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# The utilization of traditional harmonic devices by Maurice Ravel

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BOSTON UNIVERSITY

COLLEGE OF MUSIC

Thesis

THE UTILIZATION OF TRADITIONAL  
HARMONIC DEVICES BY MAURICE RAVEL

by

John Thomas Warner

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Approved by:

First Reader: Molly M. Miller  
Assistant Professor of Theory

Second Reader: Garner Read  
Professor of Theory and Composition

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## INTRODUCTION

The chief preoccupation of composers in the thirty-odd years of the 20th century that parallel the creative career of Maurice Ravel has been with the search for a new means of expression outside the system of harmony used during the Common Practice Period which held sway since the time of J. S. Bach. It is for precisely this reason that Ravel is unique among his contemporaries: while he too joined in the quest for new devices, he was also very concerned with utilizing, expanding, and elaborating on the traditional system which had preceded him.

The contrast is especially marked when Ravel is paired, as an Impressionist, with Debussy. In the words of Alfredo Casella:

Tandis que Debussy créait--et en même temps épuisait--l'impressionisme musical, Ravel restait fidèle aux architectures classiques, tout en les rajeunissant par un admirable effort de rénovation. Tel est l'abîme qui sépare les deux créateurs. . . .<sup>1</sup>

This thesis, then, will give instances of Ravel's use of classical harmonic devices and, wherever possible, relate some of the more abstruse elaborations in his style with the basis from which they grew. Due to the paucity of theoretical writings on the subject of Ravel's use of traditional harmony, the statements in this study arose from, and are of necessity documented by, examples from Ravel's music itself.

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1. Casella, Alfredo. "L'Harmonie." La Revue Musicale, 1er Avril, 1925 P. 30.

## CHAPTER I

### BASS MOVEMENT - TRADITIONAL HARMONIC FORMULAE

#### 1. Cadences

One of the foundations of the harmonic system employed by composers during the 18th and 19th centuries, or Common Practice Period as it is called, is the relationship of chords built on the scale degrees to the tonic, or center of gravity, of that scale, and especially the relationship of the two strongest tones of the scale, i.e., the tonic and the dominant, to each other. This relationship of tonic and dominant is most clearly delineated at points of harmonic cadence, a cadential formulae in the traditional system being by definition the progression of a chord, whose root is either a fifth above or a fifth below the key center, to the tonic.

Ravel has not hesitated to employ the traditional cadential formulae in his music. It is significant however that there is a relative scarcity of examples in his writing in which the unadorned dominant to tonic progression appears.

Ex: 1. La Valse, p. 5.



This may be taken as an indication that Ravel regarded the pure dominant-tonic cadence as an overworked cliché to be employed only exceptionally, rather than by rule.

Ex: 2. Sonatine: II, p. 7.

D<sup>b</sup>: II<sub>3</sub> V<sub>7</sub> I

It is not at all infrequent, however, that the penultimate dominant chord of the cadential formula is preceded by the most traditional arrangement of chords such as II, II<sub>6</sub>, IV<sub>1</sub>, supertonic and its first inversion, subdominant seventh, or, as in the example quoted below, submediant-subdominant-supertonic-dominant seventh-tonic.

Ex: 3. Le Tombeau de Couperin: Prelude, p. 5.

A<sup>b</sup>: VI IV II V<sub>7</sub> I

In the following example from the Concerto Pour Piano Et Orchestre more elaborate forms of the subdominant and supertonic offset the simplicity of the final dominant and tonic

chords,

Ex: 4. Concerto Pour Piano Et Orchestre II, p. 52.

A musical score snippet for piano and orchestra. The piano part is shown in two staves. The first staff has a treble clef and the second a bass clef. The music shows a sequence of chords: a G major triad (G-B-D), a G7 chord (G-B-D-F), a G7b9 chord (G-Bb-D-F-Ab), and finally a G major triad (G-B-D). The G7b9 chord is marked with a '+' sign and the dynamic 'App'. Below the piano part, the chords are labeled as G:  $\Pi_7$  - V - I.

One variant of the dominant commonly employed to add freshness to the cadence is the dominant with lowered third, the "minor dominant"<sup>1</sup> either in the minor modes

Ex: 5. Sonatine, II, p. 6.

A musical score snippet for piano. The piano part is shown in two staves. The first staff has a treble clef and the second a bass clef. The music shows a sequence of chords: a G major triad (G-B-D), a G7 chord (G-B-D-F), a G7b9 chord (G-Bb-D-F-Ab), and finally a G major triad (G-B-D). The G7b9 chord is marked with a '+' sign and the dynamic 'f'. Below the piano part, the chords are labeled as f:  $\Pi_7$  V T.

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<sup>1</sup>Miller, H. A., New Harmonic Devices.



or in the major:

Ex: 6. Tombeau de Couperin, Rigaudon, p. 16.

C: V<sub>9</sub> III III V<sub>9</sub> I V<sub>7</sub> I

Raising the fifth of the dominant triad is a favorite device in later works of Ravel, and it is almost a stylistic feature of La Valse, from which the following example is taken.

Ex: 7. La Valse, p. 5.

G: V<sub>7</sub> — I(+2)

Higher forms of the dominant, i.e., 9th, 11th, and 13th structures, are common in Ravel's work as the examples below indicate.

Ex: 8. Le Tombeau de Couperin, Forlane, p. 10.

APP

V<sub>9</sub> 3<sup>d</sup> T

Ex: 9. Valses Nobles et Sentimentales, I, p. 1.

APP

V<sub>13</sub> V<sub>11</sub> T

It is less frequent, however, that the ultimate tonic chord appears in higher forms at strong cadence points.

Ex: 10. Le Tombeau de Couperin, Minuet, p. 23.

V<sub>11</sub> I<sub>9</sub>

Occasionally, and especially if the cadence is intended to be of climactic or startling effect, the dominant is radically altered.

Ex: 11. Valses Nobles et Sentimentales, VII, p. 18.

Musical notation for Example 11, showing a piano accompaniment. The notation is in G major (one sharp) and 3/4 time. It consists of two staves: a treble clef staff and a bass clef staff. The bass clef staff shows a dominant chord (V) in the first measure, followed by a tonic chord (I) in the second measure. The treble clef staff shows a melodic line with eighth and sixteenth notes. The key signature is G major, and the time signature is 3/4.

Also, non-tertian structures are built on the dominant tone. In the following example the effect is still distinctly and strongly cadential despite the avoidance of the leading-tone in the penultimate dominant chord.

Ex: 12. Le Tombeau de Couperin, Rigaudan, p. 17.

Musical notation for Example 12, showing a piano accompaniment. The notation is in C major and 3/4 time. It consists of two staves: a treble clef staff and a bass clef staff. The bass clef staff shows a dominant chord (V) in the first measure, followed by a tonic chord (I) in the second measure. The treble clef staff shows a melodic line with quarter and eighth notes. The key signature is C major, and the time signature is 3/4.

But this structure is weaker in its effect, and more typical of chords built in fourths:

Ex: 13. Valses Nobles et Sentimentales, III, p. 9.

Musical notation for Example 13, showing a piano accompaniment. The notation is in G major (one sharp) and 3/4 time. It consists of two staves: a treble clef staff and a bass clef staff. The bass clef staff shows a dominant chord (V) in the first measure, followed by a tonic chord (I) in the second measure. The treble clef staff shows a melodic line with quarter and eighth notes. The key signature is G major, and the time signature is 3/4. The label "ADDED 6<sup>th</sup>" is written above the second measure of the treble staff.

The rather weak plagal cadence (subdominant to tonic) is very rare in Ravel. Furthermore, in the illustration of it from the coda of the Prelude in the suite Le Tombeau de Couperin quoted below, it is even questionable whether the progression is not heard as I-IV-I (suggesting I being equal to V of IV) rather than as IV-I.

Ex:14. Le Tombeau de Couperin, Prelude, p. 6.

The image shows a musical score for the coda of the Prelude in Le Tombeau de Couperin. The score is in 3/4 time and G major. The bass line shows a progression from G (T9) to C (IV9) to G (T9). The treble clef part consists of several measures of music, including a final measure with a fermata. The bass line is annotated with 'T9' and 'IV9' under the respective notes.

In view of the rarity of the plagal cadence in Ravel's writing it is interesting to note that while bass movement by fifths or fourths is a dominant feature of his style Ravel has a distinct leaning toward the V-I progression (bass movement up a fourth or down a fifth) rather than the IV-I sequence (bass movement down a fourth or up a fifth) as evidenced in the following example in which the entire circle of fifths is traversed,

Ex: 15. Valses Nobles et Sentimentales, p. 3.

mf

C: V<sub>9</sub> I<sub>7</sub> I<sub>7</sub>  
 C: V<sub>7</sub> F: V<sub>7</sub> E: II<sub>7</sub> G: II<sub>7</sub> V<sub>7</sub> F#: II<sub>7</sub> B: II<sub>7</sub> I<sub>7</sub> I<sub>7</sub>

Likewise, instances of the half-cadence ( IV-V, II-V, or some variant) are most infrequent. This most inconclusive of all cadences is scarcely ever used by Ravel and again, when it is, as in the passage cited below the effect is very close to the authentic cadence.

Ex: 16. Le Tombeau de Couperin, Rigaudon, p. 17.

C: II F: V<sub>7</sub>

The deceptive cadence (irregular resolution of the dominant) is a stock-in-trade of Ravel's technique, however. Very straightforward examples of this exist: the following might almost have been written in the Classical period.

Ex: 17. Le Tombeau de Couperin, Minuet, p. 20.

a:  $\Pi$  V — VI

There is a distinct inclination to heighten the surprise inherent in the deceptive cadence by raising the third of the ultimate submediant chord. In the major mode this requires raising the tonic note a half-tone and introduces a very remote alteration to the key. In the example of this from the Concerto Pour Piano Et Orchestre the tonic is returned to without delay, but in the da capo of the example from Le Tombeau de Couperin, the deceptive cadence is treated as a surprise modulation and the Minuet continues in the submediant.

Ex: 18. Concerto in G, II, p. 58.

E:  $\Pi$  V — VI

Ex: 19. Le Tombeau de Couperin, Minuet, p. 20.

Finally, there are innumerable instances of exotic cadences to be found in Ravel's music.\* They may be properly called exotic in that they represent a drastic violation of the V-I relationship on which the traditional system of tonality is based. While they have been employed by some composers of the Common Practice Period themselves, their salient characteristic is here as it was before: they represent an attempt to break down the rigidly defined rule of the traditional harmonic system that the dominant to tonic relationship must be demonstrated at cadence points. Because of their natural tendency to destroy the system, no attempt has been made to list or give illustrations of such exotic cadences. They are essentially outside the scope of this study.

## 2. Sequences

In the traditional view, sequences are of two main types: modulating, and tonal. Classical theory further decrees that a sequential pattern may be of any length, although it is most often from two chords to a short phrase in

\*II-I, III-I, and  $\flat$ VII-I, etc.

duration; and that at least two transpositions of the original pattern must occur before the sequence is firmly established.

The reasoning behind the laws of sequence writing is somewhat obscure, especially in regard to the dictum that sequences should consist of no more than three, no less than two transpositions. As Walter Piston says, "This rule may be stated as an observation without presuming to deduce a principle of aesthetics therefrom."<sup>1</sup>

Much of Ravel's sequence writing (and he uses the device liberally) does not adhere to these rules, however. In discussing sequences in Ravel's music one must accept the establishment of a sequence by only two complete appearances of the initial pattern, because in many cases its length renders a third appearance either impractical or undesirable.

Ravel employs the sequence exclusively as a means of modulation; there are scarcely any examples of tonal sequences to be found, and those principally in his early works.

Ex: 20. Sonatine, Minuet, p. 6.

f IV<sub>7</sub> II<sub>7</sub>/III III<sub>7</sub> VI II, II

<sup>1</sup>Piston, Walter, Harmony, Chapter XIX, p. 215. New York, W. W. Norton, 1948.



On the other hand instances of modulating sequences abound in his writing throughout his career. It is a favorite means of development.

While initial patterns of varying duration are to be found, the characteristic which distinguishes many of his sequences is the unusual length of the pattern. The following examples illustrate the brevity, and the length, respectively, of the sequential patterns that are encountered in Ravel's music.

Ex: 21. Sonatine, III, p. 15.

The image shows a musical score for a piano piece. The top staff is the treble clef and the bottom staff is the bass clef. The key signature has three sharps (F#, C#, G#). The time signature is 3/4. A bracket labeled "INITIAL PATTERN" spans the first four measures. Below the staves, Roman numerals indicate the chord progression: I - a: V - T - c: V - III - I - III - V.

Ex: 22. Valses Nobles et Sentimentales, VII $\frac{1}{2}$ , p. 18.

The image shows two staves of musical notation. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The time signature is 3/4. A bracket highlights a sequence of notes in the top staff. Below the staves, two more staves show the same sequence transposed to different keys, illustrating the pattern's length and its transpositions.

The pattern in the second example above is given two transpositions, the total length of the sequence being thirty bars where it is broken off.

In adhering to the chosen degree of transposition of a modulating sequence, Common Practice was not as literal as that of Ravel. The degree of transposition was most often adjusted by a half-tone to accommodate the scale tones of the basic tonality of a composition. Thus a sequence (in which the desired interval of transposition was a third) beginning on the dominant would first be transposed down a major third to the mediant, then a minor third to the tonic. When Ravel chooses an interval of transposition he adheres to it strictly without variation. In this sequence from Le Tombeau de Couperin the interval of transposition is a major second, the sequence progressing from F# through E and D to C, a tritone away.

Ex: 23. Le Tombeau de Couperin, Rigaudon, p. 16.

The musical score consists of two staves. The top staff is the melodic line, and the bottom staff is the harmonic accompaniment. The sequence is divided into three sections: 'INITIAL PATTERN', 'TRANSPOSITION I', and 'TRANSPOSITION II'. The chord symbols and figured bass notation are: F# I = E: II7 — V, T7 = D: II7 — V, T7 = C: II7 — V, I7.

Transpositions such as the above point up the modulatory character of the sequence, since each successive statement of the pattern contradicts the previous one, in accidentals, and a basic or underlying tonality governing the movement of the whole is not strongly felt.

Another treatment of the sequence which is characteris-

tic of Ravel may be called the Compound Sequence. In this device the entire sequence, consisting of perhaps three statements, is transposed, creating a larger sequence.

Ex: 24. Le Tombeau de Couperin, Prelude, pp. 2,3.

The image displays two systems of handwritten musical notation for a piano piece. The first system is labeled 'INITIAL PATTERN' at the top. It consists of two staves (treble and bass clef) with a key signature of one sharp (F#) and a 4/4 time signature. The melody in the treble clef is marked with 'INITIAL PATTERN', 'TRANSPOSITION I', and 'TRANSPOSITION II'. The bass clef accompaniment is marked with 'INITIAL PATTERN', 'TRANSPOSITION I', and 'TRANSPOSITION II'. The second system is labeled 'TRANSPOSITION I' at the top. It also consists of two staves with the same key signature and time signature. The melody in the treble clef is marked with 'INITIAL PATTERN', 'TRANSPOSITION I', and 'TRANSPOSITION II'. The bass clef accompaniment is marked with 'INITIAL PATTERN', 'TRANSPOSITION I', and 'TRANSPOSITION II'. The notation includes various musical symbols such as notes, rests, and accidentals.

Any style of composition which relies on even a moderate degree of sequential writing requires that the creator be highly imaginative in varying the pattern without destroying its identity, so that stereotyped and predictable repetitions are avoided.

The type of modification which the initial pattern undergoes as it is transposed varies, of course, with each individual case. There are almost as many examples of different techniques of varying a sequential pattern as there are

examples of the sequences themselves. Yet, some of the more interesting types of variation recur, and these are worth noting.

Below are two examples in which the entire sequence is placed over an unvarying pedal note. In the first instance this leads to intimations of bitonality:

Ex: 25. Valses Nobles et Sentimentales, I, p. 2.

The musical notation for Example 25 consists of two staves. The upper staff shows a sequence of chords: D major, E major, F major, G major, A major, B major, C major, D major, E major, F major, G major, A major, B major, C major, D major. The lower staff shows a constant bass pedal point of D. The sequence is divided into three sections: 'INITIAL PATTERN' (first four chords), 'TRANSPPOSITION I' (next four chords), and 'TRANSPPOSITION II' (last four chords). The key signature changes from D major to D minor and back to D major.

Ex: 26. Valses Nobles et Sentimentales, VI, p. 15.

The musical notation for Example 26 consists of two staves. The upper staff shows a sequence of chords: D major, E major, F major, G major, A major, B major, C major, D major, E major, F major, G major, A major, B major, C major, D major. The lower staff shows a constant bass pedal point of D. The sequence is divided into four sections: 'INITIAL PATTERN' (first four chords), 'TRANSPPOSITION I' (next four chords), 'TRANSPPOSITION II' (next four chords), and 'TRANSPPOSITION III' (last four chords). The key signature changes from D major to D minor and back to D major. Below the notation, it is noted 'L. V PEDAL'.

The quotation from Valse VI is also another instance of a compound sequence. The strong phrasing of the bass in two bar groups diverts attention from the quadruple repetition of the one bar sequential pattern in the upper voice.

The Prelude from Le Tombeau de Couperin is practically an essay in sequence writing which necessitates a high degree

of inventiveness. The compound sequence pattern is exploited four times in the course of the composition and is presented in three different harmonizations (Ex: 24, page 14, and Ex: 27, below). All the harmonizations are very closely related, with subtle alterations of the dominant imparting the required freshness to every appearance of the initial pattern.

Ex: 27. Le Tombeau de Couperin, Prelude, P. 5.

The image shows a handwritten musical score for Ex: 27, Le Tombeau de Couperin, Prelude, P. 5. The score is divided into two systems. The first system is labeled "INITIAL PATTERN" and shows a sequence of chords: F#m: II9, bV, TRANSPOSITION I (I = E: II9, bV), TRANSPOSITION II (I = D: II, V), VI, IV, II, V, I. The second system is labeled "TRANSPOSITION I" and shows a sequence of chords: D: I = C: II9, #V, TRANSPOSITION I (I = Bb: II9, #V), TRANSPOSITION II (I = Ab: II, V), VI, IV, II, V, I. The score includes treble and bass staves with handwritten notes and chord symbols.

Also to be noted in the above example is the third technique of variation, often employed when the same sequential pattern is repeated in two different sections of a piece: the radical changing of the interval of transposition of the initial pattern, in this case from a half-tone down in the first compound sequence, to a tritone up in the

second appearance.

Finally, Ravel's sequence writing at its most complex occasionally involves more than one sequence simultaneously. In this passage from his Trio the Violin and Violoncello have one sequential pattern which is transposed up a fourth each bar; the bass pattern, meanwhile descending in seconds, suggests the typically Common Practice "sequence of sevenths." In the center, the piano has a two bar pattern, which is treated rather freely due to the complexity of the writing.

Ex: 28. Trio, III, p. 22.

The image displays a handwritten musical score for Ravel's Trio, III, p. 22. The score is divided into three systems, each representing a different instrument: Violin (top), Violoncello (middle), and Piano (bottom). The key signature is A major (two sharps) and the time signature is 3/4. The Violin and Violoncello parts feature a sequential pattern of eighth notes that is transposed up a fourth in each bar. The Piano part features a two-bar pattern of chords that is transposed in each bar. The score is annotated with labels: 'INITIAL PATTERN' and 'TRANSPOSITION I', 'TRANSPOSITION II', 'TRANSPOSITION III' for the Violin and Violoncello parts; and 'INITIAL PATTERN', 'TRANS. I', 'TRANS. II', 'TRANS. III' for the Piano part. The handwriting is clear and legible, with some corrections and markings throughout the score.

### 3. Modulations

The classical principles governing modulation are very clear and explicit for any composer making use of the traditional system.

Modulation is a means to secure harmonic variety in music. It introduces a higher complexity and depth to musical composition in offering it the resources of keys other than the tonic with their attendant galaxy of chords. Furthermore, it expands the principle of the relationship of chords to a tonic into the relationship of tonal centers themselves to each other.

"Composers seem to have been in consistent agreement that to remain in one key throughout a piece of any length is aesthetically undesirable."<sup>1</sup> It is to be expected that Ravel is no exception. In fact, he has probably brought more imagination and ingenuity to bear on this aspect of the traditional harmonic system than on any other. Allowing himself only the simplest means, he elaborates on, and at the same time offers clarification of, the traditional methods of modulation.

Before a modulation can be effected the initial tonality must first be clearly established. The modulation may then be executed by means of a pivot chord (a chord common to both the key of origin and the key of destination) and the key of destination is established, usually by means of a

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<sup>1</sup>Piston, Harmony, Chapter VIII, p. 77, New York, W. W. Norton, 1948.

cadence. "The simplest modulations employ the cadential tonic triad as a pivot."<sup>1</sup>

Ex: 29. Valses Nobles et Sentimentales, VI, p. 14.  
(C to G)

C: I — G: IV — II — V — I

Ravel's modulations usually do employ the simplest means. Always they are effected by means of this pivot chord principle. The student of Ravel does not find the violent juxtaposition of keys without benefit of a smooth hinge that are occasionally employed by Beethoven.

In the simple type of Modulation described above, with the cadential tonic of the key of origin becoming the pivot chord to the key of destination, the pivot chord will assume any tonal function in the key of destination that the desired modulation requires. Thus if the modulation is to the dominant, the cadential tonic in the key of origin will assume simultaneously the function of the subdominant in the key of destination. Following are examples of the tonic assuming six different roles in as many modulations:

<sup>1</sup>Hindemith, Paul, Harmony, Chapter XIV, p. 101, New York, Associated Music Publishers, 1944.



I becomes II (modulation to the seventh degree of the scale). See Ex: 23, page 13.

I becomes III (modulation to the Submediant)

Ex: 30. La Valse, p. 12.  
(D to B<sup>b</sup>)

I becomes IV (modulation to the Dominant). See Ex: 29, page 19.

I becomes VI (modulation to the Mediant)

Ex: 31. Valses Nobles et Sentimentales, II, p. 5.

I becomes VII (modulation to the Supertonic).

Ex: 32. Valses Nobles et Sentimentales, V, p. 12.

Example 23, cited above in relation to the modulation to the leading tone (I becomes II), offers striking proof of Ravel's complete acceptance of the pivot chord principles. It is notable that the initial pattern is  $II_7-V-I_7$  and that each time the tonic assumes the role of the supertonic of the next key, the major seventh is flatted to a minor seventh, thus enabling the former tonic seventh to fulfill literally its function as supertonic seventh in the key of destination. In this way Ravel almost spells out the principle "tonic becomes supertonic" and verifies the theoretical principle of the pivot chord.

While these six examples cover in general the simplest kinds of modulation, which are by far those most frequently used by Ravel, there are groups of more complex modulations in which chords other than the cadential tonic act as the pivot to the key of destination.

It is a logical extension of the pivot chord principle that any chord of a key of origin may assume the function of any chord in a key of destination, the complexity of the relationship between the two being in direct proportion to the remoteness of the modulation.

To offer a simple instance of the use of pivot chords other than the cadential tonic, the following example is given.

Ex: 33. Le Tombeau de Couperin, Rigaudon, p. 18.

The image shows a musical score for a Rigaudon from 'Le Tombeau de Couperin'. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one sharp (F#) and the time signature is 3/4. The melody in the treble staff features eighth and sixteenth notes. The bass staff provides a harmonic accompaniment with chords and a bass line. Below the staves, the harmonic progression is written as: F#7 - G#m7 - V - I.

This dominant-becomes subdominant modulation is really only another means of achieving the same end as the tonic-becomes supertonic formula; i.e., modulation down a tone. It differs, however, in that it is used (1) in the middle of a phrase rather than as a link between two phrases, (2) when the tonic is only implied and not actually sounded, and (3) when progressions which involve parallel dominant sevenths occur. The last two points quoted above are critical features of Ravel's style, and a clear grasp of them is essential in order to show the relation of certain modulatory passages in his music to traditional theory. For an example of both the reader is referred to bars 33 through 57 of Valse III in Valses Nobles et Sentimentales.<sup>1</sup> Here the parallel dominant sevenths are written over a dominant pedal in the key of B. At the conclusion of the first phrase a modulation to E is effected, and another series of parallel dominant sevenths is heard over the dominant pedal of that key. The pedal note then changes its function from dominant, to medi-

<sup>1</sup>Edition Durand, p. 8, Paris, Durand et Cie, 1911.

ant, and the return to the tonic G of the piece is accomplished. In this entire passage, however, the tonics of the transitory keys are only implied, not sounded. So again we find Ravel clearly illustrating a classical principle: in modulations "it is not essential that the tonic chord should appear, but the dominant must be made to sound as such."<sup>1</sup>

In the most remote Modulations of the Common Practice Era the pivot chord in the key of origin becomes a chord with extended alterations in the key of destination. This is a technique that finds only occasional favor with Ravel. When dealing in modulations to remote keys, he usually selects an alternative: the passing modulation.

The passing modulation is simply one in which the key of destination is reached by passing through one or more tonal centers on the way, instead of going directly to the new key. At no time in a modulation of this sort is there any question that one of the momentary tonal centers is actually the desired goal. The key of destination is always made unmistakably clear by a strong cadence. The example which follows is a perfect illustration of this technique. Here it is applied to modulation down an augmented fourth, a very remote modulation indeed. The complete smoothness with which it is accomplished is due to the division of the interval into two passing modulations of a whole-tone down.

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<sup>1</sup>Piston, Harmony, Chapter VIII, p. 78, New York, W. W. Norton, 1948.

Ex: 34. Le Tombeau de Couperin, Rigaudon, p. 18.

The image displays a musical score for 'Le Tombeau de Couperin, Rigaudon, p. 18'. The score is written on a grand staff with two staves. The upper staff contains the melody, and the lower staff contains the accompaniment. Below the lower staff, there is a series of chord symbols and harmonic analysis:  $I = E: \pi$ ,  $V$ ,  $I = D: \pi_9$ ,  $\pi_7$ , and  $V_9$ . The numbers 13, 9, and 9 are written below the lines of the lower staff, indicating the number of notes in the chords. Below the main score, there is a smaller musical score showing a sequence of chords:  $I_9 = C: \pi_9$ ,  $V$ , and  $I$ .

At this point it is not out of order to observe that Ravel inclines either toward modulating around the circle of fifths, or toward modulating by step. His predilection for writing progressions involving bass movement by fifths has been noted earlier (p. 8); modulation by fifths is only a natural extension of this practice. Modulation by step, and incidentally the frequent use of passing modulations, is a result of his penchant for employing the modulating sequence, which has been fully discussed above.

A much smaller but most interesting group of modulations are those in which the key center shifts a major third either up or down. These key changes are effected by an imaginative

device based on the ambiguity of the diminished seventh chord, a popular technique of the period of Common Practice.

In the modulations under discussion the triad with augmented fifth is substituted for that worst of traditional clichés, the diminished seventh chord. An augmented triad when placed on the dominant of any scale can be interpreted (with enharmonic adjustments) as the dominant sixth chord of the key a major third below, and as the dominant six-four chord of the key a major third above:

Ex: 35.

C: V<sub>5#</sub> = A#: V<sub>6<sub>3#</sub></sub> = E: V<sub>#</sub>

Ravel has capitalized on this ambiguity of the augmented dominant triad, as the following excerpts show.

Ex: 36. Valses Nobles et Sentimentales, IV, p. 10;  
VII, p. 20.

A#: V — C: V<sub>#</sub> — I — F: V<sub>#</sub> — A: V<sub>#</sub> — I<sub>#</sub> — V<sub>#</sub>

To a more limited extent he has also applied this to the tonic triad. In example 30 (p. 20), used in reference to the tonic-becomes mediant modulation, the pivotal tonic on the third beat may also be interpreted as a B flat triad

without root and with fifth augmented. While this may seem far-fetched, the cleverness of the writing makes it a quite feasible interpretation.

Hitherto in this study of Ravel's utilization of the traditional principles of modulation the phrase "chord x- becomes- chord y" has always been used. This naturally implies that a time interval is necessary for the ear to adjust to the new function of the pivot chord. Actually it is an instantaneous process which is perceived only in retrospect. The pivot chord is always simultaneously in both the key of origin and the key of destination. Example 15 (p. 8) shows at once the pivot chord in its bi-functional role, and the mental process whereby Ravel starts from a traditional principle and arrives at an explanation of a complex 20th century phenomenon, the chord with major and minor third or major and minor seventh.

#### 4. Altered Chords

Any chord in the traditional system may be altered, and, depending on its resolution, still retain its identity. It is through their regular resolutions, i. e., their relationship with other chords of the key that the function of triads is identified.

In a style in which resolutions and voice leading are at times obscure, it becomes a considerable problem to determine if a chord has been altered, or if it is a combination of unresolved appoggiature, or a free choice of tones which

cannot be related to the traditional system at all.

This is the cause of a great deal of the confusion and controversy that exists among analysts of Ravel's harmony. There are, however, certain structures which appear again and again in his music and these may safely be described as altered chords.

The chord which most frequently appears in altered form is the dominant. It appears with both raised or lowered fifth, major seventh, and with the simultaneous sounding of major and minor thirds. In addition, the dominant tone of the scale is sometimes raised or lowered and the normal dominant seventh chord is constructed thereupon.

The following examples illustrate each type of alteration:

Ex: 37.

LA VALSE P. 11. VALSES NOBLES P. 9. LA VALSE P. 9. VN. SONATA P. 28

(F = E#)

D: V5# G: V5b F: V5# I (+b) V5b

TOMBEAU DE COUPERIN P. 5. TOMBEAU DE COUPERIN P. 5.

C: V5b F: V5b



Higher forms of the Dominant are also extensively altered. Such alterations of eleventh and thirteenth chords follow a less consistent pattern; the alteration of each chord is idiomatic, being intended for each individual context. In these cases involving alteration of thirteenth structures the lower members of the chord are either left untouched or omitted altogether.

Ex: 38.

The image shows a musical score for two pieces. The first piece is 'TOMBRAU DE COUPERIN P. 15' and the second is 'VLN. SONATA. P. 3.'. Below the notes are chord diagrams for each measure. The first piece has measures with chords: T, V<sup>11#</sup><sub>13 4</sub>, T, V<sup>9 11#</sup><sub>13</sub>, T. The second piece has measures with chords: C: V<sup>11#</sup><sub>13</sub>, I. The second piece also has 'APP.' written above the final measure.

Alteration of the Subdominant

There is one altered structure that stands above all others as a stylistic fingerprint of Maurice Ravel. Its ancestry is traceable directly to Chopin. Indeed, Ravel is said to have remarked to Nadia Boulanger, "If Chopin had not written this, I would have written nothing."

Ex: 39, Chopin, Scherzo in B minor, Op. 20, p. 25.

The image shows a musical score for a piano piece. Below the notes are chord diagrams for each measure. The chords are: b: IV<sup>7b</sup>, V<sup>7</sup>, I. There is also a 'PED' marking below the first chord.

While this is an extreme point of view that the composer alone is entitled to take, it is not wholly untrue.

The chord will be recognized, of course, as the so-called "German Sixth," or Subdominant seventh with raised root. It is not so much the use of the "German sixth" which is distinctive in Ravel as it is his adoption of it in the identical setting used by Chopin; i.e., in root position over a dominant pedal. In this form it is to be found in music from all periods of Ravel's career. In this example from Alborada del Gracioso it is used in the same key as the Chopin example.

Ex: 40. Alborada del Gracioso

The image shows a musical score for Example 40. It consists of two staves. The upper staff contains a sequence of chords: a German Sixth chord (F#4, C5, G#5, B5) followed by a dominant seventh chord (F#4, C5, G5, B5). The lower staff shows a single chord, the German Sixth chord (F#4, C5, G#5, B5). The key signature is one sharp (F#). The time signature is common time (C). The notation is labeled 'C# I(+6^b+2)' and 'etc'.

The difference in treatment of this and similar structures between the two composers lies in its resolution. In Chopin it is always carefully resolved to the dominant. Ravel often takes it as a point of departure for a whole series of dominant seventh structures over a dominant pedal, and he sometimes fails to resolve the chord at all. On other occasions it is given only the most off-hand resolution, with the voices sounding the diminished third not necessarily re-

solving to the dominant but often progressing freely to another dissonance.

Ex: 41. Valses Nobles et Sentimentales, III, p. 8.

A further development of this unique setting of a similar structure occurs in the coda of the Chopin Barcarolle, Op. 60. Here it is no longer a "German Sixth" over a dominant pedal, but a leading-tone seventh with lowered third and seventh all over a tonic pedal.

Ex: 42, Chopin, Barcarolle, Op. 60.

It may be argued here that this is a Neapolitan seventh chord in the third inversion. It is only consistent, however, to say that the leading-tone is the root by virtue of the analogous setting and voice leading of the "German Sixth" example. In both cases then, the root will lie a half-tone

below the pedal-note to which it must resolve.

This development of the augmented sixth chord in Chopin is paralleled in Ravel. In the example below it is heard as a pivot chord between F sharp (enharmonically G flat) and D flat. What makes it an unusually interesting example is the fact that in acting as a pivot it shows clearly the relationship between the two chords discussed above. For, in F# it is the "German Sixth" over a dominant (C sharp) pedal, while it is a leading-tone seventh with lowered third and seventh over a tonic pedal in D flat, the key of destination.

Ex: 43. Sonatine, II, p. 7.

#### Alteration of the Supertonic

An entirely different type of alteration is applied in the case of the supertonic. Although the aural result is similar to a secondary dominant seventh, the regular resolution of the chord demands that it be followed by the dominant seventh of the tonality. In this chord the fifth is simultaneously raised and lowered.

Ex: 44.



Unfortunately, as used by Ravel it is impossible to prove (1) the regular resolution of this chord to the dominant seventh, due to his very free voice leading, (2) that he considered it a supertonic at all, due to the enharmonic spelling of the chord.

The following example shows most clearly the derivation of this alteration from the supertonic. Here it is preceded by the supertonic seventh and followed by the dominant. This context carries with it the strong implication <sup>that</sup> the the chord under discussion is an intensification of the familiar supertonic to dominant progression.

Ex: 45. La Valse, p. 9.

Musical notation for Example 45, showing a sequence of chords in La Valse, p. 9. The chords are F major (F1), F# minor (II 5/4), D minor (II 4/3), and D major (I 5/4). The notation includes a trill (tr.) and a triplet (3) over the first chord.

It is used later in La Valse in a sequence of dominant sevenths over a pedal. Again, the voices do not resolve by step but progress by skip to another dissonance. The spelling of the chord gives no hint of its augmented and diminished fifth.

Ex: 46. La Valse, p. 10.

Handwritten annotations in the score include  $(F=E\#)$  and  $(B=A\#)$  etc. Below the staves, Roman numerals are written:  $D: V (F\#) (II, III, IV) - V7 \text{ of } IV - I (B\#) (V, VI, VII) - V7 \text{ of } VII$ .

Among the instances of the usage of this chord the one below comes closest to showing its regular resolution to the dominant seventh:

Ex: 47. Valses Nobles et Sentimentales, V, p. 12.

Handwritten annotations in the score include  $(D=C\#)$  and  $APP.$  Below the staves, Roman numerals are written:  $E: II (D\#) (5\#) - II (D\#) (5\#) - V 13$ .

Here, however, the chord is resolved from the six-four inversion. It is strictly exceptional to find this chord in any but the root position.

## Other Alterations

Of all altered chords not discussed in detail these general rules may be applied:

Any chord not susceptible to alteration ensuing from adoption of either the major, melodic, or harmonic minor may have its fifth either raised or lowered.

Ex: 48. Valses Nobles et Sentimentales, VII, p. 12  
Trio, I, P.2.

VALESE NOBLES  
P. 16

TRIO  
P. 2, BAR 1.  
etc

I 5# I 5# C: T 5b

Occasionally both an altered and a perfect fifth occur simultaneously:

Ex: 49. Le Tombeau de Couperin, Forlane, p. 10.

IV — 9# 5# —

The only remaining tone, the root of the tonic triad, can be neither raised nor lowered without losing its identity completely. When raised it will be equivalent to the Neapolitan tone, and when lowered it will become the leading-tone.

## CHAPTER II

### NON-CHORDAL TONES

The traditional theory which underlies the practical application of the harmonic formulae of the Common Practice is in essence very strict, and as a result imposes severe limitations on the compositions written under its influence. Composers would have been quite limited by its discipline were it not for a sort of "escape clause" through which conventional theory acquires a considerably expanded tolerance and flexibility. This escape-clause is the recognition of the existence of non-chordal tones.

The term "non-chordal" tones embraces those notes which are sounded simultaneously with a chord or chordal progression but which would not be permitted if the rules governing the construction of such formulae were inflexibly applied. For the sake of orderliness in accounting for the behavior of those patterns of non-chordal tones which recur in music throughout the Common Practice Period, another set of principles had to be invented and another group of definitions given.

It is not necessary to become overly concerned with the rules governing non-chordal tones in as much as composers throughout the Common Practice Era have treated them with considerable license. The terms and definitions, however, are a means of classifying and broadly categorizing those non-chordal tones which demonstrate similar or closely related



tendencies; and insofar as they clarify what might otherwise be a chaotic picture, they are most important.

The terms which will be dealt with in this chapter are: Added notes, pedals, pedal tones, appoggiature, passing notes, suspensions, and ornamental resolutions. These terms will be treated in decreasing order of their importance in Ravel's style.

The significance of the role which these non-chordal tones play in Ravel's utilization of the Traditional Harmonic System can scarcely be overstressed. It is largely the use of this device which enabled him to consciously direct an expansion of the system without destroying it altogether.

Through it, he managed to transform the visual and aural appearance of traditional harmonic writing to a degree that, in its apogee, remains recognizable perhaps only to the composer himself. This accounts for the endless confusion and controversy in studies of his music in which the traditional harmonic viewpoint figures little or not at all. The enlightened view of traditional harmony must at least be constructively present at all times in analyzing Ravel's music, if meaningless or absurd interpretations of certain examples are to be kept at a minimum. One such instance will be noted in the sections on pedals and appoggiature.

#### 1. Added Notes

The tertian structures of traditional harmony may be enriched by the addition of tones which are foreign to the chord

in its simplest triadic form. This principle was presented at the very outset of the Common Practice Period by Rameau, and parenthetically it may be observed that it seems to have been a concept peculiarly attractive to French musicians since.

As originally stated, Rameau's theory was that the function of the chord which very commonly preceded the penultimate dominant chord in cadences of that period was best described as a subdominant triad with added sixth. It matters little that the chord is universally referred to as the supertonic six-five today. What is important is the idea that a note may be added to a chord without endangering its identity.

In its original context the theory was limited by the example chosen. With the expanding force of continual use the example has long since been superseded and the theory enlarged until from the practice of Ravel it may be stated thus: any note or notes may be added to any chord, provided that, in terms of the degree of dissonance tolerated in the period, the chord remains wholly consonant. In other words, the added note must be capable of being absorbed into the chord so that the chord remains a wholly satisfying consonance at cadences. By definition, notes added to a chord must not result in any tension which would require resolution.

This is the working hypothesis: to deal with specifics in the practice of Ravel, the exact extent of tones which may be added must be defined.

1.) The major second may be added in the major triad:

Ex: 50. Le Tombeau de Couperin, Minuet, p. 20.

Handwritten musical notation for Example 50. The right hand part shows a G major triad (G, B, D) with an added major second (A) indicated by a '+' sign. The left hand part shows a G major triad (G, B, D). The notation includes 'P.T.' and 'ADDED 2ND' labels. Below the staves, the chord is identified as G: IV - P.T. - IIq -

2.) The major sixth may be added to the major triad:

Ex: 51. La Valse, p. 11.

Handwritten musical notation for Example 51. The right hand part shows a D major triad (D, F#, A) with an added major sixth (F#) indicated by a '+' sign. The left hand part shows a D major triad (D, F#, A). The notation includes 'ADDED 6th' and 'DOUBLE APPROPRIATE' labels. Below the staves, the chord is identified as D: I -

3.) The minor sixth may be added to the major triad:

Ex: 52. Concerto pour la Main Gauche

Handwritten musical notation for Example 52. The right hand part shows a G major triad (G, B, D) with an added minor sixth (F) indicated by a '+' sign. The left hand part shows a G major triad (G, B, D). The notation includes 'ADDED MINOR 6th' and 'p' labels. Below the staves, the chord is identified as G: IV -

4.) The major second and major sixth may be added to the major triad:

Ex: 53. Daphnis et Chloé.

Musical notation for Example 53, showing a major triad with added major second and major sixth. The notation is on a grand staff (treble and bass clefs). The bass clef part shows a major triad (C-E-G) with a major second (D) and a major sixth (F) added. The treble clef part shows a melodic line with notes corresponding to the triad and its extensions. A circled number '691' is visible in the bass clef part.

5.) The perfect fourth may be added to the minor triad:

Ex: 54. Le Tombeau de Couperin, Prelude, p. 6.

Musical notation for Example 54, showing a minor triad with an added perfect fourth. The notation is on a grand staff. The bass clef part shows a minor triad (C-Eb-G) with a perfect fourth (F) added. The treble clef part shows a melodic line with notes corresponding to the triad and its extension. A circled number '691' is visible in the bass clef part.

6.) The major second and minor sixth may be added to the major triad:

Ex: 55. Gaspard de la Nuit, "Ondine," p. 1.

Musical notation for Example 55, showing a major triad with added major second and minor sixth. The notation is on a grand staff. The bass clef part shows a major triad (C-E-G) with a major second (D) and a minor sixth (Fb) added. The treble clef part shows a melodic line with notes corresponding to the triad and its extensions. A circled number '691' is visible in the bass clef part.

Handwritten notes below the staff:  $IV_7^{\#} - II_7 - V_7^{\#} III$  and  $\text{I}^{\text{psa}}$

These examples define the limits of the added-note theory in the overwhelming majority of cases. There are some further examples which, while rare and exceptional to the general rule, throw additional light on Ravel's utilization of the added-note principles and are therefore worth discussing.

The augmented fourth is added to the major triad with augmented fifth. This occurs mainly in La Valse, where the composer is very much concerned with augmented intervals, altered triads, and seventh chords.

Ex: 56. La Valse, p. 9.

Added 4<sup>th</sup> Aug.

F: I 5#

The conclusion to be drawn from this and similar examples in La Valse is that the augmented fourth, while a dissonant interval by itself, may be added successfully to a triad whose fifth is also augmented. Thus the added note remains a whole step away from its neighbor on either side.

Indeed, it may be observed about the added second or fourth generally that there is a pronounced reluctance to place them closer than a whole step away from the nearest chord member. This partially explains the lack of minor

seconds added to triads, as well as the rarity of perfect fourths added to major triads. In both cases the half step between the added note and its neighboring chord tone is apparently too harsh to satisfy the composer's sense of consonance where added notes are concerned. However, the above remark does not apply to the added minor sixth, which is employed with great and obvious relish at final cadences.

In regard to the placement of the added note in relation to the other chord tones it is obvious that it must be in the same octave as the main body of the chord. If it is in the octave above, an added second, fourth, or sixth will take on the aspect of a ninth, eleventh, or thirteenth. The latter can under no circumstances be considered added notes at all but are higher forms of the chord. If the added note is in the lower octave, forming the bass, then the chord tones will sound like higher forms of a chord built on the added note.

It is largely this matter of placement of the added note which determines whether or not the chord is really a structure with note added or rather a ninth, eleventh, or thirteenth chord. In borderline cases the distinction can become rather obscure.

When the added note is placed in the bass as happens occasionally it needs a chord tone very nearby in order that the bass be heard as an added note rather than as a root.

Ex: 57. Valses Nobles et Sentimentales, III, p. 7.

(A<sup>b</sup>, G#)

f# V<sub>9</sub> V<sub>3<sup>rd</sup></sub> I

(Later in the above Valse the added note is left alone in the bass, but by this time the ear has identified its function and retains it even in a considerably changed context.)

Ex: 58. Valses Nobles et Sentimentales, III, p. 9.

ADDED 2<sup>nd</sup>

ADDED 6<sup>th</sup>

G: V<sub>7</sub> I 9

It is apparent both in the sound and in the usage by the composer that the added note is completely absorbed by the chord, enriching it without affecting its function. In regard to modulation, however, the added note can make a distinct contribution to smoothness at the critical "pivot point."

The addition of a note to a chord permits the chord a new interpretation as a pivot in a new key. Thus in the case of the tonic triad with added sixth, when used as a

pivot to the relative minor, the chord is also literally the tonic six-five in the key of destination. Except that one is a root position and the other a six-five chord, the two are identical. This permits much smoother hinge-type modulations.

Ex: 59. Valses Nobles et Sentimentales, III, p. 8.

The image shows a musical score for two staves. Above the top staff, the text "Added 6th" and "p.t." is written. Below the staves, there is a line of figured bass notation: "D: I = b: III (I 6/4) V - IV 7 II Root".

It is plain from the discussions, then, that added notes have been so thoroughly assimilated in the writing of Ravel that they should be considered interchangeable with the undorned chord. They are used with such frequency in his music that they should require no theoretical "raised eyebrows." In the analyses given in this thesis they are regarded simply as an enrichment of the underlying harmonies and no reference is made to them in the figured bass.

Of all non-chordal tones, they are the most characteristic in Ravel's traditional harmonic writing. They account for the richness of texture, as well as wielding a considerable influence over the effectiveness or lack of effectiveness of other non-chordal tones. It will be necessary to return to this point in ensuing discussions of other non-chordal tones.



## 2. Pedals

The pedal, or organ-point, refers to a note which remains static through several changes of harmony. It is of about the same importance in Ravel's music as the added notes which were studied above. Both devices exert a primary influence on the musical texture: the added notes are encountered everywhere as a stylistic feature and extended passages or whole sections of a composition are constructed upon pedal tones.

Obviously then, a thorough appreciation of these most basic non-chordal tones is necessary before the more individual type of non-chordal tone can be treated, for the former will appreciably govern the effect of the latter.

The pedal is perhaps the non-chordal device which has the fewest restrictions placed upon it. It may be of any duration, it may appear in any voice, and it may be on any scale degree. In practice the only real restriction which is placed upon its use is the taste of the composer, so that the study of pedals in Ravel becomes in effect an inquiry into his personal preferences. This is not valueless, however, for style is sometimes solely the result of taste.

Ravel follows the conventional precedent in that the tone most frequently appearing as a pedal note is the dominant, and second in frequency, the tonic.

Ex: 60. Trio, I.

G: I — 7 II — I — VI II — N — V — VI II — N — III — IV — I  
 V PEDAL

Ex: 61. Le Tombeau de Couperin, Minuet, p. 23.

G: I — II II — V, VI — III V of I — I m VI — III  
 V PED  
 I PED

The supertonic sometimes appears as a pedal tone:

Ex: 62. Sonatine, II, p. 6.

E<sup>b</sup>: II, III — IV — V — IV — V — VI — V  
 II PED

The following is an unusual example of a submediant pedal occurring at the outset of the Valse in G.

Ex: 63. Valses Nobles et Sentimentales, III, p. 7.

G: I, I, V, I, V, V, V, V, V, I  
VI PEDAL

The example below can be construed as a leading-tone pedal in the key of destination, an extremely rare occurrence.

Ex: 64. Valses Nobles et Sentimentales, VI, p. 15.

G: VII, VI, VII, V  
VII PEDAL

(B=C)

Examples of subdominant pedals are lacking, curiously enough, and while mediant pedals do occur, they appear infrequently.

Ex: 65. Valses Nobles et Sentimentales, III, p. 9.

G: III, II, II, II, II, II, II, II  
III PED

Double pedals on the tonic and dominant are common.

Ex: 66. Le Tombeau de Couperin, Rigaudan, p. 17.

The musical score for Example 66 consists of two staves. The upper staff contains a melodic line with various note values and rests. The lower staff contains a bass line with chords and notes. Below the lower staff, there are four measures of double pedals, each labeled with a Roman numeral: I, II, I, and VII. The text 'I + I PEDALS' is written below the first measure.

The dominant accompanied by its dominant tone (super-tonic) is a frequent double pedal.

Ex: 67. Sonatine, I, p. 4.

The musical score for Example 67 consists of two staves. The upper staff contains a melodic line with various note values and rests. The lower staff contains a bass line with chords and notes. Below the lower staff, there are four measures of double pedals, each labeled with a Roman numeral: I, II, I, and II. The text 'I + II PEDAL' is written below the first measure.

The use of tones other than these as double pedals frequently brings about bitonality, as in the case of the sub-median and median pedal used in this example:

Ex: 68. Sonata for Violin, I, p. 5.

The image shows a musical score for Example 68. It consists of two staves. The upper staff is a violin line with a treble clef and a key signature of one flat (B-flat). The lower staff is a piano accompaniment line with a bass clef. The piano part features a pedal point chord in the left hand, with notes E, G, and B-flat. The violin line has a melodic line with various intervals and accidentals.

This is a clear case of the keys  $E^b$  and G sounding together.

Entire chords are sometimes used as pedals. When this occurs the pedal chord will be heard as a tonic, and any harmonic digression in the upper voices will immediately cause bitonality.

Ex: 69. Sonate pour Violon et Piano, I, p. 2.

The image shows a musical score for Example 69. It consists of two staves. The upper staff is a violin line with a treble clef and a key signature of one flat (B-flat). The lower staff is a piano accompaniment line with a bass clef. The piano part features a pedal point chord in the left hand, with notes E, G, and B-flat. The violin line has a melodic line with various intervals and accidentals. There are handwritten annotations: "MPPS/STATE" with two plus signs above the piano part, and "I TRIM. PE-4." below the piano part.

While the pedal was originally a phenomenon brought about by holding down the pedal of an organ and improvising above, thereby causing a static bass, subsequent treatment of it has enabled the pedal to occur in any voice. Example 65 (page 46), cited earlier in reference to the pedal on the mediant degree, is also an instance of a pedal occurring in the soprano and bass simultaneously.

It is very common, indeed a stylistic mannerism, for Ravel to have the pedal sounding in all octaves of the texture.

Ex: 70. Valses Nobles et Sentimentales, III, p. 8.

The image shows a musical score for piano accompaniment. It consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The music is in 3/4 time and features a key signature of one sharp (F#). The lower staff contains a constant eighth-note bass line, which is the pedal point. The upper staff contains a melodic line with various intervals and rests. The notation includes notes, rests, and a fermata over the final note of the upper staff. Below the staves, the text 'c. I PEG' is written.

This practice causes the pedal to be brought into juxtaposition with the dissonant upper voices. As a result a piquancy and acidity are imparted to the texture, giving examples like the above and similar passages their characteristic Ravellian flavor.

The interior pedal, the pedal in the middle voices, is the least common variety and the most difficult to write. In addition to the example of it given below mention must be made of "Le Gibet" from the suite Gaspard de la Nuit. This

entire composition is constructed around an interior pedal note B<sup>b</sup> (enharmonically changed to A<sup>#</sup> in the course of the piece). It constitutes, along with Purcell's Fantasia on One Note, the ne plus ultra in imaginative use of the pedal device.

Ex: 71. Sonatine, III, p. 9.

In the conventional use of the pedal, it is generally required that the pedal begin and end as a member of the harmony above. Ravel does not bind himself by this restriction, sometimes leaving the pedal note after having progressed to an entirely foreign key.

Ex: 72. Valses Nobles et Sentimentales, I, p. 2.

Another requirement ordinarily stated in regard to pedal notes is that at some time in the course of its use the

harmonies should progress to chords of which the pedal could not possibly be a member. This again is a convention likely to be ignored by Ravel. In this example the supertonic F is clearly heard as a pedal in spite of its being an integral member of the chords surrounding it:

Ex: 73. Sonatine, II, p. 6.

The musical score for Example 73 shows a piano accompaniment. The bass line features a constant F pedal point. The right hand has a melodic line with chords. Below the bass line, Roman numerals and chord symbols are provided:  $E^b: V_9$ ,  $II$ ,  $V_9$ ,  $II$ ,  $V_9$ ,  $V_9$ , and a final chord with a sharp sign. The text "II PEDAL" is written below the first few notes of the bass line.

Finally, as applied by Ravel to his writing, the pedal device may take the form of a fairly elaborate figuration involving several notes.

Ex: 74. Sonata en Duo, IV, p. 12.

The musical score for Example 74 shows a piano accompaniment. The bass line features a complex pedal figure consisting of several notes. The right hand has a melodic line with chords. The text "PEDAL FIGURE" is written above the first few notes of the bass line.

Usually when this refinement of pedal technique is used the pedal will be heard as centering on one or two notes of the pattern. The following has two different pedal configurations in different voices. The patterns gravitate toward the  $C^\sharp$



however.

Ex: 75. Sonatine, II, p. 7.

We have seen, then, the considerable domination which the pedal has over the musical texture in many passages in Ravel's music. It even plays a considerable role in creating higher forms of triadic or seventh chord harmony. When these simpler structures are placed over a single or double pedal, ninths, elevenths, and thirteenth are often the result.

When any technical device plays as prominent a role as this in a creator's thinking it obviates the necessity for the analyst to give it equal prominence in his attempts to show how the final result was achieved. This is why the pedal must be considered first in importance before other means of classifying non-chordal effects can be attempted.

If this approach had been used in accounting for the famous opening chords of Valses Nobles et Sentimentales, some fatuous errors in analysis could have been avoided.

Ex: 76. Valses Nobles et Sentimentales, p. 1.

It is unthinkable to call the first chord a dominant ninth with added second and fourth, but it has been done.<sup>1</sup> A partial and correct explanation can be given by noting the double pedal. In this light it can be seen as the dominant thirteenth over a tonic pedal, but to explain the E sharp it will first be necessary to take up the next category of non-chordal tones: appoggiature.

### 3. Appoggiature

The appoggiatura is the non-chordal device which is most often used by Ravel in his efforts to expand and elaborate on traditional harmonic formulae. It is far more frequently employed as a means of renovating tired structures and shop-worn clichés than the device of altering chords which was discussed in Chapter I. Through the use of the appoggiatura Ravel has arrived at some of the more advanced of Twentieth Century harmonic practices.

<sup>1</sup>This description of the chord is given: "...Perfect fourths are added to chords in the form of dominant ninths, although written as augmented sixths with ninths added." Colson, Venita B. Harmonic Innovations in the Piano Works of Debussy and Ravel. p. 59. B. U. Graduate School Thesis, 1939.

In classical terms the appoggiatura is that non-chordal tone which is rendered distinct by its rhythmic emphasis. In the Common Practice Period it was customarily arrived at by repetition, by step or by leap, and was resolved by step.<sup>1</sup> As the appoggiatura is a non-chordal tone it is therefore by definition dissonant, and resolution of dissonance was of course required throughout most of the period.

In the hands of Ravel the appoggiatura is used sometimes in accordance with the principle of mandatory resolution and sometimes not. This development of the "unresolved appoggiatura" was well under way toward the end of the Common Practice Period, so while it cannot be said that he originated the device he may be credited with having greatly extended its use.

Here is an example of the appoggiatura which is resolved in accordance with all conventional rules:

Ex: 77. Valses Nobles et Sentimentales, p. 2.



It is to be noted that while the dissonance is resolved into another dissonance, it is a true resolution none the less, for

<sup>1</sup>Piston, Walter, Principles of Harmonic Analysis, Chapter II, Par. 2, page 31, Boston, E. C. Schirmer, Inc., 1933.

the minor seventh of the resolution is a less intense dissonance than the major seventh of the appoggiatura. This, by the way, illustrates a most important point in respect to Ravel's use of the appoggiatura: it may, and frequently does, resolve into another dissonance.

Ex: 78. Sonate pour Violon et Piano, III, p. 24.

When the exact equivalent of the diminished seventh chord with its appoggiatura ( Example 77, above) is placed in a different inversion, and the non-chordal tone is left unresolved, the result is the idiomatic structure encountered so frequently in his music.

Ex: 79. Alborada del Gracioso.

Again, as the appoggiatura in the example from Valses Nobles et Sentimentales (Example 77) is really the root of the chord, by analogy it may be assumed that the roots of the chords in the example from Alborada del Gracioso are in the upper voice.

This is not the case in the following example, however. When the root is a minor third below the appoggiatura, as it is here, the result is the simultaneous major and minor third, another characteristic structure.

Ex: 80. Valses Nobles et Sentimentales, IV, p. 10.

The image shows a musical score for Example 80. It consists of two staves. The upper staff contains a melodic line with an appoggiatura (marked 'APP') that is a minor third below the root of the chord. The lower staff shows the chord structure, which is labeled 'A°: IV'. The notation includes various accidentals and a 'D.T.' (Doppeltutti) marking.

The resolution by substitution which occurs above is a technique which is frequently found. It is used to render sensible such extremely angular melodic lines as this one:

Ex: 81. Valses Nobles et Sentimentales, I, p. 2.

The image shows a musical score for Example 81. It consists of two staves. The upper staff contains a melodic line with an appoggiatura (marked 'APP') that is a minor third below the root of the chord. The lower staff shows the chord structure, which is labeled 'F: I'. The notation includes various accidentals and a 'D.T.' (Doppeltutti) marking.

In contrast to the avoidance of resolution entirely, Ravel frequently causes the appoggiatura to sound together with its note of resolution. In so doing, however, he violates one of traditional harmony's most stringent rules: the resolution of a dissonance must not be anticipated in another voice.

Ex: 82. Vln Sonata, III, p. 26.

The image shows a musical score for a violin sonata, specifically page 26, measure 82. It consists of three staves. The top staff is the violin part, featuring a series of eighth-note patterns with slurs and accents. The middle staff is the piano accompaniment, showing chords and single notes. The bottom staff is the bass line. The score includes dynamic markings such as 'APP.' (appoggiatura) and 'RESOLUTION' with arrows pointing to specific notes. The key signature has three sharps (F#, C#, G#) and the time signature is 3/4.

In addition to the single note appoggiatura, double and triple appoggiature are frequently employed. The following passage shows the use of combinations of appoggiature to ornament and freshen a harmonic formula which is characteristic of the Viennese waltz. On paper it looks far removed from tradition but in as much as each appoggiatura is carefully resolved its relation to the Common Practice Period is unmistakably plain.

Ex: 83. La Valse, p. 11.

APP. RES. APP. RES. APP APP APP RES. APP RES. APP APP RES.

F: I —  $II\frac{3}{4}$  —  $II\frac{3}{4}$  —  $II\frac{3}{4}$  — I — I —  $II\frac{3}{4}$

The concept of multiple appoggiature which are not resolved or are delayed in their resolution is an invaluable aid in explaining passages such as this one:

Ex: 84. Concerto pour Piano et Orchestre, I, p. 12.

APP. RES. (G#-FX) APP. RES.

I —  $II\frac{3}{4}$

Triple appoggiature sounding together with their resolution result in such powerful progressions as are found throughout the Trio.

Ex: 85. Trio, I, p. 1.

Musical score for Ex: 85, Trio, I, p. 1. The score consists of four staves. The top two staves are treble clefs, and the bottom two are bass clefs. The music features multiple appoggiature (accents) marked with '+' signs. A 'G' chord symbol is written below the bass staff.

When the resolution of such multiple appoggiature is delayed or dispensed with altogether, frank bi- or polytonality is the result.

Ex: 86. Concerto pour Piano et Orchestre, p. 1.

Musical score for Ex: 86, Concerto pour Piano et Orchestre, p. 1. The score shows two staves. The top staff is a treble clef with a key signature of one sharp (F#). The bottom staff is a bass clef with a key signature of one flat (F). The score is divided into four measures. The top staff has a melodic line with many appoggiatures. The bottom staff has a bass line with a 'G' chord symbol and 'RESOLUTION G: I' written above it. The bottom staff also has 'APPoggiATURE' written above it with an arrow pointing to the notes. A 'F# I (+6)' chord symbol is written below the bottom staff.



It is in the nature of appoggiature in general that they receive their stress by sounding against a change in harmony. Furthermore they are a device which originated in melodic writing. Both of these essentials, then, conspire to keep the appoggiature in the upper voices for (1) it is the bass that determines the harmony, and (2) bass lines in Ravel are rarely melodic.

On infrequent occasions, however, the unresolved appoggiatura does appear in the bass, and this can be a cause of great confusion in analysis. The unresolved appoggiatura in the bass is almost never recognizable as a non-chordal tone to the ear; it is through the spelling of the note in the score that the composer reveals his thought.

Ex: 87. Valses Nobles et Sentimentales, VI, p. 13.

If the opening dominant four-three chord of this example had arisen through chromatic alteration, the bass note would have been spelled D flat rather than C sharp. As it is, the note is an appoggiatura to a D natural which never arrives. The same is true of the bass of the leading tone six-five chord in the following example. The F sharp, which is the note of resolu-

tion for the appoggiatura in the bass and also for one in the melodic line, is scrupulously avoided by all voices, leaving the composition hanging in mid-air.

Ex: 88. Valses Nobles et Sentimentales, V, p. 13.

The image shows a musical score for two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature is one sharp (F#). The music consists of two measures. The first measure has a complex chord structure with an appoggiatura (marked 'APP') on the third beat. The second measure has a simpler chord structure. Below the staves, the chord symbols are indicated: E: VII<sup>b</sup>, V, and I.

After having observed how the concept of the appoggiatura is applied by Ravel to his embellishment of traditional chords it is profitable to reconsider the chord from Valses Nobles et Sentimentales which was partially analyzed in the section on pedals. (Ex: 76, page 53). The E sharp is clearly an appoggiatura to the F sharp which follows in the chord on the third beat. Thus, the complicated structure which opens this collection of waltzes can be described as a dominant thirteenth with appoggiatura over a tonic and dominant pedal. This shows how a chord which superficially bears no relation to traditional harmony in reality is a direct outgrowth of it. The dissonant notes of the third beats of both measures will be understood after passing notes have been dealt with, while the chord on the first beat of the second measure is clearly a tonic with added second and sixth.

#### 4. Passing Notes

Passing notes have always been a melodic rather than a harmonic device, yet their use can affect harmony to a considerable degree.

Yet, in a style which has already made effective use of several non-chordal devices, their utility is somewhat reduced.

When it is remembered how much use is made of ninth, eleventh and thirteenth structures, added notes, pedals, and appoggiature, it will become obvious that most conventional types of passing notes will sound as chord tones. If the chord tone itself is not actually present, the ear, having adjusted to the style, will automatically relate the conventional diatonic "passing tone" to the bass and re-interpret the resulting texture as a chord. Thus the passing tone as it was most often employed during the Common Practice Era, (i.e., as a tone of weak rhythmic stress used to continue scalewise motion in the melodic line, regardless of the underlying harmony), all but loses its identity in the complex style of Ravel.<sup>1</sup>

Under certain clearly defined circumstances it continues to play a valid role as a non-chordal technical device. The requirements are : (1) that the over-all harmonic texture is confined to lower forms of tertian structures (i.e.,

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<sup>1</sup>Piston, Walter, Counterpoint. Chapter III, p. 48. W. W. Norton, New York, 1947.

that eleventh and thirteenth chords are not extensively used), or (2) that the passing note occurs as part of a melodic bass, or (3) that it is chromatic rather than diatonic.

An excellent illustration of the first condition necessary for effective use of passing is provided in the second movement of the Concerto pour Piano et Orchestre. Here the harmonic materials are generally limited to ninths or lower forms.

Ex: 89. Concerto in G, II, p. 49.

The image shows a musical score for a piano part, consisting of two staves: a treble staff and a bass staff. The key signature is G major (one sharp, F#) and the time signature is 3/8. The treble staff contains a melodic line with eighth notes. The bass staff contains a harmonic line with chords. Below the bass staff, there are two chord diagrams: the first is labeled 'E: IV' and the second is labeled 'II'. The diagrams show the fingerings for these chords on the piano keyboard.

Here the passing implications of the chords on the third beat of each three-eighths grouping are quite manifest. Another example from the same movement shows how passing notes in individual voices of a chord are used to create quite unexpected dissonances, a favorite device with most Common Practice composers.

Ex: 90. Concerto in G, II, p. 49.

The second condition which enables passing notes to be heard as such is that of the bass moving by step. While this is easy enough to arrange, it is not encountered as often as might be expected, due to Ravel's preference for bass movement by disjunct intervals, most often by fourths and fifths.

Ex: 91. Le Tombeau de Couperin, Rigaudon, p. 17.

But the most important usage which is made of passing tones by Ravel is the chromatic passing tone. Here there are hosts of examples all with a common trait stylistically; they are employed in order to facilitate the upward resolution of the sevenths and ninths, especially dominant sevenths and ninths.

Ex: 92. Valses Nobles et Sentimentales, p. 9.

This is the most frequent means employed to arrive at the characteristic dominant with raised fifth and seventh:

Ex: 93. La Valse, p. 9.

The process can be reversed also:

Ex: 94. La Valse, p. 9.

Then, to return once more to the opening of Valses Nobles et Sentimentales, both directions of chromatic passing tones occur against each other:

Ex: 95. Valses Nobles et Sentimentales,

Thus through the four main species of non-chordal tones this passage can be seen as an imaginative extension of the ultra traditional dominant-tonic progression.

## 5. Other Non-Chordal Tones

### A. Suspensions

The stylistic factors which conspired to reduce the effectiveness of the passing note as a non-chordal device have had an even more obliterating effect on the suspension, which was once the cardinal means of achieving dissonance in musical composition.

It is to be observed that the only essential difference between the suspension and the appoggiatura (arrived at by repetition and resolved by step) is that the rhythm of a suspension (prepared on a weak beat and tied over to a strong beat) is felt as weak to strong, while the appoggiatura occurs on a strong beat and resolves on a weak one, therefore being heard

as a strong to weak rhythmic impulse.

The suspension, then, is a rhythmic device. Its close similarity in treatment to the appoggiatura means that in the hands of Ravel it is not usually resolved, and when left unresolved it becomes nothing more than a retardation.

Nevertheless, a few examples of suspensions do occur, and while it cannot be said that it is a device which has played an appreciable role in Ravel's development of traditional harmony, its existence at least can still be recorded.

Ex: 96. Sonatine, II, p. 6.

D: I, III VII - I<sub>9</sub> II

### B. Ornamental Resolutions

The echappé and the nota cambiata which were ornamental resolutions of the suspension have suffered the same fate as the device with which they are inseparably associated. Where suspensions exist ornamental resolutions may possibly occur, which circumscribes their utility to harmonic advancements in this style.



Ex: 97. Valses Nobles et Sentimentales, V, p. 12.

The image shows a musical score for Ex: 97. The top staff is a treble clef with a key signature of two sharps (F# and C#). The bottom staff is a bass clef. The bass line includes harmonic analysis: a 4th chord (IV) with a sharp sign, a 5th chord (V) with a sharp sign, a 6th chord (VI) with a plus sign, and a 1st chord (I) with a plus sign. The text "ORNAMENTAL RESOLUTION" is written above the bass line, with a plus sign above the 6th chord. The melodic line has several notes with plus signs above them, indicating ornamental resolution.

C. The Auxiliary

The auxiliary tone is the one remaining non-chordal tone which makes a valid contribution to Ravel's utilization and expansion of traditional harmony. When used to its greatest effect in evolving subtle variations of traditional harmonic formulae, it will be observed in a context governed by the condition described above in relation to passing notes: melodic bass moving by step. It is the lower auxiliary that is used in this way. It preserves its Common Practice definition as a tone of weak rhythmic stress which leaves and returns to its chord tone by step in the passage below.

Ex: 98. Concerto pour Piano et Orchestre, p. 50.

The image shows a musical score for Ex: 98. The top staff is a treble clef with a key signature of two sharps (F# and C#). The bottom staff is a bass clef. The bass line features a sequence of chords: a 4th chord (IV) with a sharp sign, a 5th chord (V) with a sharp sign, a 6th chord (VI) with a plus sign, and a 1st chord (I) with a plus sign. The melodic line has several notes with plus signs above them, indicating ornamental resolution.

CHAPTER III  
GENERAL HARMONIC CONSIDERATIONS

1. Harmonic Rhythm

In addition to having employed specific harmonic devices which were everyday facets of Common Practice technique, Ravel has applied some broad underlying principles which govern the use of these formulae. One such principle is that of harmonic rhythm, or the temporal spacing of chord movements and the counterpoint of the resulting rhythm with that arising from the melodic elements of composition.

The tremendous variety of harmonic rhythms, and the rhythmic interest aroused by the conflict of harmonic and melodic rhythms, suggest that they were the result of great conscious attention on the part of the composer.

Certain features of style combine to blunt the edge of clear harmonic rhythm patterns such as are found in the Common Practice Period, in the same way that the high degree of dependence on certain non-chordal devices reduced the importance of others which played a greater role in Common Practice technique than they do in Ravel's adoption of traditional harmonic devices to his own personal style. This was gone into at some length in Chapter II and especially with reference to the suspension.

Such factors as liberal usages of non-harmonic pedal tones, for instance, will have a profound effect on harmonic

rhythm. For harmonic rhythm depends on root movements of chords, on strong and weak progressions, and the pedal device tends to obscure, sometimes to a great degree, the relative values of a harmonic formula.

Likewise conspicuous use of higher forms of tertian structures tends to weaken the subtle changes in position (and therefore root movement) that were a convenient technical means of Common Practice composers. In a context of ninth, eleventh, and thirteenth chords, both with and without added notes, a root movement must be very strong indeed if it is to be felt at all.

Perhaps this is a partial reason for the frequent appearances of root movements by fourths, fifths, and seconds, which have been noted so often. These are the strongest progressions of all, and in employing harmonic formulae based on them, the device of a clearly perceptible harmonic rhythm is preserved.

It is probably safe for the analyst to assume, however, that, when harmonic rhythm becomes obscured by other aspects of the style, it is no longer the factor of primary importance in the harmonic scheme; it has ceased to be the point that Ravel is trying to make. For when dealing with a composer as conscious of technique and means as Ravel appears to have been, the interplay of clarity and obscurity, which are large technical means in themselves, is probably the result of conscious plan also. When clarity in reference to harmonic rhythm is the aim, it is as clear as can be desired.

An excellent example of this is the first of Valses Nobles et Sentimentales. While the entire piece would be too long to quote literally as an example, a reduction of it to its harmonic rhythm can be profitably studied. (See Ex: 99 on the following page.) In this work are to be found all the varieties of harmonic rhythm which are commonly employed by Ravel, from the static type, resulting from unchanging harmony, to the very rapid style, announcing the arrival of important cadences, and including the rhythmic excitement generated by the contradiction of melodic and harmonic patterns.

## 2. Voice Leading


Voice leading is the general consideration of traditional harmony which is the most strictly governed by arbitrary rules, and is the element of harmony which is the most inextricably associated with the over-all style of the Common Practice Period.


It is enough to hear almost any section of a piece by Ravel to tell that he is emphatically not a Common Practice composer. This historical advantage has enabled him to take or leave the strict rules governing the leading of voices which total obeisance to the Common Practice style demands.

While it can be readily noted what traditional harmonic concepts he has applied to his own style, it cannot be said that he has taken over Common Practice in toto due to the complete freedom of his approach to the problem of voice

MODERÉ - TRES FRANC    EX 99: HARMONIC RHYTHM OF VALSES NOBLES, N° I


  
 C:  $V_{13}$  I —  $V_{13}$  I — I<sub>9</sub> ————— D:  $IV_9$  —————  $V^{\#}II(\Pi)$   $V^{\#}II$   $IV_{13}^{\#}$   $V^{\#}II$   $IV_{13}^{\#}$   $V^{\#}II$   $IV_{13}^{\#}$

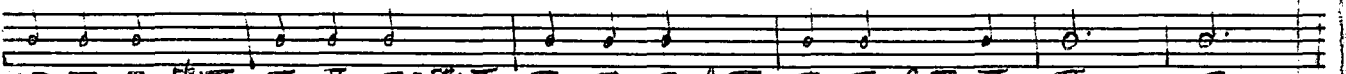

  
 D:  $V^{\#}II$   $IV_{13}^{\#}$   $II_9$  —————  $II_{13}$  ————— I  $II^{\#}II = C: VII_{13}^{\#}$  —  $\Pi_7$   $V_9 = E^b: VII$

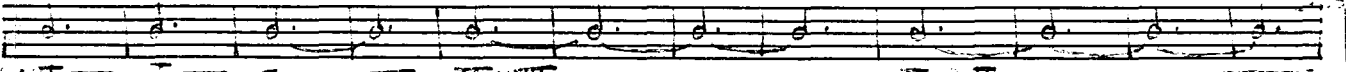

  
 E:  $\Pi_7$   $II_9 = E: \#VII_7$   $II_7$   $\#VII_7$   $II_7$   $\#VII_7$   $II_7$   $\#VII_7$   $II_7$   $\#VII_7$   $II_7$   $\#VII_7$   $II_7$


  
 E:  $\#VII_7$   $II^{\#}II$   $II_7$  I V I V I ————— VI  $bII^{\#}VI$  VI  $bII^{\#}VI$


  
 E: VI = F: V — I =  $B^b: V_7$  — III V, IV  $VI = B^bV$ , I =  $C^{\#}: bVII$  V, I =  $E^b: bVII$  V, I =  $F: bVII$


  
 F: V, IV  $V = F: bV$  I  $II^{\#}II$   $II^{\#}II$   $V = C^{\#}: II^{\#}II$   $II^{\#}VI$  VI  $II^{\#}VI$  VII  $V = C: VI$ ,


  
 C:  $\Pi$  V I =  $E^b: VI_7$   $\Pi$ , V, I =  $F^{\#}: VI_7$   $\Pi$ , V, I =  $A: VI_7$   $\Pi$ , V, I =  $G: VI_7$   $\Pi$ ,  $V_{13}$  — I —


  
 E:  $V_{13}$  I — I —————  $V^{\#}II$  —————  $V^{\#}II$


  
 E:  $\Pi$  ————— V — I

leading.

From this license it can be concluded that it is the device itself which matters to Ravel and not the context in which it was customarily applied. Thus in dealing with harmonic formulae in Ravel's music it becomes apparent that the important considerations are first, the chord itself, second, the root movements of the chords - not the means used for getting from one chord to another. This undeniably leads to a basically homophonic style.

This does not imply, however, that careful voice leading does not occur in Ravel, but does mean that he is highly selective about it. He uses it when suitable to his purpose, abandons it when unsuitable. That he was capable of writing the purest contrapuntally derived progressions may be seen by looking at the "Pavane de la Belle au Bois Dormant" from the suite Ma Mere l'Oye. Here as in the following short excerpt the emphasis is entirely on contrapuntal purity of line.

Ex: 100. Quator en Fa, I.

ALL<sup>o</sup> MODERATO

The musical score consists of four staves. The first staff is in treble clef, the second in treble clef, the third in alto clef, and the fourth in bass clef. The time signature is 3/4. The key signature has one flat (F major). The tempo marking is 'ALL<sup>o</sup> MODERATO'. The score shows a contrapuntal texture with four distinct melodic lines. Dynamics are marked 'p' (piano) at the beginning of each staff. The music consists of eighth and sixteenth notes with various phrasings and rests.

But more often, when employing harmonic formulae, this is not the aim. Sometimes the intent is so much in the other direction that fine voice leading is intervallically dislocated in order that the chords may be heard as sonorities and nothing more. To demonstrate this freedom of approach to voice leading, even when the progression originally derived through counterpoint, the reduction of one octave of the opening of Valses Nobles et Sentimentales of examples 97 (page 68) may be compared with the original, intervallically dislocated version which appears as example 78 (page 55).

## CHAPTER IV

### CONCLUSION

This study has shown the traditional harmonic devices which have been utilized by Maurice Ravel. The examples illustrating these points have been selected from works of all periods of his creative career. Of necessity a certain preponderance of the examples chosen have been drawn from major works in which the utilization and elaboration of traditional harmonic devices is the primary concern, notably Valses Nobles et Sentimentales and Le Tombeau de Couperin.

The analyses in terms of strict traditional theory which have been given show that the attempt to account for each note as if written in the Common Practice Period is not only instructive but profitable. While variations in interpretation of technical devices are always in order, it is maintained that phenomena which are completely accountable in traditional terms do not arise completely by accident. If conscious thought on the part of the creator has been the causative factor in the existence of these traditional harmonic devices in the work of Maurice Ravel, then the *raison d'être* of this study has been justified.



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