly with the rest, and acquire an *obligato* character, while they serve as an accompaniment. If this is not the case, then all the parts can be alternately made prominent by such secondary notes, and gain thereby increased importance. In general where the position and progression of a part is adapted for the introduction of such notes, it is thereby made susceptible of greater melodic significance; but even here, unless the proper proportion be hit upon, a crowded and confused effect may be the result.

The following simple harmonic phrase



by the use of these secondary tones might be written thus :



A musical score for piano, consisting of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature has one flat (B-flat). The melody in the upper staff consists of eighth and quarter notes, with several notes marked with an asterisk (*). The bass line consists of quarter and eighth notes, also with some notes marked with an asterisk (*). The piece concludes with a double bar line.

The passing notes and appoggiaturas are here marked by crosses ×.

It may be seen in the above example that a phrase can easily suffer from such an accumulation of tones foreign to the harmony, if it is executed in quick Tempo, whereas a slow movement is better adapted to this style of writing.

As has been already remarked in the case of suspensions, care must be taken also in the use of appoggiaturas, *that no part shall contain the harmonic tone which in another is introduced by an appoggiatura*, e. g.:

256.

A musical example labeled 256. It shows a single staff in treble clef. The melody consists of a series of eighth notes: G4, A4, B4, C5. The word "or:" is written above the C5 note. Below the staff, there are two chords: a G4 chord (G-B-D) and a C5 chord (C-E-G). The C5 note in the melody is a dissonance with the G4 chord.

This can only happen when the harmonic tone is at least one octave removed from the foreign note, e. g.:

257.

A musical example labeled 257. It shows a single staff in treble clef. The melody consists of a series of eighth notes: G4, A4, B4, C5. The word "or:" is written above the C5 note. Below the staff, there are two chords: a G4 chord (G-B-D) and a C5 chord (C-E-G). The C5 note in the melody is a dissonance with the G4 chord.

According to the principles of doubling, the root or fifth is better adapted than the third of the original chord for such a purpose.

In case of a quicker movement, however, and longer continuance of such figures formed of appoggiaturas, there are other considerations, as the following phrase will show, which indeed cannot be conceived of as a four-part vocal passage:

258.

A musical example labeled 258. It shows a single staff in treble clef. The melody is a continuous line of eighth and quarter notes, featuring several appoggiaturas and passing notes. The bass line consists of chords, some of which are marked with a sharp sign (#). The piece concludes with a double bar line.

With regular passing notes the same considerations hold good as to proximity to harmonic tones, and figures like 259 a. b. are not as pure as in c. d. e.

259. 

Here also more rapid figures sooner admit of this proximity, e. g.:

260. 

Erroneous progressions with Passing Notes and Appoggiaturas.

As it is the office of passing notes to fill out the interval where a skip is made in the harmonic progression, care must be taken in changing the harmony, that no false progressions arise, as in the following examples where concealed fifths become *open* :

261. 

Open octaves, formed with passing tones, may not occur, as the first of them will be equally harmonic with the second :

262. 

On the contrary, in the following cases the passing notes do not cover the open octaves, and are therefore faulty :

263. 

Remark. — In instrumental composition, where strengthening and doubling is intended such octaves might be used.

Likewise the entrance or progression of an *appoggiatura* by direct motion is to be pronounced faulty, if it proceed as follows :

264.

The last example is better, for the reason that the octave progression is covered.

Passing Notes and Appoggiaturas in several parts at once.

A direct motion of thirds and sixths is best adapted for passing notes in several parts at once, e. g. :

265.

The free movement of parts with the aid of passing-notes may produce also parallel seconds, fourths, fifths, sevenths of all kinds; these require, however, great care, and on account of harshness are admissible only in *single* cases and under very favorable positions.

Progressions of fourths are good when another part takes the third below :

266.

Single fifth-progressions, formed by passing-notes, are found sometimes in good compositions, which, however, affords no ground for recommending

them in general as faultless (see remarks upon consecutive fifths on p. 27 and elsewhere.)

In like manner the harshness of successive sevenths is alleviated only by favorable position, good progression of all the parts, and in general by Tempo, movement, etc.

In *contrary motion* the varied intervals of passing notes often give the movement a new, peculiar coloring, and add greatly to the independence of parts, only they should not be too crowded or appear in too many parts at once.

267.

Here also it will be found that those passing notes, which with others, outside of the simple fundamental harmonic structure, form as it were an inner new (passing) harmonic movement, are more natural and smoother than those whose combination cannot be shown to be harmonic.

The value of such movements can only be judged of with reference to their character and Tempo.

In regular diatonic progressions several parts at once may have passing notes. e. g.:

268.

The main point in all such passages is, that at the change of harmony which in the last example occurs at the half-bars, the parts shall be so disposed as to admit of a *regular* formation of their progression.

Appoggiaturas can occur in differen' parts :

a. in *two* parts :

in direct motion:

269. 

in contrary motion:

270. 

b. *in three parts:*

271. 

c. *in four parts:*

272. 

Remark. — Most of the above examples can also pass for harmonic progressions upon an organ-point.

It appears from these examples that for appoggiaturas also, in a direct movement of two parts, progressions of thirds and sixths are the most natural, while parallel seconds, fourths, fifths and sevenths always have a very harsh effect. Thus no one could easily pronounce as good, appoggiaturas like the following:

273. 

Appoggiaturas may also be of greater length than the harmonic note that immediately follows them. e. g.

274. 

As regards composition, the importance of the matters explained in chapters twelve to fourteen inclusive is sufficiently great for subjecting them to a careful examination, as a thorough knowledge of them aids essentially in understanding the inward harmonic structure of a composition. — It yet remains to speak of their relation to pure part-writing, the object of our next study.

As on page 24 we spoke but generally of the term "pure part-writing," it here becomes necessary to limit the question more closely and present it somewhat thus :

What application of these materials for composition is allowed by our next object, practice in pure part-writing ?

It is undeniable that these materials especially adapt themselves to the perfection and adornment of the parts.

If, however, our immediate concern be with the recognition and working out of simple harmonic formations, then indeed whatever is adapted for the perfection of the parts may properly be used, but all else, serving them merely for ornament, must be put aside ; in brief, a distinction made between the essential and non-essential.

With the non-essential must invariably be classed first of all :

Whatever is affected in harmony generally, so far as there lies at the root of it no inward necessity ; unnatural introduction of harmonies little used.

These readily occasion superfluity, bombastic overloading of the piece, and rather give evidence of a sickly or mentally weak condition, than of originality and a fresh, free, strong and steady action ; again :

irregular employment of suspensions ; the use of sustained parts, of anticipated and delayed tones ; but especially :

appoggiaturas abruptly used and the figures formed from them, in short, whatever is inconsistent with simple, good four-part song.

Vocal composition being generally accepted as the *basis* of all music, much will naturally be excluded from it which is proper in instrumental works.

Although for practice in the use of harmonies and for the study of good and pure part-movement, the writing of chorals or simple movements in choral style is suggested as most serviceable, yet even this will not exclude the use of those materials, so far as they serve not only as ornamental, but also as *perfecting* the movement of parts.

Herewith is particularly to be reckoned the use of suspensions, regular passing notes and appoggiaturas.

From what has been said may now be estimated the strictness of pure part-writing at the commencement of the study of harmony and in later contrapuntal work, which prohibits much as inexpedient, unessential and diverting from the main point, that in practice may readily be used at proper times.

A complete understanding of all the subjects hitherto treated will be greatly assisted by the thorough study of good compositions: for individual experiment opportunity will be afforded in chapter nineteen in the third section of this book, in which we shall recur to these topics.

CHAPTER XV.

Passing Chords.

PASSING CHORDS are those which like passing notes in several parts appear in *smaller subdivisions* of the measure as real chord-formations, but whose entrance and treatment deviate at times from the general rules of chord-connections.

One species of these has been already seen in those passing notes and appoggiaturas in three parts, which assume the form of a chord, e. g. in Nos. 271 and 272. So in one sense most chords formed upon an organ point may be called passing.

There are, however, other cases of this sort, which we shall here explain.

As, in the main, passing notes and appoggiaturas rest chiefly upon rhythmic relations, it becomes necessary also, for the explanation of passing chords, to glance at the different divisions of time.

It is known that in simple *even kinds of time* the natural accent falls upon the first part of the measure, while the second has less weight.

Now if the harmonic progression be simply based upon the two divisions of the measure, so the harmonies also, which fall upon the accented part (thesis), must be regarded as the most important and as the point always to which the chords of the second part are directed:

275.

In this sense the chords in the second half of the measure may be called passing chords, although moving thus uniformly their character does not stand out so prominently.

That this has been so understood in theory, though seldom plainly expressed, is proved by the fact that greater care at their entrance has always been bestowed upon the chords on the thesis, and much that was inadmissible allowed to those on the arsis.

The character of passing chords, however, appears more distinctly in harmonies which are assigned to the lesser divisions of the measure; as in the following examples:

276.

c.

277.

The peculiar appearance of the chord of the Sixth-and-Fourth in example 276 a. and c., as also of the Seventh-chord in c. is to be explained only as a

movement of all the parts by degrees in the character of passing notes to the position aimed at (the chord on the thesis of the following measure.)

These parts may appear still better in their character as passing, if one part be sustained, e. g. the Bass 277 *a.*, or the upper parts *b.* (see above 277.)

By the use of both methods arose the part-movement in 276 *a.*

If this condition (the movement of parts by degrees) be fulfilled, then all chords may enter free, and find explanation in the chord which terminates.

278.

Remark. — The free treatment of the seventh before mentioned finds its warrant also in this explanation of passing chords (see N. B.)

In the simple *uneven* kinds of measure the accent falls likewise upon the first part, while there are *two* parts of less weight. Passing chords will appear thus :

279.

Smaller divisions of the measure may also contain passing chords, examples for which are not necessary after what has been said, neither for the compound kinds of measure.

Here also the study of good compositions will serve to illustrate and assist.

For individual exercise the following remarks may be in place.

All chords indicated as passing will either progress according to the known rules of harmonic connection or deviate therefrom. In the former case, the most frequent, no further remark is needed ; in the latter it will depend on a flowing, melodious movement of the parts, as well independently consid-

ered, as in relation to one another, whether formations of this kind are to be considered correct. It can only be said in general, that *here also the movement of the parts by degrees will determine the character of the passing chords*, and that all such passages must be estimated with reference to the rhythm, Tempo and character of the piece.

CHAPTER XVI.

Means of Modulation.

THE term *modulation* has already been explained in chap. eleven.

Having there treated of the proper method of determining all modulations, we shall now discuss the *principal means* of producing them.

The art of modulation consists in discovering such harmonies as stand in relation to two or more keys, that through them we may pass from one key into another.

Any modulation can be effected in different ways, and will serve various purposes. It may be

first: sudden in appearing, of short duration — and passing, or

second: with longer preparation, seeking the new key as an end and acting longer as a basis.

In the former case it will employ the simplest means, be decisive, but leave the new key speedily, and of itself even have no determined validity: in the latter, it is usually through various means prepared and carried out by degrees, seeks to impress the new key upon the ear, and itself leads to a finite conclusion. Thus in the following example

280.

C: F: V₇ G: V₇ a: V₇ C: I

the modulation is passing, changing often, without essentially leaving the main key *C* major.

This kind of modulation is only adapted to the keys nearest allied, and though others more remote may be reached by special and absolute methods, their development must be guided by perfectly natural and organic connections, or they will appear unintelligible.

In the next example, however, the more remote key becomes the end, which is gradually reached; the original key is wholly abandoned, and the new takes its place:

281.

C: I b; VII° 7, Bb: I f: V 7, Eb: V 7

This example shows clearly how the extended modulation, having the new key as its end, makes use of the passing modulation in order to reach it; the rather, as it was not the purpose here to pass quickly into *E_b* major.

Unless these short phrases are employed as interludes between two pieces of different keys, or as exercises, their use in composition must be in a special manner, as upon this very formation of modulations rests in part that also of periods and their connections. This is, however, an important branch of the study of form, and has to do with the order of modulations in a composition, consequently is foreign to our present purpose.

Remark. — An explanation of this may be found in the author's work: "The principles of musical forms and their analysis."

At present we take as exercises the formation of such modulations, in order by this means also to promote skill in the use of harmonies and their proper connection.

In discovering the means of modulation, we pay no regard at present to the kind of modulation, as they may serve for both kinds indicated above.

The first and simplest means will be itself

THE TONIC TRIAD OF THE NEW KEY.

If this triad, however, already forms a part of the first key, the intended modulation will only be definitely determined by what follows, particularly if it be the dominant-harmony of the new key. Thus in the following

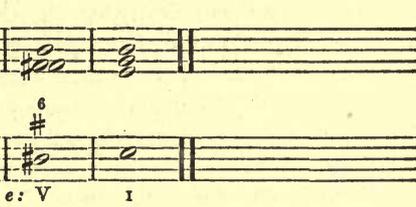
example in *a.* there will be no modulation perceptible, while in *b.* first the third harmony makes the key of G-major to be distinctly heard :

282. 

In the case of remote keys, indeed, the effect of the *minor triad* as the tonic may be more decided, yet this also will be followed by the dominant-harmony for the sake of clearness (in *a.*); but the *major triad* is more readily received as a *Dominant* (*b.*).

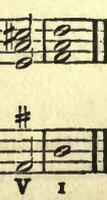
283. 

C: I f: I V₇ I C: I III e: I V₇ I

b. 

C: I a: V I C: I e: V I

Though the *tonic* triad used as above for modulation be so unsatisfactory, yet one position of it, the chord of the Sixth-and-Fourth, has the property of rendering a modulation thoroughly decisive. For as this readily forms a part of the closing cadence (see pp. 49 and 53,) with the same effect it produces also a sense of modulation, provided it be not used like a passing chord, but enter on the thesis. But also in this case the dominant naturally follows, the modulation not being complete without it.

284. 

C: I G: I V I C: a: I V₇ I C: d: I V I

On the arsis it will not indicate the key so decisively.

285.

Figured bass notation: 6 4 7b 6 4 # 6 4 #

All the above examples, however, point to a still more effective means of modulation; this is the

DOMINANT HARMONY.

The triad as well as the seventh-chord of the dominant appears as the most natural and best means for modulation, since by it (particularly as regards the dominant-seventh harmony) the key is most unmistakeably fixed.

The modulation through the Seventh-chord of the dominant may take place without any intermediate chord in the following manner.

According to the principle that *that* harmonic connection is most intelligible of all, which is effected through *similar* or sustained tones (preparation,) we may modulate from the tonic major triad through the dominant Seventh chord directly into all the other keys, except those of the minor and major third and the augmented fourth. From C major then we may pass to all other keys, except *E flat*, *E* and *F sharp* (whether major or minor, need not be determined at present) in the following manner:

286.

From C to d: C — F: C — G: C — a:

C — B: C — Db: or: C — Ab:

C — Bb:

In all these examples the similar tones, connected by a tie, effect the transition to the dominant of the next key, thus from C major to d minor the tones *g* and *e*, which become the Seventh and Fifth of the dominant-harmony, etc.

Remark. — We need only hint that these modulations are attained also through other positions of the chords. e. g.:

287. *C — d: or:*

If we wish to modulate in the same manner into the three keys not found above, this may be done by the insertion of a chord (a triad is simplest) which supplies the desired connection. e. g.

288. *from C to Eb: C — E: C — F#:*

From *minor* the modulation will admit of these forms:

289. *From a to b: a — d: a — e: a — F:*

a — G: a — Bb.

Into the remaining keys C, D \flat , E \flat , F \sharp and A \flat through a connecting chord:

290. *From a to C: a — Db: a — Eb:*

a — F#: a — Ab:

It is understood that this method of modulating is merely adduced as the *simplest principle*, and that a modulation need not invariably proceed in this manner; also that as simple harmonic connections can be effected without a *sustained tone*, the same will be the case with modulations, as e. g. the following may take place *without* an intervening chord:

291. *From C to Eb: C — e: a — C.*

Still for the connection of harmonies, and of keys especially, it will always be greatly beneficial to become thoroughly familiar with that principle, and for this purpose to write out modulations from all the keys, bringing the chords at the same time into the most varied positions, and to illustrate these connections by playing them on the Pianoforte.

This mechanical practice will greatly promote facility in the use of all the means of composition.—

There is another chord which shares with that of the dominant-seventh this aptness for modulation. This is the

DIMINISHED SEVENTH-CHORD.

This chord, which in most cases takes the place of the Dominant-harmony, will often prove better adapted for modulation than the latter, since its appearance is less harsh, especially in cases where seventh and root would have to enter simultaneously without preparation.

The following examples will show the use of this chord.

292. *From C to Bb: C — B: C — d: a — e:*

This chord, beside the above application, exhibits still further capability from its *enharmonic* nature.

The following chord, precisely similar in sound, but differently written :

293.

will belong to *four* different keys, namely : in the first form, *f* minor, in the second *d* minor, in the third *b* minor, in the fourth *ab* minor.

Hence a fourfold modulation becomes possible :

294. *From C to f: C — d. C — b: C — ab*

Now as all the diminished Seventh-chords can appear in the following three positions, as can be most distinctly seen on the Pianoforte :



each of which, however, may by enharmonic change belong to *four* keys, we thus have modulations for all the *twelve* keys in minor, to which in many cases may be added the twelve in major; as this chord may often be used in major in place of the dominant-harmony.

As far as the intimate connection of all the keys is concerned, and the variety of harmonic connection, it will here also be very useful to write out diligently this method of modulation.

Although in composition itself this kind of modulation proves useful in many ways, yet it should be at the same time observed, that it ought not to be employed too often, because with its facility of application it loses in artistic value.

Of similar use, that is by enharmonic change, though not in so extended a manner, is

THE CHORD OF THE AUGMENTED SIXTH-AND-FIFTH.

Its similarity in sound to the dominant-seventh chord :



renders it well adapted, in conjunction with the latter, for modulating into certain keys through an enharmonic change. e. g.

297.

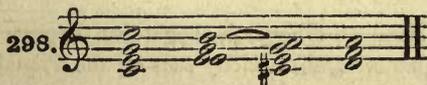
From C to b: Eb - d:

C: V₇ b: II°₇ I V Eb: V₇ d: II°₇ I V I

Though we have been seeking above the means of passing quickly from one key to another, yet, as it is not always the object to effect a modulation quickly and decisively, we may to acquire readiness extend our exercises and arrange them thus :

From one key to the other through the triads of different degrees :

From C to d through the triad of the third degree :



From *C* to *d* through the triad

299. *of the fourth degree:* *of the fifth degree:* *of the sixth degree:*

of the seventh degree:

From *C* major to *E* through the triad

300. *of the second degree:* *of the fourth degree:* *of the fifth degree:*

of the sixth degree: *of the seventh degree:*

These hints may suffice, in order to learn to form other modulations on the same principles.

Extension of the Modulation and its completion through the Cadence.

The above-described process of passing from one key into another, was based upon the simplest and most natural means.

If we wish to extend further a digression into a new key, the above means indeed will serve this purpose likewise, only we must not apply them so abruptly and directly, but make use of the passing modulation mentioned before, and introduce the new key only gradually. The use of the cadence-formulas, however, will best determine the key we arrive at.

For this object the following kind of exercises may be employed. e. g.

Modulate from *C* major through *d* minor, *a* minor, *G* major to *e* minor.

This would be performed somewhat thus :

301.

C. *I d: vii^o₇* *a: vii^o₇* *G: V₇* *e: V₇*

In adding the cadence the following should be observed :

If the modulation take place through the chord of the Sixth-and-Fourth of the tonic triad of the new key (see p. 143,) the following of the dominant chord with its natural progression is sufficient to create a cadence. e. g.

302.

In other cases the *extended cadence* or the familiar closing formulas will be requisite in order to determine the final key. As the simplest of these formulas may be used the following :

303.

a: in other positions:

b:

If these cadence-forms be added according to the position of the *last* chord of the modulation, the latter is completed.

This may be shown in some of the former examples.

The modulation from *C* to *E flat* No. 288 ends there with the fifth in the Soprano. To this is added the cadence in the position corresponding to *that* last chord. e. g.:

SECTION III.

PRACTICAL APPLICATION OF HARMONIES. EXERCISES FOR THEIR USE IN PURE PART-WRITING.

THE following hints on the most practicable form of exercises in the use of harmonies may serve at once to further illustrate, enlarge and complete the principles thus far developed. For this object, single cases in given examples will furnish opportunity for more extended remarks.

CHAPTER XVII.

A simply Harmonic Accompaniment to a given Melody.

FIRST of all it may be observed that we are here treating solely of the *simply melodic progression* of a part, and for the present leave all other elements of a melody, as its metrical and rhythmic formation, out of the question.

1. *Harmonic accompaniment to a Soprano.*

We select first the following simple *exercise* :



For the sake of facility we will add in the manner heretofore employed, those fundamental tones which may serve in general as the harmonic basis.



In every harmonic progression the movement of the Bass is the most important.

We turn our attention then to this first, and write its progression as follows:

311.

SOPRANO.

BASS.

or thus:

312.

The addition of the middle parts will not now be difficult:

313.

SOPRANO.

ALTO.

TENOR.

BASS.

The above may serve chiefly as an illustration of the exercises themselves.

The next will furnish occasion for studying the principles of a good Bass-movement as well as a melodic part-movement in general, so far as the simplest harmonic progression requires it.

Examples incorrectly written out will best serve our purpose.

Exercise with fundamental tones given.

314.

Remark.— In working out this and subsequent exercises, we shall for the sake of room use the Violin-clef, writing the parts on two staves; most urgently recommending, however, for individual labor, the method of notation employed in No. 313.

Let this exercise be written out thus :

315.

C F G₇ C d G₇ C

6/4 7 6/4 6 7

There appears in this example no violation of the rules thus far known for progression and connection of chords, and yet it is wholly objectionable from the stiffness, weakness and lack of firmness in the Bass.

Excepting where there is an organ-point, a good harmonic Bass-movement admits of sustained tones only when caused by the necessary preparation of a tone, or counterbalanced by a decisive movement in the other parts.

The above example also twice contains the *chord of the Sixth-and-Fourth*, which may afford occasion to say more of the use of this peculiar and difficult chord.

Of the use of the Chord of the Sixth-and-Fourth.

The infrequent use of the second inversion of the triad, the chord of the Sixth-and-Fourth, arises from the fact, that its appearance is tied to certain conditions.

In the first place, we find it oftenest in *cadence formations*, as the preceding examples show.

Then it appears in the same character *in modulation* (see p. 142.)

It may enter abruptly too in both cases, but is not to be regarded as a passing chord ; on the contrary, it must always *fall on the thesis*.

Beside these instances it appears most naturally as a *tonic, dominant and sub-dominant triad* under the following conditions :

- a. *When the fourth is prepared :*
- b. *When the Bass moves by degrees to the next new chord, or is sustained.*

The following examples show the application :

316.

a.

6/4 6 6 6/4 6/4 6/5

b.

6 6 4 6 5 6 4 6 5

In example *a.* it appears most naturally, because it is based upon the Tonic, Dominant and Sub-dominant, while on other degrees (*b.*) it readily produces a sense of modulation.

Used upon the arsis, it may also appear, beside according with the above conditions, with a *preparation of the Bass.*

317.

6 4 6 6 6 4 6 5 6 4

As in all these examples the chord of the Sixth-and-Fourth appears either as a passing chord (on the arsis) or as above in the character of a suspension (on the thesis,) its effect on the thesis with a preparation of the Bass is much weaker:

318.

6 4 4 3 6 4 6

Often it appears also as a suspension itself, whereby the preparation of the fourth is fully vindicated.

319.

6 4 3 6 5 6 6 5

In the second case still more decisively, as it appears in a chord that seldom occurs (that of the third degree.)

That the chord of the Sixth-and-Fourth, however, where the parts move by degrees in the smaller divisions of the measure, can in passing enter without preparation even, as :

320.

Musical notation for example 320. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff shows three chords: a triad of G4, B4, D5; a triad of G4, B4, D5; and a triad of G4, B4, D5. The bass staff shows a sequence of notes: G3, A3, B3, C4, D4, E4, F4, G4. Above the bass staff, there are figures: '6 4' under G3, '7' under A3, '6' under B3, and '6 4' under C4. The piece ends with a double bar line.

will need no further explanation after what is said in chapter fifteenth concerning passing chords, and after examples 276, 279.

Remark. — The frequent necessity of preparing the perfect fourth in the chord of the Sixth-and-Fourth has induced many theorists to class it among dissonances.

In the division of intervals on page 17 of the introduction to this work it is classed with the consonances, and the reasons for it are given on page 20.

The uncertain relation of the perfect fourth and the necessity of its preparation appears only as *against the Bass* or lowest part, and in general only in the chord of the Sixth-and-Fourth, since even in the chord of the Sixth-Fourth-and-Third this necessity of preparation does not always exist; as regards the other parts, the perfect fourth is to be treated precisely like any other consonance.

With actual dissonances this is not the case, for they retain their character throughout, whether lying in the highest, lowest or middle parts.

The chord of the Sixth-and-Fourth of the diminished triad can seldom be used in four parts, showing itself to be too imperfect.

321.

Musical notation for example 321. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff shows three chords: a triad of G4, B4, D5; a triad of G4, B4, D5; and a triad of G4, B4, D5. The bass staff shows a sequence of notes: G3, A3, B3, C4, D4, E4, F4, G4. Above the bass staff, there are figures: '6 4' under G3, '6' under A3, and '6' under B3. The piece ends with a double bar line.

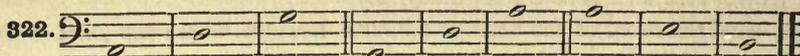
It will occur, however, in three-part harmony, where it often supplies the place of the chord of the Second (see later: Three-part movement.)

Beside the condition of a good harmonic progression, that the Bass part shall form a good and intelligible foundation for it, the second requisite is

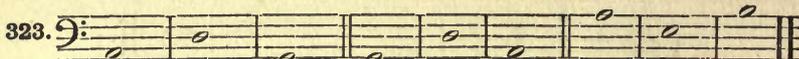
THAT THE PROGRESSION ALSO BE MELODIOUS.

Certain skips have always been properly classed as unmelodious progressions.

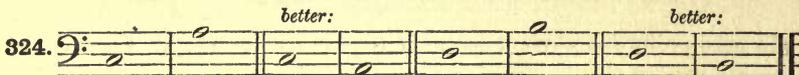
A succession of two fourths or fifths in the same direction e. g.:



These skips are better thus :



Even skips of a sixth are more practicable as thirds in contrary motion, if the position and compass of the parts admit of them :

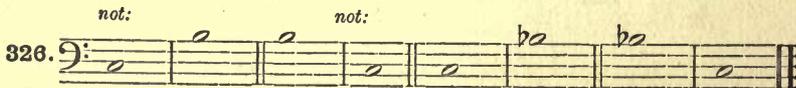


Skips by augmented intervals are to be avoided as unmelodious, diminished, however, are serviceable :



Deviations from this rule often occur ; they find their explanation in the formation of the melody or the peculiar character of the composition generally. The observance of the rule in theoretical study will always be very advantageous.

A skip of a major seventh is wholly to be avoided ; but that of a minor seventh is practicable only in an inversion of the same chord.



The last in some such harmonic progression as the following :



These few remarks contain the chief features of a good melodic progression of parts, and for the next, simply harmonic, exercises particularly, will prove sufficient. It should be further observed that these rules apply not only to the movement of the Bass, but in general to all the parts.

The exercises given under 314 may with an improved Bass-progression be written somewhat thus :

328.

328 b.

1 2

C G C — F C G C C — F

3

G₇ C d₇ G₇ C C G a d G₇ C d₇

4

G₇ C C — G₇ C d₇ G a d₇ G₇ C

The next example leads us to explain an important and difficult part of harmonic connection and part-movement.

Exercise.

329.

C F b° C a d₇ G₇ C

The following incorrect solution may serve to illustrate :

330.

C F b° C a d₇ G₇ C

6 6 6 $\frac{6}{5}$ 7

The errors here consist, first, in the doubling of the third in the Bass of the second chord, which gives to this and the following harmony an awkward position; secondly, in the concealed fifth indicated between the fourth and fifth measures, and lastly in the seventh introduced by a skip in the last measure but one.

As to this last, it can only happen with the dominant-seventh, when the root is already present (prepared) (see p. 70.)

331.  Musical notation for example 331, showing a treble and bass staff. The treble staff has a G4 with an asterisk above it in the first measure, followed by chords in the second and third measures. The bass staff has chords in the first and second measures, with an asterisk above the G2 in the second measure, and a chord in the third measure with an asterisk above the G2.

The free entrance of Seventh and root is more endurable and less harsh in *contrary motion*,

332.  Musical notation for example 332, showing a treble staff with a sequence of chords: G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4.

but in *direct motion* either wholly objectionable, or only to be used in specially favorable progressions, when perhaps as in the first example of 333 the root *g* is already present in the preceding chord, although in a different part.

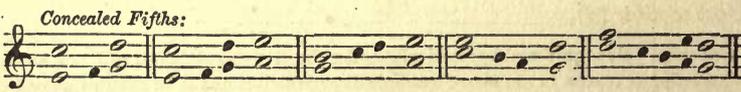
333.  Musical notation for example 333, showing a treble staff with a sequence of chords: G4-A4-B4, G4-A4-B4, G4-A4-B4.

The first of the above-mentioned errors shall be corrected in the sequel. The second is more important, and leads us to speak in general

OF CONCEALED FIFTH AND OCTAVE PROGRESSION.

We have already spoken on p. 29 of the nature of these progressions.

Concealed fifths and octaves arise, when *two parts progress IN DIRECT MOTION from a different interval to a fifth or an octave.* e. g.

334. *Concealed Fifths:*  Musical notation for example 334, showing a treble staff with a sequence of chords illustrating concealed fifths: G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4.

Concealed Octaves:  Musical notation for example 334, showing a treble staff with a sequence of chords illustrating concealed octaves: G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4.

These fifths and octaves become obvious, if the skip made by one or both parts be filled up with the intermediate tones, as is indicated above by the black notes.

Since in all four-part harmony certain concealed fifths and octaves may occur, without which the choice of chords as well as the movement of parts would be very limited, but others again are to be avoided, it becomes necessary first to examine more particularly the *mode* of their appearance. The attempt to furnish positive rules for their use, sufficient for all cases, has never yet been successful, nor could it easily be; only general remarks therefore are to be made, which nevertheless for special cases will afford a standard of criticism.

Concealed fifths and octaves between two parts may occur :

1. when one part moves by step, and the other by skip ;
2. when both parts skip.

In the former case :

- a. by degree in the upper, by skip in the lower part ;
- b. by skip in the upper, by degree in the lower ;

As to the position of the parts, relatively to both cases :

- a. between the extreme parts,
- b. between the middle parts and
- c. between one extreme and one middle part.

Concealed Fifths and Octaves in the extreme parts

They are allowable, if the upper part move by step.

335.

The musical example consists of two staves, treble and bass clef, in common time. It is divided into five measures labeled a through e. In measure a, the upper part moves from G4 to A4 (step), and the lower part moves from C3 to G2 (skip), creating a fifth. In measure b, the upper part moves from A4 to B4 (step), and the lower part moves from C3 to G2 (skip), creating an octave. In measure c, the upper part moves from B4 to C5 (step), and the lower part moves from C3 to G2 (skip), creating an octave. In measure d, the upper part moves from C5 to B4 (step), and the lower part moves from C3 to G2 (skip), creating a fifth. In measure e, the upper part moves from B4 to A4 (step), and the lower part moves from C3 to G2 (skip), creating a sixth. Arrows and numbers (1, 2, 3, 4, 5, 6) above the notes in the upper part indicate the intervals between successive notes.

It will be well also, if one part at the same time move in contrary motion or be sustained, as in example 335 a., b., c. Not so if all the parts move in direct motion (d).

Remark. — Though the above rule will suffice for many cases, yet it will not hold good universally, as is seen in the above example 335 e, which is not to be counted among those having a good part-movement, the progression from the Sixth-chord c being a very forced one.

Likewise should be called to mind what has been said on pp. 35 and 36 of the cadence-forming Bass-progression, namely, that concealed octaves over the *leading tone* or generally over a *half-degree* are more tolerable than over a whole degree.

In the examples above cited, the octave appears throughout as *root* of the chord; cases where it forms the third of the chord are more doubtful, and are consequently to be used with greater caution.

336. 

Even as the fifth of the chord it is not to be considered good:

337. 

Remark.—In case of a concealed fifth the *lower* part will always be the root of the chord.

Concealed fifths in the extreme parts are forbidden when the upper part moves by skip.

338. 

In all cases where a seventh aids in the harmonic connection, as in *b*, *d*, *e*, the progression of fifths seems more concealed and less harsh.

Concealed octaves in the extreme parts are not absolutely forbidden when the upper part moves by skip.

339. 

Here also those cases, in which the Bass moves a half degree, are seen to be the most endurable. What was said in 336 and 337 holds good concerning *d*. and *e*.

Concealed fifths and octaves in the extreme parts are forbidden, if both parts skip.

340.

When they form merely *transpositions of the same chord*, they are not to be regarded as errors, because they are really not then fifths and octaves *progressing to other chords*.

341.

Concealed Fifths and Octaves in the middle parts.

Although the movement of the middle parts should be quite as pure as that of the extreme, yet their position being greatly hidden by the latter allows them also at times a greater freedom, especially with regard to concealed fifths. Concealed octaves should be avoided here, for the sake of a good relation between the parts, and the case of concealed fifths, beside the rules before mentioned, must principally depend upon an otherwise good harmonic connection. A few cases may be annexed:

342.

Concealed Fifths and Octaves between the extreme and middle parts.

Here also the points to be considered in such part-progressions are rather to be found in a good and natural harmonic connection, than to be settled by merely mechanical rules. A few examples may follow:

343.

not good: not:

One particular case of concealed octave is specially to be mentioned, that *over the seventh*, which in all the parts is to be avoided as erroneous.

344.

(See p. 84.)

What was said of octaves, applies equally to *concealed unisons*. Between Soprano, Alto and Tenor they should be wholly avoided, between Tenor and Bass, however, according to the position of the chord and of the parts themselves to be regarded as concealed octaves.

The cases, in which concealed fifths and octaves may appear, are so manifold, that it would be superfluous to cite them all, if it were at all possible. We may rest satisfied with the foregoing considerations, adding thereto the following maxim, which indeed is not written for those beginners who are still occupied with the technical or the purely mechanical harmonic structure, without regard to the higher demands of art :

Avoid indeed concealed fifths and octaves as far as possible, but use them without scruple in cases, where, on the one hand, by so doing, a good harmonic connection results, or, on the other, considerations of a higher nature prevail, as the melodious movement of parts, use of given motives, or others.

After this digression we return to No. 330, in order to correct the faults already mentioned.

It will be hardly possible in this case to correct the concealed fifth found there, which belongs to that class where both parts skip, because, even if the Bass progression be in contrary motion, the evil appears again elsewhere. e. g.:

345.

All that remains therefore in this case is to change the harmony itself and denote the fundamental tones differently.

The change may be made as follows.

346.

or:

347

Exercises.

347 b. 1

347 b. 2

3

F B \flat g d B \flat C $_7$ F g $_7$ C $_7$ F

4

F C d C g d F g $_7$ C $_7$ F

Let the following exercise

348.

G C G D $_7$ G C G a D $_7$ G

be filled out thus :

349.

1 2 3 4 5

6 6 8 7 8

4 5

The errors here are indicated by the figures.

The movement by skips of all the three upper parts in direct motion in No. 1 is not good, being contrary to the first principle of all harmonic connection and not at all necessary.

A skipping movement of one or two parts can only happen, when the harmonic connection (by sustaining a tone or by contrary motion) is preserved in a third part.

No. 2 also has the same fault, which becomes here still harsher, because seventh and root appear in direct motion *without preparation*, and thereby arrive at an awkward position, so that one is pushed aside by the other.

It has already been mentioned (p. 72 and 158) that the free entrance of the dominant-seventh cannot but have a harsh effect, unless the root be already present and can be sustained in the same voice,

Thus all the following *examples* exhibit an undesirable movement of parts.

350.

A few of these and similar passages could be excused for weightier melodic causes.

The following *examples* may further serve as supplementary to what was said on p. 158 of the allowable free introduction of root and seventh in contrary motion :

351.

The passage in example 349 No. 2 contains also another error, violating the rule before mentioned (p. 153) under the chord of the Sixth-and-Fourth : that the Bass must not move by skip from the chord of the Sixth-and-Fourth.

The third error in example 349 consists both in the concealed fifth, which is made all the more prominent by the skip of the Soprano in the same direction, and generally in the distended movement of the parts.

The concealed fifth in No. 4 is faulty because it was unnecessary, as the Tenor could move equally well from *b* to *c*. That in No. 5 is better, being allowable with the movement of the Alto and Bass in an opposite direction.

Exercise No. 348 is better written out as follows :

352.

Exercises.

352 b. 1

G C - G - D a D G D7 G

2

G D G D e C D a D7 G

3

G C D C D7 G e a7 D7 G



The next exercise



filled out thus :



gives us opportunity to speak of an error, called the

Unharmonic Cross-relation.

The *unharmonic cross-relation* (*relatio non harmonica*) belongs to the unmelodious progressions and in general consists in this, that a tone is immediately followed in another part by the same tone chromatically raised or lowered, as here the *g* in the Alto by the *g sharp* in the Bass.

To avoid this error, the following rule is to be observed:

Immediate chromatic alterations of a tone should always take place in the same part exclusively, in which the tone occurred unaltered just before.

Much as this rule agrees with every principle of harmonic connection and progression, yet there is scarcely one to which more exceptions are found in practice.

Hence in manuals of later methods the doctrine of the cross-relation has been strongly suspected, and instances cited where the unharmonic cross-relations occur in a perfectly natural way, without investigating the cause of their not being regarded as erroneous.

A few of them may be here introduced :



The image shows two systems of musical notation. The first system contains three examples labeled d, e, and f. Example d shows a treble staff with chords and a bass staff with notes. Slanted lines connect notes between staves. Example e shows a similar structure with different chord progressions. Example f shows a treble staff with a melodic line and a bass staff with accompaniment. The second system contains two examples labeled g and h. Example g shows a treble staff with a melodic line and a bass staff with accompaniment. Example h shows a treble staff with chords and a bass staff with notes. Slanted lines connect notes between staves in all examples.

In all these cases the cross-relation seems to be formed not by the *simply harmonic progression*, but either
in the character of appoggiaturas, as in *a*, *b*, *g*,
 or by the *shortening (contraction) of harmonic connections which are natural*, though too minute for metrical organization, as in *c*, *d*, *e*, *f*, *h*.

The first needs no demonstration, and it need only be added, that this kind of cross-relation would occur mostly in smaller divisions of the bar, and the above notation in half notes is rare and hence inappropriate, since by them is expressed the simple *harmonic foundation*, and not those tonic elements which serve for ornament.

The original progression of parts in the above cross-relations resulting from contraction is as follows :

356.

The image shows two systems of musical notation, both labeled 356. The first system contains two examples labeled c and d. Example c shows a treble staff with chords and a bass staff with notes. Slanted lines connect notes between staves. Example d shows a treble staff with a melodic line and a bass staff with accompaniment. The second system contains two examples labeled e and h. Example e shows a treble staff with chords and a bass staff with notes. Slanted lines connect notes between staves. Example h shows a treble staff with chords and a bass staff with notes. Slanted lines connect notes between staves.

Compare these examples with those under No. 355 at *c*, *d*, *e*, *h*.

That this, however, is not the sole cause of the bad effect of this interval is shown by the very common inversion of the same, which would likewise require a two-part progression :



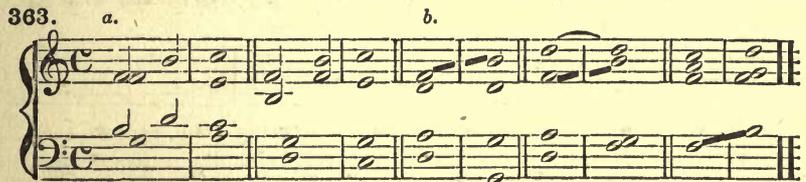
and which is equally intelligible and easy of execution, as the tritone is difficult and repulsive.

Remark. — It may be further observed here, that the tritone is based upon the diminished triad and its progression, as is evident from the above example 362 (see p. 38).

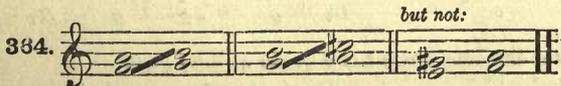
The reason why this interval was formerly especially insisted upon as erroneous, was this, that in the simple harmonic form of composition then in use it constituted the only *augmented* interval, which diatonically presented itself. At the present day, with the extended use of all the resources of art, it is simply reckoned among the augmented progressions, which in a *pure* harmonic movement of parts are to be avoided as unmelodious, or at least to be used with caution.

The points to be considered in the use of the tritone lie in its position and appearance itself.

It may occur based
upon *one chord* (a) or
upon *two chords* (b.) e. g.



If it occur upon one chord, its entrance is not unexpected and the ear is prepared: in case of two chords, however, its forced progression is very perceptible. Formerly it was also forbidden to use the tritone upon the *two major thirds*, which succeed each other by a *whole degree*. e. g.



nor can it be denied, that this progression *in two parts* has the same harsh

effect, while with three and four parts it is much softened, particularly if not appearing in the extreme parts.



The reason why the interval from the fourth to the seventh degree of the minor scale, e. g. from *d* to *g sharp*, was not considered a tritone, is based upon the view formerly taken of the minor scale itself and its harmonies. The effect of this interval, being augmented, remains the same.

We turn back to our exercise 353 and try a better construction.



Exercises.

366 b.

1

a E a F d a b⁷ E a

2

a d — b⁷ a b⁷ E a

3

e d^{#°} e a B₇ e a e B₇ e

4

g c — D₇ g a⁷ g D₇ g

2. Harmonic accompaniment to a given middle part.

This practice, which properly belongs to contrapuntal studies, cannot be commenced soon enough. We shall introduce it at first, indicating the roots.

Exercise.

367. *ALTO.* C G C F G a d7 G C

In working out this exercise, the sketching of the Bass again will be the first and most important thing. At the same time, however, the Soprano may be added also as the most conspicuous part. e. g.

368.

The foregoing may answer for three-part harmony. By adding the Tenor it will appear thus:

369.

Exercises with a given Alto.

369 b.

1 F g C7 d g7 C F 2 F Bb C

3 Bb C F g C7 F F C F C d

4 g C F d - g C7 A7 d e7 A7 d

5 d Bb C c#7 d d A d

6

g D -7 g B_b c g D₇ g

The treatment of a Tenor part will be the same.

Exercise.

TENOR. C G a F C G₇ C

370.

Sketch of the Bass and Soprano:

371.

In four parts:

372.

Exercises with a given Tenor.

372 b.

1 C G₇ C G a d G₇ C C G C

2

3 a d C G₇ C a E a d b₇ a

4 E₇ a a d g₇ a - b^o E₇ a

This practice should be continued, until the sketching of the Bass, as well as the management of parts generally, is perfectly pure and safe.

In closing this chapter it may be further observed, that for a good construction of these four-part movements, a good position of the parts is

especially necessary. The limits of the parts themselves must not be transgressed, nor the distance between them too great; neither must they be brought too near together, which, however, does not apply to two parts meeting, e. g., on one tone.

Let the following rule be observed in this connection:

Of the three upper parts the distance from one to the next must not cover more than an octave. The relation between Tenor and Bass, however, admits of exceptions.

Remark.— Transferring these exercises to the Bass part would be useless, so far as they would be precisely similar to the figured Bases used heretofore. They can be used only for free harmonic treatment.

CHAPTER XVIII.

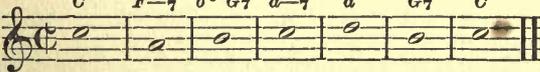
Extension of the Harmonic Accompaniment.

A given part in whole notes with harmonic accompaniment in half notes alternating in the remaining parts.

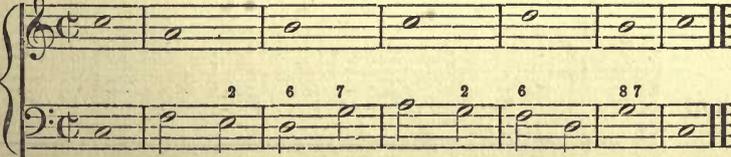
This can happen
 through two chords,
 through change of position in one chord,
 through suspensions.

The exercises may be indicated in the same manner as heretofore.

Exercise.

373. 

The Bass may be sketched as follows:

374. 

In the second and fourth measures there appear sevenths of collateral Seventh-chords without preparation. These are called *passing Sevenths*.

They move from the root, and always fall on the *arisis*. They may occur in this manner in all the parts.

The addition of the middle parts to the Bass sketched above gives the following four-part harmony :

375.

The same exercise with a richer variety of harmony may be written thus :

376.

Written out.

377.

The next *exercise* will show the use of suspensions.

378.

Written out :

379.



We pass over the exercises in the middle parts.

The use of the simply melodic progression in whole notes for exercises (*cantus firmus*) was in order to exhibit the simple harmonic substance of a measure, or, as in *Alla breve*-time, in its component parts (half notes). If the exercise is to be in half notes, chorals may be selected for the purpose.

For individual practice, one can easily take the Bass from some well-harmonized arrangement of chorals, and work it out for himself.

The mode of proceeding is shown in the next exercise.

380.

a - *A*₇ *d* *a* *d*₇ *b*[°] *E*₇[#] *E* *a* - *E* -₇ *a*

C *G* *C* *F* *b*[°] *C* *F* *C* *a* *C*₇*b* *d* - *a* *a*₇[#]

G -₇ *C* *G* *a*₇ *D* *G* *C* *G*₇ *C* *d*₇ *G* *E* *a* *E*

This choral, harmonized as above indicated, could be written out thus :

381.

The image contains three systems of musical notation for piano. Each system consists of a treble staff and a bass staff. The first system shows a sequence of chords and moving lines. The second system continues with similar harmonic patterns. The third system concludes with a double bar line.

After sufficient practice and sureness in the treatment of simple harmony, one may pass on to the further development of the part-movement by means of passing notes and appoggiaturas.

To this end we shall say more of melody and melodic progression in the next chapter.

CHAPTER XIX.

Formation of Melody.

WE are not to discuss here the invention of melody, but its formation, and, what is very important for our harmonic study, the method of recognizing and using by the treatment and formation of melodies that which is essentially harmonic in them.

This will depend on the recognition and comprehension of the following principles:

Every melody, however carried out and developed, has a foundation fully as simple as those we have used as exercises in our last examples.

Therefore every harmonic movement of parts, however complicated, may be traced back to simple harmonic connection.

To see the truth of this, one must learn to discriminate between the essential notes and what is extra and accessory.

For this we choose the analytic method, and seek to develop the following melody, which we will set down in the simplest form with the fundamental tones indicated as heretofore :

382. F — B_b F B_b g C F — d F C₇ F

Both melody and harmony are chosen with a view to simplicity, and the latter may be introduced in four parts thus :

383.

Before proceeding to the farther development of this passage, it will be necessary to premise what ought to be mentioned concerning the rhythmical formation of a melody.

A melody may be either a musical phrase consisting of a greater or less number of measures without any fixed limit, such as often occurs as the theme, motive of a composition, or by means of counter-phrases, a separate, distinct whole.

In the latter case it is called a *period*, and contains usually eight measures, having as counter-phrases two sections of four measures each. These counter-phrases or sections are often called "antecedent and consequent."

The details of this subject belong to the science of form.

See the author's work: "The principles of musical forms."

It is clear from its complete termination that the above passage forms a period, and it is first of all necessary to find the division into sections.

This division is very often found in the cadences which occur in the middle of the passage, either as imperfect whole, half, or plagal cadences.

Such a *half cadence* (in general: a close on the dominant) we find in our exercise in the sixth and seventh measures, and we may take the point, where the sign † stands, as the dividing line of the two sections of the period.

The first section, the antecedent, therefore would contain *seven*, the consequent *six* measures, and must each be rhythmically changed to four measures. This may be done thus:



By adding the harmonic accompaniment above chosen, we have a complete musical period.

Likewise it may be seen at a glance that all further transformations into different kinds of time, e. g. into $\frac{2}{4}$, $\frac{3}{4}$, $\frac{3}{8}$ or $\frac{6}{8}$ time, can be very easily arranged. e. g.:

385.

We pass now to the tonic variations of the melody and add thereto passing notes and appoggiaturas. e. g.:

386.

A still further use of all the accessory tones would give the following form:

387.

Adagio.

Originally.

The simple melodic progression underneath will be easily recognized as the foundation. That the upper melody, however, is carried out with reference to the original harmony, will be at once evident, if we add the other parts with the few deviations required by the upper part:

388.

Adagio.

p



As to the consecutive octaves in the middle parts in the third measure of this example, it is to be observed that these may be considered faultless, when they do not occur singly, but in a longer series for the purpose of reinforcing and thus bringing out a harmonic and melodic progression. The movement in this case is to be viewed as in three parts.

Slight as is the independent worth of this example, yet it is used here merely to show of what development the simplest melodic and harmonic phrase is capable.

The advantage of studying and discerning these melodic and harmonic relations is too important for us to omit making another experiment in the following interesting phrase.

The fundamental harmonic progression is quite as simple as those exhibited before.

389.

Two systems of musical notation for example 389. The first system shows the right hand (treble clef) with a series of chords and the left hand (bass clef) with a series of notes. The key signature has two flats (B-flat and E-flat), and the time signature is common time (C). The second system continues the piece, ending with a double bar line.

This passage will form a period; the middle close is easily found in the half cadence in the seventh measure.

We pass over the various kinds of measure and select the following arrangement:

890.

Two systems of musical notation for example 890. The first system shows the right hand (treble clef) with a series of chords and the left hand (bass clef) with a series of notes. The key signature has two flats (B-flat and E-flat), and the time signature is 3/8. The second system continues the piece, ending with a double bar line.

The upper part, adhering to the harmonic progression, may be developed as follows :

391. 

The following passage from Beethoven's E-flat major-Quartett will show how the other parts can partake of melodic development :

392. *Adagio.* 

VIOLINO I.

VIOLINO II.

VIOLA.

VIOLONCELLO.



A comparison with No. 390 will show the melodic and harmonic changes.

A still further variation of the original melody from the same piece follows here :

393. 

The other parts appear with the following changes :

394.

The musical score consists of four staves. The top staff is the melody, starting with a treble clef and a key signature of two flats (B-flat and E-flat). It features a series of eighth notes, some grouped in triplets, and ends with a flourish. The second and third staves are piano accompaniment, with the second staff in treble clef and the third in bass clef. Both accompaniment staves use chords and eighth-note patterns, also including triplets. The fourth staff is a bass line in bass clef, providing harmonic support. The piece concludes with the notation '&c.'.

These hints in regard to melodic development may suffice here and be left for individual practice or special instruction.

Remark. — The mechanical character of this whole treatment must not lead astray ; for certain as it is, that in composition the above is not always the mode of procedure (although Beethoven in the subsequent variations of this original melody must have in part proceeded thus), so our only object here was, partly to place in the right light the relations of our previous exercises to the practical side, partly to gain a clear insight into complicated compositions themselves.

As concerning the accompanying parts, they resulted naturally from the simple harmonizing and needed little change, showing themselves, if subordinate, yet not on that account unimportant.

It now remains to speak of other modes of *accords and figures*, which will be done in the next chapter.

CHAPTER XX.

Formation of the accompanying Parts.

THE mode in which the accompanying parts partake of harmonic, metrical and melodic development, is seen in the last examples of the foregoing chapter.

There are, however, still other kinds of accompaniment, known as :

THE FIGURED ACCOMPANIMENT.

It is not suited to the character of vocal parts, and its use therefor must be very limited. In the following investigation we shall treat only of instrumental music.

By figured accompaniment is understood that kind which arises from the metrically uniform transformation of the simple chord-tones, e. g. :

395. *Simple Harmony:* *Figured Accomp't:*

a.

b.

c.

tr.

The musical notation consists of three staves. The first staff shows a simple harmonic accompaniment with chords. The second staff shows a metrically figured accompaniment with chords and figured bass (3 3). The third staff shows a melodically figured accompaniment with a melodic line and figured bass (tr.).

The accompaniment under *a.* is *harmonically figured*. The figures that result from it are also called *broken chords*. That under *b.* is *metrically figured*, and that under *c.* *melodically figured*. The figures produced by this last are formed of appoggiaturas and passing notes.

Each accompanying part can be used for such figuration, either alone or in conjunction with other parts.

We take the beginning of the 382d example to try a few modes of accompaniment. The following further remarks may here be stated beforehand :

When the figures are repeated uniformly (e. g. in broken chords), all the

rules for harmonic progression in a CHANGE OF CHORD, as well as for doubling, are to be observed.

We cannot therefore write thus :

396. *or:*

but somewhat in this manner :

397. *or:*

In a change of harmony the *last note* of a figure and the *first* of the next must not form a false progression with any other part. e. g. :

398. *not:* *better:* *not:*

not better:

The harmonic figuration enables us to arrange even *one-part* movements with greater fullness. The examples may begin with the following :

399. *In one part:*

It is easily seen that these phrases are calculated for a single instrument, as a violin or clarinet.

400. *In two parts:*

In three parts:
in the middle part:

in the lowest part:

in the highest part:

in two parts:

After these experiments with the above example, the figuring in four-part movement will be equally easy to accomplish.

Instead of this we rather take as an example of varied figuring the following passage from the Quartett movement of Beethoven cited above.

401.

pizz.

cres.

cres.



The whole of this rich development rests upon the base given in Nos. 390, 391 and 392, and in all cases where there is a change of harmony, the progression of parts is carefully observed. —

If one desires to gain a clear insight into compositions so elaborated, and learn to comprehend their inner harmonic structure, it will be very well to trace back pieces of this kind to their simple basis; labor of this sort will be repaid by enriching his knowledge on many points, and qualifying him for individual productions.

CHAPTER XXI.

Exercises in Three-part Movement.

In our exercises thus far we have used with but few exceptions four-part harmony, and although the same admits of greater fulness and seems most suitable for harmonic connections, yet three-part movements also are of great use, being particularly adapted for greater skill and variety in the management of the parts.

We begin as formerly with exercises on a figured Bass.





Three-part harmony is indeed sufficient for the triad, but the movement of parts will often result in the omission of one interval, as must of course be the case with seventh-chords, though the omitted interval can never be the seventh itself. Generally the fifth can be left out, as has already occurred in four-part movement, and in many cases the root also; the third as the interval which determines the nature of the chord, can rarely be omitted without producing a peculiar gap.

We will harmonize as follows, and annex a few remarks:

403.

In the fourth measure at NB. we find the chord of the Sixth-and-Fourth of the diminished triad *c-g-b \flat* . It stands in place of the chord of the Second *b \flat -c-e-g*, the root of which *c* is here omitted, for in four parts the passage would stand thus:

404.

Musical notation for example 404, showing a two-part setting of a chord. The treble clef part has notes G4, B4, and D5. The bass clef part has notes G3, B3, and D4. Figures 6/5 and 2 are written below the bass line.

Compare remarks on p. 155 concerning this chord.

In the fifth measure a fourth supplies the chord. Though a fourth, to be sure, can neither in three-part, nor in two-part harmony, pass for a complete chord, as is the case with the third and sixth, yet in those instances where the chord of the Sixth-and-Fourth in four-part harmony can be used on the arsis as a *passing chord*, in three-part, for the sake of a better movement of parts, the Sixth, or the third of the fundamental chord, can be omitted, so that the fourth shall stand alone, designating here the root and fifth of the original chord.

Sometimes in two-part movement the fourth will represent the chord of the second, especially in the case of a passing seventh. e. g.:

405.

Musical notation for example 405, showing a single part with figures 4 and 4. The notes are G4, B4, D5, G4, B4, D5, G4, B4, D5.

With four parts the above passage in example 403 would be thus, when completed:

406.

Musical notation for example 406, showing a four-part setting of a chord. The treble clef part has notes G4, B4, and D5. The bass clef part has notes G3, B3, and D4. Figures 8, 6^b/₄, and 6/5 are written below the bass line.

By the skip in the Alto part in the eighth measure of example 403, the chord of the Sixth-Fourth-and-Third is made complete.

In the tenth measure appears a chord of the Sixth-and-Fifth. Really the fifth here is only a suspension of the fourth, which, however, by the progression of the Bass becomes a third. With four parts this too is made clearer:

407.

6 6/5 6/5

The last measure of example 403 shows in the Octave *F* that the triad may appear in such cases even without the third and fifth.

It is seen in the first and second measures of the next example that the movement of parts often requires the omission of the third.

408

6 5 6 4 # 7 5 4 3 6 5

5 4 3- 4 6 6 4 6 #

The omission of the third occurs best upon the arsis, as here in the latter part of the measure: on the thesis, therefore at the beginning of the measure, the third must not be wanting.

Further exercises are to be left for special instruction.

Exercises in Three-part Harmony to a given upper part.

The following exercise with the roots indicated is to be written out in three parts.

409. *C G C -2 F a d G7 C*

Written out:

410.

*without
root.*

This work needs no explanation.

The choice of the middle and lower part will in general depend on the position of the chords. Thus in a low position the Tenor is better suited for a middle part than the Alto; likewise the Tenor can be taken for the lowest part instead of the Bass.

For the following example the Tenor is selected as the middle part, because its movement is more in company with the Bass, while the simple song of the Soprano seems of itself more isolated.

The former exercise with a more extended harmonic development:

411. *C a d7 G E a G C d g#7 a e d D G7 C*

412. *Written out.*

NB.

In the fifth measure at NB. what is really a suspension on the ninth appears through the position of the parts as a second, which must occur very rarely and only between Tenor and Bass. It should be observed here that there can be no suspension on the second at all, because the second of itself

is based upon the inversion of the seventh, and conforms to the progression of the latter. e. g.:

413. or: *Inversion:*

Exercise in a middle part.

414. TENOR. *d A B \flat C g e $^\circ$ d - c \sharp $^\circ$ 7 d A d*

The Alto is taken here as most convenient for the highest part.

415. # 3 6 7 #

The same exercise with the following designation of chords:

416. *d g A-7 B \flat G CF B \flat e $^\circ$ d. B \flat F g C $^\circ$ d A d*

Written out:

417. # 7 6 6 6

6 6 4 6 7 6 #

The last measure but one shows that even the sixth may be a suspension.
 The former exercises, proposed for the four-part movement, can also be made use of here for further practice.

CHAPTER XXII.

Two-part Movement.

THE great barrenness of the two-part movement in a purely harmonic relation renders it seldom adapted for other than contrapuntal labors, in which alone it derives any peculiar importance, and even then is used in movements of several parts e. g. in fugues. If indeed, for a simply harmonic use, a metrical and rhythmical variety in the formation of the parts will render a two-part movement tolerable, so the contrapuntal development of two parts can alone free them from the monotony of numerous consecutive thirds and sixths, and give it essentially that completeness which every part-movement should have.

There must always be in this movement an omission of one or more intervals. In triads it will oftenest be the fifth or the root. When Seventh-chords are used, the seventh of course must not be wanting. Octaves and fifths should seldom be introduced, as the effect is too bare: the fourth would only be admissible in a few cases, where the chord of the Sixth-and-fourth may properly stand, or when it occurs in place of the chord of the Second (see p. 182.)

Example: C F b° C 2 F C a G C

418.

Written out:

419.

The omission of intervals is plainly seen, on comparing the fundamental tones in exercise 418. There will seldom be a confusion of harmony, since each chord explains itself by its position, that is, by the harmony which precedes and follows it.

The same exercise with different harmony :

C F-7 G C G d C Ca G C

420.

Written out:

421.

Most of the exercises in the third section pass into the domain of counterpoint. The difference lies in this, that here the succession of chords is prescribed and the part-movement remains to be carried out, whereas in contrapuntal studies a knowledge of harmony and a safe use of it is presupposed, so that the series of harmonies can be left to individual choice.

These studies may therefore be considered useful as preliminary to those, furnishing at the same time a view of the relation between harmony and counterpoint.

The exercises in the following chapter are to be regarded in the same light, though the restriction to a fixed series of chords is done away with.

CHAPTER XXIII.

Harmonic Treatment of a given Part in Melodic Form.

By the melodic formation of a part is not to be understood here that richer ornamentation exhibited in chapter nineteen, but we merely mean to avoid by means of metrical variety the simple choral-like progression of our previous exercises, and thereby afford opportunity for learning to develop the parts better in the harmonic accompaniment.

The following exercise will make this clearer :

422.



The series of chords is left for selection when the exercise is worked out. Although the kind of measure we have chosen will of itself produce a similar melodic movement in the parts to be filled out, yet special attention must be given to their good progression according to the principles developed in former chapters, if a free, skilful treatment of them is to be acquired.

Let the exercise be first treated in three-part harmony.

423.



This treatment needs no further explanation after the remarks under three-part movement.

The harmonic treatment of this melody as a middle part will show its many-sidedness, and may be recommended as a useful exercise.

To be able to retain the Alto voice, we transpose the melody for the sake of a better position into *F* major.

424.

cantus firmus.

7 5 8 3 9 8 4 6 6 5 6 9 8 7 5

The explanation of the unprepared chord of the Sixth-and-Fourth in the fourth measure is found in the remarks on passing chords in chapter fifteen. It arose incidentally from the progression by degrees in the Bass, and stands here in place of the chord of the second.

The treatment of the same *cantus firmus* transferred to the Bass:

425.

c. f. 6 6 6 6 4 3 3 5 - 4 5 - 6

This treatment displays one weak point in the third and fourth measures in the harmonizing of the sustained *a* in the Bass. So the bare fourth in the sixth measure is a very imperfect representative of a chord, unless it be explained as a passing note.

If it be desired to develop the part-movement still further, passing-notes and appoggiaturas can be used alternately in the parts to be added. e. g.

426.

c. f.

6 6 7 6

6
5

3

5

6

3 7

Of the remaining treatments, that with the *cantus firmus* in the middle part here follows :

427.

c. f.

6

6 7

6 9 6 6

6

6

9 8

5

6

The following may serve here as examples of four-part treatment :

428. *Given part:*

429. *Harmonized in four parts:*

c.f.

N.B.

N.B.

In the fifth measure at N.B. the skip of the Tenor to the seventh should not be considered good for the reason that the Soprano simultaneously makes a long skip in the same direction to the root *g*; this can only be justified by the position of the Alto.

In the same measure we find the chord of the Sixth-and-Fourth of the augmented triad, whose original fifth is prepared. (p. 91 and 92.) It stands here in the character of a suspension from below (see Suspensions, Chap. XII., p. 116.)

The same *cantus firmus* transposed into *D*:

c.f.

N.B.

N.B.

In the fourth measure are suspensions in three parts (see p. 117). In the fifth and sixth measures the position of the Alto and Tenor is not good, as they are more than an octave apart.

Of the remaining treatments, that with the *cantus firmus* in the Bass may here follow :

The introduction of the seventh-chord of the seventh degree in the fourth measure seems confused here, because the root lies immediately above the seventh (see p. 69.) In similar favorable positions it is well to use even the chord of the second or VII₇.

Moreover the progression here is not according to the movement of the leading-tone, but in the same cadence-like form as with other seventh-chords : c₇[#] f₇[#]. — (See pp. 68 and 69.)

The treatment of this *cantus firmus* with more movement in the parts can be effected thus :

432.

c. f.

6 4 5 6 6 6 4

NB.

6 5 2 6 5 7 6 4 3 6 7

The progression of the seventh upwards in the last measure but one (at NB.) is caused by the movement of the Soprano (see p. 84.)

The treatment of the *cantus firmus* in the Tenor here follows:

433.

c. f.

6 6 6

The third measure gives us opportunity to speak of consecutive fifths and octaves in *contrary motion*.

According to the principle heretofore unfolded (p. 27, &c.) they are equally faulty with those in direct motion, and it should especially be observed of consecutive octaves, that they clog the free movement of the parts. With consecutive fifths, however, the character of chord-partition is very much softened by contrary motion, which is especially true of those that move towards each other; whereas those moving asunder make the separation or want of connection more perceptible. (See also example 430 in the 6th and 7th measures between Tenor and Bass.)

Compare the following examples :

434.

A glance at the treatment contained in this chapter shows plainly the melodic formation of parts, and here lies the reason for regarding them as contrapuntal labors; for the essence of counterpoint in contrast with the simply rhythmical harmonic movement, consists in this very thing, that it requires the melodic movement of parts to be freer and more varied, but with observance of the harmonic laws which constitute, as it were, the inmost germ.

Throughout these examples, even where the parts move in quarter-notes, the simply harmonic structure can be traced, so that they may serve for the present to show the difference between the simply harmonic and the contrapuntal development of a given part. The details of this subject can only be discussed under counterpoint itself.

CHAPTER XXIV.

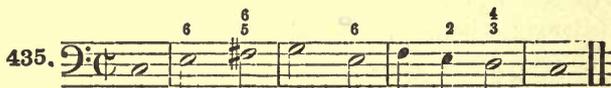
Five-part Movement.

SINCE already in four-part harmony the doubling of the intervals of a triad is necessary, so in a movement in five or more parts the same will be requisite to a still greater extent and even in Seventh-chords.

As in pure harmonic movement every part must preserve its independence, so, to attain this, those intervals will be specially adapted for doubling, which admit of a *double progression*. Now this, to be sure, may under certain circumstances be the case with each interval of a chord, though sevenths are the least adapted to it; the doubling of these must therefore be necessitated by the melodic progression, as e. g. in passing.

Further remarks follow under the examples given.

Exercise.

435. 

The exercise is a single bass line in G major (one sharp) and common time. The notes are G, A, B, C, D, E, F#, G, A, B, C, D, E, F#, G. Above the notes are figured bass symbols: 6, 6, 5, 6, 2, 4, 3.

In writing this out we may, according to the position of the parts, take either two Sopranos, two Altos or two Tenors.

436.

436. 

The exercise is a five-part setting of Exercise 435. The parts are labeled on the left: SOPRANO., ALTO I., ALTO II., TENOR., and BASS. The Soprano, Alto I., and Alto II. parts are in treble clef with a G-clef. The Tenor part is in treble clef with an F-clef. The Bass part is in bass clef. The notes are G, A, B, C, D, E, F#, G, A, B, C, D, E, F#, G. The figured bass symbols (6, 6, 5, 6, 2, 4, 3) are placed above the Bass line.

The same exercise differently constructed :

437.

Musical score for exercise 437, featuring five staves: Soprano I, Soprano II, Alto, Tenor, and Bass. The score is in G major and 3/4 time. The Soprano parts move in parallel motion, while the Bass part provides harmonic support with figured bass notation: 6, 6 5, 6, 2 4 3.

The independence of the parts demands also, that in a *change of chord* two parts shall not be sustained upon the same tone or in the octave. In the above example in the first and second measures it is the case between the second Soprano and Tenor, but not erroneously, because the *same chord* only leaves its position, but does not change to another chord.

But the following passage

Musical score for exercise 438, showing two staves (Soprano and Bass). The score is in G major and 3/4 time. The Soprano part has a chord in the second measure that is sustained in the Tenor part, which is noted as an error. The Bass part has figured bass notation: 6, 6 5, 7.

should be corrected thus :

Musical score for exercise 439, showing two staves (Soprano and Bass). This version corrects the error in exercise 438 by moving the Tenor part in the second measure. The score is in G major and 3/4 time.

Remark. — This rule, however, often admits of exceptions where there are more parts, and other relations then present themselves.

That the movement of parts allows also the leading-tone to be doubled, is seen in the third measure of example 437 between the second Soprano and Tenor.

As was the case in four-part harmony, still more in that of five or more parts will be seen the impossibility of avoiding concealed fifths, octaves and unisons. It may be again mentioned, however, that here also the *extreme parts* must progress in pure relation, and only to the middle parts is a greater freedom allowed.

The following example contains various progressions of this sort.

440.

SOPRANO II.

ALTO I.

ALTO II.

TENOR.

BASS.

The progressions of concealed fifths, octaves and unisons in this example are indicated by a stroke. The open fifth in the eighth measure between the second Alto and Bass need not be avoided, since *with several parts* the diminished seventh chord can with difficulty progress otherwise.

From the eighth measure the first and second Alto might also move in this way.

441



From the second Alto and Tenor in the second and third measures it may be seen that the parts, especially the middle ones, may often cross each other.

For practice in five-part movement chorals can be used to special advantage.

The following may be annexed here :



Exercises in five parts and more require a simple and natural Bass-progression, and the less artificial and difficult it is, the clearer and more intelligible will be the succession of harmonies, which is all the more important because very unintelligible progressions can easily arise where there is this fulness of chords and necessity for the free movement of the parts.

The beginning of this exercise is here given :



At the repetition this series of harmonies may be used :

444.

2 6 G 4 3 4 6 # A 2 6 &c.

CHAPTER XXV.

Six-, Seven- and Eight-part Movement.

THE necessity of doubling or tripling increases with the number of parts added; likewise their independent movement will require them to cross one another. The simplest harmonic progressions become now the main condition of the possibility of employing so many parts, and it must be observed, that many chords are totally unadapted to this mode of writing, because their intervals, being subjected to a fixed progression, cannot be multiplied, as for example the altered chords and the diminished seventh-chord.

A few progressions of the triad may be given here.

Progression to the *second* degree :

445.

4 parts: 5 parts: 6 parts: 7 parts: 8 parts:

Progression to the *third* degree:

Musical notation for progression to the third degree. It consists of two staves (treble and bass clef) with five measures. Above the staves, the number of parts is indicated for each measure: 4-parts, 5-parts, 6-parts, 7-parts, and 3-parts. The notes are arranged in chords that progress from the first degree to the third degree.

Progression to the *fourth* degree:

Musical notation for progression to the fourth degree. It consists of two staves (treble and bass clef) with five measures. Above the staves, the number of parts is indicated for each measure: 4-parts, 5-parts, 6-parts, 7-parts, and 8-parts. The notes are arranged in chords that progress from the first degree to the fourth degree.

Progression to the *fifth* degree:

Musical notation for progression to the fifth degree. It consists of two staves (treble and bass clef) with five measures. Above the staves, the number of parts is indicated for each measure: 4-parts, 5-parts, 6-parts, 7-parts, and 8-parts. The notes are arranged in chords that progress from the first degree to the fifth degree.

We pass over further combinations, which it will be very useful to try with all the varied transpositions.

As an example of the treatment of part-movement, the choral under No. 442 is here given in six parts:

446.

Musical notation for a six-part choral setting, labeled 446. It features four staves: Soprano I. & II., Alto, Tenor I. & II., and Bass. The music is in 3/4 time with a key signature of one sharp (F#). The Soprano and Alto parts have a melodic line, while the Tenor and Bass parts provide harmonic support. The Bass part includes figured bass notation: 6, 6, 6 5, 7.

First system of musical notation. The piece is in G major (one sharp) and 3/4 time. The first system consists of three staves: treble, middle, and bass. The treble staff contains chords and a melodic line with a slur over the final two notes. The middle staff contains chords. The bass staff contains a bass line with fingerings: 6, 6, 6, 6, 4, 7, 2, 6, 3, 4, 3.

Second system of musical notation. The treble staff continues with chords and a melodic line with a slur. The middle staff contains chords. The bass staff contains a bass line with fingerings: 6, #, 2, 6, 6, 7, 4, 3.

Third system of musical notation. The treble staff continues with chords and a melodic line with a slur. The middle staff contains chords. The bass staff contains a bass line with fingerings: 6, 7, 4, 3, 8, 6, 7, 5, 7, #, 6.

Musical score for piano accompaniment in 3/4 time, G major. It consists of four staves: two for the right hand and two for the left hand. The left hand has figured bass notation: 6, #, 6, 6, 6, 6/4, 7/4, 3.

Since in chorus movements consisting of many parts, these are not always employed simultaneously, as in an accompanied chorale, the harmony is sometimes in three and four parts, and is worked up to a climax by the addition of others.

The following examples will explain this kind of chorus-movement, and especially serve to show also, that even in a composition consisting of many parts, suspensions and passing notes can well be introduced, without impairing its clearness and comprehensibility.

447.

SOPRANO
I. & II.

ALTO.

TENOR
I. & II.

BASS.

Musical score for four vocal parts: Soprano I & II, Alto, Tenor I & II, and Bass. The score is in 3/4 time, G major, and shows staggered entries for each part.

Piano accompaniment for the vocal score above, in 3/4 time, G major, with four staves.

448.

SOPRANO I.

SOPRANO II.

ALTO I.

ALTO II.

TENOR.

BASS.

Musical score for voices and piano accompaniment, measures 1-4. The score is in 3/4 time and G major. The vocal parts are Soprano I, Soprano II, Alto I, Alto II, Tenor, and Bass. The piano accompaniment is in the right hand. The first measure shows the vocal parts with rests, and the piano accompaniment with a half note G. The second measure shows the vocal parts with notes, and the piano accompaniment with a half note G. The third measure shows the vocal parts with notes, and the piano accompaniment with a half note G. The fourth measure shows the vocal parts with notes, and the piano accompaniment with a half note G. Dynamics include *f* (forte) and *f*.

Musical score for piano accompaniment, measures 5-8. The score is in 3/4 time and G major. The piano accompaniment is in the right hand. The first measure shows the piano accompaniment with a half note G. The second measure shows the piano accompaniment with a half note G. The third measure shows the piano accompaniment with a half note G. The fourth measure shows the piano accompaniment with a half note G. Dynamics include *f* (forte).

A musical score for an eight-part chorus movement. It consists of six staves of music, all in G major (one sharp) and 3/4 time. The top two staves represent soprano parts, the next two represent alto parts, and the bottom two represent bass parts. The music begins with a common chord and features a variety of rhythmic patterns, including quarter notes, eighth notes, and half notes, with some parts moving in unison and others independently.

In eight-part chorus-movements, where the customary four parts are usually doubled, these are not always employed as eight independent parts, which might result in overcrowding, but frequently two parts of similar register in unison (e. g. two sopranos, two altos, or two tenors and two basses in unison) so that the harmony often appears in four, five and six parts. We find also the eight parts divided into two distinct choruses, acting each by itself and in detached places.

As showing the peculiar movement which many of these parts must adopt, the commencement of the above choral is here given in eight parts :

449.

A musical score for the commencement of a chorus in eight parts, labeled 449. It consists of four staves of music, all in G major (one sharp) and 4/4 time. The staves are labeled: Soprano I. & II., Alto I. & II., Tenor I. & II., and Bass I. & II. The music features complex harmonic textures with many chords and some melodic lines, illustrating the peculiar movement of the parts.

In movements of many parts, divided into distinct choruses, the difficulty of this kind of writing is met by making, not always a *tonic*, but often a *metrical* distinction between the parts, where two or more choruses co-operate; but it must always be assumed that the succession of harmonies shall follow in the simplest manner and never by a sudden change. This is also understood to be the case, when we speak of chorus and movements in twelve and sixteen parts, and only single compositions of Bach are found, where eight and more parts, including, however, instrumental parts, are treated *obligato*.

These hints with regard to movements in several parts may suffice here, especially as further details, after a thorough knowledge of harmony, may be left to individual study and taste for movements of this kind. As to their application we would only remark further, that the use of the movement in many parts above exhibited, and its mode of treatment within the assigned compass, will occur for the most part in compositions for chorus, but not in instrumental music, e. g. in orchestral works, as may be conjectured from the participation of so many instruments of various kinds; and that for these last in most cases the four-part movement is sufficient, concerning the further treatment of which reference can only be had to *actual* systems of instrumentation, since the doubling relations, although often approximating the method above indicated, must yet be subjected to other principles.

CHAPTER XXVI.

Forms of Musical Endings.

DIFFERENT forms of ending have already been mentioned on pp. 32 and 33, likewise further remarks have followed in reference to the authentic close pp. 40 and 53, but throughout the whole treatise there has been no opportunity afforded of recurring to them, so that what remains to be said of these and other forms of ending shall here follow.

We divide the forms of ending first into
the *authentic cadence* and
the *plagal cadence*.

The authentic cadence has the formula V-I, the plagal cadence IV-I (or in minor: V-I, IV-I), as has been before observed.

Both forms are used not only at the close of entire pieces, but also at the close of the chief divisions, of periods and their sections. The remainder of this subject belongs to the doctrine of form (see Book quoted on p. 142.)

If the plagal cadence end a piece, it seldom stands alone, but follows the authentic cadence; so in a piece in minor it often leads to major. e. g.:

450.

*auth.
Cadence.* *Plagal
Cadence.*

It is then often introduced, as in the above example, by a modulation.

Endings (cadences) are also divided into *whole* and *half*.

By the former we understand the same as by an *authentic cadence*. But these we subdivide into *perfect* and *imperfect*.

Perfect whole cadences are those in which the Bass contains the root of the dominant and tonic, and the Soprano likewise the root of the tonic. e. g.:

451. not:

When this is not the case, they are called *imperfect*. e. g.:

452.

If the Bass move from the dominant to another degree, they are called *false cadences*.

453.

See examples p. 82-85.

Half cadences have the formula I-V. e. g.:

454.

They consist also in this, that the *dominant triad* ends the phrase.

Beside the tonic triad, chords of other degrees also may precede the dominant triad in the formation of a half-cadence. e. g.:

455.

Under *half cadences* we include also those endings in the dominant key,

which are formed by a modulation into the same, not a decisive one, however, through the fundamental position of the dominant-seventh harmony, but either through its inversions or the seventh chord of the seventh degree. e. g.:

456.  Musical notation for example 456, showing a sequence of chords on a staff with figured bass notation below. The notation includes a treble clef, a key signature of one flat, and a common time signature. The chords are: G: VII°7, I, a bar line, g: VII°7, C: V, c: II°7, V. The staff shows the corresponding chord voicings for each.

This is the case, however, only in relation to the key which has prevailed immediately before.

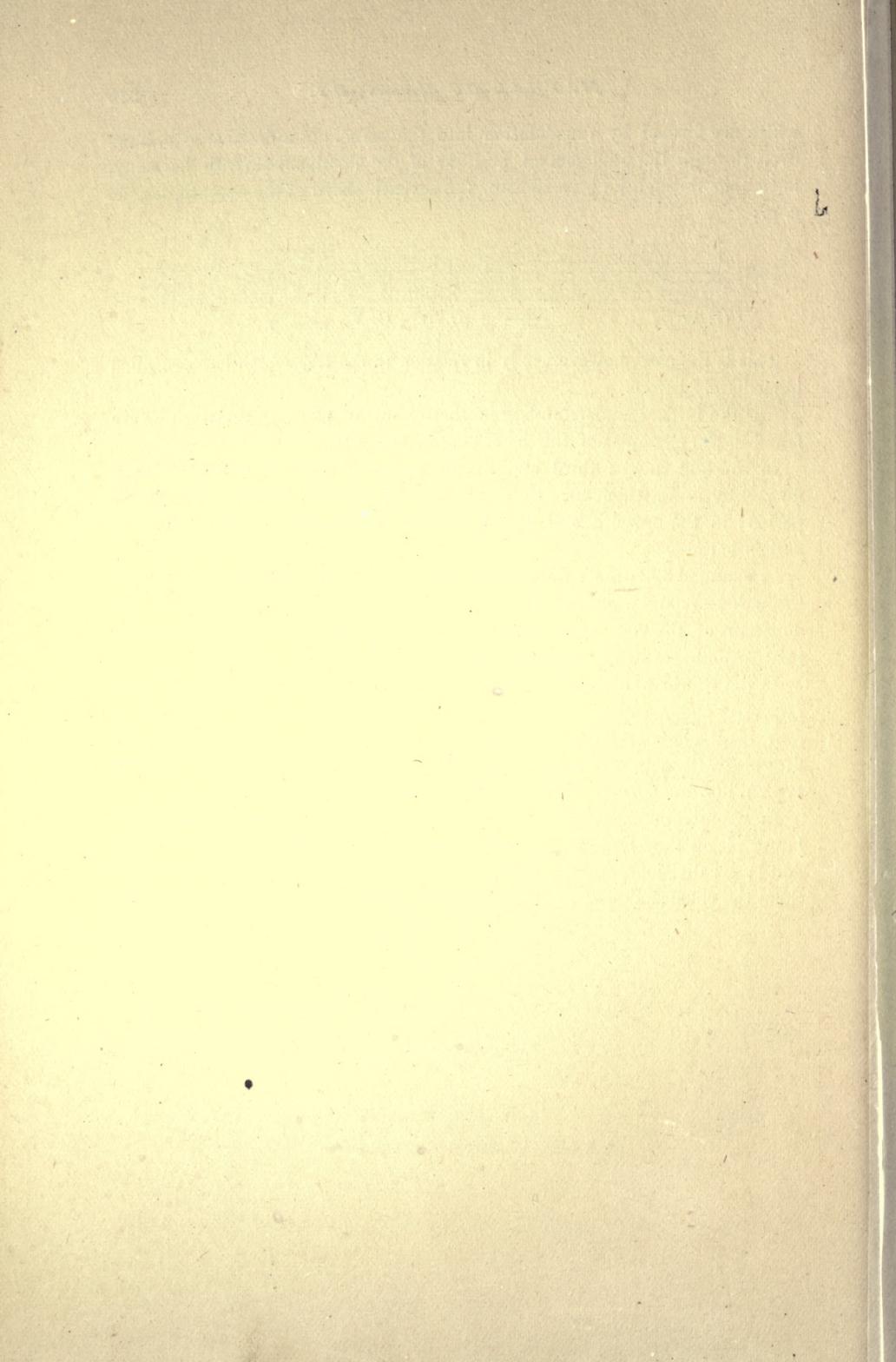
For the further understanding of these kinds of cadence, those which are found in the examples of this book may be compared.

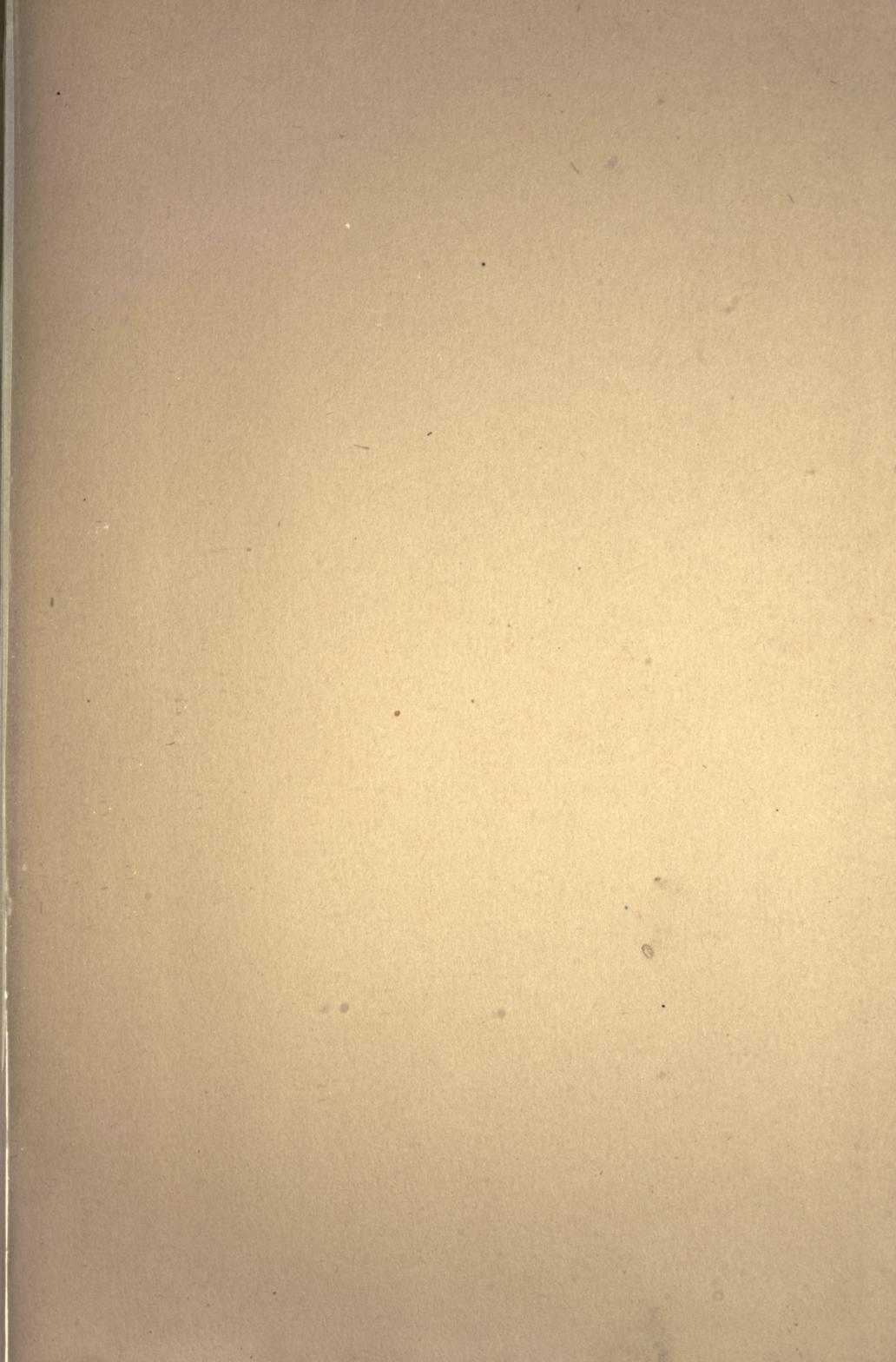
In No. 388 in the third and fourth measures there is a *half* cadence formed by II-V, which constitutes the close of the first section of the entire period: in the seventh and eighth measures, however, a *perfect whole* or authentic cadence.

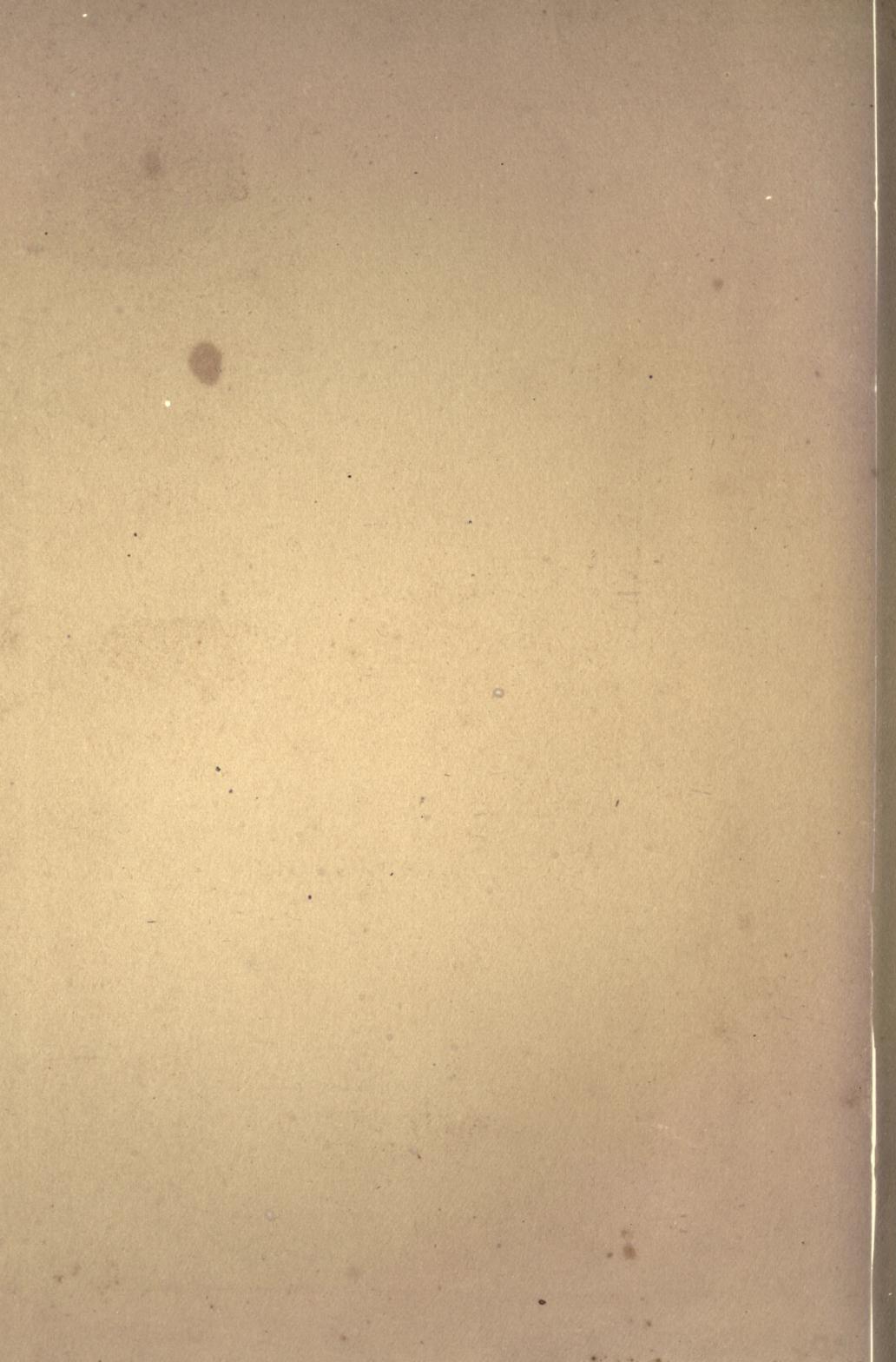
In example 392 a *half* cadence is formed in the third and fourth measures through I-V, and a *perfect whole* or *authentic* cadence in the key of the dominant at the end. (Here therefore *no half cadence*, because the dominant-seventh harmony renders the modulation decisive.)

In the choral written out under No. 446 the first strophe ends with an *imperfect whole* cadence, the second with a *perfect whole*, the third with a *half* in *E* minor (IV-V), the fourth with a *perfect whole* in *G* major, the fifth also with a *perfect whole* in *A* minor, the sixth with a *half* in *E* minor (IV-V), and the seventh with a *perfect whole* cadence in *G* major.

In chorals the application of the various cadences is easily found; for larger pieces they furnish means for separating and connecting the smaller and larger divisions, and are therefore to be used with great care, since upon them the construction of a piece as regards form in a great measure depends.







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