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New Perspectives on the Music

Edited by Peter Kaminsky

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23. See Peter Kaminsky, "Of Children, Princesses, Dreams and Isomorphisms: Text-Music Transformation in Ravel's Vocal Works," *Music Analysis* 19, no. 1 (2000): passim.

24. Roy Howat, "Ravel and the Piano," in Mawer, *The Cambridge Companion to Ravel*, 83, also cites the centrality of these elements.

25. Norma Doris Pohl, "*Gaspard de la nuit* by Maurice Ravel: A Theoretical and Performance Analysis" (PhD diss., Washington University, 1978), 45, notes accurately that thematic content flows from two cells. Her highly reductive perspective, however, does not adequately account for the recurrence of themes in different tonal and formal contexts, especially in relation to the unfolding of the poem.

26. See Jean-Philippe Rameau, *Treatise on Harmony*, trans. by Philip Gossett (New York: Dover, 1971), 71–73, on deceptive cadences.

27. I am designating the octatonic collection according to its first two pitch classes; the complete scale would be G–G♯–A♯–B–C♯–D–E–F.

28. The association between octatonic and symmetrical collections in general and the supernatural is discussed by Elliott Antokoletz, *Musical Symbolism in the Operas of Debussy and Bartók: Trauma, Gender, and the Unfolding of the Unconscious* (Oxford: Oxford University Press, 2004), 56–57, and by Richard Taruskin, "Chernomor to Kashchei: Harmonic Sorcery; or, Stravinsky's 'Angle,'" *Journal of the American Musicological Society* 38, no. 1 (Spring 1985): 103.

29. The final cadence of Ravel's "Ondine" features the same motion (in C♯ major); see mm. 88–89.

30. Howat, "Ravel and the Piano," 84, cites the centrality of F♭ within the tonal argument but does not discuss its resolution.

31. Edgar Allan Poe, *The Raven: with The Philosophy of Composition* (Boston: Northeastern University Press, 1986), 26–27 and 35.

32. Orenstein, *A Ravel Reader*, 87, from a letter from Debussy to musicologist and critic Louis Laloy.

33. Jankélévitch, *Ravel*, 69–70.

Chapter Five

Repetition as Musical Motion in Ravel's Piano Writing

Daphne Leong and David Korevaar

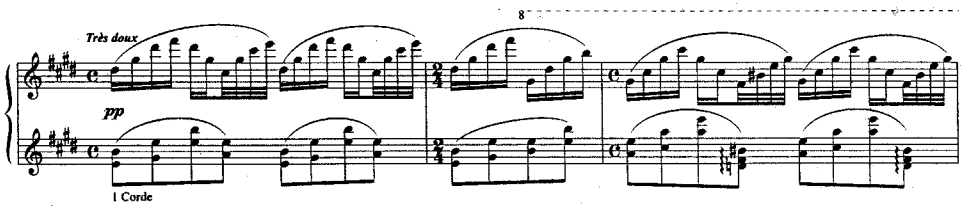
Ravel use des formes classiques, comme le jongleur des balles, des plumes, des éventails, des mille objets qui volent entre ses doigts.

[Ravel uses classical forms as the juggler uses balls, feathers, fans, the thousand objects that fly between his fingers.]

André Suarès

In Ravel's writing for the piano, the tactile dimension influences and sometimes determines aspects of musical structure. We consider physical motions—the gestures of the performer—as a dimension of musical structure in Ravel's piano-centered writing, and demonstrate how the conjunction of physical and musical features produces distinctive units, which, repeated and varied, create characteristic qualities of musical motion.[1]

Consider the opening of *Jeux d'eau* (ex. 5.1), with its ascending right-hand arpeggiation <D♯–G♯–D♯–F♯> requiring the fingering <1, 2, 4, 5>—a figure that is inspired in part by the way the hand lies on the keyboard.[2] This figure, set in motion by the rolling of the hand over the black keys, is immediately extended by retrograde (the return down the opening arpeggio), and then by a neighboring figure in halved note values (down a step in thirty-second notes, retaining the G♯ as the second-finger pivot). The initial four-note figure and its transformations combine to form ever-larger units, eventually creating, in this example, half-measure, then (by literal repetition) one-measure units, the third measure roughly sequencing the first up a fourth.



Example 5.1. *Jeux d'eau*, mm. 1–3

While certain aspects of the figure remain fixed in the first half measure (the contour and fingering of the four-note arpeggio), others change (the neighboring pitches and rhythmic diminution of the thirty-second-note arpeggio, the I-IV harmonic oscillation of the left-hand accompaniment). This varied repetition, animated by the choreographic arc of the pianist's hands and by the harmonic rhythm ♩., ♪, produces musical motion. The quality of the motion is not determined by the passage's basic pitch-rhythmic-physical structure: played without pedal and with light clear articulation, the excerpt sounds like a wind-up music box,[3] but played according to Ravel's indications (slurs, *1 corde*, and the pedaling implied by these markings and the piece's title),[4] it expresses subtle and fluid motion. It is the "dance of the performer"—the necessary rhythmic swing, the pedal clarifying the harmonic rhythm—that turns mechanical activity into dynamic waves, the music a metaphor for a fountain, itself a mechanical creation emulating nature.

This example presents syntactic *units* defined musically and physically, in terms of pitch-rhythmic structure and performed gesture. Our concern is to examine how the structure, repetition, and variation of such units create distinctive qualities of motion in Ravel's writing for the piano. We will show (1) how the characteristics and treatment of the units tend toward "mechanical" or "dance-like" types of motion; and (2) how the combination of these two types of motion characterizes particular pieces, wherein the composer, in tandem with the performer, creates, animates, and choreographs musical motion.

To do so we will draw upon Lawrence Zbikowski's recent work on categorization and conceptual blending. A category is a cognitive construct that groups similar items into a class. We will work with Zbikowski's "Type I" categories, in which membership in a category is graded according to conformance to a standard of "typicality" derived from existing members of the category.[5] For our units, this standard is based on some set of musico-physical characteristics in the domains of pitch, rhythm, and/or physical gesture.[6] For this type of category, boundaries are fuzzy, and category definition can shift over time depending on context, function of the category, and related factors.[7]

Our units range in size from the single note to the musical figure, motive, theme, and beyond. Essential to all of our units is the characteristic of being discrete and aurally recognizable. The units form hierarchies in which each

level relates by inclusion to the next;[8] the primary level in our discussion will be that of the musico-physical *figure*, a unit larger than that of the single note that contains no meaningful intermediate units (for example, the first four notes in the right hand of *Jeux d'eau*). This level corresponds roughly to the "basic level" of category theory, that level which optimizes cognitive efficiency and informativeness.[9]

To evaluate how the features and treatment of units resemble either mechanical or dance-like motion, we call upon the notion of *conceptual blending*, which Zbikowski defines as "a dynamic process of meaning construction" in which "structure from two correlated input spaces is projected into a third, blended space."[10] We present five basic interrelated conceptual blends, on three different levels, from general to specific: (1) musical motion, (2) mechanical motion and dance-like motion, and (3) object and dance.

Musical motion is a generic conceptual blend of physical motion and musical structure. In the physical domain, motion occurs when an entity changes location over time, resulting from some expenditure of energy. In the musical arena, motion occurs when some parameter is held constant while others change, resulting from the action of some agent. For instance, in the *Jeux d'eau* passage, the initial one-measure unit moves upward by a fourth to the third measure: melodic contour, rhythmic structure, harmonic relations, and physical gesture remain largely the same, but change their pitch "location" to a fourth higher; the literal agent is the performing pianist.

The type of musical motion depends on the traits and treatment of the unit in question. For our discussion of Ravel's works, we present two specific types of musical motion—mechanical motion and dance-like motion—dependent respectively on two particular types of units—musical object and dance.

Mechanical motion involves units that resemble physical objects. Physical objects are discrete entities with relatively fixed boundaries; they can be viewed from multiple perspectives but are themselves inanimate. *Musical objects* are relatively discrete pitch-rhythmic entities with clearly defined temporal boundaries and proportions; multiple musical "perspectives" can be gained by slight alterations or additions to the basic pitch-rhythmic core. The inanimate nature of musical objects is generally represented by static harmonic and melodic structure.[11]

Mechanical motion in Ravel's music tends to resemble small-scale mechanical motion in the physical world, exemplified by the miniature toys and mechanisms of which the composer was so fond.[12] Such motion is characterized by regular repetition on a small physical scale, and translates musically into repetition accompanied by fast activity (usually at the subpulse level) and often, submetric regularity. Since mechanical motion involves musical objects, it tends to preserve the essential pitch-rhythmic features of these objects, and to repeat them as whole units, frequently creating hypermetric regularity. The opening passage of *Jeux d'eau* thus resembles mechanical motion, as we have already noted, in imitation of nature.

Dance-like motion involves units that reflect dance's blend of music and physical motions; thus a *musical dance unit* borrows from both the musical and the physical domains. It may incorporate the rhythmic-melodic-harmonic patterns and metric regularity (and often hypermetric irregularity) of particular dance musics (for example, waltz, habanera, forlane) and may translate physical dance motions into analogous motions of the pianist's limbs, into melodic contours, or into harmonic progressions.[13] Dance plays a central role in Ravel's oeuvre; as Deborah Mawer writes, "[in Ravel's music] dance is ubiquitous and its connection to physical movement, as choreography, inherent."[14]

In the works we analyze, dance-like motion resembles physical and natural motions in that, while core units are present, they are linked in a much more fluid and flexible manner than the objects of mechanical motion. Thus, repetition of dance units may be more elastic, stretching or shrinking temporal dimensions, significantly altering pitch relationships, changing affect, and so on.

In short, mechanical motion animates musical objects, while dance-like motion choreographs musical dance units. Though the sense of motion in both results from the varied repetition of units, the resulting hierarchies are of distinctive types. The structure of pieces governed by mechanical motion resembles a bottom-up assembly of components; components on each level are contained within those on the next level. That of pieces characterized by dance-like motion seems motivated by a top-down force.[15]

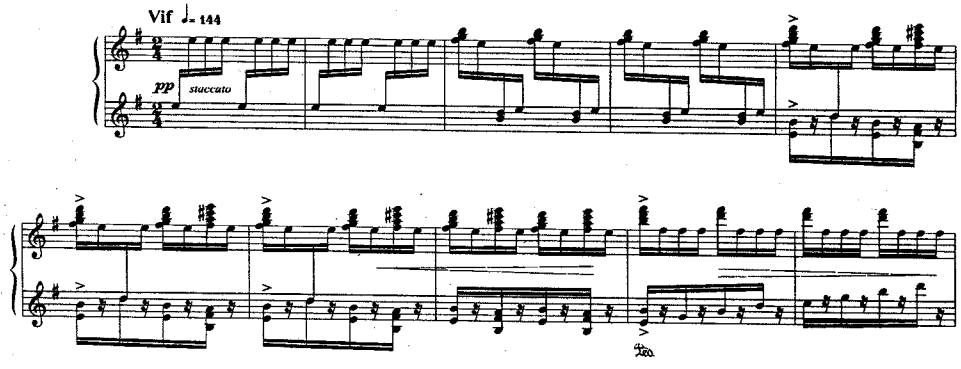
Yet as illustrated by the *Jeux d'eau* example, the two types of motion rarely occur independently in Ravel's music. While one or the other usually predominates, mechanical motion is usually tinged with dance-like motion, and vice versa; the particular blend of the mechanical and dance-like produces many different qualities of motion, from the clockwork of the last movement of the Piano Concerto in G Major to the spinning of the mysterious dwarf in "Scarbo."

Because of this blend of motion types, as well as Ravel's love of intricate detail and elegant craftsmanship, we will argue that for Ravel, the small levels—those of the figure and its neighboring levels—are always of prime importance in the generation of musical motion. Thus in this chapter we will take a bottom-up hierarchical approach, examining first repeated notes, then repeated figures, motives, and themes, and repeated layers. We will discuss (1) the repeated notes of the Toccata from *Le tombeau de Couperin* and the alternating-hands figures of the finale of the G-Major Piano Concerto; (2) the figures and motives of "Noctuelles" and "Une barque sur l'océan" from *Miroirs;* and (3) the layering of figures and themes in the second movement of the G-Major Piano Concerto. We will then explore Ravel's use of all of these types of units in a complete movement, "Scarbo" from *Gaspard de la nuit.*

Mechanical Motion

Repeated notes make a logical starting point for this discussion of Ravelian units. They occur throughout Ravel's oeuvre and take multiple forms. Heard slowly, as in "Oiseaux tristes" or "Le gibet," they are evocative of melancholy or horror; at high speed, as in the Toccata from *Le tombeau,* they are intrinsically virtuosic and physical (usually requiring a rapid change of fingers on the piano).[16] As building blocks for musical development, repeated notes are initially the most mechanical of units, although, as we shall see, they have the potential to dance as well.

The Toccata from *Le tombeau de Couperin* ranks among the most technically difficult piano works ever written (ex. 5.2). Ravel here extends the initial musical object—four sixteenth-note Es, the first played with the left hand, the next three with the right—into a marvelous mechanism. As can be seen in the example, the initial pitch-rhythmic core undergoes slight alterations and additions; in measures 3–4, for example, upper and lower neighbors (F♯ and D) enter, the alternating-hand distribution changes from 1 + 3 to 2 + 2 sixteenths, and the registral space expands from E to the surrounding octave via clockwork-like eighth-note Bs in alternating octaves. It is as if the original object had been rotated to exhibit more facets. Another "rotation" occurs in measures 5–8, featuring a new rhythm (quarter-eighth-eighth) and an augmentation of the neighbor-tone idea (D–E).

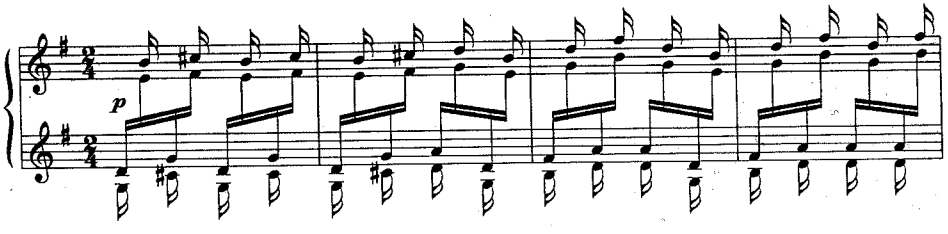


Example 5.2. Toccata, mm. 1–10

The piece's perpetual sixteenth-note motion in quarter-note pulses strongly suggests the mechanical, as does the constant presence of the opening object implied by this perpetual motion. The original repeated-note object also reappears in its most basic form to delineate the sonata-form structure of the piece (for example, the F♯s beginning in m. 42 as a transition to the second theme, and the five measures of Bs beginning at m. 81 as a transition to the development).[17]

Yet the physical feel of this passage introduces another element: while playing the initial repeated notes requires a kind of rotation of the hand in one place, the motion in measures 3–4 is dance-like, with the hands exchanging symmetrical gestures with each other. The new rhythm in measures 5–8 further animates the dance of the hands. The physical techniques of the repeated notes, alternating hands, and implied three-hand writing evident in these opening measures are intrinsic to the nature of the piece; the effect of the piece in performance depends on the player's ability to continue executing these intensely physical figures for its duration.

In the G-Major Piano Concerto, Ravel set out to create the effect of virtuoso display through technical tricks; his original goal, sadly unrealized because of his declining health, was to compose a work that he would be able to play himself.[18] The soloist's opening of the last movement (ex. 5.3) displays a musico-physical figure whose treatment exemplifies many of the characteristics of mechanical motion. Articulated by an alternating-hand technique, the initial figure of four sixteenths is executed with each hand in a single position; the left-hand fingering is 5–2, 3–1, and the right-hand fingering is 1–4, 2–5. The shape of the piano keyboard facilitates the choreography of the overlapping hands, with the C♯ on the third sixteenth and the F♯ on the fourth. The melodic content is created out of the middle notes, as is clear from Ravel's beaming, while the alternating hands imply a clearly articulated execution as a by-product of the technique.[19]



Example 5.3. G-major Piano Concerto, III, mm. 5–8

As in the Toccata, the basic figure is ubiquitous, and gives rise to fast regular rhythmic activity. The entire movement is built around this mechanical-technical trope. Thus, for example, the E♭-clarinet and piccolo licks at rehearsal 1 and 2 prefigure the piano's version of that material at the point of recapitulation, rehearsal 20.[20] The pianist, in playing this material, splits it once again between the two hands. The second theme (rehearsal 7 in the exposition) is also first given by the orchestra; it is only the piano entrance at rehearsal 9 that shows the alternating-hands origin of this idea. Furthermore, the effect of alternating hands is to make two hands sound as one—a reversal of the act of imposture in Ravel's own contemporaneous Piano Concerto for the Left Hand, where one hand masquerades as two.[21]

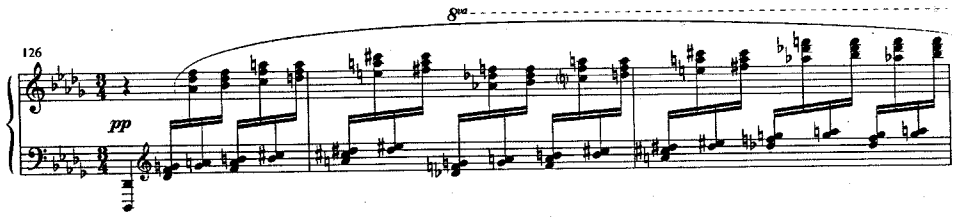
The Dance of Nature: Evoking the Organic through the Mechanical

The line between mechanical and dance-like motion is hard to limn precisely. As we have seen, the essentially mechanistic opening of *Jeux d'eau* gives rise to wave-like motion; the dance of the hands in the Toccata and the finale of the G-Major Concerto animate initially mechanical musical units. In his more descriptive piano works, including especially *Miroirs* and *Gaspard de la nuit,* Ravel evokes the natural world by juxtaposing and subtly blending both kinds of motion.

The initial impulse in "Noctuelles" from *Miroirs* (ex. 5.4) is, once again, essentially mechanical in its use of the pianist's hands. However, the consequence of this mechanical motion is an organic-seeming physical metaphor for the flight of the creatures of the title.[22] The opening two sixteenth notes exploit the natural division between the thumb and the rest of the hand, with the thumb on a white note and the second and another finger on black notes; the resulting motion seems analogous to the fluttering of wings—be they of moths, owlets, or bats. This opening figure is repeated a total of five times at various pitch levels in the first measure. The physically inspired alternation of white and black notes creates a chromatic mixture in the right hand that is effectively contrasted by the whole-tone content of the left. Measures 4 and 5 present a new and more diatonic (A major) pitch manifestation of the same choreography, with further developments interpolated throughout measures 63–84. It is easy for a pianist to imagine this right-hand figuration divided between the hands (as at the beginning of Liszt's *Totentanz*). Ravel entertains that very idea by way of a coda in "Noctuelles" (ex. 5.5), raising the possibility that the opening figure is a kind of imposture, substituting the fluttering dance of the right hand for a passage more technically suited to left and right hands in alternation.[23]

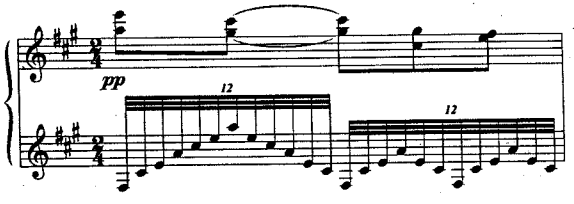
Example 5.4. "Noctuelles," right hand, m. 1

The opening measures of "Une barque sur l'océan" from *Miroirs* present a repeating idea split between the hands, whose complex choreography helps evoke the title subject (ex. 5.6). Ravel's initial materials are limited to the minor-third pairs {F♯, A} and {C♯, E}. The left-hand pattern is thoroughly pianistic, involving a rolling motion over <F♯, C♯, E, A>, an extension of that motion up a second octave, and a return to the lower part of the pattern,



Example 5.5. "Noctuelles," mm. 126–28

rolling over it twice. The physical action of playing this arpeggio creates a large-scale rhythmic articulation of <♩, ♪, ♪,> literally executed by the left-hand fifth finger on the lowest pitch. There is a swing and dance to the motion, animating material that is harmonically static and that repeats itself exactly in every measure.



Example 5.6. "Une barque sur l'océan," m. 1

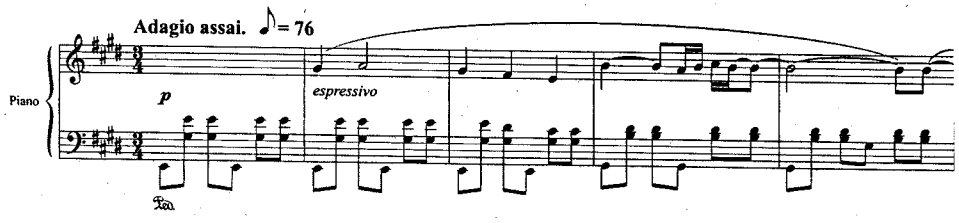
The hands deal with the initial note pairs in mirror motion to one another. Where the left-hand pattern has {F♯, A} outside of {C♯, E} first ascending and then descending, the right hand sets descending <E, C♯> followed by ascending <C♯, E> an octave below around a descending <A, F♯> with a passing G♯ between. The rhythm of the right hand, directly and clearly expressed, reverses the traditional habanera pattern <triplet, duplet> into <duplet, triplet>, with the middlemost note tied across between the beats.[24] Thus animated and combined, the left-hand arpeggio and the right-hand dance rhythm blend mechanical motion (associated with static harmony and repeated figuration) and dance-like motion (through flexible rhythm and the habanera trope), evoking musical waves.[25]

Layering

Repeated figures lead naturally (in the case of Ravel's music especially) to contrapuntal layering—the combination of different musical strands. By the end of his creative life—the time of the two concertos—Ravel had extended layering to a level of dissonance and rhythmic sophistication that shows not only his own expanding craft but also the liberating influences of Stravinsky, Schoenberg, and jazz (by way of Gershwin).[26] Ravel's complimentary review of

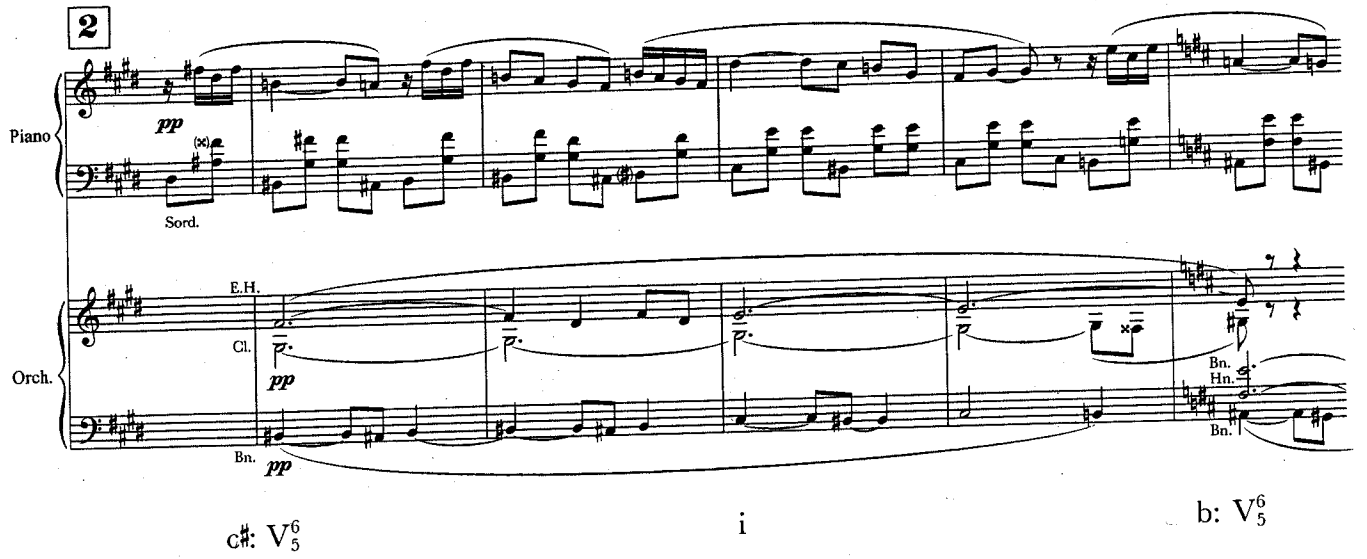
Stravinsky's *Le rossignol,* a work based on the story of a mechanical nightingale, is suggestive. He writes, "I am referring to this absolute contrapuntal liberty, this audacious independence of themes, rhythms, and harmonies, whose combination, thanks to one of the rarest of musical sensibilities, offers us such a fascinating ensemble."[27] Here Ravel celebrates his friend's ability to combine threads of apparently mechanical motion (represented by the nightingale of the title) into a simulacrum of the organic—a more sophisticated version of the process described above in *Jeux d'eau.*

The slow movement of the G-Major Piano Concerto presents the accumulation of layers derived originally from dance-like units, resulting in mechanical motion of surprising complexity. Beginning with two primary layers—a waltz bass and a sarabande-like melody—Ravel successively increases complexity through acceleration, modal clashes, metric dissonance and rhythmic transformations, and cumulative layering. Example 5.7 shows the two primary layers. The moderate waltz bass in $\frac{3}{8}$ meter, introduced by the pianist's left hand, persists throughout the movement, generally in the background. The adagio sarabande-like melody in $\frac{3}{4}$ meter in the pianist's right hand creates a pervasive hemiola effect against the left.

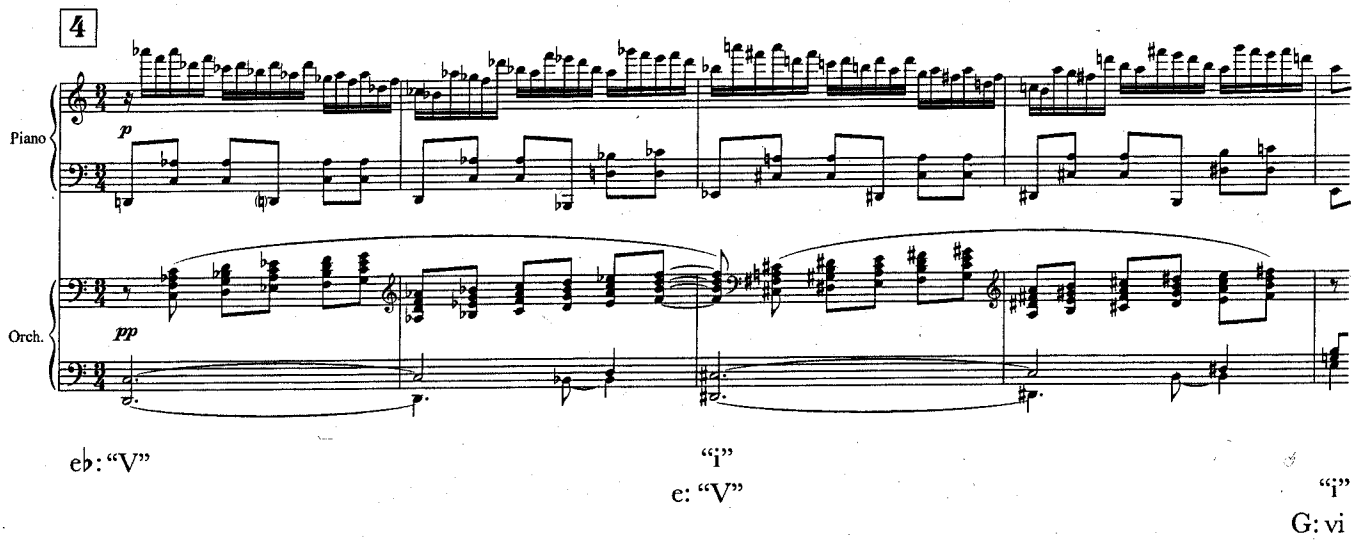


Example 5.7. Opening of G-major Piano Concerto, II

The first increase in complexity comes at rehearsal 2 (ex. 5.8), with modal clashes between melody and accompaniment, and metric and rhythmic development in melody and bass. The pianist's right hand has an oscillating triadic figure followed by a descending scalar pattern, initially just two notes, then expanded to four notes, articulating C♯ natural minor against the left hand's C♯ melodic minor. In contrast to the opening, the melody here features a three-sixteenth-note anacrusis; its main surface pulses have sped up from the sarabande's quarter and eighth notes to eighth and sixteenth notes. The waltz bass introduces a new emphasis on the third quarter note of the measure, undercutting the pervasive $\frac{6}{8}$ ($\frac{3}{8}+\frac{3}{8}$) pattern. From rehearsal 2 to rehearsal 4, the entire passage unfolds an aab form, in which the four-measure phrase shown in example 5.8 is first sequenced down from C♯ minor to B minor, then followed by a culminating third four-measure phrase in D major. This closing phrase temporarily releases tension, with a return to the texture, rhythm, and melodic smoothness of the opening of the movement, and a consonant harmonic progression leading to a perfect authentic cadence.



Example 5.8. G-major Piano Concerto, II, rehearsal 2



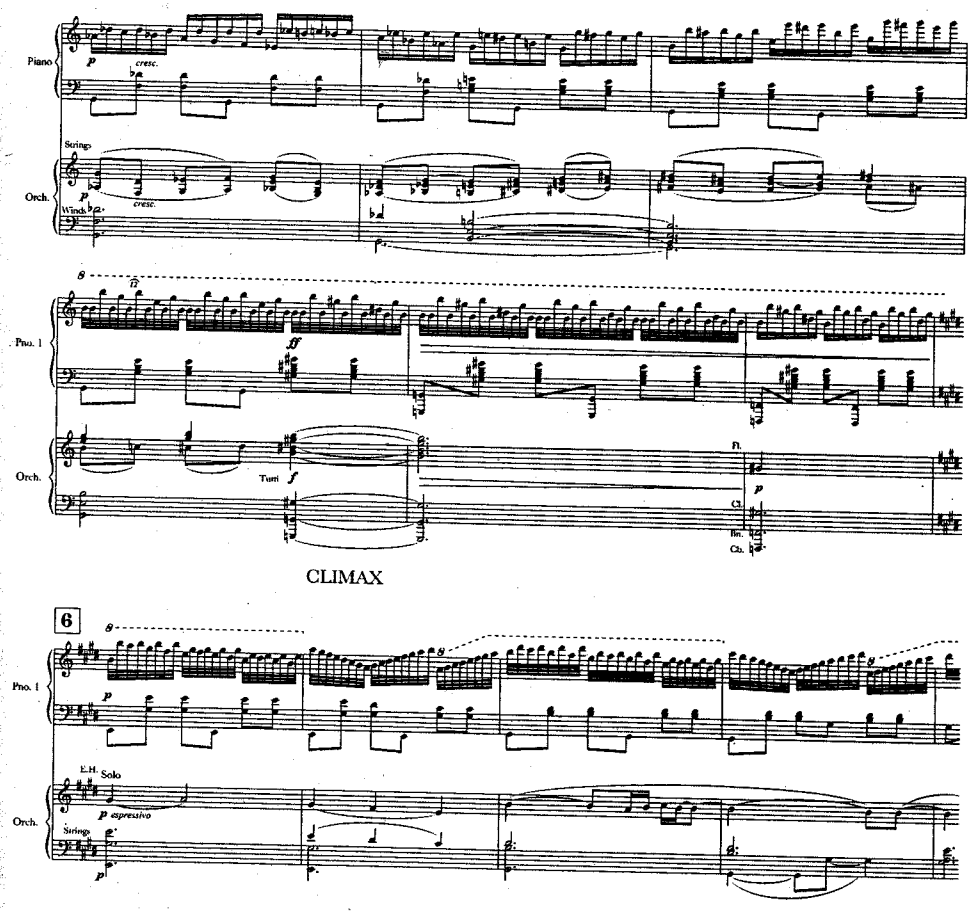
Example 5.9. G-major Piano Concerto, II, rehearsal 4

Immediately following this cadence (ex. 5.9), complexity continues to increase, as the right-hand figure of rehearsal 2 speeds up to new surface pulses of triplet eighth and triplet sixteenth notes (still over the waltz bass). Meanwhile the orchestra adds a new layer of ascending scales in parallel triads in E♭ major, in opposition to the E♭ minor mixed modes of the piano. There are only three layers operating here—the left-hand waltz pattern and orchestral bass, the right-hand melodic figuration, and the ascending triads—but Ravel dynamically opposes them, with the ascending triads of the orchestra grinding against the descending broken arpeggios and scale patterns of the piano's right hand.

The sense of compression created by the right hand's acceleration is heightened by formal compression: the 4 + 4 + 4 measure structure of the immediately preceding aab passage is shortened to 2 + 2 + 4 measures, with overlaps occurring at phrase boundaries. The three phrases now move from E♭ minor in the first phrase, sequenced to E minor in the second, concluding with G major in the third. (The dominant-tonic progression within each of the first two original four-measure phrases now occurs just at the downbeat overlap between the shortened two-measure phrases, the tonic ending the preceding phrase becoming the dominant for the following phrase.) The melodic structure now begins *after* the beat, rather than before it, and this afterbeat grouping facilitates the phrase overlaps. (While the final phrase is four measures, its afterbeat melodic structure forces Ravel to condense the first two measures of the corresponding four-measure phrase of rehearsal 3.)

At rehearsal 5 the opposition of descending scales in eighth-note triplets in the piano with the inexorably ascending eighth-note scales in the orchestra culminates in the climax of the movement (labeled below the score in example 5.10). Just before the climax, the piano's right-hand figuration again speeds up its surface pulses, doubling them to triplet sixteenths and triplet thirty-second notes. The climax—underlined by the entrance of the entire orchestra—reaches a level of dissonance startling in this unassuming movement. Here the bass line splits into two layers, suspending the lower G while simultaneously also moving it up to G♯. The opposition of G and G♯ stands in for the superimposition of E minor (the harmony that precedes the bass line's split) and the soon-to-come key of E major (represented here by G-sharp minor triads), an effect that continues the modal mixture begun at rehearsal 2.

Each step in the process leading to the climax increases tension through accumulating rhythmic, harmonic, and melodic complexity, as well as through the addition of new layers of material. Each of the movement's primary layers—the ubiquitous waltz bass (sometimes taking on $\frac{3}{4}$ meter characteristics, rather than $\frac{3}{8}$), the sarabande-like melody in $\frac{3}{4}$, the right-hand arpeggiation and scale passages articulating accelerating pulse levels,[28] the orchestra's parallel triads and ascending scales—retains its distinctive identity even through metric or modal shifts. Furthermore, each tends to occupy its own harmonic plane,



Example 5.10. G-major Piano Concerto, II, 6 mm. before rehearsal 6

and even, within sections, its own metric plane. Within these layers, constant repetition of figures generates regularity on multiple metric levels. Thus, though beginning with the dance-like figures of waltz and sarabande, the movement transforms them into a kind of infernal musical mechanism.

Immediately after the climax, the pianist's right hand returns to its surface triplet eighth- and sixteenth-note pulses (1 measure before rehearsal 6), and then, at rehearsal 6, reaccelerates to sixteenth- and thirty-second-note pulses. Despite the speed of this motion—a rate of activity superseded only by the two measures of the climax—the effect is one of an elegant dance, articulating a basic contour that repeats itself every two measures. At the same time, the English horn reintroduces the opening sarabande-like

theme, and the return of this theme—together with the return of E major, consonant harmony, a *piano* dynamic, and more transparent texture—resolves the tension of the climax. Thus musical figures combine in the layering process of the movement, leading to apparent chaos; then, with a scraping of gears, they resolve into a quietly purring mechanism—like the mechanical nightingale of Stravinsky's opera.

Form as Motion

We now examine musical motion in a complete movement, "Scarbo" from *Gaspard de la nuit.*[29] We have already made the point that Ravel combines mechanical and dance-like types of motion in distinctive ways in different pieces. In the slow movement of the G-Major Piano Concerto, the layering of dance-derived units creates a primarily mechanical quality of motion. In "Scarbo's" depiction of a pirouetting dwarf, by contrast, musico-physical figures combine and transform into ever-larger units to express a largely dance-like quality of motion.

Our discussion of "Scarbo" begins with its text. Ravel chose three poems from Aloysius Bertrand's collection of sixty-six prose poems *Gaspard de la nuit: Fantaisies à la manière de Rembrandt et de Callot* as the basis for his musical *Gaspard de la nuit: Trois poèmes pour piano d'après Aloysius Bertrand.* In the original edition of Ravel's *Gaspard,* each movement is preceded by its poem,[30] and our translation of Bertrand's "Scarbo" and its epigraph is shown below.

SCARBO

> He looked under the bed, in the fireplace, in the chest;—no one. He could not understand how he had entered, or how he had escaped.
> HOFFMANN.—*Contes nocturnes.*

Oh! how many times have I heard and seen him, Scarbo, when at midnight the moon shines in the sky like a silver coin on an azure banner sown with golden bees!

How many times have I heard his laughter buzzing in the shadows of my alcove, and his nails rasping on the silk of my bed curtains!

How many times have I seen him descend to the floor, pirouette on one foot and roll around the room like the spindle fallen from a sorceress's distaff!

Did I believe him to have vanished? the dwarf would grow between the moon and me like the spire of a gothic cathedral, a little golden bell swinging from his pointed cap!

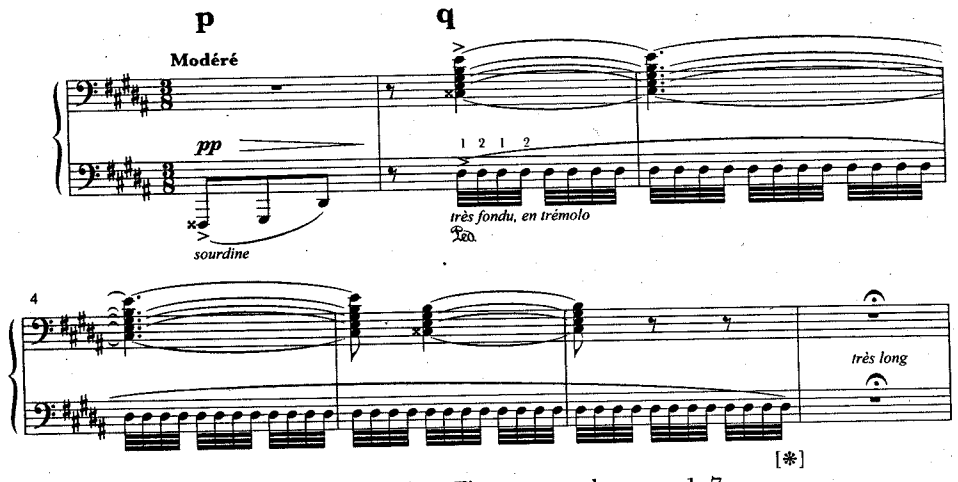
But soon his body would turn blue, translucent as the wax of a candle, his face would pale like the wax of a candle-end,—and suddenly he would go out.

The dwarf Scarbo is a fantastic and faintly malevolent being, unexpectedly appearing and disappearing, rapidly changing in size and color, constantly active and full of motion. His motion is described in both anthropomorphic and object-like terms: rasping nails, pirouetting on one foot, rolling spindle, expanding cathedral spire, swinging bell, flickering candle. The poem itself exhibits a kind of circularity, evidenced in the statement "how many times . . ." stated thrice. The dwarf's continually changing manifestations are colored, literally, by the silver, blue, and gold of the moon, midnight sky, and stars, the golden bell of the gothic cathedral, and the translucent blue of an expiring candle.

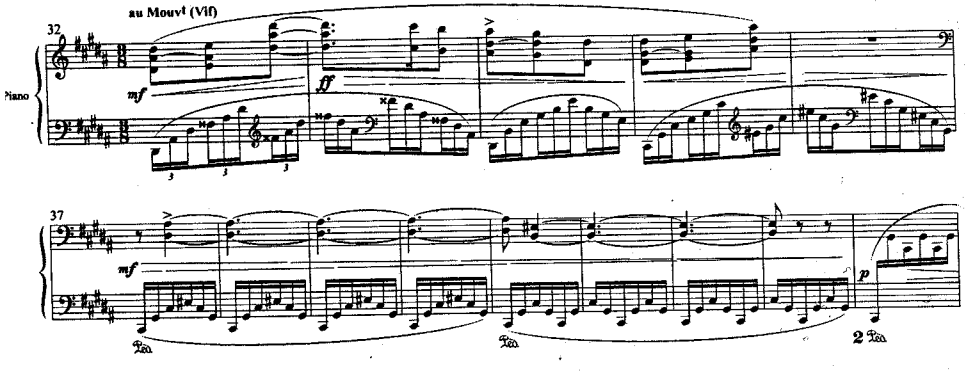
Without claiming literal correspondence between the sequential events in the poem and those of the music, we will show how Ravel's use of musico-physical figures expresses the aspects of the poem described above, and particularly how it creates musical motion of both dance-like and mechanical kinds, embodying the antics of the dwarf Scarbo. We begin with two central figures, show how they transform into four themes, and demonstrate how these themes unfold in three formal sections, all governed by the motivating force of Scarbo.

The movement grows from two basic figures labeled p and q in example 5.11. Implying a G-sharp-minor tonality, the two figures complement one another: both are based first on semitone neighbors, and second on the interval of the fifth and its inversion the fourth. Figure p, muted, deep in the bass, sounds a mysterious three-note motive in which F× acts as lower neighbor to G♯ which rises a fifth to D♯. Cut off by a rest, this D♯, dominant of G♯, is picked up an octave higher by q where it vibrates in the left hand, surrounded musically by its upper and lower semitone neighbors E and C× and physically by the fact that both of these neighbors are played by the splayed right-hand thumb. The doubling of the E up an octave at the top of the right-hand chord draws out its importance, and emphasizes the symmetry of the p and q figures: F× lower neighbor to G♯ answered by E upper neighbor to D♯, the ascending fifth to D♯ in measure 1 answered by the falling fourth to B in measure 5, all elaborating G♯ minor. The close and intertwined hand positions, the muted dynamics dwindling to rests, and the soft accents beginning both p and q—on the downbeat in the first case and on the second beat in the second—contribute to the suspense of these opening measures.

Appropriate to the mysterious appearances of the dwarf, the pairing of figures p and q appears three times in this introductory section, first as shown in example 5.11, then again with q's right-hand chords an octave lower, and finally in an accelerating traversal of the keyboard from bottom to top, an alternating-hand crescendo of the p figure and p and q sonorities.[31] This dramatic growth in dynamic, register, and tempo brings us to the movement's primary tempo, *Vif,* and its first complete theme. Theme i (for introduction), shown in example 5.12, expands figures p and q. Its opening measures stretch p's contour to embrace an octave from D♯ to D♯ before falling through C♯ to B to regain p's original intervallic span. This gesture is then completed by melodic motion



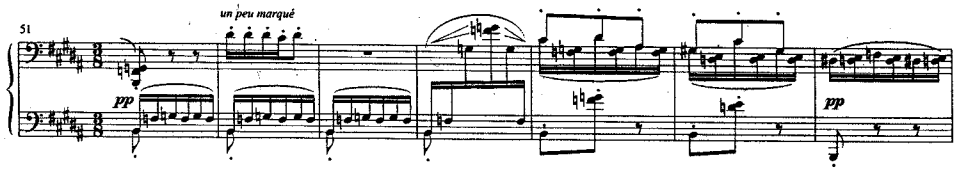
Example 5.11. "Scarbo," Introduction, Figures p and q, mm. 1–7



Example 5.12. "Scarbo," Introduction, Theme i, mm. 32–45

through two step-related fourths <G♯, D♯> and <E, A>. Measures 37–44 extend figure q by restating its melodic falling fourth and its repeated-note accompaniment, now expanded from single notes to arpeggiated chords.

The transformation of figure p into the opening of Theme i creates waves of pitch motion in both hands, and implied hemiolas in the right hand. These and other features are strongly suggestive of waltz topics used by Ravel in other pieces (compare the theme to the oboe solo at rehearsal 18 in *La valse*). Note the metric regularity articulated by the left-hand pitch contours, the cutting across these bounds by the right-hand hemiolas, the hypermetric irregularity, and the sense of swirling motion created by these rhythmic features, the waves of pitch motion, and the physical gestures required to realize these waves.



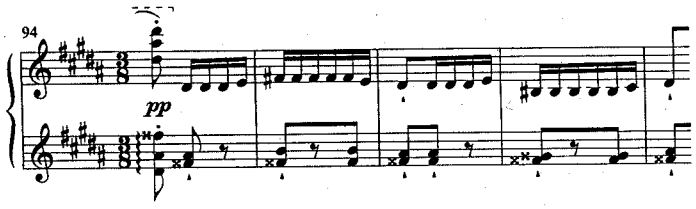
Example 5.13. "Scarbo," Exposition, Theme 1a, mm. 51–57

The particular quality of motion engendered by the theme also results from its harmonic basis. The arrival of D♯ major harmony (dominant of G♯) in measure 32 resolves the suspense of the cadential $\frac{6}{4}$ implicit in all of the preceding material, and provides the impetus for Theme i's waltz-like motion by recontextualizing the elements of p incorporated here. Theme i exchanges p's metric placement of consonance and dissonance: the downbeat is now consonant, allowing for the grounding of the waltz-like motion, and the *second beat* is now the neighbor note, here a complete neighbor surrounded by (octave-displaced) D♯. Significantly, this use of the pitch classes D♯ and E translates q's *harmonic* clash into a *melodic* line.

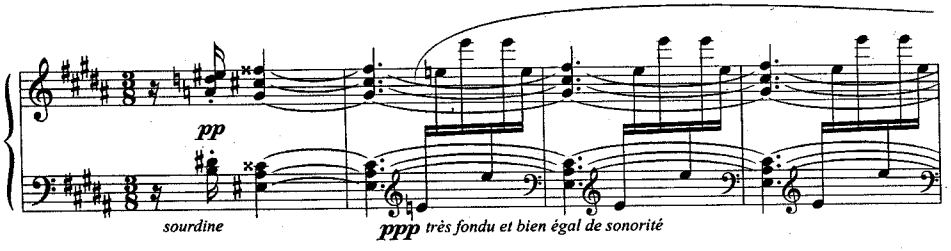
From measure 32 to measure 50, the type of motion gradually changes to a more mechanical one, as the left-hand arpeggiation decreases in range and duration from two measures (m. 32) to one measure (m. 37), quarter notes (m. 41), and finally eighth notes (m. 45). The static harmony, the small size of the repeated figures, and (from m. 37) the basic hypermetric regularity contribute to this mechanical quality.[32] The entire passage takes place over a <D♯, C♯, B> bass descent (arriving at B in m. 51), related to the <D♯, C♯, B> descent in the head motive of Theme i (m. 33), as well as to the <D♯, B> articulated by the final melodic notes of figures p and q respectively.

Just as the dwarf Scarbo is ever-elusive, so too his musical portrayal shifts between two tonics, G♯ minor and its relative major B. The arrival at B in measure 51 (ex. 5.13) announces the beginning of the exposition proper and the movement's true tonic. The repeating bass figure with its tonic pedal B continues the mechanical motion, while also recasting an identifying pitch feature of the opening. The oscillating {F, G} neighbors an absent F♯ (dominant of B),[33] just as in figure q, {D, E} ({C×, E}) surrounded D♯ (dominant of G♯); the correspondence between these two-note pairs {F, G} and {D, E} becomes explicit in measures 55–56.

The main figure of Theme 1a enters in measure 52, and it incorporates the repeated D♯s and neighbor-note elements of the opening, influenced by the shape taken by these features in Theme i. The <D♯, D♯, D♯, C♯, D♯> figure condenses and inverts the upper-neighbor figure of Theme i, retaining its downbeat location, and then answers this figure (as did Theme i) with a pair of stepwise-related melodic fourths. The perpetual-motion sixteenth notes, repetition of small figures in both hands, small range and close hand position,



Example 5.14. "Scarbo," Exposition, Theme 1b, mm. 94–98



Example 5.15. "Scarbo," Exposition, Theme 2, mm. 121–24

un peu marqué and *staccato* markings, and harmonic stasis all contribute to the mechanical quality of the motion. At the same time, certain physical and musical attributes also suggest the dance (a reference that will be realized more strongly in Theme 1b). That is, Theme 1a's separation into primary melodic material all on the *black* keys and accompanimental material all on the *white* keys lends the theme a physical bounce;[34] registral crossovers (mm. 55–56) require the left hand to leap over the right; the hairpin dynamic, pitch wave, and associated physical motion in measure 54 create a miniature surge—all aspects that suggest an undercurrent of dance.

As shown in example 5.14, Theme 1b, Theme 1a's alter ego, returns to D♯ (dominant of G♯ minor), and expands Theme 1a's primary figure directionally, intervallically, and temporally. The neighbor motion now extends both up and down (having appeared each way in preceding Themes i and 1a), spans a third with passing motion rather than a second, and covers two measures rather than one. (The neighbor-note origin of this right-hand theme is clarified by the upper voice of the accompanying left hand.) More significantly for the theme's character, it accentuates beat two rather than beat one, suggesting the flamenco (a flavor that becomes much more prominent when this theme reappears in the development at m. 256).[35] "Wedge" staccato markings and tight overlapping hand positions provide a physical sense of the theme's energy.

As can be seen from the foregoing, figures p and q and Themes i, 1a, and 1b evidence a cumulative development; all three themes grow from p and q, each successive theme taking on and transforming traits of the preceding themes.

We detail just one additional way in which this successive shape-shifting happens. The movement's repeated-note figure contains change in the form of the pianist's finger changes on alternating notes. From p and q through to Theme 1b, Ravel merely steps up the change: repeated pitches (figure q), semitone neighbor (Theme i), whole-tone neighbor (Theme 1a), and minor-third upper and lower "neighbors" (Theme 1b)—all centered on D♯.

Theme 2, the first theme in which D♯ does not play a primary role, also differs from Themes i, 1a, and 1b in its succinctness. As shown in example 5.15, its primary figure comprises only two chords. This figure appropriates the {B, F, G} of Theme 1a's accompanying ostinato (see ex. 5.13) and turns it into its outer voices: B, E♯, and F×, with the melodic E♯ and F× occurring on the second and third sixteenths of the measure, just as they did in measure 51. The first chord's inner voices slide down a semitone to those of the second chord, although the physical semitone motion, generally from white to black key, steps *upwards* in finger height, and this white-to-black key step-up mirrors the semitone rise of figure p. As with figure q, Theme 2's sustained chord is animated by repeated notes (here in broken octaves), featuring the same pitch, E, that was so prominent in q. The diaphanous fabric of these Es and the complete octatonic collection (articulated by the combination of Theme 2's second chord, the repeated Es, and the bass B of the first chord) create an uncanny air, abetted by the markings *sourdine* and *très fondu,* further evidence of the theme's connection to p and q. (As Theme 2 unfolds, it also incorporates the complete neighbor-note element found in Themes i, 1a, and 1b; see mm. 131–33.)

Thus "Scarbo's" opening figures p and q successively take on four incarnations in the work's four themes i, 1a, 1b, and 2. Ravel's choreography of these figures and themes in turn creates a thematic cycle, that of the sonata-form movement's introduction and exposition, shown in example 5.16a.[36] In the following we will show how this thematic cycle itself recurs, transformed, in the development and in the recapitulation,[37] and thus how varied repetition on the expanding levels of figure, theme, formal section, and movement as a whole express the dwarf's continual motion and changing shapes. (In example 5.16a themes in parentheses are interjections or fragments; themes in italics are augmentations; theme i acts as a boundary marker.[38])

Example 5.17 diagrams the development. The themes are listed across the top of the example. Just below this, the line labeled "model/copy" shows that each theme expresses a version of the classical development technique "model-copy(-fragments)," where the "model" (m) is the first statement of material, the "copy" or "copies" (c) its sequential restatement or restatements, and the "fragments" (c'), where present, shortened versions of sequential restatements.[39] An extension (x) uses preceding motivic material.

As diagrammed in example 5.17a, Theme 1a states a model with F♯-major harmony, then its copy with C♯-major harmony, in a pattern of ascending fifths that brings us to the G♯-major harmony of Theme 1b. Theme 1b unfolds in

(a) Thematic Layout

Section:	**Introduction**		**Exposition**				**Development**				
Measure:	1	32	51	94	110	121	214	256	314	366	386
Theme:	p,q	i	1a	1b	i	2	1a	1b (1a, 2)	i/1b (2) (1a)	2 (1)	*i*

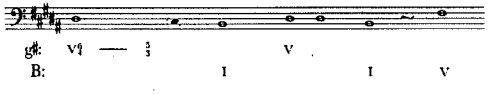
Theme 1 area

Section:	**Recapitulation** Introduction	Recapitulation proper		Conclusion		
Measure:	395	430	477	580	592	616
Theme:	p,q	*1a*	2	i (2)	*1a* (2)	*p*/q

(b) Formal Reinterpretation in the Recapitulation

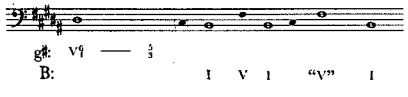
Section:	**Introduction**		**Exposition**			
Measure:	1	32	51	94	110	121
Theme:	p,q	i	1a	1b	i	2

Theme 1 area



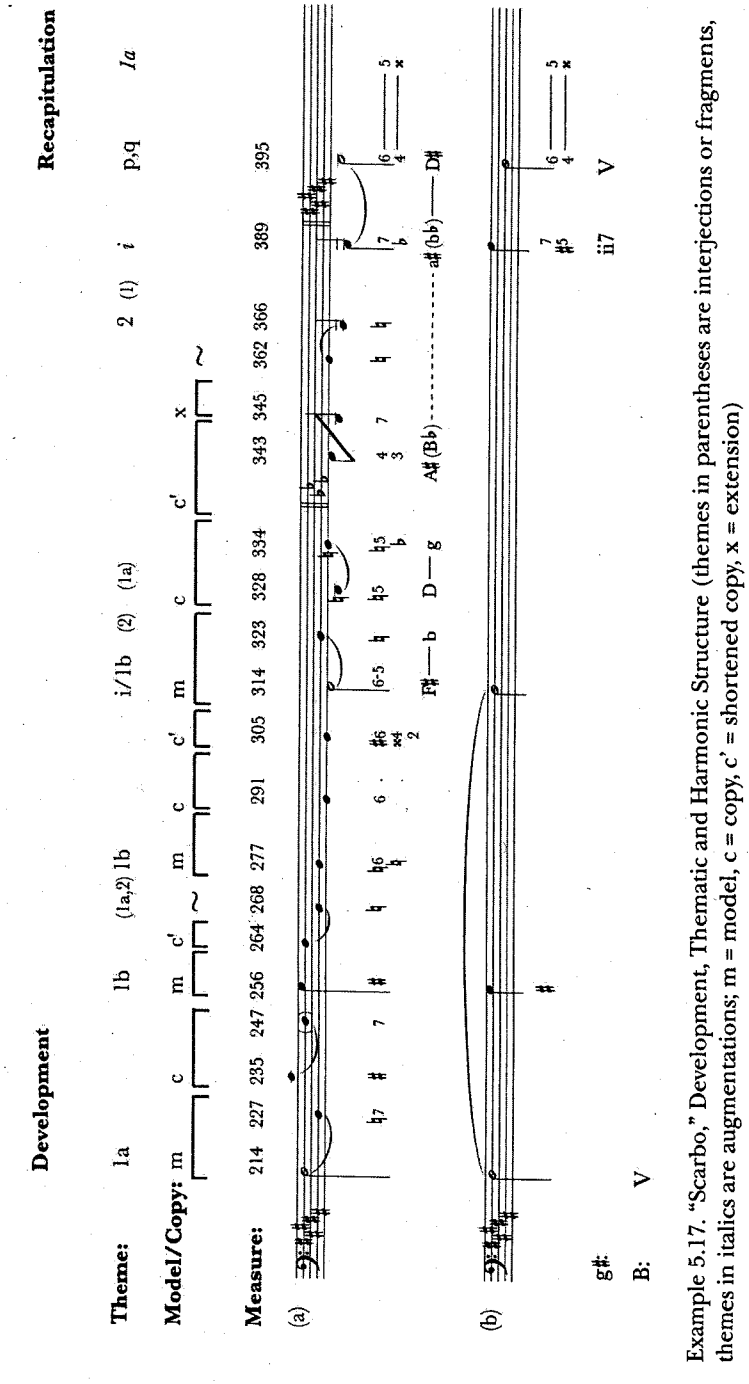
Section:	**Recapitulation** Introduction		Recapitulation proper				
Measure:	395	430	460	477	580	592	615
Theme:	p,q	*1a*	2	i(2)	*1a*(2)		*p*/q

"Theme 2 area"



Example 5.16. "Scarbo," Form (parentheses indicate interjections or fragments, italics indicate augmentation)

two parts, set off by interjections of Themes 1a and 2. In the first part (mm. 256–76) the theme is stated twice over G♯-major harmony, then once over F♯ as the dominant of B minor. Fragments of Themes 1a and 2 then occur in B minor. In the second part (mm. 277–313) Theme 1b occurs first twice over G-major harmony, with B in the bass, then twice over E-major harmony, with G♯ in the bass. A shortened version of these statements then occurs over an A♯ dominant $\frac{4}{2}$ (notated in the score as B♭ $\frac{4}{2}$), continuing the preceding G♯

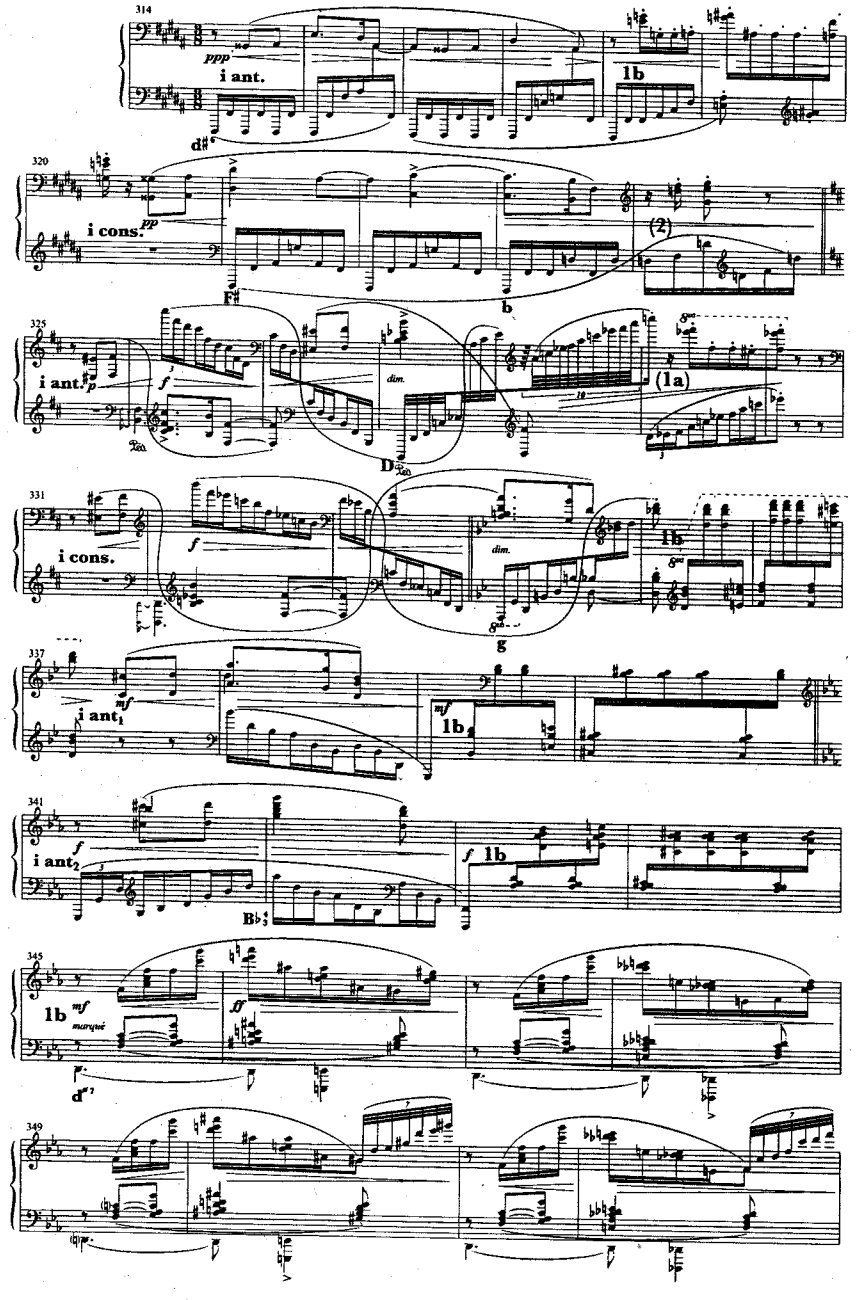


Example 5.17. "Scarbo," Development, Thematic and Harmonic Structure (themes in parentheses are interjections or fragments, themes in italics are augmentations; m = model, c = copy, c' = shortened copy, x = extension)

bass. Hence the entire Theme 1b area (mm. 256–313) prolongs the bass G♯, acting as neighbor to the larger-scale F♯.[40]

Theme i brings back the bass F♯, initially underlying a D♯ minor harmony that resolves the preceding A♯$^4_2$ (B♭$^4_2$). The Theme i/1b area (mm. 314ff.) proceeds in an overlapping sequence of falling (enharmonic) major thirds: the model expresses the harmonies <D♯ minor, F♯ major, B minor>, the copy <B minor, D major, G minor>, and the shortened copy <G minor, A♯ (B♭) major . . . > leading eventually to the D♯-major harmony of the recapitulation. The entire sequence can be reduced, as shown in the example, to a series of ascending fourths <F♯–b, D–g, A♯/a♯–D♯> sequenced at the descending interval of the major third. The last ascending fourth, that from A♯ to D♯, is expanded over time (although, as indicated by its c′ designation above the staff, its thematic reference to the model is *shortened,* consisting only of broken-up statements of the model's antecedent phrase). Its A♯ dominant-seventh harmony at measure 343 (notated as B♭ dominant seventh with F in the bass) is extended by a passage elaborating a D half-diminished-seventh harmony (mm. 345ff.), which leads temporarily to V of C major (m. 362), and to the C major of the Theme 2 area (m. 366). This brief Theme 2 area, occurring just before the arrival of ii^7 of G♯ minor ushering in the recapitulation, represents the culmination of the development. The diagram shows the structural growth leading to this climactic point: beginning with the first Theme 1b area in measure 256, successive sections increasingly elaborate the model-copy framework, expanding from <m, c′> to <m, c, c′> to <m, c, c′, x>. When the climactic Theme 2 arrives, it, along with the following augmented statement of Theme i, concludes the development, moving stepwise from D through C down to attain the awaited bass A♯ (notated as B♭), supporting ii^7 of G♯. The <D, C, B♭> descent echoes the <D♯, C♯, B> descent prominent in the exposition. The entire development, as shown in example 5.17b, moves from V of B major to ii^7 of G♯ minor, to lead to the cadential $^6_4$ of G♯ minor that begins the recapitulation.

To demonstrate how Ravel choreographs themes and the pianist's physical motions via the model-copy-fragment process, we now look more closely at the Theme i/1b section (mm. 314ff.), shown in example 5.18 (cf. ex. 5.17). Model (m), copy (c), shortened copy (c′), and extension (x) are labeled to the left of the example. The model and copies, as labeled between the staves, consist of antecedent-consequent phrases of Theme i, answered by interjections of Theme 1b (and once also of Theme 2 and of Theme 1a). Previously we identified Theme i as waltz-like in its motion; here it takes on even greater kinetic energy than in the exposition, beginning on beat 2 and expressing an even clearer hemiola structure. Theme 1b, identified with the flamenco, yet retaining some of the mechanical aspects of its twin Theme 1a, contrasts in the quality of its motion with Theme i.



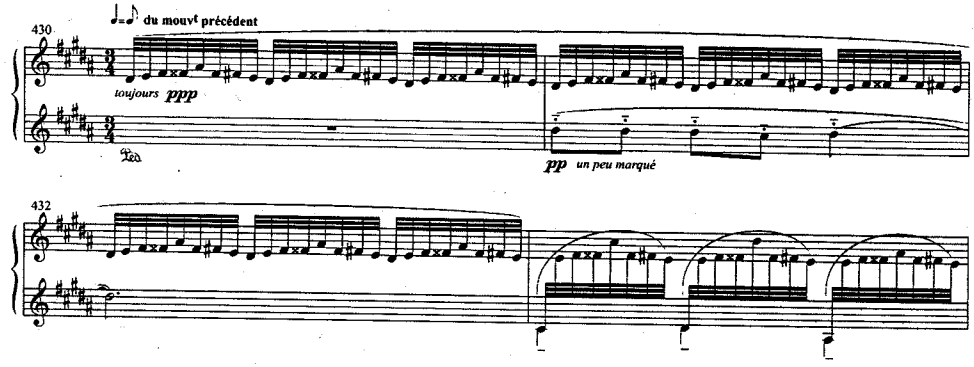
Example 5.18. "Scarbo," Development, Themes i and 1b juxtaposed, mm. 314–52 (m = model, c = copy, c' = shortened copy, x = extension)

The two themes swirl around one another as each grows in complexity and drama. Theme i increases in stature from single notes (m. 314), to octave doublings (m. 320), to chordal doublings with arpeggios sweeping across the registral compass of the piano (m. 325), all the while rising in register. Theme 1b also grows: its interjections appear at measures 318, 335, 339, and 343; at measure 335 it appears for the first time as chords split between the two hands.

The pianist has a visceral sensation through this passage of the sweep of motion created by the increasing complexity and thematic dialogue. The legato motion of Theme i is undercut by the jagged interpolations of Theme 1b; the growth of both themes demands increasingly larger physical gestures, particularly with the swirling hand exchanges and registral expansion of measures 325ff. The two-hand rendition of Theme 1b at measure 335 adds to the theme's physical palette, for articulation of the repeated chords now requires a throwing of the hand onto the keys. At measure 345 the metamorphosis of the two themes in this passage—Theme i and Theme 1b—is complete: Theme 1b becomes a waltz-like sweep of octave hand positions resembling Theme i, its characteristic repeated pitches now forming pivot points for the accordion-like motion of the right hand. Its staccato articulation (notice the progression from m. 318 through mm. 335, 339, and 343), flamenco character, and mechanical facets have transformed into a legato waltz-like wave: compare measures 345–46 (Theme 1b) with 341–42 (Theme i), noting how the two hands have essentially changed roles.

Thus it is that Ravel's choreography turns one theme into another, expressing motion of ever-increasing dimensions. Comparing this choreographic section with the other model-copy sections of the development, we see similar processes of thematic transmutation and registral ascent at work. For instance, in the Theme 1b section of measures 256–76, Theme 1a interjections take on the second-beat placement of Theme 1b. Another example occurs just after the section in example 5.19. In measures 353–65, Theme 1b fragments, consolidated to closely resemble Theme 2's main figure, repeat and grow to build to the climactic arrival of Theme 2 at measure 366. This arrival, the apex of the development, has been preceded by registral ascents in each of the preceding thematic sections; the motion of the development as a whole therefore parallels the dwarf's immense expansion into the size of a cathedral spire. The growth, appropriate to the multiple manifestations of the dwarf, has occurred through transformed repetition on multiple levels: that of individual themes within passages, of passages within thematic sections (via the model-copy process), and of the entire thematic cycle (borrowed from the exposition).

Transformation of the opening thematic cycle occurs on an entirely different scale in the recapitulation. We begin by showing how the cycle reappears in the recapitulation, and then demonstrate how this apparent thematic parallel is itself reinterpreted. Our discussion references example 5.16 primarily,

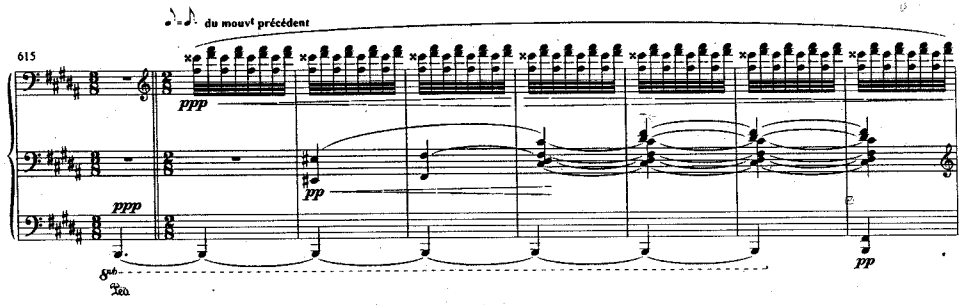


Example 5.19. "Scarbo," Recapitulation, Theme 1a augmented, mm. 430–33

accompanied by musical illustrations in examples 5.19 and 5.20. As shown in example 5.16a, the recapitulation articulates the introduction-exposition thematic cycle in condensed form. The recapitulation brings back figures p and q, Theme 1a (representative of the first-theme area), and Theme 2, and follows this condensed thematic cycle with a rough expanded retrograde of the introduction (Theme i . . . figures p and q).

But, reflective of the dwarf Scarbo, Ravel continues to transform themes within this cycle. The recapitulation's Theme 1a—the sole Theme 1 representative in the main body of the recapitulation—is wholly altered, as shown in example 5.19. Augmented visually (notated in eighth notes in $\frac{3}{4}$ meter) and durationally (occurring in the slower tempo of the introduction's triple meter), and accompanied by D♯ harmony (dominant of G♯ minor), this dreamlike version of the theme suggests the flickering translucency of the dwarf near the end of Bertrand's poem ("but soon his body would turn blue, translucent as the wax of a candle").[41] From this slow beginning, the recapitulation only gradually regains the movement's primary tempo *Vif*—and the movement's true tonic B—achieving them just before the recapitulatory statement of Theme 2 (m. 477). Theme 2 is now over F♯ harmony (dominant of B), and it is developed, as in the exposition, over approximately a hundred measures.

Returning to example 5.16a, the concluding section re-presents the elements of the introduction in roughly reverse order. Theme i (m. 580), expanded registrally and temporally over C♯ harmony (recall the importance of C♯ harmony underpinning Theme i in the introduction as a conduit to B major), announces the beginning of this closing section. Just as the movement's introduction wound up to Theme i, this closing section winds down from Theme i, descending, decrescendo-ing, and decelerating in the pace of its activity. Snatches of Theme 2, with the interpolation of an expressive augmentation of Theme 1a, participate in this descent. The passage arrives at B major in measure 615 (ex. 5.20). Over the B pedal, figures p and q return, the



Example 5.20. "Scarbo," Conclusion, Figures p and q, mm. 615–22

repeated D♯ and the C× neighbor of q reappearing in the right-hand tremolo, and the three-note motive of p occurring in the left-hand octaves. This closing p statement answers the opening one (cf. example 5.11), for whereas that initial statement outlined a G♯ minor tonic triad within a dominant context, this closing statement frames a dominant chord within a B-major tonic context. The tenuto {F♯, D♯} third that responds to p at measure 620 stands in for q's chordal sonority that responded to p at the opening of the work.

The recapitulation thus condenses the introduction-exposition thematic cycle, and then concludes the work by roughly mirroring the elements of the introduction. Example 5.16a showed thematic correspondences between the movement's introduction-exposition and recapitulation by vertical alignment. But Ravel has fooled us with a formal sleight-of-hand: the two large sections follow essentially parallel harmonic plans, and example 5.16b realigns them according to this harmonic structure.[42] Notice the resulting realignment of *thematic* material. The recapitulation omits the introduction's Theme i (m. 32) and replaces it with its augmented Theme 1a (m. 430). This theme leads via an accelerating crescendo to the primary tonic B (m. 460), the resumption of the primary tempo *Vif* (m. 464), and not Theme 1a as in the exposition, but Theme 2. Theme 2 unfolds in B major, leading to the movement's climax in measure 563, where it reestablishes the tonic with a powerful V-I motion. The lengthy Theme 2 is followed by two brief sections quoting first Theme i and then Theme 1a in augmentation, all held together by interjections of Theme 2 material, forming a "Theme 2 area" corresponding to the tripartite Theme 1 area of the exposition (a longer Theme 1a section followed by shorter 1b and i statements). The recapitulation achieves its final tonic at measure 615, just preceding the recall of figures p and q, paralleling the exposition's expression of its final tonic in its concluding Theme 2 section. After the expected Theme i does not appear in the recapitulation's "introduction," it is as if the subsequent

thematic sections all shift one step earlier, each taking the harmonic and formal place of its predecessor.

Thus the apparent *thematic* parallels between introduction-exposition and recapitulation (ex. 5.16a) are reinterpreted by the *harmonic* parallels between the two large areas (ex. 5.16b)—a masterful reinterpretation of thematic design by harmonic structure. This functional restructuring explains in part the slow and dreamlike form of Theme 1a in the recapitulation (m. 430), for the theme is now introductory in function (though still resonating with its previous meanings). As a result, thematic and harmonic focus shifts to Theme 2, and the movement's true final cadence takes place across the seemingly "tacked-on" Themes i, 1a, and figures p and q.[43] Ravel's choreography does not stop with the transmutation of motivic figures into distinctive themes, nor with the synthesis of these themes into dance-like motion, but reaches even to the shape-shifting of the form itself, creating a musical movement worthy of the virtuosic dwarf Scarbo. The piece thus reflects the dwarf's ever-changing guises on multiple levels: the generation of a trove of different themes from figures p and q; the ways in which the themes seem to arise out of one another and turn into one another over the course of the movement; and the rotation and transformation of the basic thematic cycle through exposition, development, and recapitulation.

* * *

Musical motion is an illusion, a cognitive construct arising from the conceptual blend of physical motion and musical attributes. In Ravel this motion characteristically results from the varied repetition—animation and choreography—of musical objects and musical dance units, resulting in mechanical and dance-like motion respectively. The size of object and dance unit most strategic to this sleight of hand is the figure, the smallest meaningful unit larger than the single note.

We have argued that the pianist's physical gestures form an intrinsic part of these crucial figures and units, all the more so because of the centrality of piano writing—and of Ravel's own investment in virtuosic piano playing—to Ravel's oeuvre.[44] These gestures not only help to define and characterize units, but act in fact as the real "movers" in the animation and choreography of these units.[45]

As we have noted, mechanical and dance-like motion shade into one another in Ravel's works, and the combination often results in naturalistic depictions of water, creatures, or anthropomorphic beings. One can even posit a stylistic spectrum from mechanical (*Le tombeau de Couperin*, the G-Major Piano Concerto, the Piano Trio) to dance-like and organic (*Jeux d'eau*, *Miroirs*, the Left-Hand Concerto, *Gaspard de la nuit*), with the former lending itself more to the neoclassical, and the latter to the extramusical and pictorial.

In the end, the distinctive qualities of motion that result are characteristically Ravelian, centering on repetition of figures and units transformed in many ways. In mechanical motion the transformations leave basic pitch-rhythmic characteristics intact, while in dance-like motion, deeper transformations of material result. We find Ravel the composer a juggler indeed—able to keep thousands of perfectly choreographed objects flying from his pianist's fingers for our pleasure.

Notes

The epigraph to this chapter is drawn from André Suarès, "Pour Ravel," *La Revue Musicale* 6, no. 6 (1925): 6. Unless otherwise specified, translations are by Korevaar and Leong.

1. A pianistic physicality informs Ravel's writing as a whole. Arbie Orenstein, in *Ravel: Man and Musician* (New York: Dover, 1991), 135, states, "The piano is the privileged instrument in Ravel's art, not only because he was a pianist and composed at the keyboard, but because virtually all of the fresh trends in his style first appear in the piano music."

2. Maurice Ravel, *Jeux d'eau*, Urtext edition by Roger Nichols (London: Peters, 1994). Throughout this chapter, we use angle brackets < > to indicate ordered sets, and curly brackets { } to show unordered sets.

3. Henri Gil-Marchex, in "La technique de piano," *La Revue Musicale* 6, no. 6 (1925): 40, points out the harpsichord-like clarity implied by the technique of *Jeux d'eau*, mentioning Scarlatti in particular—perhaps a reaction to the repetition and sequencing of keyboard-derived figurations that are common to both composers' styles.

4. Although Ravel indicates only "1 corde" in the score, the performance tradition of the time as evidenced by pianists who worked with Ravel demands generous use of the damper pedal. See Roger Nichols's preface to his urtext edition of *Jeux d'eau* (London: Peters, 1994), 6.

5. Lawrence Zbikowski, *Conceptualizing Music: Cognitive Structure, Theory, and Analysis* (Oxford: Oxford University Press, 2002), 36–40.

6. Although our work intersects somewhat with that of Robert Hatten (*Interpreting Musical Gestures, Topics, and Tropes: Mozart, Beethoven, Schubert* [Bloomington: Indiana University Press, 2004]), our concern lies more with literal physical gestures and musical units that may be construed as gestures, rather than with the semiotic or specific expressive meaning of such gestures.

7. Compare to Ian Quinn's "Fuzzy Extensions to the Theory of Contour," *Music Theory Spectrum* 19, no. 2 (1997): 232–63, and his application of fuzzy set theory to contour theory.

8. We use the term "hierarchy" here in the straightforward sense in which it describes taxonomies in category theory: Zbikowski, in *Conceptualizing Music*, 31, uses the categories "housecat, feline, mammal, and living organism," for instance, as examples of hierarchical levels related by inclusion.

9. See Zbikowski, *Conceptualizing Music* 31–32 for a discussion of this level. Zbikowski correlates "basic level" with "musical motive" (34).

10. Ibid., 94.

11. Deborah Mawer likens certain of Ravel's musical building blocks to "objects"—"fixed" and "passive" entities which, though viewable from multiple angles, do not

themselves move or develop. See Deborah Mawer, "Musical Objects and Machines," in *The Cambridge Companion to Ravel*, ed. Deborah Mawer (Cambridge: Cambridge University Press, 2000), 48–49.

12. Hélène Jourdan-Morhange, in *Ravel et Nous* (Geneva: Éditions du Milieu du Monde, 1945), 27–28, describes the miniatures in Ravel's studio at Montfort-l'Amaury: mechanical toys, music boxes, a miniature sailboat that pitched on cardboard waves, a tiny nightingale that flapped its wings and sang.

13. Dance topics of course associate with a whole range of sociocultural meanings beyond those with which we are primarily concerned.

14. Deborah Mawer, "Ballet and the Apotheosis of the Dance," in Mawer, *The Cambridge Companion to Ravel*, 141.

15. This dichotomy roughly corresponds to Zbikowski's "atomistic" and "chain-of-being" hierarchies (Zbikowski, *Conceptualizing Music*, 287–321).

16. Serge Gut suggests a possible semantics of repeated notes, from horror (the slow repetitions of B♭ in "Le gibet") to grotesque laughter (the nearly unplayable sixteenth triplets of "Alborada del gracioso"). Gut also points out that the use of repeated notes (and, by extension, repeated figures) allows Ravel to animate certain musical parameters while allowing others to hover in place through repetition. See Gut, "Le phénomène répétitif chez Maurice Ravel. De l'obsession à l'annihilation incantatoire," *International Review of the Aesthetics and Sociology of Music* 21, no. 1 (1990): 37–38, 43. Gut's classification does not allow for the potential playfulness of repeated notes, an aspect that Ravel also exploits.

17. We might draw a parallel to the use of the drum for the scene changes in Stravinsky's *Petrouchka*.

18. Orenstein, *Ravel: Man and Musician*, 101–2.

19. The sheer pianism of this passage is convincingly demonstrated by how nearly impossible it is to execute by various instruments in the orchestra following rehearsal 14.

20. Maurice Ravel, *Concerto pour piano et orchèstre* (Paris: Durand, 1932), 61–62, 86.

21. Daphne Leong and David Korevaar, "The Performer's Voice: Performance and Analysis in Ravel's *Concerto pour la main gauche*," *Music Theory Online* 11, no. 3 (2005), paragraphs 21–23, http://mto.societymusictheory.org/issues/mto.05.11.3/toc.11.3.html. On the performer, and particularly the keyboard player, as mechanism, see Carolyn Abbate "Outside Ravel's Tomb," *Journal of the American Musicological Society* 52, no. 3 (1999): 477–82.

22. The definition of "Noctuelles" is ambiguous; in the nineteenth century the word could refer to both nocturnal moths and small owls. Colette compared Léon-Paul Fargue, dedicatee of the work, to both a nocturnal bird and a bat (David Korevaar, "Ravel's Mirrors" [Doctoral document, The Juilliard School, 2000], 32).

23. Just as in alternating-hands chromatic-scale passages by various nineteenth-century composers, the equal partition of the octave into six and then three parts leads to strong whole-tone implications. In this final passage, the chromatic scale in the middle is harmonized by D♭, F, and A-major triads—a distinctly Lisztian progression.

24. This rhythm is reversed, creating a traditional habanera pattern, in the second theme beginning in measure 44. See Korevaar, "Ravel's Mirrors," 105.

25. See Korevaar, "Ravel's Mirrors," 104–6, for a more extended analysis of the symmetries inherent in this passage. The entrance of the horn calls between the hands in the middle register in mm. 4–10 further suggests the "barque" of the title, or at least a human presence on the ocean. These horn calls take pitches from the original ostinato

and reorder and slow them down, creating a new melodic line from already-present material. The rhythm of this new melody is related, by augmentation and retrograde, to the rhythm of the right-hand ostinato (Korevaar, "Ravel's Mirrors," 106, example IV-2b). Thus, Ravel delineates layers that are organically related, introducing the symbolic unity of ocean and boat through the blending of different types of musical motion.

26. Regarding Schoenberg's influence, Ravel wrote, "I am quite conscious of the fact that my *Chansons madécasses* are in no way Schoenbergian, but I do not know whether I ever should have been able to write them had Schoenberg never written" (quoted in Orenstein, *Ravel: Man and Musician*, 126). Regarding the influence of Gershwin and jazz, see Michael Russ, "Ravel and the Orchestra," in Mawer, *The Cambridge Companion to Ravel*, 132.

27. Maurice Ravel, "New Productions of the Russian Season: *The Nightingale*," trans. Arbie Orenstein, in *A Ravel Reader: Correspondence, Articles, Interviews*, ed. Arbie Orenstein (New York: Columbia University Press, 1990), 381. (Original: "Les Nouveaux Spectacles de la saison russe: *Le Rossignol*," *Comœdia illustré* 6, no. 17 (1914): 811–14.)

28. The acceleration in the right hand occurs within a larger process of transformation from melody into figuration, as the opening sarabande-like melody first becomes the arpeggiated and scalar melody of rehearsal 2, which itself becomes increasingly diminished until reaching the movement's climax.

29. Maurice Ravel, *Gaspard de la nuit*, Urtext edition by Roger Nichols (London: Peters, 1991).

30. Ravel's score, published in 1909, used the 1908 Mercure de France edition as the source for its reproduction of the three Bertrand poems (Maurice Ravel, *Gaspard de la nuit: 3 Poèmes d'après Aloysius Bertrand* [Paris: Durand, 1909], 2, 16, 22).

31. Ravel finds the piano's ambitus to be too small here: in m. 15 the keyboard's lower limit forces him to write <A, A♯, D♯> rather than <F𝄪, G♯, D♯>. A similar limitation occurs at the recapitulation in m. 395.

32. The change from triplet subdivisions of the beat to duple ones may also contribute to the mechanical quality; the qualitative differences between triple and duple subdivisions may have affective connotations.

33. See Roy Howat, "Ravel and the Piano," in Mawer, *The Cambridge Companion to Ravel*, 85–87, for discussion of this semitonal neighbor figure.

34. A specific physiological trait of the composer, his spatulate thumb, has influenced his choice of pitches in the accompanying voices. The {F, G} and {D, E} white-note pairs, when written vertically (mm. 55–56), are played with the thumb covering both notes; the thumb also plays the pairs on the second, fourth, and sixth sixteenths of m. 57. This natural motion is encouraged by the thumb's relative comfort on the white keys while the other fingers are working the higher black keys.

35. Howat, in "Ravel and the Piano," 87, identifies Theme 1a and 1b material as flamenco-influenced.

36. The sonata-form designation for this movement is based more upon thematic than upon harmonic structure. The movement, in addition to slipping between two tonalities (G♯ minor and B major), exhibits many other harmonic aspects unusual for sonata form, from vocabulary (octatonic collections, for example) to large-scale structure. Although Howat, in "Ravel and the Piano," 85, also identifies the movement as a sonata form, his view of the form seems to be based largely on its ternary design. His view thus differs significantly from ours: his exposition begins with m. 1, and his recapitulation with m. 386; he identifies five separate themes.

37. See James Hepokoski and Warren Darcy, *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata* (Oxford: Oxford University Press, 2006), 16–20, 205–7, 611–14 for their presentation of "rotational form" in the Classical sonata.

38. Theme i ends the introduction, the exposition's first-theme area, and the development, and begins the conclusion.

39. See William Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven* (Oxford: Oxford University Press, 1998), 141–47 for his discussion of this development technique, which he calls "core technique," after Erwin Ratz.

40. The Theme 1b section in the development echoes the structure of the Theme 1b section in the exposition, while successively intensifying its features. In the exposition the theme occurs thrice, the third time fragmented; all three statements occur over the same harmony. In its first appearance in the development the theme also occurs thrice, the first two times over the same harmony and the third time harmonically shifted. In its second appearance in the development the thematic section expands through repetition: the theme occurs five times, in groups of 2 + 2 + 1, with each group now occurring on a different harmonic level. In all three appearances, in the exposition, development, and again in the development, the theme's statements gradually increase in textural and rhythmic complexity, as well as rising in register.

41. At m. 430, "♩ = ♪ du mouvt précédent" relates to the tempo at m. 395; because of the durational augmentation at m. 418, acceleration is needed to smooth the connection between the motivically-equivalent bar at m. 429 and quarter note at m. 430. Ravel himself must have been confused by the notation here, for the autograph manuscript notes "♩ = ♪." at m. 430, which would equate the quarter-note at m. 430 with the bar at m. 429, but express an untenably slow tempo were no speeding up to occur between measures 395 and 430. Many recorded performances accelerate between m. 422 and m. 430. See critical commentary in Roger Nichols's urtext edition of *Gaspard de la nuit* (London: Peters, 1991), 46.

42. Roman numerals indicate basic tonal function only; Ravel often articulates these functions with nontraditional means. The exposition Theme 2, for example, begins with much octatonicism in the pitch-center context of B; the "V" in the recapitulation is entirely octatonic ($OCT_{0,1}$) over an F♯ bass.

43. Ravel's use of sonata form in "Scarbo" bears some striking resemblances to Haydn's sonata forms: Haydn's development sections frequently recycle exposition themes in order, and they sometimes do so while reinterpreting thematic *function* harmonically, as in the first movement of Sonata Hob. XVI/41 in B♭.

On transformed repetitions, see Dora Hanninen, "A Theory of Recontextualization in Music: Analyzing Phenomenal Transformations of Repetition," *Music Theory Spectrum* 25, no. 1 (2003): 59–98.

44. Ravel aspired to be a virtuoso pianist in his days in Charles de Bériot's class at the Conservatoire, and his interest in virtuoso keyboard music from the French clavécinistes through Liszt, Saint-Saëns, and the Russian school is well documented. For example, see Gerald Larner, *Maurice Ravel* (London: Phaidon Press, 1996), 161–62, here discussing the influences of Couperin, Liszt, and Saint-Saëns on *Le tombeau de Couperin*. See also Orenstein, *Ravel: Man and Musician*, 136 (Scarlatti, Couperin, Saint-Saëns, Chopin, Liszt); and Roland-Manuel, *Maurice Ravel*, ed. and trans. Cynthia Jolly (New York: Dover, 1972), 30 (Liszt and Scarlatti as influences on *Jeux d'eau*).

45. Similarly in *L'enfant et les sortilèges*, the flesh-and-blood child is the conduit through which the audience enters an enchanted world of dancing objects and talking animals. Speaking of the moment when the Child loses consciousness and the Animals suddenly fall speechless, then laboriously learn to speak, Abbate says, "Ravel is making a critical point about the 'enchanted' nature of all we have heard up to the instant the Child becomes unconscious. The Animals, the trees, the books, the teapot, the wallpaper: none of these things could speak, dance, or sing. They had *seemed* to, but their animation and voices are now understood as an illusion, engendered by [the child's] 'picturing gaze'. . ." (Abbate, "Outside Ravel's Tomb," 512–15).

Chapter Six

Playing with Models

Sonata Form in Ravel's String Quartet and Piano Trio

Sigrun B. Heinzelmann

If you have something to say, this something will never emerge more distinctly than in your unintended unfaithfulness to a model.

Introduction

Ravel's advice to his students quoted above points to the central role that models played in his composing.[1] A composer arguably with little overt "anxiety of influence," Ravel sought inspiration both in past conventions and in the innovations of his contemporaries. Ravel's appropriation of baroque and classical forms implies both homage and provocation: playing with models, Ravel entices his listeners to place his creations in the lineage of the composers whose heritage he evokes while at the same time distancing himself from them. Jankélévitch's assertion that "every composition by Ravel represents . . . a certain problem to be solved"[2] applies especially to works that are in sonata form: each presents a unique response to formal, harmonic, and motivic conventions of sonata-form "principles"—from early binary designs like those of Scarlatti to classical prototypes derived from Mozart to third-related key schemes à la Chopin.[3]

My aim in this essay is to show how Ravel adapts, manipulates, and even subverts sonata paradigms of the past.[4] To do so I will examine the respective first movements of the String Quartet and the Piano Trio. Separated by about a decade, the two movements represent very different solutions in Ravel's engagement with the form. The analyses also shed light on compositional developments in Ravel's prewar style that led toward condensation of form;