LARGE-SCALE TONAL ISSUES IN MAURICE RAVEL'S

HISTOIRES NATURELLES

by

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ABSTRACT

Maurice Ravel's music is enigmatic in that it is deeply rooted in the tonal tradition, yet exhibits several features that can also be found in early atonal music. To analyze his music exclusively with the analytic tools of tonal theory or those of pitch class set theory can therefore be only partially fruitful. To invent an entirely new set of tools to confront his compositions, however, may isolate the music from its historical context and contribute little to our understanding of how it participated in the profound changes that the music of its time underwent. It is the aim of this paper to provide the reader with a set of tools that is not only satisfying from an analytic point of view, but also music-historically justifiable. Robert Mueller's concept of the "tonal pillar," which is slightly extended and modified in this study, when combined with quasi-Schenkerian graphing and traditional harmonic analysis, offers a viable means to deal with Ravel's early music, if not Impressionist music in general. The following five analyses of the five songs from Ravel's song cycle *Histoires Naturelles* demonstrate the effectiveness of such an approach in disclosing some of Ravel's compositional objectives.
TABLE OF CONTENTS

Abstract ii
Table of Contents iii
List of Examples iv
List of Figures v
List of Appendices vi
Acknowledgment vii

Chapter I Introduction: Analytical Approach for *Histoires Naturelles* 1
Chapter II Analysis of “Le Paon” 6
Chapter III Analysis of “Le Grillon” 20
Chapter IV Analysis of “Le Cygne” 28
Chapter V Analysis of “Le Martin-Pêcheur” 34
Chapter VI Analysis of “La Pintade” 43
Chapter VII Conclusion: Compositional Objectives in *Histoires Naturelles* 52

Bibliography 58

Appendices Graphs for *Histoires Naturelles* 60
<table>
<thead>
<tr>
<th>Example Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &quot;Le Paon,&quot; mm. 1-7</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>2. &quot;Le Paon,&quot; mm. 7-8</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>3. &quot;Le Paon,&quot; mm. 16</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>4. &quot;Le Grillon,&quot; m. 11</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>5. &quot;Le Grillon,&quot; mm. 22-23</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>6. &quot;Le Grillon,&quot; mm. 19-21</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>7. &quot;Le Martin Pêcheur,&quot; mm. 1-2</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>8. &quot;Le Martin Pêcheur,&quot; m. 12</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>10. &quot;La Pintade,&quot; mm. 1-2</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>11. &quot;La Pintade,&quot; mm. 3-4</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>12. &quot;La Pintade,&quot; mm. 7-9</td>
<td></td>
<td>46</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

1. “Le Paon,” Formal Divisions according to Complex Distribution 13
2. “Le Paon,” Condensed Formal Divisions according to Complex Distribution 14
3. “Le Paon,” High-Level Counterpoint 16
4. “Le Paon,” Hypothetical High-Level Counterpoint 17
5. “Le Paon,” Interval Classes Formed by High-Level Counterpoint 17
6. “Le Grillon,” Formal Divisions according to Complex Distribution 25
7. “Le Cygne,” Formal Divisions according to the Compositional Material 29
8. “Le Cygne,” High-Level Melody and Harmonic Functions of Section A 32
9. “Le Cygne,” High-Level Melody and Harmonic Functions of Section A’ 33
10. “Le Martin Pêcheur,” Main Harmonic Events of Section A 36
11. “Le Martin Pêcheur,” Main Harmonic Events of Section B 38
12. “Le Martin Pêcheur,” Main Harmonic Events of Section A’ 40
13. “Le Martin Pêcheur,” High-Level Counterpoint 41
14. “La Pintade,” Formal Divisions according to Complex Distribution 48
15. “La Pintade,” Formal Divisions as Projected by Scale Collections 49
16. “La Pintade,” Alternation of Scale Collections 51
LIST OF APPENDICES

1. a) “Le Paon,” Foreground 60
1. b) “Le Paon,” Middleground 62
1. c) “Le Paon,” Alternative Middleground 63
2. a) “Le Grillon,” Foreground 64
2. b) “Le Grillon,” Middleground 65
3. a) “Le Cygne,” Foreground 66
3. b) “Le Cygne,” Middleground 68
4. a) “Le Martin-Pêcheur,” Foreground 69
4. b) “Le Martin-Pêcheur,” Middleground 70
5. a) “La Pintade,” Foreground 71
5. b) “La Pintade,” Middleground 72
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CHAPTER I

In 1896 Jules Renard published several poems under the title *Histoires naturelles*. The poems are short humorous sketches of the animal world which engage one's interest because of their simple and direct language and their amusing content. These zoological sketches, to which the author, according to Basil Deane, often referred as 'petits poèmes en prose,' enjoyed popularity soon after their release. Deane considers these poems as representative of Renard's realist works, which stand "in contrast to nineteenth century idealisation of childhood, rural life, and the artistic vocation," yet set Renard apart from the naturalist school of novelists as represented by Zola and Georges Sand. She stresses the extraordinary gift of observation that Renard applied to his characters as well as to nature. The short and charming animal characterizations of *Histoires naturelles* certainly illustrate his skills in observing the latter. His writing style, to which the author himself referred as 'Le style vertical, diamanté, sans bravures,' derives its clarity and immediacy from simple sentence constructions according to Deane. The majority of his sentences are short and have the most basic forms of subject-verb-object or subject-verb. More complex and elaborate sentences, she explains, are occasionally inserted to ensure the rhythmic flow of his prose.

Maurice Ravel, who was intrigued by the 'clear and direct speech' of these poems, set five of them to music: "Le Paon," "Le Grillon," "Le Cygne," "Le

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2Ibid., 178.
3Ibid.
4Ibid., 178-79.
Martin-Pêcheur,” and “La Pintade.” Ravel’s song cycle, which carries the same title as Renard’s collection of poems, holds a distinctive position in traditional French vocal music because the singer is instructed not to pronounce the final “e”s, as is usually done in classical French singing. Hence, the vocal part sounds like conversational French rather than sung French. With regard to this phonetic innovation, Philip Russom mentions that “on January 12, 1907 Ravel’s Histoires naturelles received a stormy premiere at the Société Nationale, because the audience felt scandalized by the innovative declamation that left the mute endings of words unsung.”6 As well, Ravel’s songs appear to have been somewhat of a musical challenge for the average concert-goer. The critic Pierre Lalo felt that ‘few subjects were more alien to music’7 and described the songs as ‘the café-concert with ninths.’8 This reaction may be attributed not only to Ravel’s lush harmonies, which indeed feature the ninth chord rather frequently, but also the melodically subordinate lines of the vocal part. In the attempt to enhance the conversational quality of the vocal part Ravel deprived the vocal line of its melody-presenting function and let the piano present melody as well as harmony. The vocal line thus derives its meaning only in connection with the piano accompaniment and appears otherwise loose and without direction. Consequently, the vocal part is only of limited significance as a starting point for linear analysis.

Music of the late nineteenth and early twentieth centuries is often problematic from a theoretical perspective because it came into existence during a time when tonal common practice had lost much of its appeal and composers were searching for new means to establish a tonal center or, as in the case of Arnold Schoenberg, were abandoning tonality.

6Ibid., 162.
7Ibid.
8Ibid.
for a new and autonomous system of composition. The decades surrounding the turn of
the century were a time of transition and innovation and witnessed the creation of works
that differed in style and supported distinct compositional agendas. One of the ways that
composers lent new interest to music was by experimenting with new scale collections.
Composers of French and Russian schools introduced non-diatonic scale collections or
portions thereof into diatonic frameworks. To the extent that the compositions arising
from these scalar mixtures still rely on the main principles of major-minor tonality they
may be considered tonal. On the other hand, these and other composers also wrote works
in which non-diatonic collections completely replace functional scales. To the extent that
the resulting music emphasizes a pitch class or a triad, it should be called centric rather
than tonal.

Philip Russom, who has dealt in great detail with Ravel’s early music, considers
Ravel’s music neither tonal nor centric, but “non-tonal.” He understands Ravel’s music as
“an amalgamation of tonal and atonal elements,” in the form of diatonic and non-diatonic
scale collections, and believes that a new theory is needed to reveal the harmonic
principles of the composer:

Ravel’s early music is organized around functional tone centers, but is not
tonal in the traditional sense. Indeed, Ravel’s harmony shares many
attributes with traditional tonality, yet it is organized in a distinctly different
manner, and so it must be confronted on its own terms, with an
autonomous theory that seeks to point out the individual characteristics of
Ravel’s harmony.10

Russom’s theory places considerable weight on all the different scale collections, ordered
and unordered, and their occurrences as vertical and horizontal pitch class formations.
Although his theory draws attention to some of the main characteristics of Ravel’s music

9Ibid., 2.
10Ibid., 62.
as well as to a number of interesting voice-leading details, it completely ignores the tonal attributes of that music. The presence of different scale collections, as vertical and horizontal pitch-class formations on several structural levels, is indeed remarkable but reveals nothing about the large-scale formal or tonal objectives of the composer. Rather than focusing on the novelties of Ravel’s harmony, as conveyed by non-diatonic scale collections and dissonant vertical structures, it is, I believe, more fruitful to view these innovations in the light of traditional tonality. Such an approach, however, first of all requires the examination of the tonal aspects of Ravel’s music.

Robert Mueller’s work is quite informative with respect to the formal organization of Ravel’s compositions and Impressionist music in general. He describes the formal construction of many Impressionist works as a chain of “tonal pillars,” which he defines as “melodic-harmonic structures that provide the motivic or thematic materials of the music.” These structures, which may be varied and transposed, recur throughout the piece and combine to generate formally unified compositions. The connection from one such structure to the next is usually achieved by means of an extension of the structure or by a short transition. The “tonal pillars” themselves may feature anything from simple, diatonic triads to the most dissonant, non-diatonic vertical structures. Since the pillars in Mueller’s analyses occupy several beats if not several measures, they should also be considered rhythmic structures. The definition of the “tonal pillar” should therefore also encompass the rhythmic component of the melodic-harmonic entity.

In the following five analyses of Ravel’s *Histoires Naturelles* I will employ Mueller’s concept of the “tonal pillar,” because the parsing of the musical surface into

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12Ibid., 40.
melodic-harmonic entities not only draws attention to the compositional material used throughout the piece, but also clarifies the large-scale formal design of the composition. However, since the term “tonal pillar” implies that the melodic-harmonic content of the structure be tonal in the traditional sense, I have decided to replace it with “complex.” I define “complex” as a melodic, harmonic, and rhythmic entity that constitutes one compositional idea within a given composition. Mueller’s work is primarily concerned with describing the “tonal pillar” in terms of surface and with outlining forms in terms of pillars. The properly tonal aspects of Impressionist music are largely neglected in Mueller’s discussion.

It is the aim of the present study to determine which aspects of tonality are retained in Ravel’s *Histoires Naturelles*, to examine how tonality is obscured, and to investigate how non-diatonic scale collections or portions thereof are integrated into a tonal framework. James Baker’s analysis of Scriabin’s “Enigme” Op. 52, No. 2, which demonstrates how a composition with mostly non-diatonic features is still based on some of the main principles of traditional tonality, has been inspiring and serves as an analytic model for the present study. Each of the five analyses consists of a short summary of the narrative of the poem, followed by an examination of the song’s various complexes that leads to a description of the song’s formal design. Following this, the large-scale melody and bass lines as well as the high-level counterpoint between melody and bass are described with reference to graphs. These graphs, supported by Roman numerals, guide the reader through the main melodic and harmonic events of each song.

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14The Roman numerals employed in the graphs (App. 1-5) show actual or implied root movement and imply nothing about the chord quality.
Chapter II

"Le Paon," the first of the five animal stories, describes the daily routine of a peacock. Day after day the creature strolls about in the courtyard and displays its extraordinary beauty. He awaits his fiancée, who has yet to come. After a strident call for his fiancée from the top of the roof he returns, seemingly unaffected, to the courtyard where he continues to worship his own beauty. Ravel’s musical depiction of the peacock’s daily ritual is detailed and reflects the creature’s cold, arrogant nature as well as his beauty. The dotted rhythm, which permeates the song, is reminiscent of the French ouverture and creates a noble, aristocratic air for the story. Although Renard’s poem portrays the peacock as being indifferent to the absence of his fiancée, Ravel’s piano accompaniment nevertheless suggests an occasional hint of melancholy.

The compositional material in this song consists of three complexes: M, N and O. These complexes differ from one another in character and occur more than once throughout the song. Complex M (Ex. 1) first occurs in mm. 1-6 and is characterized by the opening interval of a ninth between the outer voices and by a stepwise melodic descent, in the right hand piano part, supported by a succession of descending fifths in the bass. A more immediate, less reductive reading of the passage would also reveal the long gradual ascent of the bass line, which culminates dynamically and registerally on B-flat in m. 4, as well as the triadic arpeggiations in the melody. As is typical of late 19th-century and impressionistic song literature, the theme is initially presented by the piano alone, and it lacks the compactness and the directional force which is characteristic of early 19th-century music. The triadic structure of the melody in mm. 1-6 conceals the stepwise descent through a fifth (G5 to C5), giving M a sprawling quality.
The succession of fifths, which underlies the bass of complex M, conforms to convention if discussed as an isolated event. Its occurrence at the beginning of the song, however, is rather unusual. Descending fifths and ascending fourths, which serve prolongational purposes, are common in the development sections of Classical sonata form movements, where they provide the basis for the presentation of theme fragments. They may also occur in Baroque ritornelli. With the latter in mind the succession of fifths can be interpreted as another neo-classic feature, not unlike the French Baroque rhythm mentioned above.

After a short bridge in mm. 7-8, which marks the end of the first melodic descent and prolongs the dominant of the main key area, complex M reappears with a few alterations in mm. 9-15. The melodic descent in the right hand piano part, which first occupied the space of a fifth, from G to C, now occupies the space of a minor third from G to E (App. 1.a), m. 9). The chain of fifths in the bass is shortened by one member to fit the abbreviated version of the melodic descent. The voice, which has entered in the meantime, has no impact on complex M itself. Local alterations from B-flat to B-natural in m. 10 increase the affinity of one chord to the next within the succession of fifths. Another alteration concerns the ending of the second occurrence of complex M. Whereas
the first ends with a descending fifth in the bass, from G to C, the second ends with a descending fourth, from D to A. Complex M recurs a third and last time in mm. 44-49 in the key of G-major. One interval in the chain of fifths has been changed to a diminished fifth (D-G♯) to prepare the pedal point on A-flat in mm. 50-54. The move to G-sharp in the bass produces an alteration from F-sharp to F-natural in the right hand piano part. F-natural in turn anticipates the frequent occurrence of F in mm. 50-58. The melodic descent in the right hand piano part now occupies the space of a fourth from A5 to E5 (App. 1.a), m. 44).

The bridge (mm. 7-8) that connects the first two occurrences of complex M is conspicuous because of its abundance of parallel fourths and fifths and, in consequence of these, its archaic character. The latter is also the result of the absence of semitones in the interval content of the melody. Due to the distinctiveness of the bridge it seems reasonable to label it and its later occurrences as complex N (Ex. 2).

![Ex. 2](image)

N occurs a second time in mm. 42-43, before the last appearance of complex M. Whereas the first occurrence of complex N centers on C, the dominant of the main key area, the second occurrence centers on D-flat, the lowered submediant. The last occurrence, in mm. 55-56, emphasizes F as tonic and brings the piece to a close. A change in N,
whereby G is replaced by A-flat on the fourth beat of m. 55, recalls the A-flat pedal point in mm. 50-54.

Complex O (m. 16) undergoes frequent changes and recurs only once in its original form, in m. 18. The melodic interval content is similar to that of complex N. The relationship, however, cannot be expressed with one of the standard transformations (P, RP, I, RI) associated with ordered sets in pitch class set theory. Yet, if the melodic content of both complexes is considered as an unordered pitch class set, O can be explained as a subset of N. The melodic interval content of O, a 3-7 trichord, is included in the melodic interval content of N, a 4-22 tetrachord. M. 17 and m. 19 have slightly different forms of O. If the melody of O is segmented into two dyads, a perfect fourth and a minor third, these measures may be understood as presenting retrogrades of O. Ex. 3 presents a simplified version of O as it appears in m. 16.

Ex. 3

The accompanying voices of O are richer and more diverse than those of complex N. These voices progress by semitone and create vertical whole-tone structures in combination with the members of the melody. The bass alternates slowly between the root (A) and its lower fourth (E). The outer voices in the piano part recall rhythms that were introduced in complex M. Although mm. 21-27 do not display the melodic interval
content of complex O and their inner voices do not progress by semitone, the rhythm of O is maintained and the bass still alternates between the root, now D-flat, and the corresponding fifth. The vertical sonorities in these measures usually conform to one of the whole-tone scales with the occasional exception of one or two notes. The similarities between mm. 16-20 and mm. 21-27 allow the latter passage to be interpreted as a free variation of O. M. 25 does not project the precise rhythm of the preceding measures, instead displaying a fragment of O that shortens its characteristic motive from three beats to two, creating duple meter in mm. 25-26. Triple meter is restored beginning with the last beat of m. 26. Mm. 26-27 prolong a sonority stated in m. 25 and are therefore an extension of the preceding measures. Complex O occurs for the last time in mm. 35-41. Here, O is initially presented by the voice (m. 35). Once again the inner voices progress by semitone and the bass alternates between the root, now C, and the corresponding fifth. The bass line in mm. 37-38 deviates from its usual pattern to present an augmentation of the O-motive found in m. 17. Since E-flat is the last tone of the motive, and provides a pedal point throughout the following three measures, it seems reasonable to group mm. 39-41 with mm. 35-38.

Whereas most passages feature one complex at a time, with occasional rhythmic references to other complexes, mm. 28-34 juxtapose material from different complexes or from passages that are less characteristic of their thematic environment. These measures hold a unique position within the movement since they appear at a central location, contain the song's climax, and are not repeated anywhere. The rhythmically active inner voice in the right hand piano part of mm. 28-30 clearly recalls the bass line of complex M by means of its rhythm and its ascent by fourths on each beat. The piano melody line on the other hand may be interpreted as a reference to the right hand piano part of m. 2-3.
The thirty-second note tremolo of m. 31 leads to the song's climax in m. 32, by continuing the melodic ascent of the right hand piano part. The point of climax in m. 32 is conveyed by the composer's choice of dynamics, force of attack, and register. The peacock's diabolical cry for his fiancée is fortissimo, accented, and emphasizes F₅, the highest note in the voice part. The first beats of m. 31 and m. 32, respectively, emphasize the pitch classes C and F, like those of mm. 28-30. M. 31, despite its rhythmic deviation, is therefore motivically connected to its preceding measures as well as to the following point of climax. The clash between F-natural and F-sharp in m. 32 may be understood as a result of the juxtaposition of diatonic and whole-tone collections which are associated with complexes M and O, respectively. The top line of the right hand piano part starts on C and rises to F-natural in m. 32. The top line of the left hand piano part also starts on C, but rises to F-sharp. Whereas the melodic interval content of the former ascent constitutes a diatonic scale segment, the melodic interval content of the latter constitutes a whole-tone segment. The combination of these scale segments results in a large subset of the third octatonic scale collection¹⁵ in m. 32. Only pitch classes D-sharp and B are missing.

The juxtaposition of two different scale collections as a means to create a point of climax is especially plausible since complexes M and O are prominent throughout the song and are originally associated with different scale collections. Unlike the melodic ascent in mm. 28-30, the tremolo and the two measures following the point of climax make ample use of whole-tone structures. The whole-tone structures, which are found on almost

¹⁵I refer to the three octatonic scale collections as “first,” “second,” and “third” octatonic scale collections. The first octatonic scale collection starts on pitch class C with a semitone followed by a whole tone. The second and third octatonic scale collections are transpositions of the first octatonic scale collection. Whereas the former is transposed by T₁, the latter is transposed by T₂.
every beat of m. 31, and the major seconds in the right hand piano part of mm. 33-34 recall mm. 16-27 and therefore point towards complex O.

In mm. 50-54 is another passage which is neither a statement of one of M, N, or O nor is it clearly derived from any of these. Most noticeable are the recurring accented F’s, which are sometimes linked to a lower C, the pedal point on A-flat, and a pentatonic flourish (m. 51). The perfect fourths in the piano part of mm. 51-52 anticipate complex N (mm. 55-56) and may therefore be interpreted as subsets of that complex. The A-flat pedal point seems to be motivated by motivic as well as scale-related considerations. A-flat and G-flat are both very prominent throughout mm. 50-54, as are their enharmonic equivalents, G-sharp and F-sharp, in m. 32, at the point of climax. The former pitch-class pair may be seen as a reference to its enharmonic Doppelgänger in m. 32, which has now been enharmonically respelled to fit the tonal context of F. The presence of A-flat and G-flat as well as E-flat and D-flat in the context of F results in a phrygian scale collection. Another pitch class present both at the point of climax and in mm. 50-54 is F. F increases the harmonic tension in m. 32 and prepares for the final measures, in which it is reestablished as key center. The A-flat pedal point in mm. 50-54 gains significance in the light of the large-scale bass structure of the song. A-flat is, within the F-phrygian scale collection, the only note that is consonant with F and that has not already played an important part in the bass line. C, the dominant of F, was employed in mm. 7-8 to connect the occurrences of complex M; B-flat, the subdominant of F, was sustained throughout mm. 28-30 in preparation for the point of climax; and D-flat was featured in mm. 21-25 in connection with complex O and in mm. 42-43 in connection with complex N.

The division of the compositional material into complexes not only allows for the discussion of motivic relationships but also for speculations regarding the formal organization of the work. As has been shown above, most complexes in “Le Paon”
occupy several measures and therefore shape the formal layout of the song. Fig. 1 lists the passages which are primarily associated with one complex, as well as those passages which differ from the norm (i.e., mm. 28-34 and mm. 50-54). Mm. 28-34 are labeled "core" because of their central position within the piece. Mm. 50-54 follow the final appearance of complex M and merely reflect on earlier events in the piece. Although mm. 55-58 contain another occurrence of N and return to the main key area, their function is similar to that of mm. 50-54. Both passages together are an extension of the final occurrence of M and may thus be identified as coda.

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<tr>
<td>16-27</td>
<td>O</td>
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<td>Core</td>
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<tr>
<td>35-41</td>
<td>O</td>
</tr>
<tr>
<td>42-43</td>
<td>N</td>
</tr>
<tr>
<td>44-49</td>
<td>M</td>
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<tr>
<td>50-58 (55-58)</td>
<td>Coda (N)</td>
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*Fig. 1*

Although complex N seems at first as distinct and autonomous as each of the other complexes, it loses importance in the larger context of the piece because of its brevity. It is usually preceded or followed by complex M and may therefore be interpreted as an embellishing partner of complex M. If complex N is subsumed into M the formal sections display, with the exception of the coda, a symmetrical order with the core as the center. The above modifications regarding the number of divisions within the song are reflected in Fig. 2.
The formal layout could further be condensed by combining the two O-sections with the core section. Such a reduction would yield a ternary structure with a varied reprise: A-B-A'.

Before discussing the formal divisions in relationship to the emphasized key areas, it seems worth pointing out some of the word painting in the song. The ascending bass motive of complex M, in mm. 28-31, depicts the peacock as he climbs to the top of the roof. The voice glissandi in m. 32 and the accompanying dissonant sonorities are intended to capture the strident quality of a peacock’s call. When the bird returns from the roof to the courtyard the chords in the right hand piano part also descend (mm. 38-40). Finally, the piano glissando in m. 51 is a musical representation of the peacock’s colourful tail.

As can be gathered from Fig. 2, the song displays a symmetrical five-part structure followed by a coda: A-B-C-B’-A’ (Coda). The five part structure is unusual from the point of view of tonal common practice and may be indicative of the growing interest in symmetrical structures in music of the late nineteenth and early twentieth centuries. Also, in traditional tonal music the number of sections usually matches that of the key areas. In “Le Paon” (App. 1.b)) the number of divisions does not correspond to that of the key areas. For instance, whereas section B emphasizes two key areas, the mediant and the lowered submediant, all other divisions present only one key area. B’, due to its
transitional nature, is omitted from this comparison. The sequential relationship between mm. 35-36 and mm. 37-38 and the unstable dominant seventh sonority, which is prolonged throughout mm. 39-41, account for the transitional nature of B'. A', which features the final occurrence of the main theme, complex M, renders the supertonic more significant than the tonic. The tonic only returns in the final measures of the coda. In tonal common practice the tonic key would return with section A'.

The key scheme presented in App. 1.b) speaks for a rather free concept of tonality, for the first four key areas, respectively, display common-tone relationships. On a foreground level (App. 1.a)) the mediant of m. 16 is approached by way of the submediant in m. 15. The harmonic connection between the mediant (III) and the lowered submediant (bVI) is realized by means of common-tone augmented-sixth chord in m. 20. The lowered submediant and the subdominant are joined by a sonority which is identical in pitch content to that of the common-tone augmented-sixth chord of m. 20, but whose function is different. This sonority occurs in m. 26 and may be understood as a first inversion secondary dominant with raised fifth and added ninth.

The majority of key areas in Ravel's key scheme are introduced by chordal structures that are stable despite upper extensions. For instance, the first sonority of complex M is a major triad with added ninth. The added tone enriches the chordal structure, but preserves the functional identity of the tonic triad. Section C is peculiar in this respect. The sonority which introduces section C is a major-minor seventh chord with added ninth and is therefore unstable. If it were not for the continuous presence of the B-flat pedal point, which is to be mentally prolonged throughout mm. 31-34, the major-minor seventh chord could hardly be interpreted as a subdominant. Because of the functional ambiguity of the chordal structure in section C the chord symbol (IV) appears in quotation marks in App. 1.a) and App. 1.b). The fact that section C holds a central
position within this five-part structure as well as within a more abstract and condensed ternary form increases the significance of its underlying subdominant function.

The presence of a pedal point on the subdominant scale degree in the contrasting middle section (C) speaks in favour of a plagal system rather than the more common authentic system. In other words, the subdominant bass in C fulfills a function much like the dominant in more traditional music. To gain a deeper understanding of the meaning of the key scheme in this song one has to consider the large-scale melodic events as well. The relationship between the emphasized key areas and their melodic counterparts may shed some light on the entanglement of formal divisions and melodic-harmonic events.

Fig. 3 relies on reductionist procedures (App. 1.a, b):

<table>
<thead>
<tr>
<th>Form:</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>B'</th>
<th>A'</th>
<th>(Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melody:</td>
<td>G</td>
<td>E, D♭</td>
<td>F</td>
<td>Trans.</td>
<td>A</td>
<td>(F)</td>
</tr>
<tr>
<td>Bass:</td>
<td>F</td>
<td>A, D♭</td>
<td>B♭</td>
<td>Trans.</td>
<td>G</td>
<td>(F)</td>
</tr>
</tbody>
</table>

Fig. 3

An examination of the melody part in connection with the bass part reveals two intervallic patterns that may be the basis for Ravel's key scheme. Since the patterns involve only sections A through A', the coda and its melodic events are put in parentheses and will be omitted in the following figures. The melody descends by minor thirds throughout sections A and B and this pattern is then continued by the bass. The bass, on the other hand, ascends by major thirds throughout the first two sections and its pattern is then continued by the melody. Whereas the pitch class content of the former pattern constitutes a diminished seventh chord <G, E, D♭, B♭, G>, the latter pattern forms an augmented triad <F, A, D♭, F, A>. The melodic-harmonic key scheme is thus the result of the juxtaposition of descending minor thirds and ascending major thirds. If the intervallic
pattern of the melody had not been continued in the bass and vice versa, the juxtaposition of these two intervallic patterns would have produced a different key scheme (Fig. 4).

<table>
<thead>
<tr>
<th>Form:</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>B'</th>
<th>A'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melody:</td>
<td>G</td>
<td>E, D^b</td>
<td>B^b</td>
<td>Trans.</td>
<td>G</td>
</tr>
<tr>
<td>Bass:</td>
<td>F</td>
<td>A, D^b</td>
<td>F</td>
<td>Trans.</td>
<td>A</td>
</tr>
</tbody>
</table>

*Fig. 4*

The first three melodic-harmonic events still match those of the actual score. However, the latter two events are problematic from a tonal perspective and had to be modified. Section C, for instance, contains the interval of a fourth between the outer voices and thus does not allow for key-defining triadic structures. The pitch pair in section A' could support A-minor as a key area. However, since A-minor has already been utilized in B, the composer may have felt the need for a new key area in the final section. Ravel seems to have dealt with this challenge by inverting the melody and bass parts after both outer voices converge on D-flat. The operation leads, with the exception of the transitions, to the actual key scheme presented in Fig. 3.

Regardless of these modifications to the key scheme, the succession of interval classes (Fig. 5) formed by the counterpoint of the melody and the bass reflects a pattern identical to that of the formal layout. However, the two patterns appear to be slightly out of phase. Interval class [00] should coincide with section C, interval class [05] of section C should be delayed until B' and the transition should be omitted.

<table>
<thead>
<tr>
<th>Form:</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>B'</th>
<th>A'</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC:</td>
<td>[02]</td>
<td>[05], [00]</td>
<td>[05]</td>
<td>Trans.</td>
<td>[02]</td>
</tr>
</tbody>
</table>

*Fig. 5*
The misalignment of the interval class pattern produced by the high-level counterpoint and the pattern of the formal layout may have been caused by the composer’s desire to present the subdominant at the contrasting middle section (C). If the two patterns were aligned, the contrasting middle section would feature the lowered submediant rather than the subdominant. The composer may have felt that the polarity between tonic and subdominant was stronger than that between tonic and lowered submediant. It is thus the functional significance of the subdominant within the major-minor tonality that may have led to the misalignment of the key scheme relative to the formal layout.

The strength of the above interpretation resides in the fact that it places considerable weight on formal divisions and the high-level counterpoint between the outer voices. However, the harmonic functions derive their meaning solely from this counterpoint and appear, otherwise, almost as a random series of events. The weakness of the above reading manifests itself in the difficulty of assigning a harmonic function to the prolonged major-minor sonority in section C, of explaining the harmonic events of section B', and of viewing the coda as an integral part of the song rather than a mere extension of section A'. A more holistic and harmonically oriented approach may help to account for the events of section C and the transition and to view the song as a tonally unified structure.

App. 1.c) presents an alternative middleground. Here, we find two overlapping high-level chord progressions; one in the key of F-major (I-II-I), the other in the key of D♭-major (I-II-I-V). The progression in F has more structural weight because the song begins and ends in F-major. Most of the progression in D-flat lies embedded between the first two events of the progression in F, the tonic (I) and the supertonic (II) key areas, and may be understood as a prolongation of the lowered submediant. The last event of the progression in D-flat appears between the last two events of the progression in F, the
supertonic (II) and the tonic (I) harmonies, and harks back to the material preceding F's supertonic. Both progressions are typically Ravelian in that their supertonic chords fulfill a function similar to that of a dominant in more traditional music. In fact, these supertonic chords may be dominant and predominant in one. Each progression thus contains in essence an authentic cadence with a distinctly Ravelian flavour due to the whole-tone root movement from supertonic to tonic and the resulting fifth and octave parallels in the upper voices. The progression in D-flat differs from that in F in that it ends on the dominant (m. 54) rather than the tonic. Thus, whereas the former progression is open, the latter is closed.

A closer examination of the harmonic events in App. 1.c) shows that these high-level progressions are well intertwined. M. 16 functions as mediant in the key of F and relates to the succeeding lowered submediant in m. 21 as a common-tone triad. The lowered submediant in turn is reinterpreted as tonic in the key of D-flat and is prolonged until m. 42 via a secondary dominant (m. 28) which transforms into a diatonic submediant chord in m. 37 and resolves to one of the previously discussed supertonic chords in m. 41. M. 28 may be heard in relationship to m. 35 as a deceptive cadence in the key of Eb-major. However, the ensuing Bb-minor triad in m. 37 cancels any sense of Eb-major and reestablishes Db-major as the prevailing key. M. 42 constitutes the end of the progression in Db-major and may be seen as another pivot which reinvokes the lowered submediant of the original key. M. 44 presents the supertonic chord in F which resolves to the tonic after a brief flashback, in m. 54, recalling the Db-major progression of mm. 21-42. The coda (mm. 50-58) references the two prominent key areas, Db and F, with a phrygian scale collection whose pitch content is identical to that of the Db-major scale collection and whose tonic corresponds to that of the F-major scale collection.
Chapter III

Ravel's setting of "Le Grillon" creates the relaxing atmosphere of a warm summer afternoon somewhere in the quiet countryside. The cricket, who takes the spotlight in this second song, returns to his house after a long and tiring stroll and engages in some domestic activities to keep his humble abode neat and clean. Every task, no matter how insignificant, is performed with the utmost devotion. At times the cricket seems startled for no apparent reason. But it is not long before he continues with his activities. Finally, the animal disappears in the depths of the earth and the listener is left with the image of a warm summer evening and a few poplars pointing to the moon.

The regular sixteenth-notes in the piano accompaniment create the appropriate mood for the song's narrative. Motive M, which occurs the first time in m. 3, captures the sound of a chirping cricket. So does motive N, a tremolo gesture, which first appears in the right hand piano part of m. 22. M is characterized by the distinctive rhythm of a sixteenth-note followed by a dotted eighth-note and the descending interval of a minor third. In mm. 11, 43, 45, 50, and 51, where the vertical pitch content of M is of structural significance, M will be referred to as "complex M" (Ex. 4).

Ex. 4
Complex M features a dominant-type chord with ninth and lowered fifth as upper extensions. This structure, of which may also conceived as a [02468] pentachord, functions as harmonic basis and may be associated with the even-numbered whole-tone scale collection. Thus, only the second note of the descending third motive is structural. Like m. 3, mm. 5, 16, 44, and 46 display occurrences of M which, due to their irregular and shifting vertical pitch class sets, cannot be considered as complexes. Although m. 3 and m. 16 initially appear significant as the first and last members of a descending-fifth progression (App. 2.a)), they do not relate harmonically to the ensuing D♭-major sonority of m. 19 and therefore have no harmonic labels. M. 11, on the other hand, relates very well to the D♭-major sonority of m. 19, as we shall see.

Motive N, as displayed in m. 22, is accompanied by a steady stream of A-flat eighth-notes which for orthographic and formal reasons are enharmonically respelled in mm. 43-46. References to N, which includes the tremolo gesture as well as the A-flat pedal point, are labeled “complex N” (Ex. 5).

![Ex. 5](image)

Although the pitch content of complex N changes in mm. 37-38, the set-class is still the same as that of previous occurrences of N. Mm. 37-38 state a [013] trichord and so do mm. 22-23. Pitch class A-flat establishes a link between these two different pitch class
collections. The occurrences of N in mm. 43-46 qualify as motives but not as complexes because their set-class differs from the prototypical [013].

Complex O (Ex. 6), which extends from m. 19 to the first beat of m. 21, surpasses M and N in length and is therefore thematic rather than motivic. Complex O recurs only once in its original form, in mm. 54-56. All other occurrences constitute more or less modified versions of the original. Mm. 24-25 present an abbreviated version of O, mm. 28-30 constitute an approximate transposition of O, and mm. 35-36 display a rather free and shortened variation of O, in which the pitch content and the melodic contour have been considerably changed. The rhythmic profile of all three voices in the piano accompaniment creates the only link between mm. 35-36 and the other occurrences of complex O.

Ex. 6

The melodic essence of O is an ascending minor third generated by the interplay of the soprano and the alto line of the right hand piano part. The minor third, which receives emphasis in the very first statement of complex O, is formed by B♭⁴ and D♭⁵ on the second and third eighth-notes of mm. 19 and 20. Whereas B-flat is a member of both the soprano and alto lines, D-flat is a member of the alto line only. F⁵, on the second beats of mm. 19 and 20, is to be interpreted as a cover tone. Mm. 28-30, which present an
approximate transposition of complex O, emphasize the minor third formed by C5 and E♭5. Mm. 35-36 display the only occurrence of O whose melodic reduction yields a descending third (E♭5 and C5) instead of an ascending third. This interval is projected by the soprano line of the accompaniment on the second beats of mm. 35 and 36. The descending minor third of mm. 35-36 prepares the descending-third motive of complex M in mm. 43-51. Although the minor third interval is quite characteristic of complex O on a foreground level, it nevertheless loses importance at the later stages of reduction. At a more reduced foreground (App. 2.a)) and at the middleground (App. 2.b)), only the first member of each of the minor thirds discussed above is of melodic significance. Thus, mm. 19-21 and mm. 24-25 reduce to B♭4, mm. 28-30 emphasize C5, and mm. 35-36 stress E♭5.

The song roughly divides into three parts. Ravel's divisions are naturally in support of the events in the poem. Mm. 1-18 function as an introduction during which the cricket becomes the focus of our attention. Mm. 19-62, which constitute the main section, describe in detail a succession of activities in which the cricket engages until he disappears under the earth. The coda in mm. 63-68 pictures the surroundings in the absence of the insect. The main section reveals further subdivisions, which project a basic ternary structure. Mm. 19-42 are related to mm. 54-62 and the two passages are separated by the contrasting material of mm. 43-53. The formal events may be summarized as follows: Introduction, A-B-A', Coda.

Whereas the introduction features only occurrences of M, sections A and A' feature occurrences of N as well as O. Both A-sections are preceded by a small motive which has been omitted in the foregoing discussion of motivic and thematic content, because it has little impact on the formal design of the song. This motive occurs in the piano accompaniment of mm. 16-17 and mm. 52-53 and is characterized for the most part by a string of staccato G-sharp eighth-notes and a loose rhythmic profile. Its purpose is to
announce sections A and A'. Section B combines material from two of the other sections: instances of M reminiscent of the introduction and instances of N that recall section A. The juxtaposition of material from different formal sections at the midpoint of the piece reminds one of the events in the core passage of "Le Paon." The absence of M, N, or O in the coda cause the final measures to appear detached from the rest of the piece. Here, a long chain of sustained chords in the piano accompaniment is in contrast to the regular sixteenth-note motion of most of the preceding measures. M. 67 is the only place in the coda which employs somewhat familiar material. The short rhythmic figure on the first beat recalls M from the introduction. However, the descending minor third, which is so characteristic of M, has been avoided.

"Le Grillon" displays several instances of word painting that are not directly related to M, N, or O. The sustained dyad in m. 34, for instance, is symbolic of the cricket's rest after he files the root of a big blade of grass. He then winds his watch. But when he suddenly stops it is unclear as to whether he has finished winding his watch or whether his tiny mechanical device has broken down. The two questions in the voice part of m. 39, which express this uncertainty, are appropriately introduced by a dominant-type seventh chord on D, which prolongs the dominant functioning harmony of mm. 35-38 in an inconclusive way, and by a cessation of activity. After the animal disappears under the earth we hear nothing ("On n'entend plus rien."). This silence is reflected by a rest in the piano accompaniment of m. 62.

The examination of pitch content in each formal section suggests the presence of two different scale collections, the diatonic D♭-major scale collection and the even-numbered whole-tone scale collection. A reduction (App. 2.a), b)) has been of assistance in determining the scale collection basic to the introduction and section B, in which the whole-tone content is embellished with added tones and opposed by foreign
bass elements. Because each formal section can be linked with one of these two scale collections one can also establish a connection between the scale collection in use and the compositional material (M, N, O) contained within each section. Whereas complex M can be associated with the whole-tone collection, complexes N and O can be seen in connection with the diatonic scale collection. Fig. 6 juxtaposes each formal section with the contained compositional material and the associated scale collection. The letters EWT and D refer to the even-numbered whole-tone collection and the diatonic collection, respectively.

<table>
<thead>
<tr>
<th>Form:</th>
<th>Intro</th>
<th>A</th>
<th>B</th>
<th>A'</th>
<th>Coda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex:</td>
<td>M</td>
<td>O, N</td>
<td>M</td>
<td>O, N</td>
<td></td>
</tr>
<tr>
<td>Collection:</td>
<td>EWT</td>
<td>D</td>
<td>EWT</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

**Fig. 6**

Those occurrences of M, N, or O that do not qualify as complexes are not taken into account in the above scheme because they do not determine the formal structure of the piece. For instance, the occurrence of motive N in section B is a surface detail that embellishes the underlying structure supplied by complex M. Motive N is thus omitted under section B in Fig. 6. The figure shows that the introduction and section B are related with respect to their extensive use of whole-tone structures and their employment of complex M. Neither of these sections is exclusively whole-tone because their basses descend by perfect fifths. Sections A and A’, on the other hand, display a chromatically enriched diatonic environment and employ complexes O and N. Although the coda is exclusively diatonic and matches the collections used in sections A and A’, it nevertheless relates more convincingly to the introduction. Its chain of descending fifths (F-B♭-E♭) in
the bass mimics that of the introduction (A-D-G) and the motivic gesture of m. 67 recalls instances of M characteristic of the introduction.

Since the introduction and section B employ mostly whole-tone sonorities, they fail to convey a clear sense of tonality. Despite their lack of tonal direction, they can nevertheless be functionally interpreted in relationship to the diatonic sections. Such an interpretation, however, first of all requires the examination of the harmonic content of the diatonic sections (App. 2.a)): mm. 19-27 reduce to an added-sixth D♭-major triad, which functions as tonic; mm. 28-34 feature the mediant, an F-minor triad; and mm. 35-42 project two dominant-type chords on A-flat. Although the dominant pedal is literally present only in mm. 35-38, it is still implied in mm. 39-42. Section A' resembles the beginning of section A in that it displays an added-sixth D♭-major triad as tonic. The ensuing coda only prolongs this sonority. Section A outlines a D♭-major triad in the bass and spans the interval of a perfect fourth from B♭4 to E♭5 in the melody. E♭5, which occurs in m. 35, not only constitutes the song's melodic peak, but also coincides with the arrival of the dominant. The prolongation of the dominant in mm. 35-42 introduces the first melodic descent, to D5, in m. 39.

The whole-tone sections can now be related to the diatonic sections discussed above. Among the harmonic events in the introduction, the chord of m. 11 seems to be the most significant. It can more easily be explained in the context of D-flat than any of the other chords in the introduction. If extracted from the descending fifth progression, in which it is embedded, it may be interpreted as a tritone substitute for the dominant (TS(V)). Since the chord of m. 11 is the only vertical structure in the introduction which is realized as complex M, it carries more structural weight than the remaining chords in this section. Therefore, I consider m. 11 as the representative sonority of the introduction. My hearing of the introduction, which places m. 11 directly in front of the A-section, is
supported by the harmonic events at the end of section B and the beginning of section A'. M. 51 displays the same sonority as m. 11 and harmonically precedes section A' (m. 54). The harmonic events of m. 51 and m. 54 thus reflect my hearing of the harmonic relation between the introduction and section A.

The B-section contains a stepwise descending series of M-complexes whose purpose it is to prolong the dominant of m. 39 until the return of the tonic in m. 54. The bass descends stepwise from A-flat in m. 39 to D in m. 51 and the melody descends in a similar fashion from D in m. 39 to G-sharp in m. 51. The result is a voice exchange between bass and melody. M. 39 and m. 51 correlate not only because of this voice exchange, but also because the pitch content of their sonorities is almost identical. Whereas m. 39 constitutes a dominant with lowered fifth (E₅), m. 51 constitutes another tritone substitution identical to that of m. 11. The three instances of complex M in section B have no independent harmonic functions in Ex. 2.a; they merely prolong the dominant sonority of m. 39.

The presence of two different collections, the diatonic scale collection and the even-numbered whole-tone collection, is reminiscent of the two prominent key areas in "Le Paon." In the first song the transition from the tonic to the lowered subdominant key area and its reversal are achieved by means of a pivot chord. In "Le Grillon" the composer relies on two pitch classes that function as a link between the diatonic and the whole-tone collection. Whereas A-flat and its enharmonic equivalent occur naturally in both the diatonic Dᵇ-major collection and the even-numbered whole-tone collection, D-natural is only found in the whole-tone collection, but appears in the diatonic section A as a chromatic upper extension of the dominant sonority in m. 39. A-flat (= G-sharp) is sounded throughout most of the song and D-natural occurs only at a few structurally important points, e.g., m. 11, m. 39, and m. 51.
“Le Cygne” depicts a swan who is intrigued by the reflections of clouds in the water. Unaware of the fact that the clouds are only mirror images, he strikes at them with his beak. To his disappointment the disturbance of the water makes the clouds disappear. However, they return quickly as the ripples in the water fade. As the swan approaches another reflection the listener discovers that he is hardly interested in the clouds at all, for every time the creature plunges his neck into the water he retrieves a worm.

The irony of the poem is reflected in mm. 35-39 by unexpected staccato chord changes which carry the performance marking Modéré. Mm. 15-18 display identical performance instructions and therefore resemble mm. 35-39. Both passages are interesting from a harmonic point of view and stand in contrast to the rest of the piece, in which the melody of the right hand piano part, the flowing quality of the sixteenth-notes, and the conventional chord successions portray the swan as an elegant and noble creature. Basil Deane informs us that this characterization derives from the 19th-century view according to which “the swan symbolizes innocence and ideal beauty.”

“Le Cygne” is the most traditional of the five songs. Most of the harmonic events can be assigned conventional chord labels and the melody, as shown in the middleground (App. 3.b)), descends almost always by step. Unlike what happens in the first two songs, most of the compositional material appears as a stream of similar ideas which is only occasionally interrupted by contrasting material. Parsing the music into complexes is therefore difficult and would result in a large number of small and similar ideas which would be of little help in determining the form or the composer’s deployment of these

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ideas. The _Plus lent qu'au début_-section (mm. 19-25) and the two _Modéré_-passages already mentioned create some contrast, but are not distinct enough to be considered as complexes.

A small middleground motive (x) and its variations occur frequently enough to organize the melodic component of a considerable portion of the song. Instances of x are indicated in App. 3.a) by a bracket and by the letter x. Motive x, in its original form, consists of four notes. The first and last notes form the interval of a major or minor sixth. Whereas the first and third note pairs form the interval of a major or minor second, the second note pair forms the interval of a perfect fourth. The occurrence of x at m. 16 in App. 3.a) consists of only three notes and is therefore incomplete. I consider it a variation of x and label it x'. Any further truncation of x would produce only the neutral intervals of a major or minor second, and are therefore difficult to trace. As a result quite a few passages containing the interval of a second may or may not be motivic.

The compositional material of mm. 1-18 (A) compares to that of mm. 26-39 (A'). Fig. 7 juxtaposes the compositional material of both sections to indicate some of their similarities and differences. Section A' is shorter than section A because the material of mm. 11-15 is omitted from A'. The passages which are common to both sections differ in length, but sum to the same number of measures.

<table>
<thead>
<tr>
<th>A</th>
<th>A'</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm. 1-4</td>
<td>mm. 26-28</td>
</tr>
<tr>
<td>mm. 5-7</td>
<td>mm. 29-30</td>
</tr>
<tr>
<td>mm. 8-10</td>
<td>mm. 31-34</td>
</tr>
<tr>
<td>mm. 11-15</td>
<td>-</td>
</tr>
<tr>
<td>mm. 15-18 (Modéré)</td>
<td>mm. 35-39 (Modéré)</td>
</tr>
</tbody>
</table>

_Fig. 7_
Sections A and A' are separated by a contrasting passage, mm. 19-25. The layout of the compositional material therefore suggests ternary form. However, the stepwise melodic descent (App. 3.b)) of section A continues in the contrasting middle and this renders the middle section an extension of A. The significance of this melodic descent will be discussed later and will strengthen a view according to which mm. 19-25 are a subsection of A. If the contrasting middle is interpreted as an extension of A, the song displays binary form: A (mm. 1-25), A' (mm. 26-39).

Mm. 1-12 firmly establish the key of B-major (App. 3.a)). The sonority, which represents the tonic of mm. 1-4, has D-sharp, rather than the root B, in the bass and consists of a series of stacked perfect fourths (D#, G#, C, F#, B). The chord constitutes a complete pentatonic collection and differs from the tertian structures common in more traditional music. Despite this peculiar beginning the pentatonic collection resurfaces only once in m. 26, at the beginning of section A', and is therefore not of global significance. Mm. 5-6 introduce the major version of the submediant, which is followed in m. 7 by the major version of the supertonic. The supertonic may also be interpreted as a secondary dominant. However, the root, C-sharp, is only implied. C-double sharp, which is contained in this supertonic sonority, is to be understood as a flattened-ninth upper extension and could have also been notated as D-natural. The tonic, which provides the resolution to the dominant of mm. 8-10, is enriched by an added sixth (G#) and prolonged until the end of m. 12. Interestingly enough, the chordal roots of mm. 1-12, actual or implied, match the components of the pentatonic structure at the beginning of the song.

The harmonies of mm. 13-18 deviate from the B-major collection. They allude to the second octatonic collection, and may be perceived as a transition to the Plus lent qu'au début-section. The first inversion G-minor triad of m. 16 seems to be the best representative of the transition for three reasons: all members of the sonority are
contained in the second octatonic collection; the melody note, G, continues the stepwise melodic descent of section A; and the bass picks up on the prominent B-flat pedal of mm. 13-14. The octatonic collection which is only hinted at in mm. 13-18 becomes more noticeable in the Plus lent qu'au début-section. The structural harmonies (App. 3.a)) of mm. 19-25 all project the second octatonic collection with the exception of pitch class A, which supplies the harmonic foundation for the major-minor seventh chord of m. 21 and which is a member of the D-minor triad of m. 22. Mm. 19-25 may be summarized as a chain of descending fifths that starts on the minor subdominant and that ends on a French augmented-sixth chord. Due to the presence of the octatonic collection in mm. 13-25, which renders the diatonic collection temporarily inactive, the listener will find it difficult to perceive the harmonies contained therein as functional in a diatonic sense. Harmonic functions have therefore been omitted except for the subdominant and the French augmented-sixth chord, which occur at significant locations, such as the beginning and the end of the Plus lent qu'au début-section, and which can therefore be related to the surrounding diatonic sections.

The tonic of mm. 26-28, which directly follows the French augmented-sixth chord prolonged in mm. 23-25, marks the beginning of section A’. The harmonic events following mm. 26-28 require the reinterpretation of the tonic structure as the mediant of the submediant key area. The tonic of the submediant key area is reached in m. 33 after a chain of descending fifths. The major-minor seventh chord on the submediant scale degree in m. 34 anticipates a similar sonority on the lowered submediant in m. 35. The latter may be understood as the secondary dominant to the lowered supertonic. The resolution to the lowered supertonic is attempted twice, on the third beats of m. 36 and m. 37, but is only completely realized on the first beat of m. 38. The piece comes to a close via a modified imperfect authentic cadence. The suspensions of the fourth and the second
on the fourth beat of m. 38 briefly delay the arrival of the tonic. Whereas mm. 13-18 of section A allude to the second octatonic collection, mm. 35-38 seem to invoke the first octatonic collection. However, due to the brevity of this second passage and the constant presence of collection-foreign pitch classes such as F and B, the listener will find it difficult to detect octatonic implications.

An examination of foreground melodic events (App. 3.a)) shows the melodic descent between scale degrees eight and six in mm. 1-14. The continuation of that descent takes place in mm. 15-25 and involves scale degrees flat six through two. Only scale degree five is omitted. Fig. 8 shows the melodic and harmonic events of section A. Flats, as for instance at m. 16 and m. 22 in Fig. 8, merely indicate that the scale degrees are lowered. In the score these scale degrees are preceded by natural signs.

Scale degree eight (= one), which arrives with section A' (m. 26), is identical to that of m.1 and resumes the descent of section A. The melodic descent of section A' ends on scale degree five, which was omitted from section A. This descent also incorporates the lowered seventh scale degree which is supported by an unstable major-minor seventh chord. Fig. 9 shows the melodic and harmonic events of section A'.
"Le Cygne" engages one’s interest in part because of the interaction of diatonic and octatonic collections. The stepwise melodic descents of sections A and A’ help to integrate the octatonic collections into a diatonic context. The diatonic context endows a few vertical structures of these otherwise non-centric collections with functional meaning and the octatonic collections in turn enrich the traditional harmonic vocabulary. The subdominant, which is emphasized at the beginning of the Plus lent qu’au début-section, belongs to the second octatonic collection as much as to the diatonic B-minor collection and may be interpreted as a diatonic-octatonic hybrid. The fact that the subdominant rather than the dominant is emphasized in the contrasting middle (App. 3.b)) is reminiscent of the core section of “Le Paon.” Once again the composer seems to favour the plagal system over the authentic one.

<table>
<thead>
<tr>
<th>Form:</th>
<th>A'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure:</td>
<td>26 33</td>
</tr>
<tr>
<td></td>
<td>^</td>
</tr>
<tr>
<td>Melody:</td>
<td>8</td>
</tr>
<tr>
<td>Function:</td>
<td>I</td>
</tr>
</tbody>
</table>

Fig. 9
CHAPTER V

The protagonist in "Le Martin-Pêcheur" tells us about a rare experience he had when he was out fishing. While he did not catch any fish that evening, he was awe-inspired by a kingfisher who had perched himself upon the fishing pole. Struck by the beauty of the bird he could not help but comparing him to a big blue flower at the end of a long stem. He was proud to have been mistaken for a tree and so held his breath, convinced that the bird flew away not because he was frightened, but because he believed he was only passing from one branch to another.

The compositional material of this song reduces to two complexes, M and N. Complex M (Ex. 7) occurs for the first time in mm. 1-2 and is characterized in the melody by a descending chromatic line followed by the ascending leap of a major third. The bass displays two descending consecutive fourths separated by a major second.

A harmonic reading of mm. 1-2 yields a half cadence in the key of E-major. The added-sixth E-major triad on the second beat of m. 1 may be heard as tonic and the major-minor seventh chord with upper extensions on the second beat of m. 2 may be heard as dominant. The sonority on the first beat of m. 1 would have to be considered an
appoggiatura. All other vertical structures in mm. 1-2 are either chromatic passing chords or suspensions and are negligible already at the early stages of reduction. The pitch classes that stand out in the melody concur with the harmonic events discussed above. C-sharp corresponds to the tonic; E-sharp, a member of the dominant sonority, stands enharmonically for F4, the lowered second scale degree; and D-sharp is an appoggiatura. Because D-sharp is merely an ornamental prefix, C-sharp and E-sharp appear to have more structural weight.

However, due to the exposed position of the appoggiatura of the F♯-major chord, at the beginning of the song, and the melodic contour of complex M, one senses a strong melodic link between D-sharp and E-sharp, which considerably weakens the harmonic tension between tonic and dominant. In other words, the main melodic and harmonic events are misaligned. Whereas the melodic component of M emphasizes D♯5 on the first beat of m. 1, the harmonic component of M stresses E4 on the second beat of m. 1. The listener will have to decide which of the melodic or harmonic components is more determining. The reader is informed that App. 4.a), b) favour neither one of these hearings, but simply reflect the very conflict between melody and harmony. To consider the first beat of m. 1, rather than the second, as carrying the structural harmony would result in a plagal half cadence. However, due to the extremely slow tempo at the beginning of the song (On ne peut plus lent), the metric distance between D-sharp and E-sharp, and the strong harmonic affiliation between the E-major sonority on the second beat of m. 1 and the B-major sonority on the second beat of m. 2, the listener is unlikely to perceive the plagal relationship between the first and last vertical structures.

Mm. 6-7, which constitute a transposed (T₄), motivically varied, and harmonically condensed version of complex M, lack the appoggiatura and the descending chromatic line characteristic of M. The main melodic and harmonic events, which occur on the first beat
of m. 6 and on the second beat of m. 7, project a half cadence on the mediant scale degree of E-major. The melody notes, E-sharp and F-double sharp, continue the high-level melodic ascent that was started in mm. 1-2. Mm. 9-10 are identical to mm. 1-2 except that they are transposed (T₇) and their texture is thicker due to doublings. Surprisingly, the main melodic-harmonic events of mm. 9-10 are not strictly analogous to those of mm. 1-2.

An examination of the main melodic events (App. 4.a)) before and after mm. 9-10 leads to the conclusion that only the second beat of m. 9 and the sixth eighth-note beat of m. 9 are structural. G-sharp, the melody note of m. 9, continues the high-level melodic ascent of the previous measures and anticipates the prolongation of G-sharp in mm. 12-16. The structural bass notes, B and F-sharp, now project a half cadence on the dominant scale degree of E-major. The sonority on the first beat of m. 9 functions as a “true” appoggiatura, unlike that on the first beat of m. 1, and the vertical structure on the second beat of m. 10 supports the embellishing skip to C6. Mm. 3-5, m. 8, and m. 11 sustain each of the M-complexes discussed in turn. M. 11 with its repeated pitch class E also prepares for the arrival of complex N in m. 12. Fig. 10 shows the main melodic and harmonic events of the three complexes discussed above. Whereas the melody displays a melodic ascent from D#5 to G#5, the bass projects a series of half cadences (HC) which in turn emphasize the tonic, the mediant, and the dominant scale degrees of E-major.

<table>
<thead>
<tr>
<th>Complex:</th>
<th>M</th>
<th>M</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure:</td>
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<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Melody:</td>
<td>D#</td>
<td>E#</td>
<td>E#</td>
</tr>
<tr>
<td>Function (E):</td>
<td>(App.) I - V</td>
<td>III - V/III</td>
<td>HC</td>
</tr>
</tbody>
</table>

*Fig. 10*
Instances of complex N and its variations occur only in mm. 12-14. Complex N (Ex. 8) emphasizes the tonic of E-major and projects the melody in the top voice of the piano accompaniment. G#4 appears to be the high-level melody note, for it occurs several times in the piano accompaniment as well as in the vocal part. The staccato quarter notes on the second, fourth, and sixth eighth-note beats in the piano accompaniment may be considered cover tones.

M. 13 differs from the first-presented version of N in that it stresses the submediant of E-major. Also, the alto line leaps to B, on the fourth eighth-note beat, rather than to A-sharp. However, from a rhythmic point of view, m. 13 is identical to m. 12. M. 14 displays only a melodic fragment of N which occurs on the last two eighth-note beats of the original complex. Since m. 14 features the same harmony and high-level melody note as m. 13, it may be considered an extension of m. 13.

The two instances of M in m. 15-17 differ from the original complex in several ways: they do not constitute half cadences; their unstable thirteenth chords replace M’s characteristic added-sixth major triads; their outer voices exhibit a few intervallic discrepancies; and they each display five chordal attacks rather than six—more specifically, they lack a sixth vertical structure which compares to that on the second beat of m. 2.
Inspite of these differences m. 15 and mm. 16-17 are undoubtedly derived from M: both passages display a descending chromatic line in the melody; their basses initially descend by a major second, from the first to the second beat; and the interval of a fourth, characteristic of M's bass, is still part of the bass line.

The thirteenth chords on B, on the first and sixth eighth-note beats of m. 15, represent the dominant of E-major. G-sharp, the high-level melody note of m. 15, fits with these dominant sonorities and is identical to that of mm. 12-14. G-sharp recurs one more time, on the first beat of m. 16, and then continues through F-sharp, on the second beat, to E, on the sixth eighth-note beat. The first beat of m. 16 once again features a thirteenth chord on B, a chord that remains functionally active despite the descending chain of thirteenth chords that follows it in m. 16. The D-sharp, on the second beat of m. 17, continues the melodic descent of m. 16 and melodically anticipates the final occurrence of complex M in mm. 18-21. In Fig. 11, which summarizes the main melodic and harmonic events of the four complexes discussed above, G-sharp receives a great deal of emphasis as high-level melody note. The harmonic functions of Fig. 11 attest to a traditional chord progression which firmly establishes the key of E-major.

<table>
<thead>
<tr>
<th>Complex:</th>
<th>N</th>
<th>N</th>
<th>M</th>
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</tr>
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<tbody>
<tr>
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<td>12</td>
<td>13-14</td>
<td>15</td>
<td>16-17</td>
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<tr>
<td>Melody:</td>
<td>G#</td>
<td>G#</td>
<td>G#</td>
<td>G# - F# - E</td>
</tr>
<tr>
<td>Function (E):</td>
<td>I</td>
<td>VI</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

Fig. 11

Mm. 18-21 constitute a rhythmically augmented and harmonically extended version of the original complex. In contrast to m. 1, the melodically or harmonically significant harmonies in mm. 18-20 receive metric and durational emphasis and can
therefore more easily be distinguished from passing chords and the like. The structural sonorities of mm. 18-21 relate to those of mm. 1-2 in the following way: the first beat of m. 18 corresponds to the first beat of m. 1; the first beat of m. 19 compares to the second beat of m. 1; and m. 21 relates to the dominant sonority on the second beat of m. 2. The structural harmony of m. 20, which occurs on the first beat and which stresses the lowered seventh scale degree of E-major, constitutes a harmonic extension of M and anticipates the dominant sonority of m. 21. The pitch contents of the structural harmonies of mm. 20-21 are similar and thus allow m. 20 to be heard as an anticipation of m. 21.

The dominant sonority of m. 21 differs from common dominants in that its third, the leading tone in the key of E-major, is lowered. D-natural, which replaces D-sharp, considerably challenges the functional identity of the structural harmony of m. 21 and raises doubts as to whether the chord really functions as dominant. The ensuing F\#-major sonority of m. 22, which concludes the song and corroborates the key signature, encourages a view according to which m. 21 is interpreted as subdominant rather than dominant. On the other hand, the measures preceding m. 21 are, as Fig. 10 and Fig. 11 show, predominantly perceived in the key of E-major and allow m. 21 to be interpreted as dominant. This interpretation, however, fails to provide a satisfactory harmonic function for m. 22; the piece would end on the supertonic rather than the tonic. To gain a full understanding of the final measures it will be necessary to view them within a larger harmonic context. Fig. 12 shows the main melodic and harmonic events of mm. 16-21 and provides two analyses of the passage, one in the key of E-major, the other in the key of F\#-major.
The F#-major analysis of mm. 16-22 is more appealing because it convincingly accounts for the final measure. Such a reading would require the structural harmony of mm. 16-17 to be heard as subdominant in relationship to m. 18. The F#-major sonority of m. 18 recalls the very beginning of the song and may easily be perceived as more than a mere passing chord in the key of E-major. If m. 18 is granted the potential of functioning as tonic, mm. 18-22 can easily be understood as a progression in the key of F#-major which ends with a plagal cadence. Despite the appeal of the analysis in the key of F#-major, one cannot deny that E-major is the predominating key in mm. 1-17 and that the listener is likely to perceive m. 18 as a passing chord on its way to the tonic in m. 19. The graphs of App. 4.a), b), which display intersecting slurs between m. 18 and m. 19, reflect these two ways of perceiving mm. 16-22.

The recurrence of complex M at the original pitch class level (T₀) at m. 18 and the occurrence of contrasting material (N) in mm. 12-14, which is accompanied by a new performance marking (Très calme), indicate ternary form: A (mm. 1-11), B (mm. 12-17), A' (mm. 18-22). Whereas sections A and A' feature only instances of M, section B features instances of M as well as N. The reader may remember that the middle sections of “Le Paon” and “Le Grillon” synthesize two or more compositional ideas in a similar fashion.
An examination of the main melodic and harmonic events (Fig. 13) of each section yields an abstract vertical structure which may be the background from which the composer conducted his Auskomponierung. Because Ravel’s basses usually carry the fifth above them, Fig. 13 includes fifths as well.

<table>
<thead>
<tr>
<th>Form:</th>
<th>A</th>
<th>B</th>
<th>A’</th>
</tr>
</thead>
<tbody>
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<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>12</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>19</td>
<td>22</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Melody:</th>
<th>D♯</th>
<th>G♯</th>
<th>G♯</th>
</tr>
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<tbody>
<tr>
<td>C♯</td>
<td>B</td>
<td>C♯</td>
<td>B</td>
</tr>
<tr>
<td>D♯</td>
<td>C♯</td>
<td>B</td>
<td>C♯</td>
</tr>
<tr>
<td>Bass:</td>
<td>F♯</td>
<td>E</td>
<td>F♯</td>
</tr>
<tr>
<td>E</td>
<td>F♯</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D-sharp and G-sharp not only constitute the melodic boundary pitch classes of sections A and A’, but also occur at significant locations such as the beginning and the end of each of these sections. Although section B emphasizes only G-sharp, it is remarkable that all sections feature D-sharp, G-sharp, or both of these pitch classes in the melody. The bass alternates between two fifths, F♯-C♯ and E-B, which to some extent reflect the tonal conflict of the entire song. Sections A and A’ embody this conflict best, for they contain both fifths. If one combined the pitch classes of Fig. 13 into an intervallically ordered vertical structure, a chord consisting of stacked fifths would result. The abstract vertical structure of Ex. 9 may be considered the melodic and harmonic essence of “Le Martin-Pêcheur.”
Ex. 9
CHAPTER VI

"La Pintade" describes the hysterical behaviour of a guinea hen in a farmer's courtyard. Always ill tempered, she throws out discordant cries and torments the fowl around her from morning until evening. First she jumps on the hens, then she attacks a turkey with her sharp beak. There is no apparent reason for her aggressive behaviour. Perhaps she believes that the other fowl are making fun of her size, her bald head, and her low tail. When she leaves the courtyard the others can enjoy a moment of peace, but when she returns she is even more agitated than before. She is a nuisance to everyone including the farmer, who has to look for the eggs that she lays somewhere out in the countryside.

The compositional material of the song reduces to three complexes, M, N, and O, along with short transitions that connect one complex with another. Complex M (Ex. 10) occurs for the first time in mm. 1-2 and mainly consists of an E-major triad, in first inversion, with a momentary minor third (G). E5 is frequently repeated in the top part of the piano accompaniment and is therefore the focal pitch of M. The pitch content of M represents a segment of the second octatonic collection in which E, due to its frequent occurrence, functions as tonal center.

Ex. 10
A transposed ($T_1$) and slightly varied version of $M$ occupies mm. 36-37. It renders F-natural the focal pitch class and consequently alludes to the third octatonic collection. The third and last instance of $M$, in mm. 51-53, is identical to the original complex except for m. 53 which extends $M$ by one measure and concludes the song.

Complex $N$ (Ex. 11), which occurs for the first time in mm. 3-4, is best characterized by the descending interval of a perfect fourth, in the melody, followed by an octatonic vertical structure. Pitches E5 and B4 in m. 3 form a perfect fourth and the vertical structure on beat two conforms to the second octatonic collection.

![Ex. 11]

The second instance of $N$, in mm. 5-6, displays a perfect fourth between C#5 and G#4 and contains a vertical structure whose pitch content conforms to the second octatonic collection, except for D-sharp. The two instances of $N$ in mm. 38-39, which are repeated in mm. 40-41, display, in comparison to mm. 3-6, more rhythmic activity and project the third octatonic collection rather than the second. F5 and C5 constitute the perfect fourth in m. 38, Db5 and Ab4 in m. 39. Since the eighth-note motion of the piano accompaniment of m. 38 keeps alternating between G-flat and A-flat, which are both contained in the third octatonic collection, it is unclear which of the two pitch classes is structural. App. 5.a) features G-flat for reasons of voice leading. It is easier to determine the structural pitch.
class in m. 39, in which the piano accompaniment alternates between D-flat and E-flat. Only E-flat is contained in the third octatonic collection and thus D-flat can be dismissed as a structural pitch class.

Although the material of m. 42 and mm. 43-44 differs considerably from the instances of N discussed above, these bars nevertheless derive from N. The main link between mm. 42-43 and the instances of N in mm. 38-41 consists in the eighth-note whole-tone motion of the alto line, which now alternates between pitch classes G and A. The perfect fourth characteristic of N has disappeared except in m. 43 and on the first eighth-note beat of m. 44, where the melodic boundary pitches of the thirty-second notes emphasize the perfect fourth between E♭5 and B♭4. The two instances of N in mm. 42-44 occur over an E-flat pedal and their pitch contents project, in contrast to previous occurrences of N, the odd-numbered whole-tone collection.

Complex O (Ex. 12), which first occurs in mm. 7-9, is the most melodic of all three complexes. The melody is presented in the left-hand piano part and conforms to the third octatonic collection except for pitch class C, on the last eighth-note beats of mm. 8-9. The right hand piano part, which provides the harmonic support for O, reduces to an E-major triad and its common-tone augmented-sixth chord. The latter harmony occurs only briefly, on the last eighth-note beats of mm. 8-9, and includes the instance of pitch class C mentioned above. Complex O will be divided into two halves to allow for easier comparison between the original complex and its subsequent presentations. M. 7, the first half of O, is best characterized by the semitone neighbour motion between E4 and F4. The main characteristic of mm. 8-9, the second half of O, is the dynamic m(5 emphasis on fourth beats.
M. 10 is an extension of O that melodically connects to the transition of mm. 11-12. The melodic link between complex O and the transition is realized by the stepwise ascent from E₅, on the last eighth-note beat of m. 10, to E♯₅, on the first beat of m. 11. A♯₅, which also occurs on the first beat of m. 11, would have to be considered a cover tone. The second instance of O, in mm. 13-15, is a slightly shortened and transposed (T₇) version of the original complex. The B-major triad, which provides the harmonic background for these measures, is enriched by upper extensions, such as seventh and thirteenth, and alternates with its common-tone augmented-sixth chord. An examination of the individual halves of this instance of O shows that whereas the first half, m. 13, is short by two beats, the second half, mm. 14-15, is identical in length to the original complex. The fourth beats of the second half are emphasized dynamically as well as agogically.

The transition of mm. 16-21 is followed by three instances of complex O that supply the compositional material for mm. 22-31. The first of these three instances, which occurs in mm. 22-25, is an extended and transposed (T₁₁) variation of the original complex. Although the melody and harmony of these measures differ considerably from those of previous occurrences of O, the characteristics of their individual halves
nevertheless confirm their derivation from O. Mm. 22-23, the first half of O, still feature a semitone neighbour motion, now between D#4 and E4, and mm. 24-25, the second half of O, still display emphasized fourth beats. The first half is now extended by two beats and harmonically projects a major-minor seventh chord on D-sharp instead of a plain D#-major triad. The second half of O reduces to two dissonant chords that represent a G#-minor triad and its common-tone augmented-sixth chord. The compositional material of mm. 26-29 is identical to that of mm. 22-25 except for a few doublings, revoicings, and register changes.

Mm. 30-31 display an occurrence of O which is incomplete due to the exclusive use of second-half material. The top voice of the piano accompaniment in these measures resembles that of mm. 24-25, and consequently that of mm. 28-29, and is therefore motivically indebted to these varied instances of O rather than to the original complex. However, the harmonic background, which mainly consists of an E-major triad and a major-minor sonority on A, recalls the pitch level of the original complex. Mm. 45-47, which contain the last complete instance of O, mostly differ from the original complex in that they feature the dorian mode on C-sharp instead of one of the octatonic collections. As a result the first half of O, which occurs in m. 45 and which is shortened by two beats, now displays a major second (G#3, A#3). M. 48 may be considered an extension of O because its pitch content, when transposed by T2, matches that of m. 46 or m. 47. In other words, mm. 46-47 and m. 48 are sequentially related.

The various instances of M, N, and O discussed above are summarized in Fig. 14 and arranged in a way that places passages with identical or related compositional material side by side. Rather than list every single occurrence of a given complex, it seems more fruitful to reduce several adjacent, identical complexes to one complex which then represents an entire passage. For instance, mm. 3-6 contain two adjacent occurrences of
N, yet only one occurrence of N is noted for mm. 3-6 in Fig. 14. The ordered occurrences of M, N, and O in mm. 1-10 and mm. 36-48 suggest binary form: A, A'.

**Form:**

**A**

- **Complex:**
  - M (mm. 1-2)
  - N (mm. 3-6)
  - O (mm. 7-10)
  - *Transition* (mm. 11-12)
  - O (mm. 13-15)
  - *Transition* (mm. 16-21)
  - O (mm. 22-31)
  - *Transition* (mm. 32-35);
  - *Fermata chord* (mm. 34-35)

**A'**

- **Complex:**
  - M (mm. 36-37)
  - N (mm. 38-44)
  - O (mm. 45-48)

**Fig. 14**

Sections A and A' are similar because of their ordered occurrences of M, N, and O, but they differ with respect to transitions and the number of variations of a given complex they contain. A' contains no transitions, but its vertical structure from m. 49 recalls the fermata chord from the transition of section A; mm. 34-35 and m. 49 thus feature the same sonority, an added-sixth minor triad. The sections also differ in that they favour different complexes. Whereas section A contains only one occurrence of M and multiple occurrences of O separated by transitions, section A' displays two occurrences of M and multiple adjacent occurrences of N.

An examination of the structural bass notes (App. 5.a, b)) and the various scale collections in use reveals a conflict between the number of formal divisions and that of emphasized scale collections. Whereas the formal divisions convey a binary structure, the collections convey a ternary structure. The opening of section A and the ending of section A' both feature the second octatonic collection and are separated by the third octatonic
collection, which emerges with the arrival of section A'. The two collections have different tonal centers. Whereas the outer collections emphasize pitch class E as tonal center, the enclosed collection stresses pitch class F. Fig. 15, which lists the octatonic passages discussed above, highlights formal divisions and tonal centers to show how their patterns differ with respect to number of divisions.

Form: A A'

| Measure: | 1-10 | 36-41 | 51-53 |
| Complex: | M, N, O | M, N | M |
| Bass: | E | F | E |
| Collection: | Oct. 2nd | Oct. 3rd | Oct. 2nd |

Fig. 15

Although octatonic collections play an important role within the tonal plan of the song, they account only for a limited number of measures and leave a substantial portion of the song unaccounted for. An examination of the passages that lie between those with octatonic pitch content may not only shed light on Ravel's techniques of prolongation, but also reveal how two non-diatonic scale collections with differing tone centers can be fused to create a unified structure.

Most of the structural bass notes (App. 5.b)) between the tonal centers associated with the octatonic collections are separated by whole tones and thus form stepwise melodic lines. Due to the frequent occurrence of the major-second interval in the bass line several bass notes conform to the same whole-tone collection. There are two melodic descents. The first descent, in section A, starts on E and ends on D-sharp. It projects the odd-numbered whole-tone collection with the exception of pitch class E. The melodic leaps from E to C-sharp and from G to D-sharp are the only places that contain intervals
other than major seconds and exclude pitch classes that emerge as structurally significant in section A'. The second descent, in section A', starts on F and ends on E. It too conforms to the odd-numbered whole-tone collection with the sole exception of pitch class E. The only melodic leap found in this second descent involves pitch classes A and E, and it supplies the harmonic basis for a plagal cadence at the end of the piece. Contrary to one's expectation, the chordal structures above the bass notes of the odd-numbered whole-tone collection are not exclusively whole-tone but diatonic. Whereas section A features thirteenth chords and ninth chords, section A' mainly features minor ninth chords. In effect one may say that the presence of diatonic and whole-tone features, in form of vertical structures and bass line descents, is characteristic of the passages connecting the octatonic portions of the song.

Among the structural bass notes in these passages, D-sharp (= E-flat) appears most significant with respect to the overall tonal plan of the song. D-sharp is prolonged in mm. 22-29 of section A and underlies two extended instances of O. E-flat is prolonged in mm. 42-44 and underlies two occurrences of N. Pitch class 3 also catches one's attention because it precedes and immediately follows the occurrence of the third octatonic collection in mm. 36-41. The appearance of pitch class 3 in proximity to that portion of the song which features the third octatonic collection is not surprising because D-sharp (= E-flat) is contained in the odd-numbered whole-tone collection (OWT) as well as in the third octatonic collection and thus can function as pivot. Fig. 16 is an extended version of Fig. 15 because it includes pitch class 3 as representative of those passages that form a link between the octatonic portions of the song.
The melodic leaps in the bass lines of sections A and A’ mentioned earlier may be explained in two ways: (1) a melodic leap, as opposed to a melodic step, may indicate the shift from one scale collection to another; (2) a melodic leap may also save a pitch class for an important role later in the piece. The leap from E to C-sharp in section A not only signals the transition from the second octatonic collection to the odd-numbered whole-tone collection, but also excludes D-sharp, which later functions as pivot between the whole-tone collection and the third octatonic collection. The second leap of section A, from G to D-sharp, omits F, which becomes the tonal center with the arrival of the third octatonic collection. The leap of A to E in section A’ signals the return from the odd-numbered whole-tone collection to the second octatonic collection.
CHAPTER VII

The final pages of this study highlight and compare the main results of each analysis to disclose some of Ravel’s compositional objectives and to show at least two ways in which major-minor tonality is challenged in one of Ravel’s early works. The following points raise some of the compositional issues that keep recurring in Ravel’s song cycle *Histoires Naturelles*. Each point listed is discussed below and elucidated by several examples.

(1) Ravel’s songs sometimes emphasize two key areas in such a way that the listener is unable to hierarchize them.

(2) Non-diatonic collections, such as whole-tone and octatonic collections, which are temporarily introduced into the diatonic framework, weaken but also enrich the major-minor tonality.

(3) High-level melody or bass lines proceeding by step usually support the formal divisions of the song. Melodic leaps within these lines often save a pitch class which turns out to be of significance later in the piece.

(4) Ravel’s songs display a tendency towards a plagal system of tonality.

(5) Vertical structures, which have a major-minor seventh chord as harmonic basis and which descend by step, may either prolong a harmony of structural significance or connect two harmonies of structural significance, or both.

(6) Two major triads a whole tone apart may, depending on their melodic direction, be interpreted either as a progression from secondary dominant to tonic or from secondary subdominant to tonic.

The two key areas which receive emphasis in “Le Paon” are the tonic, F, and its lowered submediant, D-flat. Although the lowered submediant triad is not part of the diatonic collection of F-major, it still relates to the tonic triad by common tone (F), which
allows for smooth connections between the two key areas. Whereas the beginning of “Le Paon” firmly establishes the key of F-major, the coda returns only reluctantly to F after a prolonged major-minor seventh sonority (App. 1.c), m. 54), on A-flat, which relates back to the lowered submediant key area. “Le Martin-Pêcheur,” which is the most ambiguous song from a tonal point of view, stresses the tonic, F-sharp, as much as its lowered subtonic, E. The tonal conflict is already inherent in the first statement of complex M and, with the exception of section B, is felt throughout the rest of the piece. The conflict can mostly be attributed to the misalignment of structural melodic and harmonic events in mm. 1-2 and to the harmonic projection of E-major, in sections A and B, which is opposed to the occurrences of F#-major sonorities at significant locations such as the beginning of sections A and A’ and the end of section A’.

“La Pintade” emphasizes the tonic, E, and the lowered supertonic, F, by means of the second and third octatonic scale collections, respectively. The two tonal centers are perceived as two distinct tonal centers despite the fact that pitch class F, the tonal center of the third octatonic collection, is also a member of the second octatonic collection and occurs repeatedly as such, in the form of a grace note, in the first and last occurrences of complex M. The transition from the tonic to the lowered supertonic key area and the reverse motion are realized by means of a descending high-level bass line which conforms to the odd-numbered whole-tone collection.

Ravel usually employs non-diatonic collections to embellish or prolong a sonority of significant functional status, to create contrast between formal divisions, or to present a compositional idea. The even-numbered whole-tone scale collection, which is prominent in the introduction and in section B of “Le Grillon,” embellishes the structural harmony of the introduction, a tritone-substitute for the dominant (App. 2.a), m. 11), and prolongs an altered dominant sonority (App. 2.a), m. 39) until the arrival of the tonic in m. 54. The
contrasting middle of “Le Cygne” presents its structural harmony, the minor version of the subdominant, within an octatonic framework that constitutes a welcome change to the diatonic collection so prominent in most of the first half of section A and in section A’. In “La Pintade” Ravel relies once again on one of the octatonic collections to present three compositional ideas. The first three occurrences of M, N, and O all feature the second octatonic scale collection. During the course of the piece, however, the pitch content of instances of O becomes increasingly more diatonic and two instances of N even feature the odd-numbered whole-tone collection instead of the original octatonic collection.

The high-level melody lines in sections A and A’ of “Le Cygne” proceed mostly by step and support the formal divisions of the song. Whereas the first melodic descent (App. 3.a)) starts on B4, ends on C♯4, and defines section A, the second melodic descent starts on B4, ends on F♯4 and defines section A’. The melodic gap of a minor third between G4 and E4, in the first melodic descent of section A, excludes F-sharp, which is featured as the final note of the melodic descent in section A’. Sections A, B and A’ of “Le Martin-Pêcheur” feature high-level melody lines that proceed exclusively by step (App. 4.a)). Section A displays a melodic ascent from D♯5 to G♯5, section B witnesses a melodic descent from G♯4 to D♯4, and section A’ features a melodic descent, from D♯4 to G♯4, which is accomplished by means of an octave transfer from B3 to B4. The boundary pitch classes, D-sharp and G-sharp, of each melodic segment indicate either the beginning or the end of a formal division.

Sections A and A’ of “La Pintade” feature high-level bass lines (App. 5.b)) that mostly conform to the odd-numbered whole-tone scale collection. Section A displays a bass descent from E3 to D♯2, which, in m. 21 of the score, is immediately transferred up to D♯3, and section A’ shows a bass descent from F3 to A2. Whereas the first descent starts on pitch class E and emphasizes a triad root in the second octatonic collection, the
second descent starts on pitch class F and stresses a triad root in the third octatonic collection. The melodic gap between E3 and C♯3, in the first descent of section A, saves pitch class D-sharp, which later functions as pivot between the odd-numbered whole-tone scale collection and the third octatonic scale collection. Another melodic gap, between G2 and D♯2, in the first descent of section A, saves pitch class F, the tonal center of the third octatonic collection.

Ravel's music displays plagal tendencies on a foreground level as well as within a large-scale tonal scheme. In "Le Paon," the plagal relationship between the D-major triad of m. 15 and the vertical structure on the first beat of m. 16 temporarily alludes to the dorian scale collection on A and musically evokes, as we gather from the poetic content of the following measures, the image of an Indian prince. On a large-scale level the core section of "Le Paon" features the subdominant scale degree, B-flat, in the bass and thus stands in plagal relationship to the tonal center, F, projected in section A and at the end of the coda. Similarly, "Le Cygne" features the subdominant key area, E-minor, in the contrasting middle and the tonic key area, B-major, in the outer sections. The subtonic key area, E-major, which is prominent throughout most of "Le Martin-Pêcheur," relates to the tonic key area, F♯-major, in a plagal way. At m. 19, m. 21, and m. 22 in App. 4.a), the structural harmonies of the final measures form two plagal cadences. The E-major sonority of m. 19 can thus be interpreted as a secondary subdominant to the F♯-major sonority of m. 22. Finally, "La Pintade" ends with a plagal cadence, as the Roman numerals of m. 49 and m. 53 in App. 5.a) indicate.

The composer sometimes employs a series of stepwise descending major-minor seventh chords, at times enriched by upper extensions, to prolong a structural harmony or to connect two harmonies of structural significance. Section B of "Le Grillon" displays a descending chain of ninth chords with lowered fifths as upper extensions that prolong the
altered dominant sonority of m. 39 (App. 2.b)) by moving in parallel within the same whole-tone collection. Similarly, the thirteenth chords on beat two and on the sixth eighth-note beat of m. 16 prolong the thirteenth chord on the first beat of m. 16. In “La Pintade” (App. 5.b)) a thirteenth chord on C-sharp connects the tonic chord, E-major, to the dominant, a thirteenth chord on B. The dominant sonority of m. 13 in turn links to the major-minor seventh chord of m. 22 by means of two ninth chords. The sonority of m. 22 may be understood as a secondary subdominant to the F-major triad which represents the third octatonic collection.

Each of the overlapping high-level chord progressions of “Le Paon” (App. 1.c)) consists of two major triads separated by a whole tone. Russom, who discusses progressions like those in App. 1.c), concludes that Ravel “has his own methods for asserting the central tone or central chord, and [that] these methods differ sharply from those that establish tonic note and tonic chord in tonal music.”

I understand these progressions as modified tonal progressions. A G-major triad followed by an F-major triad, for instance, could be heard as a secondary dominant resolving directly to the tonic. An F-major triad followed by a G-major triad, on the other hand, could be perceived as a secondary subdominant resolving directly to the tonic. The last three structural harmonies of “Le Martin-Pêcheur,” which are discussed above, bear this interpretation.

The above discussion of the most salient features of one of Ravel’s early works shows that his music, despite its innovations, is still deeply rooted in the tonal tradition. It is therefore essential to view the innovative aspects of his music through the lens of tonal common practice. In other words, rather than focus on non-diatonic scale collections and dissonant vertical structures, we should search for the remains of tonality. Tonality in

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Ravel's *Histoires Naturelles* is mostly weakened by incomplete or modified cadential progressions and the use of non-diatonic collections. "Le Martin-Pêcheur," for instance, is mainly composed of a string of incomplete progressions, such as half and plagal cadences, and thus delivers only a faint sense of tonality. Similarly, major triads separated by a whole tone, since they proceed directly from secondary dominant to tonic or secondary subdominant to tonic, may be considered incomplete progressions as well. Non-diatonic scale collections, though foreign to traditional tonality, usually prolong or embellish a vertical structure with tonal implications and do not necessarily threaten tonality. Overall, Ravel manages to employ dissonant vertical formations and non-standard linear configurations, and to integrate these with more conventional materials to produce structures that achieve a satisfying balance of tonal conflict and repose.


App. 1.a) continued

Coda

Trans.
m. 31 33 35 38

I:  II VI bVI bII
VI:  II V I

38 39

I:  V I

I: I VI V Pass. I V II
II: (IV) I bVII IV I
App. 5.b)

m. 7 13 22 36 43 53

I: I VII bII VII I