Acordes cromáticos de sexta - PISTON (1959), 1ª edição

HARMONIA II - Prof. Paulo de Tarso Salles

#### **EXERCISES**

1. Construct a musical sentence of three phrases according to the following specifications:

a. The first phrase shows a diminished seventh chord used first as VofV, then as II, altered (with enharmonic change).

b. The second phrase modulates by means of a pivot chord which becomes VI7 altered in the second key.

c. The third phrase returns to the original key by a pivot chord which is II, altered in the final key.

2. Construct a modulating sequence, the pattern of which contains the chord VI, altered.

3. Harmonize the following bass:







4. Harmonize the following soprano:



#### CHAPTER TWENTY-THREE

### THE NEAPOLITAN SIXTH

THE supertonic triad with minor sixth degree and chromatically lowered root is known everywhere as the Neapolitan sixth. It is difficult to say wherein this chord is "Neapolitan," but the fact is that the name is of universal acceptance. In the earlier part of the period it was usually found in first inversion, hence the term "sixth." Later, however, the term "Neapolitan sixth" was applied to any arrangement of the triad, even root position.

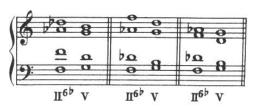
Far from wishing to discard a definition so securely established by usage, we shall welcome the convenience of the identifying label attached to this chord. In this way we may be permitted the unscientific but quite understandable expression, "the Neapolitan sixth in root position," and the occasional use of the commonly accepted

symbol Na.

The Neapolitan sixth is a major triad and is, therefore, not a dissonant chord. However, the chromatic alteration of the second degree gives that tone a downward tendency so that when it proceeds upward there is a feeling of irregularity of movement, if not of resolution.

It is a chord of strongly subdominant character, often used in cadences to introduce the dominant. By far the commonest progression from the Neapolitan sixth is to the dominant chord in some form.

EX. 504



Note that the bass is the best tone to double, as it is a tonal degree. The altered second degree is normally not doubled in the first inversion, but this is a rule less strictly followed in the case of the Neapolitan sixth than with any other chromatically altered chord.

The progressions shown in the example contain the cross-relation between D-flat and D-natural. It cannot be said that this cross-relation is avoided by composers, although there are many arrangements of the progression to V without it, as will be shown. The cross-relation may be seen in Exs. 506, 508, 510, and others.

When the dominant chord contains a seventh, its fifth will very likely be omitted so that no cross-relation will occur.

EX. 505. Beethoven-Sonata, op. 27, no. 2



The bass may remain in place as the harmony changes, making the third inversion of  $V_{\tau}$ .

EX. 506. Bach-Suite for Flute and Strings



If the sixth degree, fifth of the chord, is continued into the next harmony, a ninth chord will result.

EX. 507. Beethoven-Sonata, op. 90



The dominant ninth chord may be in its incomplete form, without root, most often as a diminished seventh chord. Unless the lowered second degree progresses upward, contrary to its tendency, the cross-relation will occur in this case.

EX. 508. Mozart-String Quartet, K. no. 421



Very often the dominant chord will first be represented by the cadential tonic six-four chord as double appoggiatura. This allows a smooth stepwise progression in all voices, the three upper parts moving in contrary motion to the bass. The root succession is, of course, still II to V. The cross-relation is not noticeable because of the intervening harmonic effect of I.

EX. 509. Mozart-Pianoforte Concerto, K. no. 488



Other chords are sometimes interpolated between the Neapolitan sixth and the dominant. These are for the most part different forms of supertonic harmony. The problems of voice leading vary with the form chosen. If the chord is dominant of the dominant, there will be several chromatic progressions in the voices. Note, in the example below, that the cross-relation between the two forms of the second degree is permitted so that the lowered tone G-natural may descend according to its tendency. The other two chromatic progressions are effected each in a single voice.

EX. 510. Schumann-String Quartet, op. 41, no. 3



These problems of voice leading are sometimes obscured by the texture of instrumental writing, especially in music for keyboard instruments. In the following the altered second degree appears to be doubled and it is questionable whether the ear will follow the upward or the downward progression of that tone.

EX. 511. Mozart-Fantasia, K. no. 397



The following excerpt is clearer, as to the melodic progression of the parts, and it is evident that the lowered second degree moves upward. Doubling of the tone A, the sixth degree, avoids the crossrelation by allowing the progression A to A-sharp to be made in one voice.

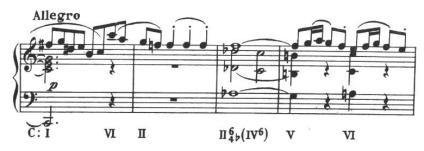
In the first measure it is to be remarked that the melodic figuration over the Neapolitan sixth harmony takes the form of the scale of the temporary tonality of the lowered second degree, here D major.

EX. 512. Beethoven-Sonata, op. 27, no. 2



The altered tone may appear as appoggiatura to the tone below. The fundamental harmony will then be subdominant, although the peculiar color of the Neapolitan sixth should be recognized harmonically. It is also reasonable to consider the tonic as a passing tone.

EX. 513. Mozart-Quintet, K. no. 515



The above example shows the adaptability and coloristic effect of this chord employed in a passage which is prevailingly in the major mode.

The use of the Neapolitan sixth is not limited to cadential formulae. It may be found in any part of the phrase, and may even begin the piece.

EX. 514. Chopin-Ballade, op. 23



In its subdominant capacity it progresses occasionally to I or VofIV.

EX. 515. Handel-Concerto Grosso no. 5



EX. 516. Beethoven-Trio, op. 1, no. 3



The Neapolitan sixth may be used as subdominant harmony in a plagal cadence, followed by either major or minor tonic harmony.

EX. 517. Brahms-String Quartet, op. 58, no. 1



In the nineteenth century the Neapolitan sixth chord was employed with increasing frequency as a triad in root position. This gave the chord much more independence and stability, the lowered second degree being treated in this case not as a melodic tendency tone, but as a true harmonic root and so doubled. The doubled root and the augmented fourth relationship to the dominant help to emphasize the remoteness of this harmony from the main tonal center.

EX. 518. Chopin-Prelude, op. 28, no. 20



EX. 519. Brahms-Violin Sonata, op. 108



Examples of the Neapolitan sixth in the six-four position are not numerous and usually such combinations are due to the presence of the lowered second degree as an appoggiatura (see Ex. 513).

The Neapolitan sixth may be preceded by its dominant, thus adding another to the list of secondary dominants available in one tonality.

EX. 520. Mozart-Quintet, K. no. 581



EX. 521. Schubert-Symphony no. 7



The independence of the root position chord is greatly strengthened by the presence of the secondary dominant "VofN<sub>6</sub>." It is plain, however, that the two chords constitute an extension of the bounds of the main tonality rather than a weakening of it.

EX. 522. Chopin.-Mazurka, op. 7 no. 2



#### FALSE MODULATION

It may happen that the tonality is actually so weakened by harmonies strongly suggestive of another tonal center that a modulation is felt to be the true effect, although there is an immediate return to the main tonality. In this case the term "false modulation" may be applied. The false modulation differs from the passing modulation by returning to the original key instead of proceeding to a third key.

In one sense the interpretation of a passage in analysis as false modulation may be considered as unnecessarily involving a change of key, since the relationship of any chord to a given tonality can be described in some way. But the general effect on the hearer should be taken into account, as well as the complexity of style of the music.

The Neapolitan sixth chord is often felt to be of sufficient tonal strength to cause a momentary shift to its root as a tonal center. This may be due simply to the length of time it occupies.

EX. 523. Chopin-Prelude, op. 28, no. 6



Or it may be because of the attendant harmonies. In the following example the last chord in the first measure is the raised supertonic in the key of G, followed by the tonic six-four. The use of the subdominant of G confirms this impression, but we know that the G-natural triad is but the Neapolitan sixth chord of the key of F-sharp.

EX. 524. Beethoven-Sonata, op. 106



### MODULATION

The Neapolitan sixth is a useful pivot chord in modulation. As a simple major triad it is capable of many interpretations. It is common ground between distantly related keys, as in the following modulation from F to E.

EX. 525. Beethoven-Sonata, op. 14, no. 1



# EXTENSION OF THE SECONDARY DOMINANT PRINCIPLE

The question of the strength of the tonal center, raised in connection with the matter of false modulation, will eventually be answered through the inclusion of all chords into any given tonality, in analysis. This, however, is not a necessary step until the complexities of the twentieth century are reached. But even in the period which we have called the period of harmonic common practice there are many instances in which a foreign chord stands in such a clear relationship to the tonality that it seems illogical to consider it as involving a change of key rather than to observe that relationship.

In the following example the G minor triad is related to the key

of A as subdominant of the subdominant. By extension of the principle of secondary dominants we may therefore describe it as IVofIV.

EX. 526. Brahms-String Quartet, op. 51, no. 2



The diminished triad on D exists in B-flat as VofIV, but as used in the example below the expression IIofII much more accurately describes its function in the sequential harmony. To infer a modulation to C minor on account of this one triad would be to exaggerate its importance.

EX. 527. Krebs-Minuet



The minor triad on the fifth degree is quite lacking in dominant feeling. When it stands in subdominant relationship to the supertonic it could be called IVofII, as below.

EX. 528. Beethoven-Symphony no. 9

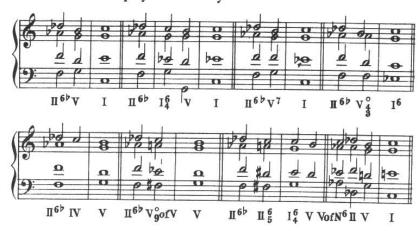


False modulations to the key of the Neapolitan sixth suggest the value of the extension of the secondary dominant principle in avoiding the inference of a change of tonality when one is not felt as important. The example following contains the major triad built on the augmented fourth above the tonic, a chord foreign to the tonality, but used here as subdominant of F-flat major, the Neapolitan sixth. Enharmonic notation is frequently adopted, as it is here, in order to simplify the reading of such chords as that of B-double-flat major.

Ex. 529. Chopin-Etude, op. 10, no. 6



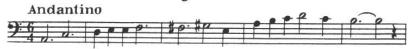
Formulae, to be played in all keys:



### **EXERCISES**

1. Construct a modulating sequence in which the pivot chord is the Neapolitan sixth in the second key.

- 2. Explain the relationship of the Neapolitan sixth chord of the key of G to the tonalities A, F, E, F-sharp, and B-flat.
- 3. Show the progression of the Neapolitan sixth to five different chords in the key of D-flat.
  - 4. Harmonize the following bass:







5. Harmonize the following soprano:



#### CHAPTER TWENTY-FOUR

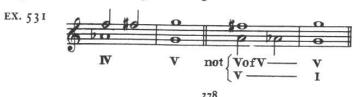
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### AUGMENTED SIXTH CHORDS

THE four chords comprising the group known as augmented sixth chords have in common the interval of the augmented sixth created by the minor sixth degree and the chromatically raised fourth degree. The name "augmented sixth chord" derives from the commonest arrangement of the chords, in which this characteristic interval is found between the bass and an upper voice; but, as in the case of the Neapolitan sixth, it is often applied to other positions.

The augmented sixth chords are nondominant in function. They are strongly tonal since they indicate unmistakably the dominant of the key. The interval of the augmented sixth expands in its normal resolution to an octave which is the octave on the dominant.

This principle of tonality inherent in the augmented sixth chords is most important to an understanding of their use by composers of the common-practice period. Only by very uncommon exception is the octave of resolution anything other than dominant. The augmented sixth interval does not come from a dominant with lowered fifth, but from a subdominant with raised root. The following example shows its contrapuntal origin.



The normal position of all four augmented sixth chords is that with the minor sixth degree in the bass and the raised fourth degree in any upper voice. Another voice is always the tonic, making three voices common to all four chords. Each member of the group will then be distinguished by the fourth voice.

EX. 532

a. b. c. d.

b. c. d.

c. b. c. d.

c. b. c. d.

a is called the augmented sixth.

b is called the augmented six-five-three.

c is called the augmented six-four-three.

d is called the doubly augmented fourth.

Many theorists have used the names Italian sixth (a), German sixth (b), and French sixth (c). These names are not universally employed and have nothing like the established usage of the name Neapolitan sixth, for instance.

Note that b is like a with the minor seventh added; d sounds like b, but the difference between E-flat and D-sharp becomes clear on the resolution of the chord; c is distinguished from b by the presence of the second degree in place of the minor third degree; a, b, and d sound like dominant sevenths.

#### RESOLUTION

The regular resolution of the augmented sixth chords is to V, or V preceded by I<sub>4</sub>. The raised fourth degree moves up a half step, the minor sixth degree moves down a half step, and the tonic either moves down directly to the leading-tone or remains in place as a suspension or approgratura before descending.

The fourth voice will, of course, vary in movement according to its identity. In a, the plain augmented sixth chord, since there are but three factors the tonic will be doubled. It is not customary to double either of the tones making the interval of the augmented sixth. The fourth voice usually moves up by step.

EX. 533



The fourth voice is free to move up by the interval of a fifth to the dominant, often a desirable melodic skip when in the upper voice.

EX. 534. Beethoven-Symphony no. 5



In the augmented six-five-three (b) the fourth voice forms with the bass an interval of a perfect fifth. The parallel fifths arising from the natural progression to the dominant are practiced except when occurring between soprano and bass. They are most often seen between tenor and bass. The third degree is, however, more frequently tied over as a suspension, or repeated as an appoggiatura, before continuing down to the second degree.

The augmented six-five-three is strongly indicative of the minor mode, since it contains both minor third and minor sixth degrees.



EX. 536. Mozart-Sonata, K. no. 332



The parallel fifths are more noticeable in the following example.

Ex. 537. Franck-Symphony



This form of subdominant harmony is very common preceding the cadential six-four chord. Its tonal clarity is especially useful after a modulation.

Ex. 538. Mozart-Overture to Don Giovanni



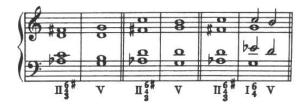
EX. 539. Brahms-Intermezzo, op. 117, no. 2



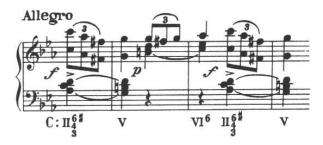
The augmented six-four-three (c) is built on the root II, instead of IV as with the two chords just described. It should be regarded nevertheless as a chord of subdominant function. The same chord may be reached by the process of lowering the fifth of a dominant seventh chord, in this case VofV, but this is a more advanced and much less common form of chromatic alteration and implies a different tonal function.

The presence of the second degree affords a common tone between the augmented six-four-three and the dominant chord, so this factor will usually be repeated or tied over in the chord of resolution, although it may progress to an appoggiatura of the second degree.

EX. 540



EX. 541. Schubert-String Quartet, op. 125, no. 1



The augmented six-four-three is employed in connection with chords characteristic of the major mode as well as those of the minor, contributing to the impression of interchangeability of the two modes.

EX. 542. Chopin-Nocturne, op. 48, no. 2



In the chord of the doubly augmented fourth (d) the distinguishing factor is the raised second degree, implying a resolution to the major third degree. This interval of the doubly augmented fourth, formed between the minor sixth degree bass and the raised second degree, is enharmonically identical with the perfect fifth. The chord can be told from the augmented six-five-three only upon its resolution.

EX. 543



Ex. 544. Chopin-Ballade, op. 47



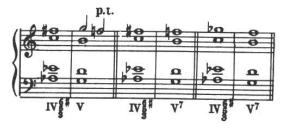
Composers frequently write the doubly augmented fourth incorrectly as an augmented six-five-three. It will be recalled that the same indifference as to the notation of the raised second degree was observed in the supertonic seventh chord with raised root and third. The two chords are closely related, differing only in the form of the sixth degree.

Ex. 545. Haydn-String Quartet, op. 64, no.5



When the augmented sixth is followed by a dominant seventh chord, the raised fourth degree descends chromatically, somewhat in the manner of the irregular resolution of a leading-tone. If the augmented six-five-three is used, the progression sounds like a succession of dominant seventh chords and is often so written, though incorrectly. The steps in the evolution of this progression might be outlined as follows:

EX. 546



In the following example, the parallel motion is interrupted by the appoggiatura in the upper voice: Andante con moto

p sfp

Coloristic possibilities of the augmented sixth combined with chromatic nonharmonic tones are suggested in the following wellknown quotation.

EX. 548. Wagner-Prelude to Tristan und Isolde

Ex. 547. Beethoven-Sonata, op. 57



The appoggiatura forming the interval of a diminished octave with the raised fourth degree is of fairly frequent occurrence.

EX. 549. Mozart-Sonata, K. no. 576



#### INVERSIONS

Disposition of the factors of these chords with other than the sixth degree in the bass does not seem to destroy their identity as chords of the augmented sixth, even though the characteristic interval is found between less prominent voices, or inverted to become a diminished third. This accounts for such expressions as "the augmented six-five-three in the six-four-three position," meaning that the chord normally found making the intervals six, five, and three has been rearranged so that it makes the intervals six, four, and three.

It is recommended that the augmented sixth chords be regarded simply as forms of II and IV with alterations as shown above, using the Arabic numerals to designate in the customary way the intervals formed with the bass.

When the raised fourth degree is in the bass the resultant interval of a diminished third resolves with no less emphasis to the octave of the dominant.

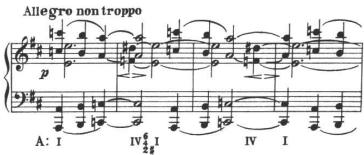
EX. 550. Brahms-Waltz, op. 39, no.7



In the above example, the position of the chord is a natural consequence of the melodic progression of the two outside voices in contrary motion chromatically. The melodic movement of the bass is usually the reason for a choice of some factor other than the sixth degree as a bass note.

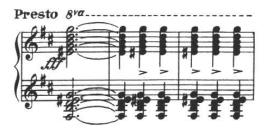
A static bass on the tonic or third degree may hold through an augmented sixth appearing above as double auxiliary or double appoggiatura.

EX. 551. Brahms-Violin Concerto, op. 77



As a dissonant chord over a dominant pedal the augmented sixth is strikingly effective.

EX. 552. Chopin-Scherzo, op. 20



#### IRREGULAR RESOLUTION

Harmonically, the augmented sixth chords have few irregular resolutions. These are mostly progressions to tonic harmony, as in Ex. 551. With the sixth degree in the bass, the progression to I in root position, the augmented sixth interval resolving in a direct fifth, was rarely used until late in the period, when it is recognized as a characteristic feature of the harmonic style of César Franck.

Ex. 553. Franck-Violin Sonata



Many irregularities in voice leading are possible in the regular root progression to V, because of the variety of forms of dominant harmony and the added resources of nonharmonic tones (see Ex. 548). In the following example the doubly augmented fourth leads to an effect of dominant thirteenth.

EX. 554. Schumann-Symphonic Studies, op. 13



#### MODULATION

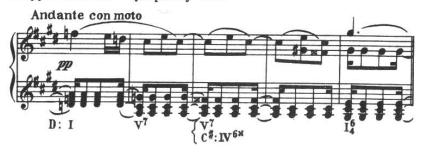
As a pivot chord in modulation the augmented sixth is most often employed for the advantage of its enharmonic similarity to a dominant seventh chord. The raised fourth degree then becomes the seventh of the chord, a tone of downward tendency. Since the minor sixth degree is interpreted as a dominant the two tonalities involved will be a half-tone apart.

EX. 555. Beethoven-String Quartet, op. 59, no. 3



The above modulation is of the sudden type, since the pivot chord is the dominant of the new key. Somewhat different is the effect of the opposite arrangement, where the pivot chord is the augmented sixth chord in the second key. Both modulations may be described as unusual, however, in that the changes are to distantly related tonalities.

Ex. 556. Schubert-Symphony no. 8



#### EXCEPTIONAL FORMS

A few cases may be found of chords having the same interval structure as chords of the augmented sixth group but derived from other degrees of the scale. One of these has been mentioned—that formed by the lowered second degree in a dominant seventh chord. Although properly considered a chord with altered fifth, it may be cited here as an instance of the comparatively rare treatment of the augmented sixth as a dominant.

EX. 557. Schubert-Quintet, op. 163



The supertonic seventh chord with major sixth degree and raised root is sometimes used in progression to I. It is similar in sound to the augmented six-five-three in the relative minor.

EX. 558. Grieg-Song, "Hoffnung"



The tonal sense of the augmented sixth is so strong that in most cases of its construction on roots other than II or IV its relationship to the tonality is more accurately described by the extension of the secondary dominant principle.

EX. 559. Haydn-Symphony no. 3



By the application of this principle a tonal unity can be discovered in such passages as the following. It is plain that the composer does not intend the tonal center to shift four times in these three bars. The augmented sixth chords with their resolutions form a series of IV-V progressions standing for degrees of the key, namely the dominant E, subdominant D, and the lowered seventh degree G, the latter being a modal degree much used by Grieg.

Ex. 560. Grieg-Solveig's Song



#### **FORMULAE**

In addition to the four-part formulae given in Exs. 533, 535, 540, and 543, the following sequences are recommended for key-board practice. They should not be written out, but played from the patterns given.



### CHAPTER TWENTY-FIVE

# **EXERCISES**

1. Write a modulating sequence in which the pivot chord is  $V_{\tau}$  of IV becoming the chord of the doubly augmented fourth in the second key.

2. Construct a musical sentence of two phrases according to the following specifications:

a. The first phrase modulates from B to B-flat by means of a pivot chord which is an augmented sixth in the second key.

b. The second phrase returns to B by means of a passing modulation through a third key.

3. Harmonize the following bass:









4. Harmonize the following soprano:

### Allegretto



<del>}}} </del>

## OTHER CHROMATIC CHORDS

HERE remain but few altered chords that we can include in the vocabulary of harmonic material in the common practice of composers. It is physically possible through the process of chromatic alteration to create a large number of new forms, just as one can spell new words with the letters of a language; but our purpose in this study is to define the harmonic vocabulary as employed.

Much can be learned about this common practice by experimenting with possible alterations of existing chords with a view to discovering reasons why some forms were used in preference to others. The student should go about this systematically, taking each chord in turn and applying to it various chromatic alterations of the factors, appraising the results for the combination of intervals obtained and the relation of the chord to the tonality.

It will be observed immediately that a large proportion of the chords made by this method are really heard enharmonically as other more familiar chords, so that the apparent new form exists only on paper. A few such results are given here:

EX. 561



The harmonic interpretation of these forms depends upon the acceptance by the ear of the tones as particular scale degrees of a particular key and mode. In the above example the key of C is