PERFORMANCE AND ANALYSIS IN PRACTICE: A Study of Maurice Ravel's *Valses nobles et sentimentales*, *Miroirs*, and *Gaspard de la nuit*

James Scott McCarrey

Thesis Submitted for the Degree of Ph.D.

The University of York
Department of Music

January 2006

THESIS CONTAINS

VIDEO CD ✓ DVD TAPE CASSETTE

Abstract

In recent years, analysts have proposed three approaches to performance: 'intuitive' performance which does not consider analysis in the first instance; analysis and performance simultaneously; or, analysis in advance of performance. This thesis investigates the relative value of each method—from the perspective of a performer. Ravel's *Valses nobles et sentimentales*, *Miroirs* and *Gaspard de la nuit* form the basis of study.

If Ravel characterized his own music as 'quite simple, nothing but Mozart', he may have also added 'experimental'. The listener's interest is kept, not from established forms, but from a careful pacing of ideas according to Golden Section (GS) and symmetrical proportions. The primary difficulty is not accepting GS as a possibility; it is confirming the 'intuition' with a measure of certainty. One solution is to consider performance as part of the analysis. In doing so, analysis and performance benefit—analysis, because the pianist is able to consider interactions of layers—form, tonality, harmony, motif and gesture—in relation to proportional patterns. For performance, analytical diagrams show the entire piece at once, making it possible to understand the music in ways which are not possible by intuition alone. This awareness of 'the whole' becomes the basis of 'an interpretation', either in advance of, or along with, the physical learning which takes place at the piano.

Contents

Accompanying material

The recorded audio examples are included as two, separate compact discs, attached to the back cover of the thesis.

Preface

Maurice Ravel unequivocally stated that performers should 'just play' rather than 'interpret' his music (Howat, in Rink, 1995:9). Along these lines, the violinist Hélène Jourdan-Morhange recounts how

> The Maestro would voice his slightest whims—I ought to say: his slightest wishes, for I have never known a composer so sure of himself with regard to the markings in his music. So Ravel used to say everything that had to be done, but above all . . . what was not to be done. No worldly kindness restrained him when he was giving his opinion. The story of *Bolero* conducted by Toscanini is well known: "That's much too fast!" Ravel told him after the performance. Toscanini took the remark very badly! Ravel had not realised that some conductors are beyond criticism! (Jourdan-Morhange and Perlemuter, 1990: 3)

In all probability, Ravel's chagrin with Toscanini reflects the spirit of the times as much as it demonstrates (in a delightful way) an 'intransigent' composer (Jourdan-Morhange and Perlemuter, 1990). The prevailing Wagnerian aesthetic of performance, if misinterpreted, tended to encourage highly individualized expression on the part of conductors, at the expense of composers. As José Bowen suggests, 'Wagner did not at all adhere to the temperate approach of Mendelssohn and Berlioz. Transmitting to conducting what Liszt had to the piano, he introduced a new style of performing which many reacted to as "romantic excess" (Bowen, 1993: 85)'. In this sense, it is not difficult to imagine that Ravel was trying to protect himself from performers, particularly Romantically-inclined ones who would establish a first generation of performances.

The analytical side of this project began with the premise that Ravel, like Debussy, had employed Golden Section (GS) proportions (Howat [1983] 1999: 189–192). As such, it was suspected that GS may be a factor in several of Ravel's other compositions, beyond those listed in *Debussy in Proportion*.

Like Debussy (and apparently unlike Schubert), Ravel makes frequent use of GS, notably throughout the *Miroirs*. The most sophisticated example is 'Alborada del gracioso', a virtual compendium of proportional devices, including a large-scale GS sequence derived thematically from a small-scale one related to it by the ratio $\sqrt{5}$ (from which is derived the exact value of GS, as shown on page 2 note 1 above). As a subtle structural encore, Ravel orchestrated 'Alborada' in 1918, extending some passages to allow more time for orchestral colour and crescendo accumulation. This new version, inevitably breaking up some of the old proportional correspondences, erects new ones in their place. ...

In general Ravel was known to be fascinated by hidden challenges, well exemplified by a highly ingenious piece of (non-GS) virtuoso construction quietly concealed in the 'Pantoum" of the Piano Trio, detected recently by Brian Newbould (1975). All this musical evidence gives a precise focus to Ravel's enigmatic remark to Maurice Delage: 'My *Trio* is finished. I only need the themes for it (Stuckenschmidt, 1969, 149). One must suspect that Ravel knew well what he was doing; learning his craft in the Paris of the early 1890s he would have been aware of the same currents of thought as was Debussy, with whom he was then still on good terms (Howat [1983] 1999: 191–192).

Howat, who is both a fine performer and scholar, did not relate these findings to performance, although performers read this book for that very reason—to take a 'behind-the-scenes' look at Debussy's music. Nevertheless, Howat does make a significant, generalized statement, which informs both the performances and the analytical writings below:

Time will tell what further conclusions may result from the present study, once its findings have been put together with material from other fields, or material that may emerge in the future. As far as performing the music is concerned, it is worth remembering that the above analyses have all been made from what Debussy wrote in his scores; to try and emphasize the forms and shapes any further would be like trying to enhance a Renoir *baigneuse* by sketching in her skeleton. In this respect Robert Godet's comment, already quoted on page 175, about 'flattening the scaffolding with one kick once the edifice is complete' can equally aptly be applied to the music's performance. At the same time, the analyses above prove

how precisely judged Debussy's indications are, and how crucial to the forms: there is even less excuse now than there ever was for the rhythmically and dynamically perverse performances of his music that tend to claim stylistic authenticity, often in the name of 'what imbeciles call Impressionism' (Howat [1983] 1999: 179).

The primary analytical approach was to investigate Ravel's music from the perspective of structural levels. As practiced by Tim Howell, this methodology explains how the 'lower' levels subscribe to larger patterns—for example, if the tonality supports or works against the formal divisions; whether the harmony articulates the tonality or makes it ambiguous.[1] If this approach has any apparent 'danger'—the same generalized questions form the basis of study for each piece—the advantages to performance far outweigh any potential for homogenized interpretation. Howell's model offers a technique for articulating analytical findings—findings which are different from one piece to the next. In many cases, it was not until the writing started to be constructed on paper that the musical ideas began to become fully formed. In other words, if the analysis began as an 'intuitive' idea which had an 'empirical' basis in the score, it was not entirely possible to understand the music on its own terms until it was first articulated in writing. Ultimately, if the piece was to be simplified and understood as a series of relationships—from the larger sectional divisions, down to the level of the motif or cell, there had to be connecting ideas—musical ideas—which would guide the reader, while at the same time 'sparing' the reader, by avoiding 'blow-by-blow' description of the music.

This approach was in turn colored by the theoretical constructs advanced in Wittlich and Martin (1988), which presents an introduction to Schenker's theories of prolongation, through a series of graded keyboard harmony examples. Because of the intricacy of Ravel's music, other analytical texts (Straus 1990) were sometimes referred to as necessary when more traditional techniques of tonal analysis were unable to solve the question at hand. This, coupled with the frame of Howell's structural levels and Howat's GS, has subsequently influenced the analysis and/or performance of Maurice Ravel's *Valses nobles et sentimentales* (1911), *Miroirs* (1904–05) and *Gaspard de la nuit* (1908). Although these works are only separated by seven years, they represent an unusual amount of contrast and complexity; as such, they merit serious thought.

Beyond the direct value of analytical understanding to performance, a second objective is to present, from a performer's point of view, a position related to the ongoing debate(s) of analysis and performance. Accordingly, the written portion of the submission is organized as follows: Chapter 1 summarizes this broader discussion; in support of a larger thesis, Chapters 2–5 outline a range of issues determined through analysis and performance. Each of the pieces listed above, with the exception of the *Valses nobles*, are discussed once from the perspective of a singular focus, whether it is form, continuity, harmony or motif. Because of their length and richness, the *Valses nobles* are considered four times, once in each chapter. Conclusions relating to the analysis and/or performance of the individual pieces are also advanced, before the final chapter returns to the preliminary debate outlined at the head of the thesis.

As Nicholas Cook has suggested, '...if analysis and performance are to be seen as interlocking modes of musical knowledge, then they should be pursued simultaneously and interactively, not in succession' (Cook, 1999: 248). It is in this spirit that the work has carried forward. The *Valses nobles* were first publicly performed on at least five separate occasions, nearly three years prior to the start of any formal analytical work. Because the writer was not aware of the emerging discipline of analysis and performance, analysis did not factor into these earlier performances. The learning of the *Miroirs* also began in advance of analysis; however, at the time of lessons with Roy Howat (London, 2001/2002), the analytical work was conducted simultaneously, under the supervision of Tim Howell at York University. Thus, for this set of pieces, analysis and performance were seen as 'interlocking modes of instruction' from the beginning stages of study. In contrast, *Gaspard de la nuit* was purposely analysed in advance of work at the piano. The rationale for doing so was to provide a third vantage point from which to examine the usefulness of analysis to performance. If this approach undermines Cook's ideas above, it also potentially benefits the learning process.

Notes

---

[1] An example of Howell's work is provided below in Chapter 1.

Acknowledgements

The research presented below was supervised by Tim Howell, of York University. From the start of this project in 2001, Tim has read, and re-read numerous drafts; along the way, he has offered expert advice and timely suggestions with good humor and understanding. Ultimately, this thesis would not have advanced to its present state, without Tim's careful guidance; for this, I am most appreciative. Although he is not a member of staff of York, I would also like to thank Roy Howat for piano instruction, taken privately in London; his knowledge of technique and French piano music has helped me to develop in unforeseen ways as a performer. In hindsight, as the 'junior apprentice', I can not imagine two better models than Tim and Roy, from which to learn the craft of analysis and performance.

I would also like to thank several additional members of the academic staff at York—Neil Sorrell and Nicky Losseff. At various times, Neil and Nicky have answered questions pertaining to timeline or regulations, or have read samples of writing.

In 2002, Paul Pollei, artistic director of the Gina Bachauer International Piano Festival, extended an invitation to perform in Salt Lake City, Utah. With the exception of *Gaspard de la nuit*, this offered a venue to test out, in a practical and preliminary way, the ideas which form the basis of this thesis; I thank him for this opportunity.

I am especially indebted to the administration of Brigham Young University-Hawaii, for their support in the form of funding, teaching reduction, or outright load-release. Two preliminary professional development projects were approved in 1999 and 2000, which enabled attendance at the *French Piano Institute* masterclasses in Paris. A fifteen month leave of absence was also granted in the 2001/2002 academic year which made it possible to relocate to York in order to devote full attention to academic study. Later funding enabled a return trip to England in the summer of 2004, in preparation for the writing-up phase. I am grateful for this extended

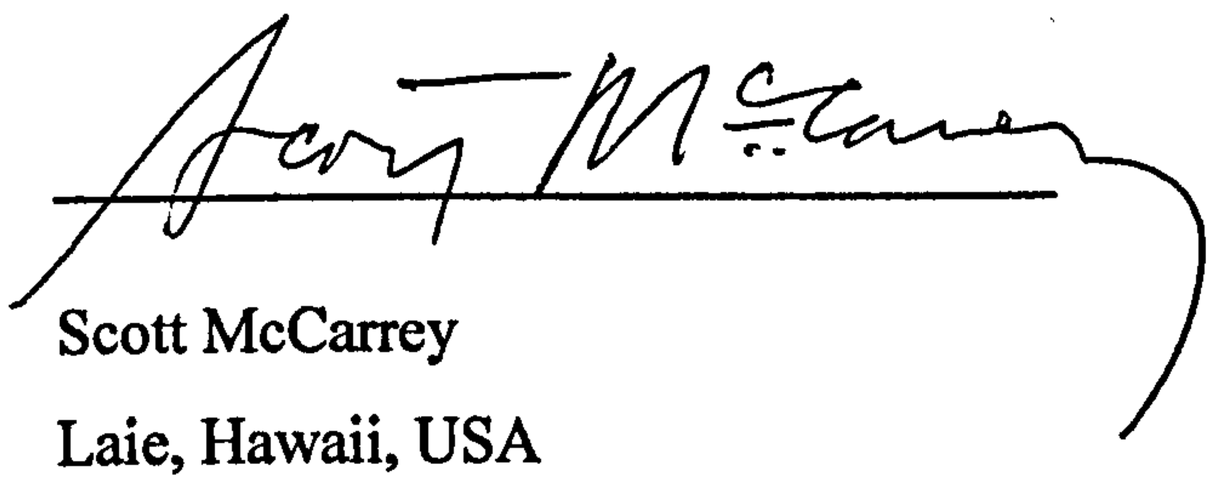
generosity and confidence. Although many contributed to these decisions, I would like to formally recognize two people on an individual basis; the first is Dr. Jeffrey Belnap. In 1999, as dean of the College of Arts and Sciences, he proposed my plan of study at York to the BYU-Hawaii President's Counsel. Although Jeff has since left Hawaii for warmer, if not sunnier climes, he has continued to express interest in this project. Dr. Jeffrey Burroughs (current dean) has offered the same measure of support. The written portion of this two-part submission has additionally benefited from the resources of two libraries—the one here at BYU-H in Laie and the other at the larger sister institution of the same name, in Provo, Utah, on the US mainland. At the preliminary stages of inquiry, each inter-library-loan office worked together to expedite the delivery of numerous articles and books from around the world to our remote village in the Pacific.

I would like to acknowledge the members of the York Second Ward of the Church of Jesus Christ of Latter Day Saints—especially Ben and Rachel Whittaker. Having first met Ben and Rachel on a brief visit to York in the summer of 2000, they helped us find housing in advance of our move to York. This made relocation halfway around the world much less daunting than it might have otherwise been.

My parents, Dr. Leon and Roberta McCarrey, have been a continuous source of support and encouragement. Over the course of childhood, they invested countless hours and financial resources to help me develop as a young musician; I am indebted to their vision of education and to their support of the arts. Lastly, I would like to thank my wife Stacy, who has graciously sacrificed her time and energy for the past several years to balance the demands of family life with research, administration and teaching obligations, as well as with her own teaching and performing schedule. To this end, I dedicate this thesis to her and to our children—Sydney, Spencer, Anne and Eve. Without their collective patience and support, this project would have not reached fruition.

Author's declaration

This thesis represents the culmination of nearly five-and-a-half years of full-time and part-time study undertaken at the University of York; accordingly, the research presented below was conducted on an individual basis. Unless specified in the text, this work is the author's and was prepared specifically for the purposes of submitting for a Ph.D. This writing has not been presented elsewhere or used for other purposes.



Scott McCarrey

Laie, Hawaii, USA

13 January 2006

1 Analysis and performance

Introduction of literature: overview

Over the course of the past few decades, an abundance of material has emerged, which examines musical performance as an object of inquiry.[1] One observation is immediately apparent; studies of performance are fast becoming their own economies of scale. The vast bulk of this scholarship is produced by psychologists of music, who study timing or 'expression'[2] within cognitive frameworks (Clarke, in Rink, 2002). Alf Gabriellson, a pioneer of the field, has recently summarized the prevailing developments; since his first review of the literature in 1999, more than 200 new sources have been published (Gabriellson, 2003). In contrast, other approaches, musicological in nature, are often inclusive of language. To cite a significant trend, theorists have advanced the use of semiotics in order to negotiate between meaning, text and gesture (Tarasti, 1994; Clarke in Rink, 1995). The tone of analytical writing about performance has itself become an object of exploration (Cook, 1999; Tong, 1995), and in broader terms, musicians have borrowed models from theorists of language or literature to advance understandings of what a musical work is, or how it may be construed (Bowen, 1993). Philosophers of music continue to explore the ideal of music as an independent object (it may be 'discovered' (Kivy, 2002)), while musicians interested in social-strata have demonstrated how musical structure is reflective of larger cultural hierarchies within contemporary societies (Kramer, 1995). Historical performance practice, once the darling of the *urtext* infatuated twentieth-century, continues to have its own following (Taruskin, 1988).

There is also a considerable literature which applies directly to analysis and performance. Most of this is written by analysts who are also performers, or by analysts interested in performance (Berry, 1989; Burkhart 1983; Dunsby, 1989; 1995; Howell, 1992; Rink, 1995; 2002; Schenker 2000). A smaller sub-category indirectly addresses analysis and performance by offering critiques of the modern academy (Botstein, 2001; Cook, 2000; Horton, 2001; Kerman, 1985). Frequently 'hegemony' or 'prescriptiveness' is the basis for discussion. If these writings happen to address specific pieces—typically they do not—the findings are integrated into the larger musings about analysis and performance.

Theorists of performance

Cynical (or overwhelmed) performers may presumably wonder what this 'bird's-eye-view' of the literature has to do with the performance of Ravel's music. It is conceded that performance and scholarship often share a curious no-man's land; some avenues of scholarship can and do influence performance. At the opposite extreme, other types of writings may be in a different cosmos altogether and of limited value to the performer. The most interesting category of ideas fits somewhere in-between, because it does not necessarily tell the performer what to do, but by way of inference encourages the performer to think about music in new or serendipitous ways.

If the multiplicity of approaches outlined above seems at first glance irreconcilable or problematic, each is potentially useful to a performer if it prompts further speculation, either about the nature of performance, or the music itself. The discussion below offers a sampling of this literature; as such, it presents an introduction to the handful of theorists who have shaped this debate over the past fifteen years, the period in which analysis and performance has begun to emerge as a discipline in its own right.[3] Rather than consider the entire group of writers listed in the full bibliography (as is often the case in surveys of literature) it is proposed that a focused selection is of greater value than the presentation of a pointillistic-mosaic, which, if inclusive of a smattering of positions, may appear fragmentary.

Bruno Repp (1995)

'Expressive timing in Schumann's "Träumerei:" An analysis of performances by graduate student pianists'

Of the many contributions from psychologists of music, one of the most provocative for performers is the consistent demonstration of either similarity or variance within performances of the same repertoire. In this sense, the notion of a definitive performance is fallacy. Performances are either too similar to be considered exceptional; or, if one happens to stand above the others, this is because a critic has elevated it to this plateau, often under the guise of 'objectivity'. (Ultimately, the relative value of a performance depends on the position of the critical observer within a particular moment in time.) Eric Clarke suggests that 'The score is of course not the music but simply one of a number of possible representations (CD recordings, videos and written descriptions are others), and can be seen as something like a blueprint for a performance—and a rather sketchy one at that, which 'makes sense' only when understood within some cultural context (Clarke, in Rink, 2002: 64).'

Because performances are statistically similar, this suggests that performers, as human beings, share a similar neurobehavioural profile (Repp, 1995):[4]

Inspection of the intercorrelation matrix for experts and students combined (n=38) revealed that all students showed high correlations with all other pianists' performances, except with Argerich, Bun, Horowitz, Moiseiwitsch, and especially Cortot. These highly individual artists in turn showed lower correlations with other experts' performances.

...all pianists marked the major phrase boundaries with *ritardandi*, even though there were individual differences in their extent (2418).

Thus it is evident that the students showed much less individual variability than the experts (2419).'

Bruno Repp's approach was to enlist several post-graduates to sight-read a well known piece—perhaps too well-known—in order to determine how similar, or how different, performances are, by measuring that which is precisely measurable—timing. He discovered the following:

In terms of the group average timing pattern, individual shaping of *ritardandi*, and within-performance consistency, the students turned out to be quite comparable to the experts. This demonstrates that precision in expressive timing does not require extensive study and practice of the music at hand, only general musical and technical competence. Subsequent principal components analyses on the students' timing patterns revealed that they were much more homogeneous than the experts'. Individual difference among student pianists seemed to represent mainly variations around a common performance standard (the first principal component), whereas expert performance exhibited a variety of underlying timing patterns, especially at a detailed level of analysis. Experienced concert artists evidently feel less constrained by a performance norm, which makes their performances more interesting and original, hence less typical. Since the norm may represent the most natural or prototypical timing pattern, relatively spontaneous performances by young professionals may be a better starting point for modeling expressive timing than distinguished artists' performances (2413).

Repp attributed the homogeneity of the student performances to

The universal availability of many note-perfect recordings of the standard repertoire,[5] which has raised expectations of technical accuracy enormously, to the detriment of interpretive originality; the increasing uniformity of these recordings as more young artists enter the Schwann catalog while historical recordings fade into the background; the lack of originality in popular classical mainstream artists who serve as role models; the disappearance of national and regional performance traditions; the enormous influx of highly competent musicians from countries without any performance traditions in Western music; the increasing remoteness of the cultural and historical contexts that gave rise to the masterpieces that constitute the standard repertoire; and to the lack of incisive life experiences in an increasingly uniform and commercialized world. (2426).

Repp's work is also is also indicative of a larger question, which has dominated the analysis and performance literature; the relationship between 'intuition' and deliberate acts of interpretation. Repp proposes that intuition and analytical strategies interact to create an interpretation, although it is uncertain whether these strategies are pre-meditated or otherwise. Tantalizingly, he suggests that pianists 'carried out an appropriate structural awareness' but this was 'presumably without explicit awareness':

It is the more remarkable, therefore, that the students were fully the equal of the experts in terms of measures of timing precision and consistency. If anything, they were *more* consistent than the experts, since the least consistent artists were all from the expert camp. What this demonstrates is that even a minimally prepared performance by a competent pianist has a precisely defined underlying plan that governs its expressive timing pattern. This plan presumably derives from tacit knowledge of general rules of expressive timing that can be implemented quickly and accurately, perhaps even in a first reading. Since application of these rules is contingent on a structural analysis of the score into phrases and their gestural substructure, the present results also imply that the student pianists carried out an appropriate structural analysis, efficiently but presumably without explicit awareness. The expressive timing profile is evidence of their structural analysis (2424).

Ultimately if timing is not entirely dependent on an accumulation of practice, this suggests a potential danger; physical gestures required for the production of sound may be fixed at the early stages of the learning process.

High stability of a pianist's expressive timing across repeated performances of the same music seems to be the rule. Although it is often said that artists rarely play the same music the same way twice, or that repeats within a piece should be played differently, such differences seem to be more the exception than the rule with regard to timing (2415–2416).

If a performer's instincts tell him or her that this is not the case,[6] Repp's data contradicts this intuition, inferring that performers may need to carefully consider the amount of practice in relation to their physical understanding of the piece.[7]

Finally, it was evident that each student's own three performances were more similar to each other (Table I) than their average was to any other pianist's performance. Likewise, as already noted by Repp (1992a), Cortot's and Horowitz's respective three performances, even though they had been recorded years apart, were more similar to each other than to any other pianist's performance. Thus each pianist, whether expert or student, seems to have a replicable "timing signature," part of his or her individuality. However, the similarity to other pianist's performances may be nearly as great (2418).

Wallace Berry (1989)

Musical Structure and Performance

If the writing above has accounted for trends in expression based on intuitive responses, it has not fully explained musicians who choose to consciously interpret musical structures in advance of performance. Wallace Berry, although not completely discounting intuition, practically eliminates it by suggesting a reliance on conscious thought. Berry's main question is, 'Does it matter whether the performer is consciously aware of the elements and processes of form and structure (Berry, 1989: x)?'

My answer is unequivocal. Certainly no justifiable decision respecting the manifold possibilities of tempo and articulation, of intervention or the lack of it, can be made without the underpinning of that systematic analytical discovery which yields a reasoned, justifiable determination among conceivable possibilities of portrayal in the illusion of spontaneous rebirth each time a piece is heard. The intuitive impulse, fed by experience yet too often unverified and adventitious as to the elements of a particular context, may indeed "hit it right"; but the thoughtful interpreter, stirred by intellectual curiosity not less than by untempered feeling, will seek the reassurances of corroborative rationale, in the analytical exploration of putative, alternative conceptions. And the analysis which informs interpretation affords a basis—the only basis—for resolving the hard questions both of general interpretive demeanor and of those elusive refinements of detail which make for performance which is both moving and illuminating (222–223).

Berry begins by asking what a performer controls in performance, in relation to 'an intervention': 'What are the domains of expressive latitude in which a performer can intervene, where it is appropriate and desirable to project and expose some conceptual image of a piece? ...Performers control tempo and articulation (2–3)'. If not explicitly stated, Berry's position as an analyst is driven by Schenkerian thought; it is focused at the 'surface' or 'near-surface detail', with a direct correlation between '...an event's nearer-foreground manifestation and its susceptibility to interpretive intervention and control in performance (5)'.

Despite a number of seminal explorations, the study of how interpretive decision follows the analysis of form and structure remains subsidiary to other interests of music theorists and performers. This is due in part, I believe, to the wide acceptance of intuitive bases for interpretive choices, as opposed to articulate justifications derived from serious analysis (7).

Berry does not dismiss the possibility that intuitively-driven performance can be convincing, but suggests an ideal form of performance 'should' include analytical thought merged to the level of the sub-conscious.

In that sense, a good performance is a portrayal, a critical discourse on the conceived meaning of a work, and a fruit of inquiry and evaluative reflection. Such an interpretation makes for that transcendent moment in which creative, theoretical, and practical efforts are fulfilled. The ideal musical performance, at once moving and enlightening, mirrors the noblest impulses in human endeavor: that of rational examination, that of powerfully significative abstract imagery, and that of fervent commitment (6).

Although Berry is often characterized elsewhere as 'prescriptive' (see below) he is also forthright in asserting that there is a multiplicity of possibilities for interpretation based on the analytical findings. Accordingly, the possibility also exists that performances may misrepresent the music. This leads Berry to conclude that analysis '...must often tell the performer what should *not* be done. In this sense, analysis is a vehicle, which allows the performer to check their intuition against rationalized thought processes (10)'. An example of this is the performer's awareness of ambiguity within the notational practice of composers. Thus, in reference to Chopin's C minor Prelude (Op. 28/2) it is possible the note 'in question'—the third beat of the second bar—is either an 'e' or an 'e flat'. To solve the problem the informed performer can rationalize the correct note, as Berry has done, with a theoretical discussion of voice-leading to confirm their intuition (10).

Ultimately, if Berry's stance of analysis as a problem-solving-device clarifies an interpretation, this is welcomed by performers. However, Berry purposely side-steps the issue of how to choose which possibility to elevate above the others if more than one option is available (26). 'I leave these questions unanswered', while noting that 'analysis is the inescapable basis for interpretive doing and not doing': 'Every analytical finding has an implication for performance... [and will] illuminate the less

obvious relations of discerned elements cofunctioning to expressive ends (44)'. Later in the context of discussing the Berg piece, Berry concludes: '...interpretive decision can be conditioned variously by divergent analytical constructs...insightful interpretation is often a matter of choosing a particular path through a composition, or a network of interrelated paths in some considered unity of the whole (83)'.

Nicholas Cook (1999)

'*Analysing performance, performing analysis*'

Like Berry's book, Nicholas Cook's essay in *Rethinking Music* also advances a model of analysis and performance, but it does not do so with analytical examples or from the performance of a particular piece. Cook's discussion takes the form of a review, enlisting recent analysis-and-performance literature to offer a defence of the usefulness of analysis, which has (recently) been pejoratively characterized as 'positivist'. As Everist and Cook write in the introduction to *Rethinking Music*,

... [Cook] argues that the existing analysis-and-performance literature marginalizes performance by conceiving it exclusively in terms of the projection of compositional structure. ... Cook argues that we place too much emphasis on what performance *represents*, and too little on what it *does*. Where established approaches look for a more or less smooth translation from analysis to performance, he sees an essential incommensurability between music as writing and music as performance; in this context, structurally oriented performance becomes just one option among others, in the same way that Samson seeks the 'formalist enterprise' in analysis as just one option among others. But Cook's main purpose in examining the analysis-and-performance literature is to gain insight into the strategies of analytical and theoretical writing in general. Echoing views expressed by other contributors to this volume, he suggests that there is 'an evolving consensus on what might be called a performative epistemology of music theory'; in other words, analysis does not simply reflect meaning that is already in music, but participates in its construction. This, he argues, is the best defence against the Kerman/Treitler critique of analysis (Cook, 1999: 9–10).

Later, in the article itself, Cook writes:

> ...My aim in this chapter, then, is to focus on the issues of analysis and performance not so much for its own sake, but for what it can tell us about music theory in general. My central proposition is that a theory which does justice to performance will be at the same time a theory aware of its own performative qualities: in a nutshell, we need to think about what our theory *does* as much as about what it *represents*. Or so I shall argue (241–242).

Cook's most sophisticated argument demonstrates why an unquestioned acceptance of 'structuralist' music theory is not the most useful way to frame the larger concerns of 'analysis and performance', the implication being that performance, which is comprised of individual acts of expression, gives rise to 'the work' itself. His supporting example is an extended discussion of Fred Lerdahl's and Ray Jackendoff's generative theory of tonal music (GTTM), which has structural linguistics at its foundation.[8] This is contrasted against theories of 'gender identity' which are '...intimately linked with the pragmatist critique of structural linguistics.' Instead of going from a '...rule-based system...—...*from* competence to performance, *from* abstract knowledge *to* practical realization...'—pragmatist theorists attempt to explain the larger structure through the 'performative' acts which 'constitute' the 'expression' (242–243).

> ...Lerdahl and Narmour[9] both eliminate the musician as an individual, and replace him or her by a theory whose input is some kind of musical text and whose ultimate output is an aesthetic judgment; like all music theorists, perhaps, they explain music without musicians. But perhaps the most striking example of this kind of elimination of the musician as an individual is represented by the work of Eric Clarke, Neil Todd, and other proponents of the generative approach to musical performance. Their outstanding success in explicating some of the cognitive schemata underlying musical performance has come at the expense of interpreting 'expression'—traditionally seen as the core of performers' individuality—as itself an epiphenomenon of structure; performers introduce rubato and other deviations from the notated music, they claim, in order to project or bring out (in a word, to *express*) its underlying structure. And this structuralist interpretation of the word 'express' is really no different from the well-established Schenkerian usage according to which, for instance, compositional design 'expresses' structure. In each case, the effect is to explain expression away, and with it the performer; the music is seen as expressing nothing but itself. The

result is to give a psychological interpretation to Hanslick's metaphysical model of musical autonomy.

The concept of 'expression' provides a convenient means of introducing an important critique of this kind of structuralist thinking. Judith Butler has written that 'There is no gender identity behind the expressions of gender; that identity is performatively constituted by the very "expressions" that are said to be its results. We can generalize Butler's point—which Suzanne Cusick summarizes as 'gender is as gender does'—by saying that we tend to explain individual behaviour (including gender-related behaviour) as an epiphenomenon of social structure. And Butler's argument is that this is to put everything back to front; it is individual behaviour that gives rise to social structure, not the other way round. ... (242–243)

In terms of the analysis-and-performance literature, Cook also takes issue with Berry's *Musical Structure and Performance* to suggest that this book is more than a text trying to link analysis and performance; by placing the question on the 'theorist's turf' it advances an authoritarian relationship of theory over performance (239–240). Cook then offers a similar critique of Eugene Narmour's 'On the Relationship of Analytical Theory to Performance and Interpretation' and labels it a more 'extreme instance' of 'prescriptive conception (240)'.

...In his article...Narmour asserts that 'It is obvious that if formal relations are not properly analyzed by the performer, as well as carefully delineated in the performance itself, then many negative consequences follow'. As illustrated in relation to a few bars from *Der Rosenkavalier*, his procedure is first to analyse the music; next to derive from this an 'analytically justifiable recreative interpretation', which he presents in the form of an annotated score; and finally to assess a selection of existing recordings against his annotated score. On this basis, he produces what might be termed a 'buyer's guide'; the best buy, by a comfortable margin, turns out to be Karajan's recording. For Narmour, then, this recommendation is very much more than just a personal critic's choice. 'Of course', he says, 'in art like music there can never be any such thing as *the* definitive performance.' But he immediately adds: 'The point, however, is that, given the analytical theory applied in example 9 [his annotated score], we can say *more* or *less objectively* that . . . certain performances are subtly though demonstrably better than others.'

As Cook later concludes, '...theory, it seems, is not committed to understanding performers in the way it is to understanding composers.' He further suggests that

Narmour's '...failure to understand what a performer does might be a reflection on the theory rather than on the performance' (241).

Conversely, Cook is accepting of other theorists, such as Tim Howell or Joel Lester (both are presented separately below) because they offer a more flexible approach. As Lester suggests, 'Performers could enter analytical dialogue *as performers*—as artistic/intellectual equals, not as intellectual inferiors who needed to learn from theorists (245)'. Rather than accepting the dogma of 'one to one mapping', for example, from analysis to performance, Cook suggests that performance and analysis may be pursued consecutively, in order to 'stress the inseparability of intellectual and bodily knowledge' (this point is also taken up in greater detail below). In this sense 'analysis and performance [are]...seen as interlocking modes of musical knowledge... (248)'; the direct appeal to the performer is that it provides the means for 'posing articulate questions' about the work versus analysis as a source of answers. Thus, theory and performance take on a 'performative' aspect in shaping the work through the performance (249).

The question for the performer is how the analyst and the performer 'should' communicate with each other. In responding to Lawrence Rosenwald's criticism of performers who disagree with analytical pronouncements but are not able to argue their own point analytically, Cook recognizes the fundamental differences between writing and performing to 'counterpose' 'music as writing' and 'music as performance'.

> ... [In Robert Wason's article on the Webern Variations, Wason] argues that both serial structure and performance indications are correlated with the phrase structure, so that there is an indirect connection between the two. ...Peter Stadlen [who studied the piece directly with Webern]...denied that there is any significant coincidence between the serial structure and Webern's performance indications. ...
>
> Rosenwald suggests that such a situation might be the norm, rather than the exception, when he remarks that 'perhaps we could get a livelier dialogue between performer and analyst if the performer were prepared, on analytic grounds, to make a case for the performance of unstructural or antistructural detail'. ...Rosenwald perpetuates the classic theorist's strategy of shifting the dialogue between analysis and performance on to the theorist's turf; in this way the dialogue he asks for is already rigged. Following Jennifer Tong, I would like to counterpose not so much the analyst and the performer but rather the

'writing' and the 'performing' musician, or, perhaps more precisely, music as writing and music as performance. And by this I mean to suggest that what is at issue in thinking about performance isn't so crucially a complementarity of respective analytical concerns...as the sheer incommensurability of writing and playing.

Seen in this way, musical performance involves negotiating between the demands of physical gesture and sound (we can classify these under the heading of 'playing') and those of notation and its associated verbal traditions ('writing'). We might speak of translation between these incommensurable media, but only in Rosenwald's strong sense of 'translation' that emphasizes the semantic friction inherent in the process. This is because the media of writing and those of playing have very different structural characteristics. A score represents the concretization of the contingent, a singular encounter between sound and notation (it is generally only in improvisation that music begins genuinely to resemble the rule-based structures of grammar). And the language use that is aligned with and implicated in performance—let us call it the 'literature of performance'—has its own logic and agenda; this is what gives rise to the characteristic divergence between theory and practice. ... (250–251)

Ultimately, for the performer who chooses to analyse and perform—for this thesis 'the analyst' and 'the performer' are also 'the writer'—the logical outcome of Cook's 'model' suggests that '...analysis does not simply reflect meaning that is already in music, but participates in its construction (10)'. As David Lewin has argued, analysis is 'not an *aid* to perception, or to the memory of perception; rather, we are *in the very act* of perceiving (252–253)'.

Maus expresses the same idea with specific reference to Rosenwald's gloss on the concept of translation: 'perhaps', he says, 'analyses . . . could be regarded as translations. That is, analyses can be seen, not as pale copies of a determinate original, but as ways of exploring musical compositions in an ongoing process in which there is no point in distinguishing between making and finding the qualities of the music (253). ...

If we think of analysis, or for that matter any musicology, in terms of what it does and not just what it represents, then we have a semantic plane that can accommodate any number of metaphorical representations of music. We can negotiate between different meanings, however different the representations upon which they draw (258). ...

Jonathan Dunsby (1989)

'Guest Editorial: Performance and Analysis of Music'

Like Cook, Jonathan Dunsby also asks to what extent a 'unified focus' in performance is desirable or possible (Dunsby, 1989: 5):

> A particular analysis may well lead to the conviction that a particular kind of interpretation is essential, but how to convey that interpretation to the listener in performance is a different matter. Depending on instruments, acoustics, even factors such as the time of day, it may be necessary, for instance, to grossly exaggerate musical details in order to get the message across: evidence of this is the career of one of the most highly-valued modern interpreters, the late Glenn Gould, who withdrew from public concert work altogether because of the musically false performance that he believed it imposed between interpreter and listener. Without doubt, a sociological understanding of performance is a much less pure kind of knowledge than the analytical understanding of interpretation which has been an ideal of this century. As a consequence, performers who do not think of themselves as analysts cannot expect too much from those who do. Understanding and trying to explain musical structure is not the same kind of activity as understanding and communicating music. There is a genuine overlap between these poles of activity, but it cannot be a complete overlap.

Dunsby does not directly refute the 'Schenkerian claim' '...that all evidence needed to assimilate a composition is to be found in the score... (7–8)'. What he argues is that composers do not always '...offer the performer...a guide to the means of actually producing the required effect (8)'.[10] The principal aesthetic criticism, levied by Dunsby against the 'modern music theory community', is its unwillingness to acknowledge Schenker's belief '...that only in the so-called *"Meisterwerk"* can that magical continuity be found in which every detail of tonal and rhythmic structure is interrelated with every other, on the musical surface, at the deepest levels of prolongation and between those and intervening levels of tonal hierarchy'. Thus efforts to use these approaches of analysis and performance in 'ordinary good music' are problematic because this is '...not in essence organic, so...there is no golden key to explaining its structure and there can be no golden key to its interpretation'. The performer is caught in the crossfire of the zealotry of Schenkerianism which 'carries none of the artistic compulsion of the original ideal'. Dunsby concludes from this that '...the most helpful way to characterize analysis for the performer, which is

bound to be at the very least Schenker-influenced, is not as some form of absolute good, but as a problem-solving activity (8)'.

For Dunsby, the 'problem solving potential' of analysis has been least effective in the area of musical time because analysis is unable to capture the 'secret' of the performer (14).[11] If a piece presents timing difficulties,

> The analyst is powerless in such a case. Analysis deals, in general, with the ideology of veneration, the celebration of cultural perfection[12], the explanation of how things work in music, not of how they don't work quite as well as one might wish (15).

Either way, the bottom line—even in the hallowed ground of how to present music to others—is that there is no escape from theory in general or in particular, though we may each sometimes need to escape from thinking about it too much, and some need to escape always, even though there is no escape. 'Performance and Analysis' people know it does not feel quite like this when you are on stage—thus, again, the 'partial overlap'. Yet there is no epistemological reason for analysis and its theories to work in fear of what it feels like on stage (18–19).

Tim Howell (1992)

'Analysis and performance: the search for a middleground'

If a Schenkerian approach is problematic in relation to the practical concerns of either analysing or performing Ravel's music—Ravel is only as of late receiving attention from Schenkerian analysts, seemingly because his stature as a composer is being reconsidered within 'the canon'[13]—other, less-reductive forms of analysis may ultimately serve this repertoire better. As Leon Botstein suggests

> What is curious about the intensity of the debate over musical analysis is that once one abandons a Schenker-like claim to normative correctness, to truth, or even to priority based on a printed text, robbing music of its spatiality and performative reality, most of the argument could well cease. Nothing is more informative and suggestive than the sort of traditional musical analysis that frequently comes under attack now, even though it is neither normative nor complete, but partial. From a performer's point of view, analysis is interesting insofar as it suggests routes to selective hypotheses regarding meaning. Furtwängler read Schenker closely. Even though his performance may not make those connections obvious,[14]

something remarkable and influential probably took place. From the marginalia in the books of analysis in his library, it is clear that the pianist Claudio Arrau studied analytical accounts of the music he played (Botstein, 2001: 226).

Tim Howell's position represents one such possibility. Like the other analysts included in this survey, with the possible exception of Repp, Howell has an understanding of Schenkerian analysis, but has tended to view musical works on a case-by-case basis, with a writing style that is accessible to performers not steeped in Schenkerian thought. As a generalized basis for empirical investigation, Howell views analysis as a source of creativity, from an 'apparent conflict between the rational and the instinctive'. Thus, his position is to encourage performers to 'exploit this creative force, to play off intuitive responses against analytical perceptions in order to shape an interpretation (Howell, 1992: 698)'. At the level of practice, this suggests a pragmatic approach, 'interdisciplinary' in nature, which applies 'established methods' to 'new contexts', but, most importantly, envisions music as an interaction of 'layers' (714).

> The organic nature of tonal music, the unfolding of directed motion through time, is one of the most complex aspects of musical interpretation to be faced by a performer. ... Precisely because one 'level' of a piece ultimately depends upon another, awareness of the significance of local events on the part of the performer may help in interpretative decisions regarding the overall shaping and pacing of the music, even though it will not directly provide the means by which this can be achieved. The performer's problem in the context arises from the nature of his or her art, which is a moment-by-moment activity. (Hardly surprising then, to note that young performers engaged in 'analysis' opt for a blow-by-blow account of a piece which, at its most superficial, is dismissed as 'description'.) The analyst, however, is able to stand back and understand the total span in his or her search for underlying patterns and, moreover, the listener, by experiencing their effect, is able to perceive the large-scale workings of a piece.

Accordingly, continuity results when processes of musical activity are not resolved simultaneously.[15] Howell demonstrates this effect with a discussion of Beethoven's Op. 119 Bagatelle (G Minor), by first speculating what it is that causes 'eight out of ten sight-readers' to play a G♮ on the downbeat of bar 81 when this is not notated:

> To begin instinctively, a sight-read performance of this apparently simple piece is very revealing for the analyst. ... As our sight-reader proceeds through the passage beginning at the upbeat to bar 69, a certain lack of direction ensues (due to the hypnotic effect of continuity coupled with the density of material), resulting in the tendency for most to play a G♮ on the downbeat of bar 81... The final reworking of the main material, bar 81ff, becomes unnervingly ambiguous for our sight-reader and the last chord sounds equivocal: is it a dominant (of C minor) or a tonic (with a *tierce de Picardie*)?
>
> What was problematic, or at least irritating, for the performer (the downbeat of bar 81) is exciting, or at least intriguing, for the analyst, though both, in fact, experience it as something of an oddity. The danger to be resisted by the instrumentalist is the temptation to retreat to the practice-room and 'iron out' the tendency to 'add' something to that bar. The equivalent danger for the analyst is to dissect the score and gather evidence to 'prove' that the final chord is either one thing or the other, rather than accept that it is deliberately ambiguous. It is precisely because there is no absolute analytical notion of value that everything is kept individual and conventional analysis is rightly limited as a tool.
>
> What performer and analyst need to rationalize is the cause of this disruptive effect. For the performer merely to remove the problem, or for the analyst merely to resolve it, is to fail to come to terms with the issue and realize its musical significance. Essentially, Beethoven has produced a kind of Coda of extensive proportions exploring issues of metrical disruption coinciding with a sense of tonal ambiguity. The analytical breakthrough when pursuing this observation is to discover how these two levels of activity work together to create that effect, whilst the interpretative issue is to explore the range of possibilities of how best the performer may exploit the drama of this situation. The actual projection of that drama in the concert hall will be an instinctive act, but in preparing for such a performance the workings of this piece must be fully understood if their interpretation is to be convincingly realized. (706–707).

In accounting for the 'extension from the last beat of bar 79' Howell suggests that the

> ...local V^7–I alternations in G minor, not only balances tonal ambiguity in favour of tonic (rather than subdominant) prolongation, but quite literally balances out the two-versus-three metrical issue so that sense is made of the crotchet rest on the downbeat of bar 81 as the final point of reversion to triple metre at the moment of cadential outcome. Typically Beethovenian, given one level of resolution (metrical) is the presence of renewed ambiguity

(tonal), since the main material of the piece is now stated in terms of C minor, through an adroit change in function of the recurrent G♮s (707–708).

Intriguingly, Howell's work also suggests that analysis does not need to resolve interpretative questions associated with ambiguity; the ideas which are likely to influence performance often follow from divergent appraisals of the same musical passage.

However, further analysis reveals an alternative reading since the original 2/4 pairings could be stressed the other way around... This can be justified for two reasons: the beat that initiates them is already an upbeat; and the V^7–I impulse is more forward-tending than I–V^7. Pursuing this interpretation makes the outcome a little more complicated since a hemiola across bars 79–80 would be necessary. Simplistically, the two alternatives concern the placing of stress on either the dominant or the tonic (the moment of tension or of resolution) in each pair of harmonies. Either view can be justified analytically and both are indicated here because it is ambiguity (multiguity) which is the very stuff of performance and the role of analysis in this context is one of raising possibilities rather than providing solutions (1992: 708–709).

Joel Lester (1995)

'Performance and analysis: interaction and interpretation'

Like Howell, the tone of Joel Lester's writing is also non-authoritarian. In contrast to the extreme positions of analysis and performance outlined earlier by Nicholas Cook, Lester suggests the possibility of performance influencing analysis—specifically, as 'an interaction [,] stressing the ways in which analysis can be enhanced by explicitly taking note of performances, indeed by accounting for them as part of the analytical premise' (Lester, in Rink, 1995: 1999). In his reading of the analysis and performance literature, Lester also points out an element—perhaps the most important one, missing from the debate (197–198):

I suggest that with rare and quite circumscribed exceptions something is strikingly absent from this literature—namely, performers and their performances. Tovey, Schenker, Berry, Cone and Howell[16] never validate an analysis by referring to singular performances....For these and virtually all analysts, analyses are assertions about a piece, not about a particular

rendition. Performers and performances are largely irrelevant to both the analytical process and the analysis itself. If a given performance articulated the points made in an analysis, that would not validate the analysis; rather, the analysis would validate the performance (even when performances differ, like the two described in Schmalfeldt 1985:28). If a given performance failed to articulate the points made in the analysis, the performance, not the analysis, would be deemed somehow inadequate (as in Cogan and Escot 1976: 253–254).

This theme, which is common to Lester's writing (Lester, 1992; 1998), is illustrated by a discussion of both analysis and performance surrounding the Minuet of Mozart's K. 331:

Example 9.2 reproduces Schenker's middleground graph of the Minuet. The underlying structure that it asserts agrees with sonata-form structure through the 'exposition', 'development', and beginning of the 'recapitulation': the background motion C♯–B articulates the two key areas of the first reprise, and E is transformed in function from a local tonic at the end of the first reprise to the dominant of A major in the second reprise, all the while prolonging the background B in the first part of an interrupted structural descent. The beginning of the thematic and tonal recapitulation is marked by the restoration of the structural line on C♯. Following this point, however, Schenker's analysis no longer reflects a usual sonata-form scheme. ...

...Schenker's analysis implies that bar 41 [Minuet from Mozart's K. 331] is a phrasing elision: the cadential dominant of bar 40 resolves on the tonic in bar 41, ending the first theme-group period on the downbeat just as the second theme-group phrase begins. Many performances of the Minuet elide the cadence in precisely this manner, such as Lili Kraus's recording ca 1966. Others take an altogether different approach. For instance, in his 1966 Carnegie hall recital Vladimir Horowitz made bar 40 a half cadence rather than continue the phrase into bar 41, with a ritardando, diminuendo and noticeable breath at the end of bar 40 before launching a new phrase in bar 41. In his performance, there is little sense that the right hand's grace note A completes a cadential arrival. Instead, the second theme-group phrase emphatically begins on the E, and the descent of a fifth from this E to the final A is structurally integral and essential, not a mere coda. The dominant in bar 40 concludes an open-ended phrase, moving locally to the phrase beginning in bar 41 but resolving definitively only with the final tonic cadence of the Minuet, which rhymes with the half cadence in bar 40. In effect, the recapitulation's first theme-group period and second theme-group phrase relate as in an interrupted descent, which is not at all what Schenker's analysis shows.

These two ways of arriving at bar 41 reflect different views of the Minuet's form. Specifically, they disagree over whether the motivation for musical structure resides in underlying voice-leading or in themes and key relationships. In effect, Horowitz interprets the Minuet as a sonata form in which the grounding of the second theme-group in the tonic is a significant factor in bringing the movement to a close. Schenker and Kraus, on the other hand, rely on the directed linear motion to the tonic in bar 41 to locate the end of the Minuet's essential structure (Lester, in Rink, 1995: 199, 201–202).

Lester's point is to suggest that 'The renditions by Kraus and Horowitz are no less eloquent than the writings of theorists... (203)'. Hence, the multiplicity of interpretations 'remains a resource barely noticed by theoretical discourse (214)'. Lester also indicates that he is not advocating the possibility of a 'bland relativism' (211); rather, there is a sharing, which contributes to the understanding of the music.

Indisputable statements can go far beyond assertions of mere 'fact' about the music (e.g. the C is the first and last note in the right hand in the first melodic unit of Mozart's K. 545) to comprise elements which are not specifically notated in the score. For instance, no one would deny that there is a tonic cadence at the end of the first waltz in the 'Blue Danube' set—Rothstein, Ormandy and Paulik all agree on that even though there is nothing in the score specifying 'tonic cadence', as the required pitches and rhythms are manifest. Likewise, no one would deny that there is a phrase beginning and ending on the tonic in bars 41–8 of the Minuet from Mozart's K. 331—Schenker and Horowitz concur on this point even though no score notation specifies that phrase. Any performance not projecting these entities—a performance of the 'Blue Danube' not articulating a dominant-to-tonic motion into bar 32, or a performance of the Minuet from K. 331 failing to render bars 41–8 as a phrase in some sense—could legitimately be regarded as 'incorrect', as failing to follow the score.

Interpretative analytical statements, by contrast, do not describe universals. Rather, they concern a particular shaping of the piece realised in analysis and (according to the interaction I am advocating) possible in performance as well. In the 'Blue Danube', Ormandy's performance contradicts Rothstein's assumption that the hypermetre is inherent in the score; likewise, Horowitz's performance challenges Schenker's assertion that the basic structure of Mozart's Minuet necessarily ends in bar 41. ...Horowitz emphasises the sonata-form structure of Mozart's Minuet, graphically expressing Cone's 'sonata principle' by making the grounding of the second theme in the tonic key the motivation for the conclusion; Schenker downplays the thematic aspect and concentrates on underlying voice-leading structures (Lester, in Rink, 1995: 212).

John Rink (1995)

'Playing in time: rhythm, metre and tempo in Brahms's Fantasien Op. 116'

From a different but related standpoint, John Rink also envisions the possibility of performance influencing analytical understanding. His position begins with the ideal of analysis as a by-product of 'intuitive' performance—performance is not encumbered by analytical thought in the first instance, although it is later rationalized after-the-fact. Throughout the course of his writings, this theme is a recurring trope; first in 1990; later in 1995 and again in 2002. In terms of Brahms' Op. 116 (1995), Rink began by learning and performing the music approximately two years before attempting to analyse it. The rationale for doing so was to avoid the possibility of 'conceiving the performance in terms of the analysis, a process which typically inspires dubious imperatives to the performer to 'bring out' a given motivic parallelism or structural harmony, often in violation of the sprit of the music' (Rink, 1995: 255). At a later stage, analysis was then enlisted as the means of testing his earlier intuitive decisions against the analytic process.

Ultimately, Rink envisions performance informing analysis, perhaps more-so, than the possibility of analysis mapping onto performance (Rink, 1990: 321). Like Cook and Lester, Rink also takes exception with the hegemonic language exerted by analysts over performers:

> Notwithstanding such commands, a performer 'must' or 'should' accept an analyst's conclusions *vis-à-vis* interpretation only to the extent that he or she believes in them, 'hears' them and considers them appropriate in projecting the work (322).

Rink also proclaims the possibility of an 'informed intuition' in support of a singular approach to analysis, which is performer specific, because it 'forms an integral part of the performing process', and is 'not some independent procedure *applied* to the act of interpretation' (323). In this sense Rink views analysis as 'considered study of the score with particular attention to contextual functions and means of projecting them', with this version of 'analysis' having a different aim than analyses which are intended for publication:

Whereas analysts concentrate on musical structure, performers attend primarily to musical 'shape', which is analogous to structure but tends to be more dynamic through its sensitivity to momentum, climax, and ebb and flow, comprising an outline, a general plan, a set of gestures unfolding in time' (Rink, 1990: 323)

Although the 1990 review article does not indicate how this is accomplished, Rink's later article of 2002 illustrates the mechanics of his approach. Essentially, it is to focus on one structural layer at a time—formal divisions and tonal plan, tempo, dynamics, melodic shape and motifs, and rhythm—elements which have direct relevance to performers—and then to graph or re-notate these features as the means for further study. Thus, when intuition is not able to solve the problem at hand, analysis is enlisted as a 'deliberate' or 'conscious' act. If the methodology of the 2002 article is relatively straight-forward, the earlier writing of 1995 does not proceed in such concrete terms. One interpretative difficulty, which Rink experienced across the entire Op. 116, was that Brahms neglected sometimes to notate the pulse-unit changes across sectional divisions; if the second intermezzo is clearly notated  , no markings were given for similar changes of tempo designation in numbers 3 and 7. Rink's main investigative concern was to determine through analysis what unit of pulse to keep constant (259).

Unlike Howell, who suggests that 'Reading someone else's analysis, even if specifically targeted as 'performer friendly', is almost the equivalent of asking someone to practise on your behalf (Howell, 1992: 702)', Rink's starting assumption was to agree with Jonathan Dunsby's premise that the Op. 116 is a 'multi-piece' (Rink, 1995: 256). Rink subsequently added the idea 'ignored' by other analysts which is the '*actualisation in time of the principal motifs*—in other words, *their contexts in the music's unfolding narrative* (256)'. The basic question then became how to 'interpret this music' based on informed 'choice'. For him, discrimination must be 'musically—that is historically, stylistically, analytically, technically, expressively—viable (257)': 'If Op. 116 is the integrated 'multi-piece' Dunsby would have us believe, it is almost inconceivable that the tempo relationships between individual numbers were arbitrarily defined by Brahms or left to the performer's will (257)'. Rink concludes that this is 'particularly unlikely' because of underlying tempo changes in other multi-movement works by Brahms.

In order to test this possibility, Rink surveyed several commercially available recordings of Op. 116. For each piece, he measured the main tempo of the individual performer (268). These general trends were then compared against his after-performance hypothesis of tempo and tactus proportions. Of the group of performers surveyed, only one, Stephen Kovacevich, performed faster than the rest—within the realm of the analytical findings. (In the earlier rendition Rink had performed the fifth piece with a metronome marking of ♩.=56, substantially slower than Kovacevich.) As a result, in order to link the motifs temporally across the entirety of the work, Rink proposed the possibility of 'a brisker tempo' for No. 5 in order to 'preserve the *tactus* unit shown in Table 12.3 and to align the piece with No. 2's andante and No. 6's Andantino', the challenge being to 'capture the graceful, intimate mood required by the composer' at a faster tempo (269).

I am not of course arguing exclusively for *these* fast, moderate and slow tempos (other proportional values could work just as well) ... But if proportional tempos in this set *are* effected, they will enable the performer to demonstrate the unity of this 'multi-piece' in a unique way beyond the analyst's power: in a sense, the performance thus takes on an important 'analytical' function—the performance becomes an *act of analysis* (Rink, 1995: 270).

Conclusions

With the introductory survey established, it is now possible to consider the relative merits of each position. Firstly, Repp's article does not offer direct application to the performance of Schumann's music; its value lies in what it has to say about timing, specifically, how timing is 'fixed' at the early stages of the learning process. When analysis is not considered in advance of performance—the student performers in Repp's study had not analysed the piece before they read through it—a performer tends to imitate the sound of a performance which is already in his or her mind, the notes on the page serving as the visual stimulus for the aural memory. It is almost inconceivable that postgraduate piano majors would be playing or hearing *Träumerei* for the first time. What this suggests is that the 'expert' performers may have had greater insights into the piece because they had spent more time thinking

about it, as opposed to merely playing through it once or listening to it subconsciously.

Repp rightly points out that performance stayed constant for the expert performers over extended periods of time. Yet, he did not explore the other side of the equation—presumably, at the time the recordings were made, the expert performers had already formed a 'rational' basis for doing what they 'do'; just because one performs, this does not mean that conscious thought processes are pushed aside. In contrast, Rink's rationale for choosing 'intuitive' performance stems from a different question, which is whether there is value in purposely avoiding analysis in the first instance, to in effect gain a 'musical' basis before analysing, before then returning to the practise room and the concert hall to reinterpret the piece. Ultimately, Repp's analysis of performance offers an empirical basis for questioning Rink's methodology, which is whether or not intuitive performance, by itself, has anything to offer to the learning process.

In contrast to Berry, who posits a cause-and-effect relationship between 'an analysis' and 'an interpretation', Lester has tended to over-compensate in the opposite direction by down-playing the possibility that pre-determined analytical thought may in actuality be useful to the performer. It is entirely possible that a performer may choose to see beyond Berry's 'prescriptive' remarks in order to gain analytical insight(s). Lester's position is admirable in that it asserts the possibility of 'artistic/intellectual equals' (Lester, in Rink 1995: 214), but his chapter also minimizes the notion that analysts often take performance as the starting point for their work. If analysts are known to a wider audience for their writings, many are also highly-skilled performers or composers.

In Cook's and Howell's models, both performance and analysis benefit, when analysis and performance are pursued simultaneously (this point is returned to below). In Howell's, the performer is able to enlist analysis as the means of rationalizing their earlier 'instinctive' experience(s) with the music. Conversely, Berry envisions analysis as preparation for performance, suggesting that interpretation may be viewed as much of an act as it is a non-act. This is potentially a useful position in light of Ravel's comments to Marguerite Long ('don't interpret; just play'); the interpretation itself may bespeak maturity, because the performance is not given to excess.

Analysts or performers, who are not necessarily concerned with either the semantics or the polemics of the ongoing analysis and performance debate(s), may additionally wonder why Lester's methodology, which enlists performance as the means of bolstering analytical understanding, is more acceptable than the possibility of accounting for performance through analysis. This may be partially explained by a sympathetic reading of Lester's remarks within the context of a historical moment—the 'new' musicology was, at the time of Lester's writing, distancing itself from earlier formalist positions.[17] By referencing the performances of Horowitz and Kraus (Lester, in Rink, 1995: 202), Lester has purposely shifted the focus away from 'analysis for its own sake' to a humanized position which considers music and the musicians who produce it.

Interestingly, it is probably because of this very reason that Lester does not attempt to articulate how a particular interpretation emerges. His model may serve a different purpose, which is to present choices to the performer, ones derived from analysis or performance. In this sense, Howell's and Rink's positions are also in agreement, although they add an additional twist, by inferring a demonstrative link between analysis and performance, irregardless of whether performance is considered as an outgrowth of, or as a prelude to, analytical thought. Accordingly, as suggested above in the *Preface*, it may be possible to gain an awareness of musical relationships, by reading performances and analyses onto each other in one of three ways: from performance to analysis; from analysis to performance; or, from performance and analysis to 'back again'. Lester's position, if constructive, tends to be weighted towards the first option. This is not to suggest a critical misgiving; rather, the prospective 'value' is that it enables a reader to understand why an analyst has represented the music as he or she has, either in terms of a particular interpretation, or in understanding why issues are problematized, as opposed to being solved.

It may well be, for instance, that when Horowitz played a half cadence in bar 40 of Mozart's Minuet from K. 331 he was not consciously aware of anything other than creating an 'effective' performance, however he defined that concept. Indeed, many performers may be concerned with little more than achieving an 'effective' performance—one which pleases their sense of fancy and propriety (stylistic and aesthetic propriety as well as matters of stage decorum) and which is received by their audiences with approval. But in order to realise

such a performance, they must deal with the very same features that analysts regularly confront, assuming, of course, that there is some relationship between sounding music and what analysts do when dealing with the range of issues listed in the preceding paragraph. Thus, Horowitz's half cadence in bar 40 comments on the form of Mozart's Minuet and the location of its structural conclusion just as much as Schenker's analysis does (Lester, in Rink, 1995: 207–208).

Both Rink and Lester have placed the performer on an equivalent footing with the analyst. In contrast, Repp's empirical findings elevate the performer to the level of the composer, by articulating the different sets of responsibilities each has within the division(s) of musical labour. Hence, a performance of 'pre-existing Platonic works' (Cook, 1999: 244) is more than a 'realized' or a 'recreated' act; it is 'comparable to composition (Repp, 1995: 2425)'. Thus, micro-timing as evidenced by Clynes (1986) *et al*, is an elemental feature of performed music. This is also a direct parallel to Nicholas Cook's earlier writing (1993) where he suggests that performance of music from the Western-Art tradition is akin to an improvisational activity. Based on an analytical understanding of formal processes, performers may be able to, from their approach to timing and articulation, delineate musical boundaries in aesthetically interesting ways.

Rink's 'currency' (Dunsby, 1989) of 'informed intuition' may also be of worth to both the performer and the analyst. As Rink suggests, intuition is 'perhaps' strengthened from analytical thought. However, at this point intuition may have gone on to become something else. If, as the psychologists of music have advanced, intuition plays a role in performance, and if formalism has something to offer, both, together, are not necessarily contradictory; each may reside within the same cerebral space. However, if 'uninformed intuition' is the only tool available, conscientious performers might wonder if what they are doing is plausible; consequently, enlisting analysis to periodically check intuition is appealing.

One of Nicholas Cook's most intriguing ideas is the possibility of a musical work 'representing' or 'conceptualizing performances' (Cook, 1999: 244):

Adopting the Butler/Harris approach, we might want to see what music psychologists refer to as performance 'expression'—the unsystematized transformation of notated pitches, dynamics, and articulation—as an aesthetically foundational aspect of music; structure, as

defined by conventional analysis, would then constitute a means of representing or conceptualizing these 'expressive' characteristics, an attempt to capture their 'trans-situational' properties.

In practical terms this may suggest an even-keel for the performer's-work and the written-down-musical-work. In the case of musicians who engage in both writing and performance, neither takes predominance over the other; each is seen as a source of signification in its own right. Subsequently, each separately, or both together, is/are a representation of the music. In contrast to the distortions of Wagner's position alluded to above (Bowen, 1993), this accrual of information does not diminish the composer's position. It may instead be the opposite: there can be interplay between musical, intellectual and gestural elements, which together, work in tandem to create the composer's music.

Thesis: larger question addressed

In view of the positions outlined above, the analyses presented below include the element of performance. Regardless of whether musical structure is the cause or the manifestation of expression (Cook, 1999), performance expression is a distinctive and individualized feature. This position is also problematic; the music can never be fully explained because of this added element. If interpretation is considered as an isolated instance of creativity, there is not a fixed-body of elements to consider, as opposed to envisioning interpretation as a generic element. In this sense, an analyst or performer who sets out to analyse *Gaspard de la nuit* will never be able to realize their objective. What Vlado Perlemuter brings to the performance is entirely different than that of a pianist of a different age and temperament—such as Lang Lang—let alone the host of other performers who are never heard of. Likewise, no performance can encapsulate the entire range of possibilities because musical relationships are explored and decisions made. Ultimately, this thesis attends to one principal concern—how performance and the findings of 'analysis', if considered together as a complex of ideas, are 'useful' to the performer. To this end, Chapters 2–5 outline a range of issues in support.

Notes

[1] For performers interested in this research, an accessible starting-point is Rink, 2002. For those already aware of general positions, Rink, 1995 or José Bowen's 'Bibliography of Performance Analysis', which is current as of July 2001, provides additional sources for delving into a multiplicity of specialised investigations. See http://134.53.194.127/bowenja2/Perf-Biblio.html, <accessed 18 May 2005>.

[2] 'Expression can be understood as the inevitable and insuppressible consequence of understanding musical structure, yet it is also a conscious and deliberate attempt by performers to make their interpretations audible. As evidence for its unconscious and inevitable presence in performance, some authors have shown that when performers are explicitly asked to play without expression, the degree of tempo and dynamic variation is reduced but never eliminated, and that it keeps the same general pattern that is observed under normal conditions. This aspect of performance expression can be seen as a consequence of the performer's spontaneous and unconscious grasp of the basic elements of musical structure: crudely put, it seems impossible *not* to play a note at the end of a phrase with different expressive features compared to notes in the middle of a phrase (Clarke in Rink, 2002: 65)'.

[3] This is not to dismiss writers of earlier generations. Rather it acknowledges that John Rink (1990) and Cynthia Folio (1991) have previously addressed how this question is construed in the period leading up the late 1980's; the writer can do no better.

[4] In Clarke's introduction to the psychology of music (Clarke, in Rink, 2002), Repp's work is considered valid, after nearly 10 years of ensuing developments: 'In principle every aspect of musical structure contributes to the specification of an expressive profile for a piece, but some authors have shown that phrase structure is particularly salient. Neil Todd developed a model which produces an expressive timing pattern on the basis of the hierarchical phrase structure of the music, using one simple rule. The resulting timing profiles compare well with the data of real performances by professional players. Similarly, in a study of twenty-eight performances of a short piano piece by Schumann, taken from commercial recordings by many of the twentieth century's greatest pianists, Repp found a high level of agreement in the timing profiles of the performances, all of which were organized around the phrase structure. He also showed increasing diversity between the performers at more superficial levels of expression, suggesting that performer agree substantially about the larger shape of a piece of music, and express their individuality by manipulating the finer details of structure and its expressive implementation (Clarke, in Rink, 2005: 64–65).'

[5] A famous pianist is reputed to have had over 150 splices in his recording of the Webern *Variations* (Edward Auer: masterclass, Bloomington: Indiana, 1993–1995).

[6] Psychologists of music may also agree to some extent with this perspective: '...as Shaffer among others has pointed out, small differences in the precise implementation and relative balance of even a small number of expressive principles will result in potentially distinct characterisations of a piece. ...

Although expression may have a 'rule-like' quality, performers also have a (variable) ability to mimic an expressive pattern they hear—even when it has no reasonable structural basis (Clarke in Rink, 2002: 65).'

[7] This is not to suggest that an interpretation can not change; it often does, but it may be difficult to undo months of work.

[8] See Cook, 1999: 242. 'More specifically, it is based on Chomsky's distinction between competence and performance: that is to say, between the abstract knowledge on which any rule-based system depends and the use of that knowledge in any given situation (the production and reception of speech in Chomsky's case, of music in Lerdahl and Jackendoff's). Seen from this perspective, performance—including, of course, musical performance—becomes an epiphenomenon of competence; as Lerdahl and Jackendoff put it, 'In our view it would be fruitless to theorize about mental processing before understanding the organization to which the processing leads.'

[9] Eugene Narmour is not allied with GTTM and his position is discussed in more detail below.

[10] An example published twelve years after Dunsby's article illustrates this point: In an interview between John Rink and Murray Perahia (Rink, 2001), Perahia verbalizes how Schenkerian analysis has shaped his understanding of Chopin's music:

> Our most extended discussion focused on the third movement in [Chopin's] op. 58 [sonata]. According to Perahia
>
> > the first thing that one tries to do when playing this sonata is somehow [to achieve a] unifying [image] at least in one's mind, so that the whole thing is either telling some kind of story, even if the story is only with tones, or [so that] those tones can somehow metaphorically transform themselves into some kind of story that one can make sense of.
>
> Thus 'the whole piece can be seen as one, so that one isn't only working on details. At the beginning, I think that's quite important.' The third movement can be scanned
>
> > very simply as an A–B–A section with this tune in B major, the middle section all in E major [...] Then it gets back to the [...] dominant at bar 97 and there we have the theme returning... In some way this is reminiscent of the middle section, which transforms it into B major. So, one has the whole picture before one begins [.]
>
> As for the details, Perahia deals 'with simplicities first', as in the opening theme (bars 4ff.; ex. 2), which 'is largely 3–2–1', as he demonstrated on the keyboard. He also highlighted the interruption of the melodic descent at bar 7, the 'stronger dominant tonicisation' at bar 11, and the inner-voice motion in bars 16–18 (see ex. 3). The A♮ in bar 18 'invites a closure of [the] 3–2–1', but that does not occur until bars 26–27: instead, this 3–2–1 motive goes to E major in bar 18 in what seems to be a 'fulfillment of the whole theme', but 'is actually what CPE Bach would call "elided" '—a harmonic resolution that is 'in the mind but doesn't exist, it doesn't happen. So this fulfilment, which I feel is like paradise, never happens, and [the melody] goes down' to the C♯ in the middle of bar 19. This frustration of the melodic ascent is telling: indeed, whether or not the

ascent to E will take place 'is going to be, I think, the point of the whole piece', as it 'determines so much [...] And it's this inner voice that somehow shows the disappointment of not being able to go higher —going to the E.' Resolution eventually does occur, but as always in Chopin's music, it is 'tinged with bitterness, disappointment, regret, but a triumph nevertheless', as in the coda of the last movement (bars 274–286), which 'is not just a local moment of glory' but one that 'covers the whole'—or 'at least the third movement and the last movement' (Rink, 2001: 11–13)'.

[11] It is argued below that musical time is of value to analytical understanding.

[12] Analysis can and does influence timing patterns. This discussion is advanced in Chapter 3 below, where the phrase structure of *Noctuelles* is discussed to demonstrate how timing changes from an understanding of underlying harmonic patterns. As for 'cultural veneration', Dunsby is correct in asserting that theorists or critics have sometimes used analysis to further a political agenda. If this thesis has any pretence to an agenda, it is to show the 'logic' of Ravel's compositions and to validate the 'wisdom' of earlier generations of performers in performing Ravel's music without an excess of rubato.

[13] A recent example from the DDM database is Eddy Kwong Mei Chong, "Extending Schenker's *Neue musikalische Theorien und Phantasien:* Towards a Schenkerian Model for the Analysis of Ravel's Music" (Ph.D. diss., Eastman School of Music, Rochester, 2002). See http://www.music.indiana.edu/cgi-bin/chmtl/isearchddm, <accessed 3 June 2005>

[14] See Cook, in Rink, 1995: 105–125.

[15] Examples in support of this point are presented below in Chapter 3.

[16]Howell's position is more complex than Lester's characterization would suggest. Considering that the performer and the analyst are the same person in Howell's model, this is a direct link between analysis and performance, more so than Lester's methodology which maps performance onto analytical interpretation(s) without taking intent into account. This point is returned to below.

[17] This may represent a second parallel to Dunsby's reading of Glenn Gould's 'sociological' retreat from the stage.

2 Formal articulation

Introduction

Performers tend to think of the word articulation in the context of how to perform individual notes—for example, whether the note in question is played *staccato* or with *tenuto*. Here, the term is expanded: '...articulation in a broader sense is sometimes taken to mean the ways in which sections of a work—of whatever dimensions—are divided from (or, from another point of view, joined to) one another'.[1] In Ravel's case, the process of defining sections is readily apparent to the listener as the divisions are (often) articulated with *rubato* or *allargando*. The opposite may also be true; structural moments are not always delineated by extremes of tempo fluctuation, especially if the piece is built from proportional correspondences. This suggests that 'the nuance is already built into the notation' (Howat, 2001/02): the performer may not need to do anything to 'help the music' beyond playing the passage 'straight'.[2]

Analytical findings are presented below in support of the arguments above. In the first instance, a discussion of *Valses nobles et sentimentales* illustrates two interpretative possibilities. The first is based on an analysis of the score without considering temporal process; the latter option includes performance as a feature of the analysis. The *Ondine* and *Alborada* sections illustrate how formal shape is analytically understood in relation to articulation through performance(s). The findings presented below thus serve a dual purpose—they provide a basis for helping performers understand musical nuance within the context of formal shape. They further demonstrate that an understanding of formal articulation is not complete unless proportion is taken into account.

Valses nobles et sentimentales (1911)

The title *Valses nobles et sentimentales* is borrowed from two works of Schubert—*Valses nobles*, op. 77 and *Valses sentimentales*, op. 50. According to Ravel,

> The title *Valses nobles et sentimentales* sufficiently indicates my intention of composing a series of waltzes in imitation of Schubert. The virtuosity which forms the basis of *Gaspard de la nuit* gives way to a markedly clearer kind of writing, which crystallizes the harmony and sharpens the profile of the music. The *Valses nobles et sentimentales* were first performed amid protestations and boos at a concert of the Société Musicale Indépendante, in which the names of the composers were not revealed. The audience voted on the probable authorship of each piece. The authorship of my piece was recognized—by a slight majority. The seventh waltz seems to me the most characteristic (Orenstein, [1990] 2003: 31).

A cursory comparison of Ravel's and Schubert's waltz sets reveals apparent similarities of approach; firstly, binary and ternary forms are employed within the individual waltzes. Secondly, in Schubert's *Op. 50*, the key structure is built from an upwards cycle of fifths modulations; in *Op. 77*, thirds relationships are also included (*Example 2:1*). Thirdly, Ravel's act of homage may also extend to the short-short-long motif, which is heard at the beginning of both pieces. Whereas Schubert's rhythmic pattern relies on an upbeat, Ravel's emphasizes the downbeat (*Example 2:2*).[3] Although Ravel referred to his own collection of waltzes as a series he might have also designated it cyclic, as the composite picture emerges from an additive process of cumulative borrowings.

Form

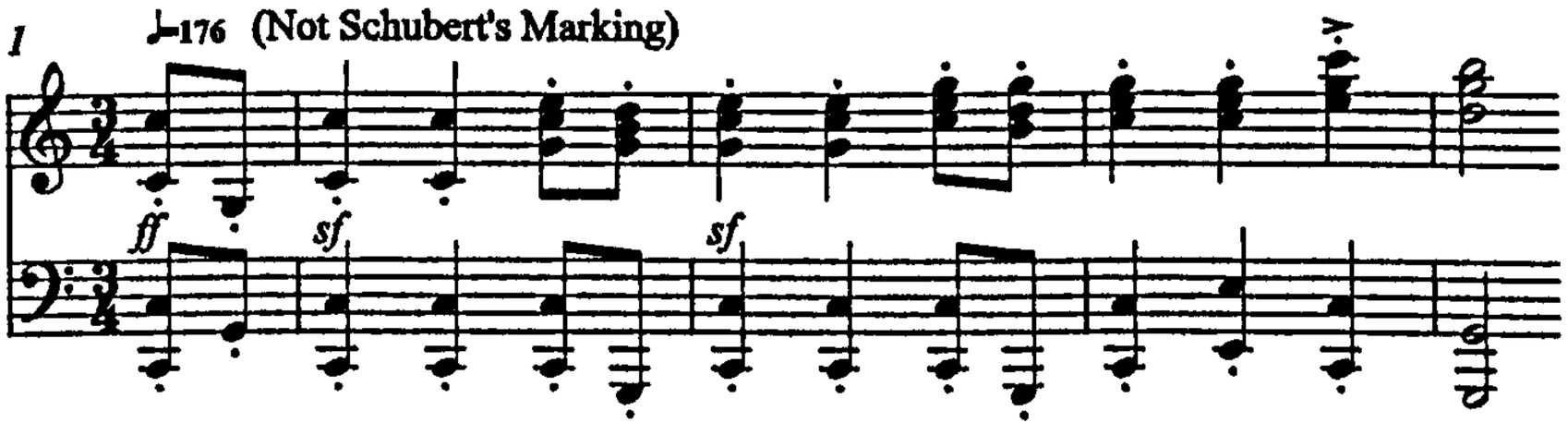
The large-scale form of Ravel's *Valses nobles* is built from two sets of three waltzes that are framed by an introduction (*Waltz 1*) and an *épilogue* (*Waltz* 8; see *Example 2:3*). This interior patterning is built from a combination of one waltz that ends with a fermata (and with slowing) that is also juxtaposed against two contrasting waltzes, joined together without a break.

Example 2:1, Valses nobles, key relationships

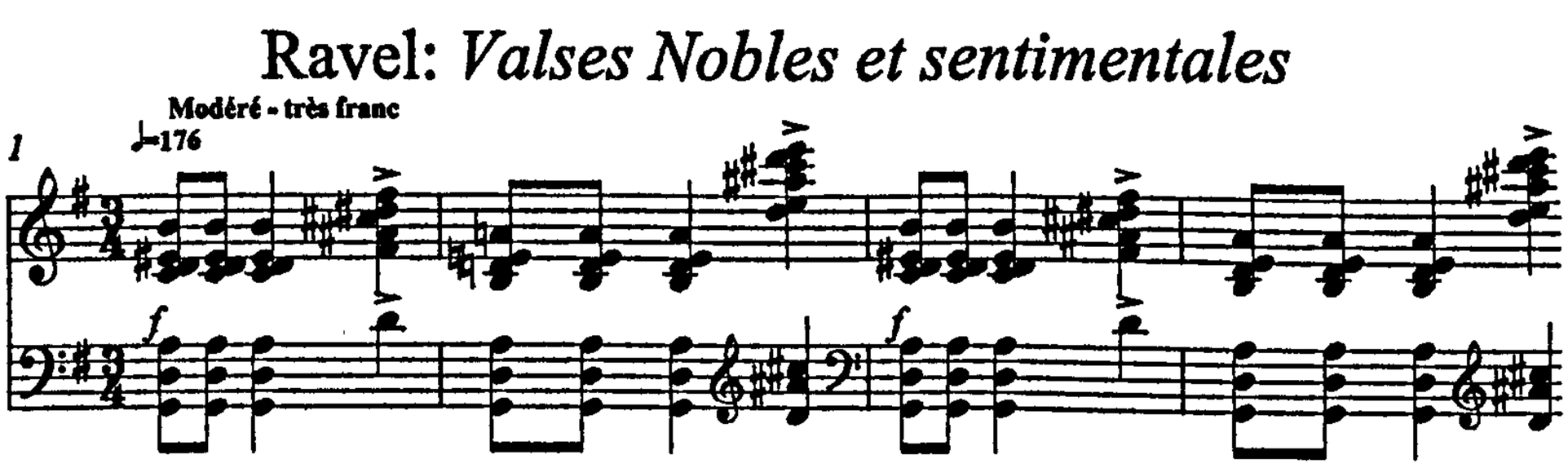
Schubert: ***Valses sentimentales, Op. 77***	**Schubert:** ***Valses nobles, Op. 50*** **(1st twelve)**	**Ravel:** ***Valses nobles et sentimentales***
1 C Major	1 C Major (start of extended cycle of fifths)	1 G Major
2 A Major (chromatic thirds relationship)	2 C Major	2 G Minor/G Major
3 C Major	3 G Major	3 E Minor/G Major
4 G Major	4 D Major	4 C Major/ A♭ Major
5 (E Minor), C Major	5 A Major	5 E Major
6 C Major	6 A♭ Major	6 C Major
7 E Major	7 A♭ Major	7 A Major
8 A Major	8 A♭ Major	8 A/G tonal centres
9 A Minor	9 E♭ Major	
10 F Major (IV to C major)	10 E♭ Major	
11 C Major	11 E♭ Major	
12 C Major	12 A ♭ Major	

Example 2:2

Schubert: *Valses Nobles, Op. 77*



Ravel: *Valses Nobles et sentimentales*



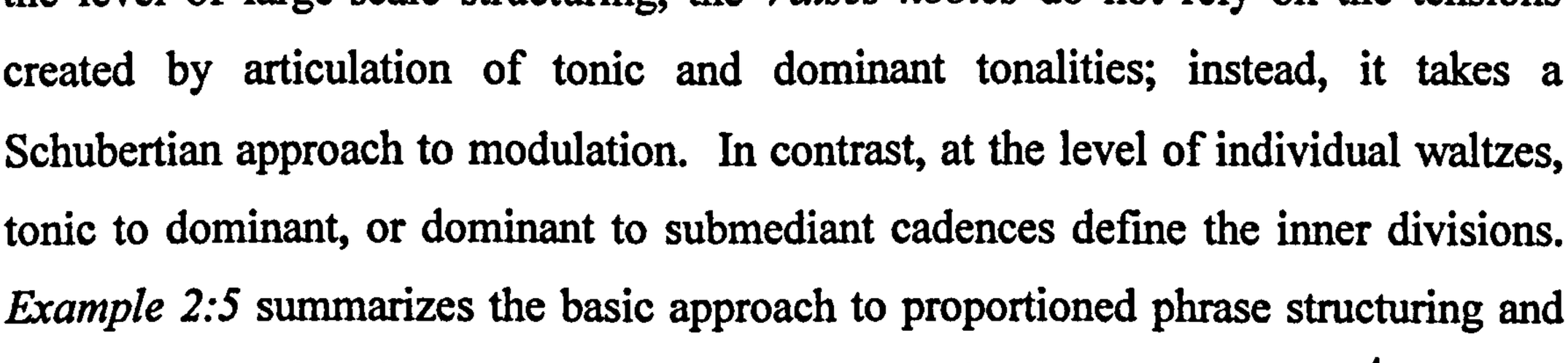
Example 2:3, Valses nobles, divisions

	Introduction	*A*	*B*	*Épilogue*
Waltz:	1	2, 3–4	5, 6–7	8

Tonal level

As implied in *Example 2:1*, a modulatory scheme links the waltzes together. It is constructed as a symmetrical tonal arch and heard consecutively with the groupings described above (see *Example 2:4*). Throughout, the dominant region (key of D) is never fully realized, in order to create a weakened sense of tonality. Viewed from this perspective, the opening prolongation of the home-key between *Waltzes 1* and *3* evolves to become a large-scale dominant to the new interior key of C major (*Waltz 4*). Once the home-key of G is abandoned, but not entirely forgotten, it is further undermined by a falling thirds approach from *Waltz 5* forward. Thus, at the level of large-scale structuring, the *Valses nobles* do not rely on the tensions created by articulation of tonic and dominant tonalities; instead, it takes a Schubertian approach to modulation. In contrast, at the level of individual waltzes, tonic to dominant, or dominant to submediant cadences define the inner divisions. *Example 2:5* summarizes the basic approach to proportioned phrase structuring and illustrates a co-functioning of musical elements within each of the waltzes.[4]

Example 2:4, Valses nobles, tonal arch



Key:	I (G)					VI (E)							I
Waltz:	1		3	4		5		6	7		8		
Bar:	1		1	7	15 (45)	4		16	19	(67)	1	40	

Example 2:5, Valses nobles, structure of individual waltzes

Waltz 1		*A*	*A'*	*B*	*A"*	*A*
form	Intro	*a*	Transition (Intro'/a')	*b*	Intro/5ths	Intro
phrase	4	6+6+4 (6+4+6?)	2+2+4; 1+1+2	2+2+2 (X 2)	4+2; 2+2+2+4	4, 6+6+4
comments			2:1 sequences	1:1 sequences	5ths expansion	
key	G	G	f, a♭, V/E (bar 32)	E C♯/G centre	?	G
bars	1–4	5–20	21–32	33–44	45–60	61–80

Waltz 2	*A*			
form	Intro/ ritornello	*a* theme	Intro/rit.	*b*/*c* motifs
phrase	2+2+4	4+4	2+4+2	2+2,4
comments	m7 intensity			
key	? to V^{7}/g	i–(III)	...to V^{7}/B♭	B♭ (III) to V
bars	1–8	9–16	17–24	25–32

Waltz 2 (continued)	*A'*			
form	Intro/rit.	*a*	Intro	*b*/*c* motifs
phrase	2+6	4+4	2+4+2	2+2,4
comments		major (+6 color)		
key	? to III^{9}	I to iii(+)	? to V^{7}/E♭	E♭ (VI) to I
bars	33–40	41–48	49–56	57–64

Waltz 3	*A*		*B*		*A'*
form	*a*	*b*	*c*	(*c*)	*a*, (*c'*)
phrase	2+2+4 (X 2)	4+4 (X2)	4+4	4+3+4; 5	4+4; 2+4+2
comments	extended cycle of fifths	(extended cycle of fifths)	M3 shift up from D to F♯	B pedal	M3 shift down from B
key	e (vi/G)	V/D (A), D pedal	F♯ (V/V)	B=V/E	G
bars	1–16	17–32	33–40	41–51; 52–56	57–72

Example 2:5, Valses nobles, structure of individual waltzes (continued)

Waltz 4	*A*	*B*		*A′*
form	*a*	(*a*)	(*a*) (*a*)	(*a*)
phrase	6+2 (X 2)	4+4	3+3+6	10
comments	deceptive cadence to C major	modulatory	fifths cadence (bar 31)	
key	A♭ (or f?) to C major	(C: to F♯= V^7/B)	B pedal= V/E	E (or c♯?) to A♭
bars	1–16	17–24 47–54	25–36 55–66	37–46 67–76

Waltz 5	*A*	*B*		*A′*
form	*a*	*b* (hemiola melody)	(*a*)	(*a*)
phrase	4 bar phrases (X 4)	4	4+4	4
comments	enharmonic M3from A♭ of *Waltz4*		thematic return (bar 25)	
key	$E^{6/4}$, C ($am^{6/5}$?), e	($F♯^{6/4}$?)	$A♭^7$ (bar 24=V^7/D♭) Enharmonic shift–C♯ (= V/V of B^7) C♯ appoggiatura chord to B (VI of e) B^7 in bar 27 = V^7/E	E
bars	1–16	17–20	21–28	29–32

Waltz 6	*A*	*B*	*A*
phrase	8 bars (X 2)	6 (X 2); 4 (X 2); 2+2+4	8 bars (X 2)
comments			literal repeat of *A*
key	C	g, a, F♯ pedal	C
bars	1–16	17–44	45–60

Example 2:5, Valses nobles, structure of individual waltzes (continued)

Waltz 7	*Intro*	*A*		
phrase	4+4+8	14 bars = 4 (2+2)+3+ 5+2	2+3+3	4 bar phrases (X 6) + $3^{2/3}$
comments		Augmented V/A (bar 18) hemiola lead-in (bars 17–18)	sequential	sequential extended *crescendo*
key	C pedal	A major	fifths cycle	coincides with fifths cycle
bars	1–16	17–30 111–122 (literal repeat of *A*)	31–38 123–130	39–66 158

Waltz 7 (continued)	*B*			*A* (bar 111)
phrase	4 bar phrases (X 3)	4 bar phrases (X 3)	$4+3^{1/2}+2+2$	9
comments	ambiguous mediant relationship hemiola/duplet cross-rhythms start of extended *crescendo*			hemiola transition
key	F (bar 67); v^7/G (bar 78)	G (bar 81); v^7/A		*decrescendo* continuation
dynamic	*pp*	*p*	*mf–ff*	
bars	$66^{2.5}$–78	$78^{2.5}$–90	$90^{2.5}$–101	102–110

Waltz 8	*A*			
form	*a*	*a*	*a*	*a*
phrase	2+2+4	2+2+4+4	2+2+4	2+2+8 (8=4+4)
comments	fifths motion (down: see bars 4–5)	thirds motion/ fifths resolution	thirds motion	thirds motion/ fifths resolution
key	C outline (bar 8); A pedal	B major (bar 20)	G pedal	eventual resolution to G (bar 40)
bar	1–8	9–20	21–28	29–40

Example 2:5, Valses nobles, structure of individual waltzes (continued)

Waltz 8 (continued)	*B (Transition)*	*A'*	*B' (Transition)*	*A"*
form		*a*		
phrase	2+3	2+2+(5)	2+2+3	2+2+(6: (2+4))+3
comments	fifths motion (E♭, B♭, F♮)	G pedal	G pedal (E♭?: see bar 61)	
key	G pedal; bars 44–45 (G^7=V^7/C?)	E♭= III/c (bar 54)	c (?)	C♯ tritone resolution to G (bars 71–72)
bar	41–45	46–54	55–61	62–74

Ultimately, the overall key of each waltz has a tonal function as part of the cycle built from the weakened tonic. This suggests that the piece 'should' be played in its entirety. Conceivably, several of the waltzes may also be played together as a small group—the writer once attended a concert in Hawaii where Noël Lee played two or three of the waltzes as an encore at the end of his programme. However, this will not work in every instance; several of the *Waltzes* do not begin or end in the same key (e.g. numbers *4* and *7*), and the performer will have to choose a progression of keys that makes sense musically. Conceivably, *Waltz 8* may also work by itself; the G centre at the opening is 'stable' to the point of standing on its own, although without an understanding of the motivic borrowings which form the basis of this waltz, *Waltz 8*, out of context, may seem confusing to the listener.[5]

Return to large-scale functioning

The discussion above has illustrated formal and tonal features of the *Valses nobles*; however, Ravel's tempi indications and localized expression markings have not been factored in. Because of this, it is not possible to deduce or predict the proportional element solely from the score. As *Example 2:6* illustrates, if the length of *Waltz 1* is estimated from Ravel's metronome marking, this produces a result that is 'somewhat' close to performance. Conversely, if *Waltz 2* is considered in the same way, the finding is not reliable. Ultimately, it is the summation of tempi changes, realized in performance, which influence the listener's perception of large-scale shapes over extended periods of time. Performance consequently calls into question

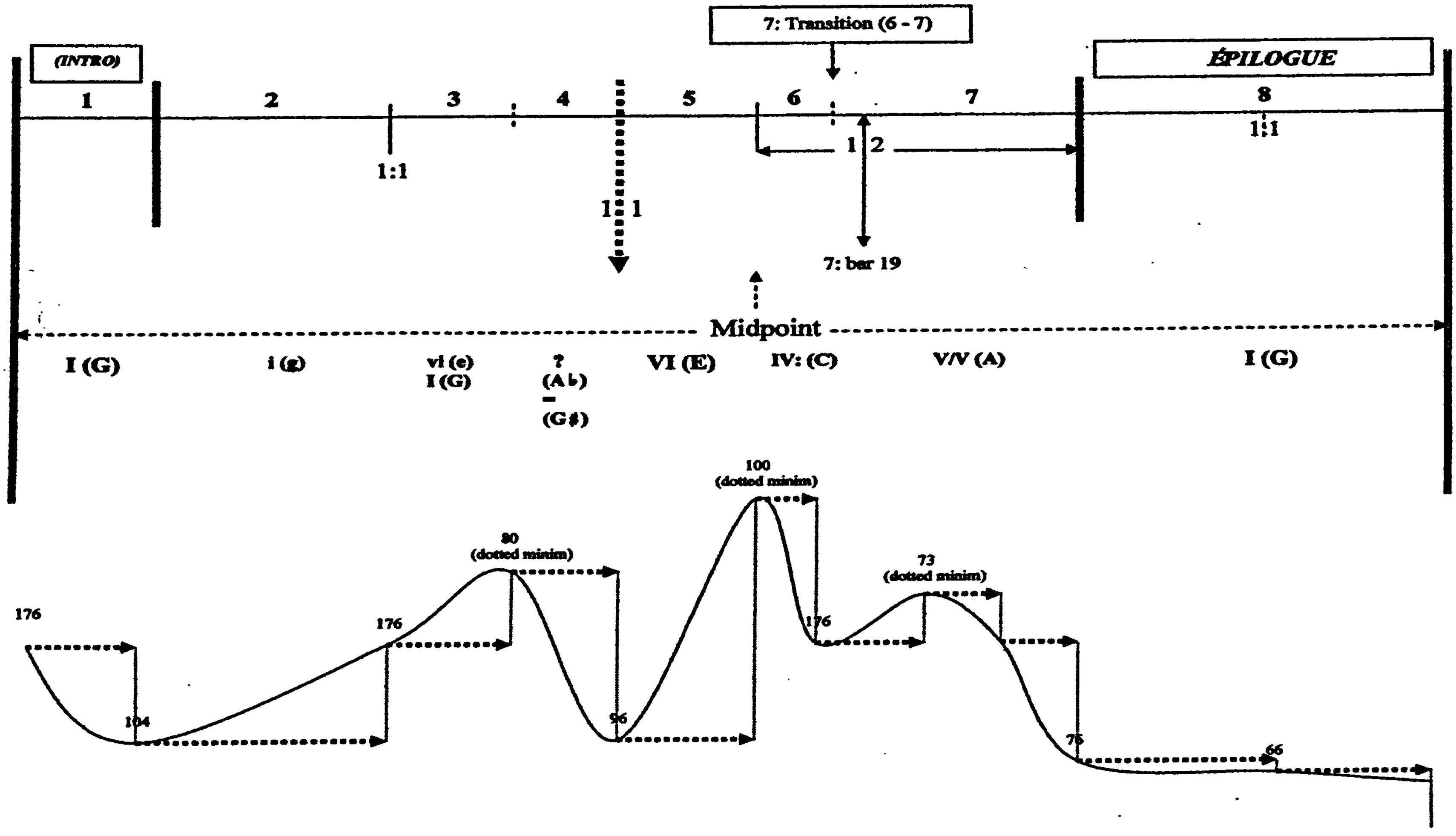
the efficacy of relying on the score alone for such measurements, particularly in a piece without a common pulse.

Example 2:6, Valses nobles, score versus actual performance timings

***Valses nobles*: notated metronome marking**	**Projected neutral time in seconds**	**Actual time in seconds (Dominique Merlet recording)**
Waltz 1, ♩=176	81.81816 seconds	86 (Merlet takes several seconds of pause between waltzes 1 and 2)
Waltz 2, ♩=104	110.76921	150
Waltz 3, ♩= (144–176?)	73.636344	82
Waltz 4, 𝅗𝅥.=80	57	70
Waltz 5, ♩=96	60	86
Waltz 6, 𝅗𝅥.=100	36	45
Waltz 7, ♩=(Howat: opening, ♩=208; *B*, 𝅗𝅥.=ca. 80*)*	?	164
Waltz 8, ♩=76/66	182.94256	243 seconds

In order to solve the difficulty of determining how each waltz relates proportionally, not only to each other, but across the entire piece, Dominique Merlet's performance was analyzed in order to create a visual representation (*Example 2:7*).[6] Reading from top to bottom, the upper numbers correspond with each waltz, and the tonal level is underneath. In the lowest portion, the dots characterize minor fluctuations within a general tempo and the curved line connects the dots (as it were) to give the reader a quick sense of this flow.[7] Several conclusions were then inferred; firstly, the comparative length of each waltz is determined in performance by the realization of tempo markings. Secondly, the extended time of the *épilogue* makes sense musically because it is scaled according to the midpoint of the tonal and tempi layers. Thirdly, the grouping of waltzes is at odds with the tonal process. Ultimately, it appears that the large-scale tensions of the *Valses nobles* are created through an asymmetrical layering of structural levels.

Example 2:7, Valses nobles, proportional representation



Conclusions: interpretative stances

The discussion below illustrates two approaches to interpretation, one which relies on the score alone and the other which includes performance. In the first instance, if proportion is not taken into account, the *Valses nobles* can be projected as a large-scale ternary form. Hence, time would be taken between *Waltzes 1* and *2*, *4* and *5* and between *7* and *8* in order that the groupings described above are made apparent to the listener (*Example 2:8*). The performer thus presents the idea of an *introduction* that is subsequently balanced at the outer end (by the *épilogue*) with a sentimental waltz articulating the beginning of the interior divisions (*Waltzes 2* and *5*).

Example 2:8, Valses nobles, ternary form and temporal articulation

Introduction	*A*	*B*	*C*
Waltz 1 (Break)	*2, 3–4 (Break)*	*5, 6–7 (Break)*	*8*

A second option purposely envisions a negotiation of structural layers across patterning, tonal process and proportion. Under this option, the *Valses nobles* are heard as a large-scale binary form. In the first instance there is not a break between the first and second waltzes due to the fact that there is no *fermata* at the end of *Waltz 1* (this point is taken up in detail below in Chapter 3). If the performer then imagines E major extending to the end of *Waltz 5*, this allows the interior waltzes (*Waltzes 3–5*) to coalesce as a larger entity by allowing continuity of tonal process over the break of pattern at the end of *Waltz 4*. This assumes that the performer does not take an undue amount of time between *Waltzes 4* and *5*. Two recorded examples illustrate this point—*Waltz 4*, bar 47 to the end of bar 16 in *Waltz 5*; Dominique Merlet (*track 1*: 1990/1991); Jean Yves Thibaudet (*track 2*: 1992).[8] Consequently, the notated expression markings at the end of *Waltz 5* imply that this is the defining structural moment—the formal articulation is not at the end of *Waltz 4*, where the merger of *Waltz 3* and *Waltz 4* ends. Because *Waltz 4* does not have any indication of *ritardando* or the word '*long*' over it, the *fermata* on the second beat of bar 76 is a short pause, versus the combined slowing and fermata at the end of *Waltz 5*. Finally, the performer continues on from the end of *Waltz 7* to the beginning of *Waltz 8*, keeping in mind that this too is a short fermata. Thus, the piece has become suite-like and the combined introduction of *Waltzes 1* and *2* proportionally breaks the first

half into a binary division between *Waltzes 2* and *3*; *Waltz 5* has the central weight because it is set in relief by itself (see *Example 2: 9*)

Example 2:9, Valses nobles, ternary form and temporal articulation

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

Ondine (1908)

Introduction: interpreting Bertrand's poetry

Ravel's placement of Brugnot's single verse and Bertrand's poem at the head of *Ondine* invites the performer to interpret the poetry in order that the listener may sense the overall mood during performance. In the preface to the Peters edition, Roger Nichols suggests the following:

It is surprising, perhaps, with all the extra-musical associations to be found in Ravel's piano music—visual ones in *Miroirs*, historical ones in *Valses nobles et sentimentales* and *Le tombeau de Couperin*, not to mention the problem-solving in *Menuet sur le nom d'Haydn*—that only four of his piano works seem to have had direct links with literature. Three of these ('Habanera' from *Sites auriculaires*, *Jeux d'eau* and *Valses nobles et sentimentales*) bear no more than a brief epigraph. *Gaspard de la nuit* is therefore unique among them, not only in taking its title from a collection of prose poems by Aloysius Bertrand, but in being shaped, albeit loosely, by the three poems chosen from the collection by Ravel, which are printed in full at the beginning of each piece in the first edition (Nichols, 1991: 4).

The pianist Angela Hewitt has offered one possible interpretation:

[After the introductory ostinato figure] Ondine's murmured song then makes its entry, tender and melancholy. There is a sense of gradual awakening which is typically Ravelian. The fortissimo passage which is the climax [bar 66] must correspond to the phrase, 'And, because I replied that I loved a mortal'. You can then hear Ondine shedding a few tears in the right-hand solo before the last page [bars 84–87]. Then comes her burst of laughter and sudden disappearance [bars 88–end]. It is a poem as much in music as it is in words (Hewitt, 2002).

Both Nichols and Hewitt seemingly agree that there is a general relationship between Bertrand's poems and Ravel's music. Hewitt's remarks also imply that Ravel has taken a non-chronological approach, since the climax of the poem is found in stanza 5, versus the musical climax at bar 66, which comes at approximately two thirds of the way through the piece.

Alternative textual interpretations: examples

Like Hewitt, each pianist will have their own insights into the creation of an interpretative narrative as they attempt to see the poetry reflected in the music. Hewitt's climax could just as easily have been read as the vision of the palace (stanza 2), and the musical sequences leading to this new section may be a tone painting of waves, with less dramatic undertones than Hewitt suggests. The lowest note of the piece comes at the beginning of bar 66 and can refer to either her father or the depths of the lake in the 'triangle of fire, earth and air'. Further, the juxtaposition of black and white glissandi (bars 72–75[1]) does not appear to be the portrayal of someone who is sulky and vexed, instead it may represent the sensuous reflections of light off the *moiré* patterns.[9] (If one accepts Hewitt's liner note interpretation one also has to concede that *Ondine* doesn't understand she has been denied until bar 84.) This cinematic splice of pitch collections between bars 74 and 75 may alternatively be thought of as the nexus for helping the man decide between the allure of *Ondine* and the mortal woman. The passage from bars 80–83 can be where *Ondine* finally asks the question and demands a definitive answer. This image is associated with the dominant harmony and the listener's expectation of closure. This particular phrase is also recitative-like with the monophonic texture stripped of its harmonic accompaniment. Without the man indicating anything verbally, his body language would communicate to *Ondine* that he is not going to be seduced, with her subsequent disappointment represented by the falling half diminished chord in bar 83. Bar 84 would then be where *Ondine* expresses the pretence of emotional detachment before the final outburst of laughter in the cadenza.

Literalist approach to interpretation

The examples above have attempted to demonstrate that there are multiple perspectives from which a programme can be determined. Performers will naturally do this, especially if they are talking to a group of non-musicians (e.g. liner notes as in Hewitt's case), or, because it may seem more imaginative to envision this aspect, rather than taking a formalist approach. Without abandoning the ideas above, the following discussion suggests an alternative way of interpreting this piece by proposing the addition of a structuralist element in order to determine the exact placement of stanzas within the music. This preliminary point of departure suggests that the formal proportions relate to the sectional divisions and to each of the poetic verses. Once the pianist has realized this as an interpretative possibility, the animation of ideas can be further refined in performance. Ultimately the construction of a musical narrative may be beneficial to the performer; the discussion below is intended to place the poetic elements into a larger context, namely proportional patterns within the music.

Introduction to formal outlines

In suggesting several programmatic interpretations above, the underlying implication has been that Ravel chose a direct or literal connection between the poetic text and his musical form. Ravel's *Ondine* has either 5 or 6 sections depending on whether Brugnot's verse is included and this point is taken up in more detail below. Further, the larger musical sections may be based on several stanzas of text grouping together. At first glance there appears to be one direct element of return and this includes the refrain at the head of the poem—'Listen! - Listen!'—and its literal repetition at the beginning of the third stanza. The form might then be thought of as *ABA'CA"* (*Example 2:10*). While the meter is necessarily fluid and contributes to a lack of periodic phrase structure, the sections are distinct and thematic elements are concomitant with harmonic structure to serve as a means of articulating the different stanzas of text. Of interest is the limited size of section *B* in relation to the rest of the work and this point is discussed below. At a different level, listeners may not immediately hear this piece breaking into the sections described in *Example 2:10*, instead perceiving it as through-composed. Given this set of listener's

expectations it was determined to investigate whether this piece exhibits any features of Golden Section (GS) proportioning.[10] GS structuring would thus support the idea of a composer intentionally creating an abstract form that masquerades as through-composed in order to suggest an element of improvisation. This prompted the further idea of determining whether or not proportions shed additional light on the relationship between text and music.

Example 2:10, Ondine, formal divisions

	A	*B*	*A'*	*C*	*A"*
stanza:	1	2	3	4	5
centre:	C♯	G♯	D♯	B	G♯=V/C♯
bar:	1	32	42	66	80

GS measurements

The first aspect of completing a GS analysis is accurately measuring the constituent parts. Not surprisingly, this also relates to one of the technical difficulties of playing *Ondine*. Pianists often struggle with the memorization of Ravel's music because seemingly insignificant repetitive patterns change ever so slightly. Angela Hewitt has made the following observation:

> The way in which Ravel evokes the shimmering moonlight on the lake is a stroke of genius. The repeated chords that open in the right hand have a tongue-twister of a rhythm that is enough to put off many a player from going any farther. Yet it all has to sound so easy! We know from testimony left by his students that Ravel was more concerned with the effect rather than the individual notes—but it's nice to have both! (Hewitt, 2002)

One of the students referred to in the quote above is probably Paul Layonnet who remembers Ravel as saying: 'If you don't count the exact number of rhythms in the opening figure, it doesn't matter.'[11] The simple cause of this un-necessary angst is often reduced to faulty editing—the intended notes or rhythms were not conveyed accurately from composer to publisher. *Ondine* represents one such case (see *Example 2:11*) and a similar example can be found in *Une Barque sur l'Océan*.[12] Although Ravel's comments may be psychologically comforting to performers, it is the counting of crotchets that is of primary importance to the analytical

understanding of Ravel's music. The discussion below demonstrates that the musical proportions can be imagined as being directly related to the individual stanzas of Bertrand's poem. In turn, the overall dimensions emerge from this combined structuring of GS and symmetrical relationships.

Example 2:11, Ondine, ostinato pattern, editions compared

Peters	**Dover**
Bar 1/2 - 3	***Bar 1/2 - 3***
xyxx yxxy	xyxx yxxy
Bar 4	***Bar 4***
xyxx yxxy	xyxx yxxy
xyxx yxxy	*xyyx yxxy*
xyxx yxxy	*xyyx yxxy*
xyxx yxxy	*xyyx yxxy*

Measurements: bars 1–65

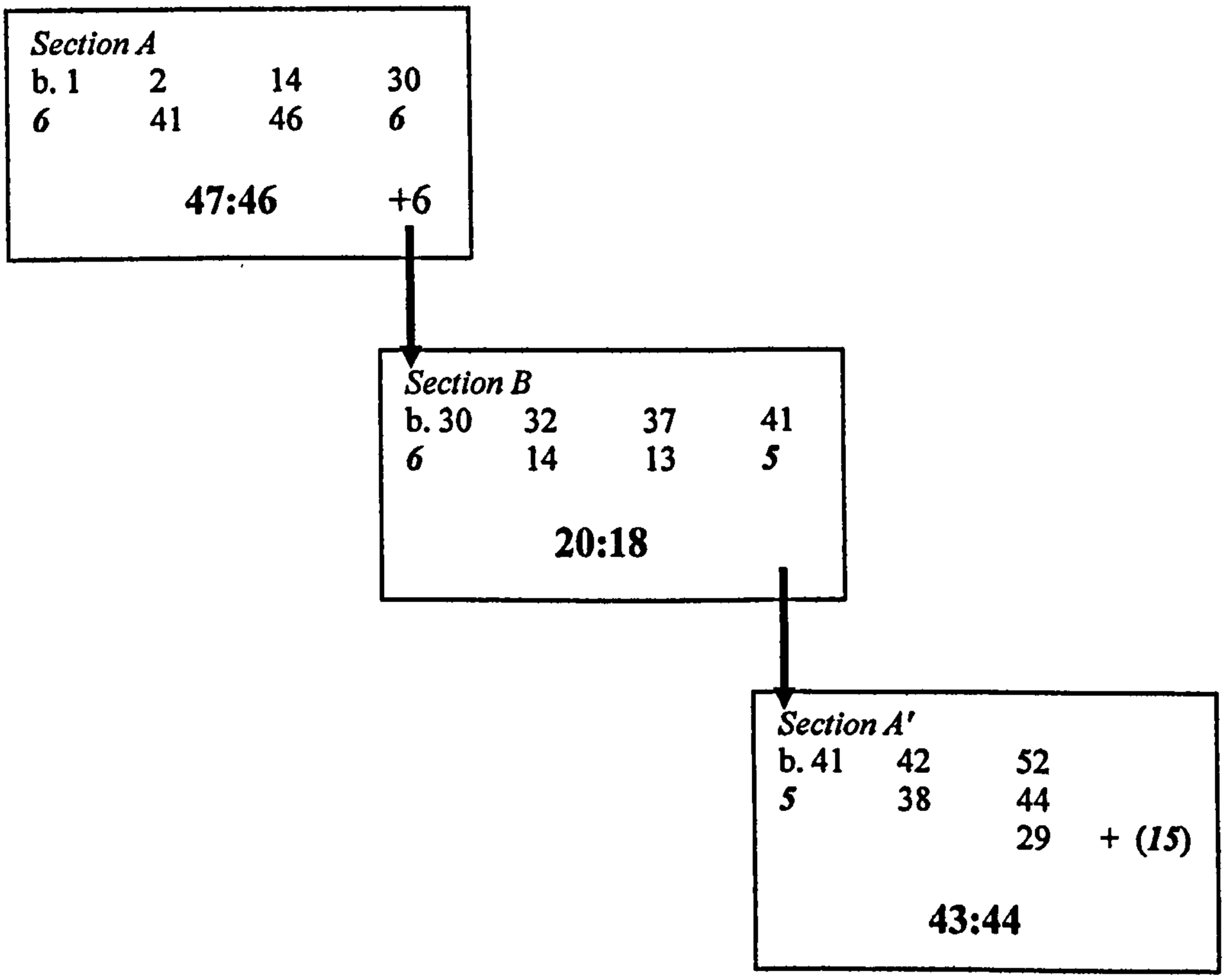
In contrast to the proportions of the *Valses nobles* which were measured in 'time', it is possible to measure portions (but not all) of *Ondine* by the score; the pulse stays constant over the course of 65 bars, and this amounts to 213 crotchets. From the start of the piece to the end of *A'*, the stanzas, choice of keys and placement of themes coincide with GS divisions. Bar 42 is the exact point of GS leading up to the central dynamic climax at bar 66 and corresponds with the one element of return in Bertrand's poem, ' - Listen! - Listen! - '. Ravel associates this with a resumption of *Ondine's* melody. Although the key of bar 42 is different than that of the beginning (bar 2), it uses the exact set of melodic pitches from bar 8. The second point of GS (*A* to the end of *B*) is bar 32, where a new theme corresponds with the second stanza: 'Each wave is a water-sprite swimming in the current...'

Elisionary crotchet ostinato

In terms of this broad overview, sections *A* to the end of *A'* are framed by an introductory ostinato figure of either 5 or 6 crotchets, which is a component of a

larger, extended additive pattern. The ostinato harmonies of the right hand serve as either an ending for the former section or as an introduction to the new section. *Example 2:12* suggests a third approach, which is to think of the ostinato figure as elisionary; it serves the dual purpose of ending and beginning each new stanza of text.

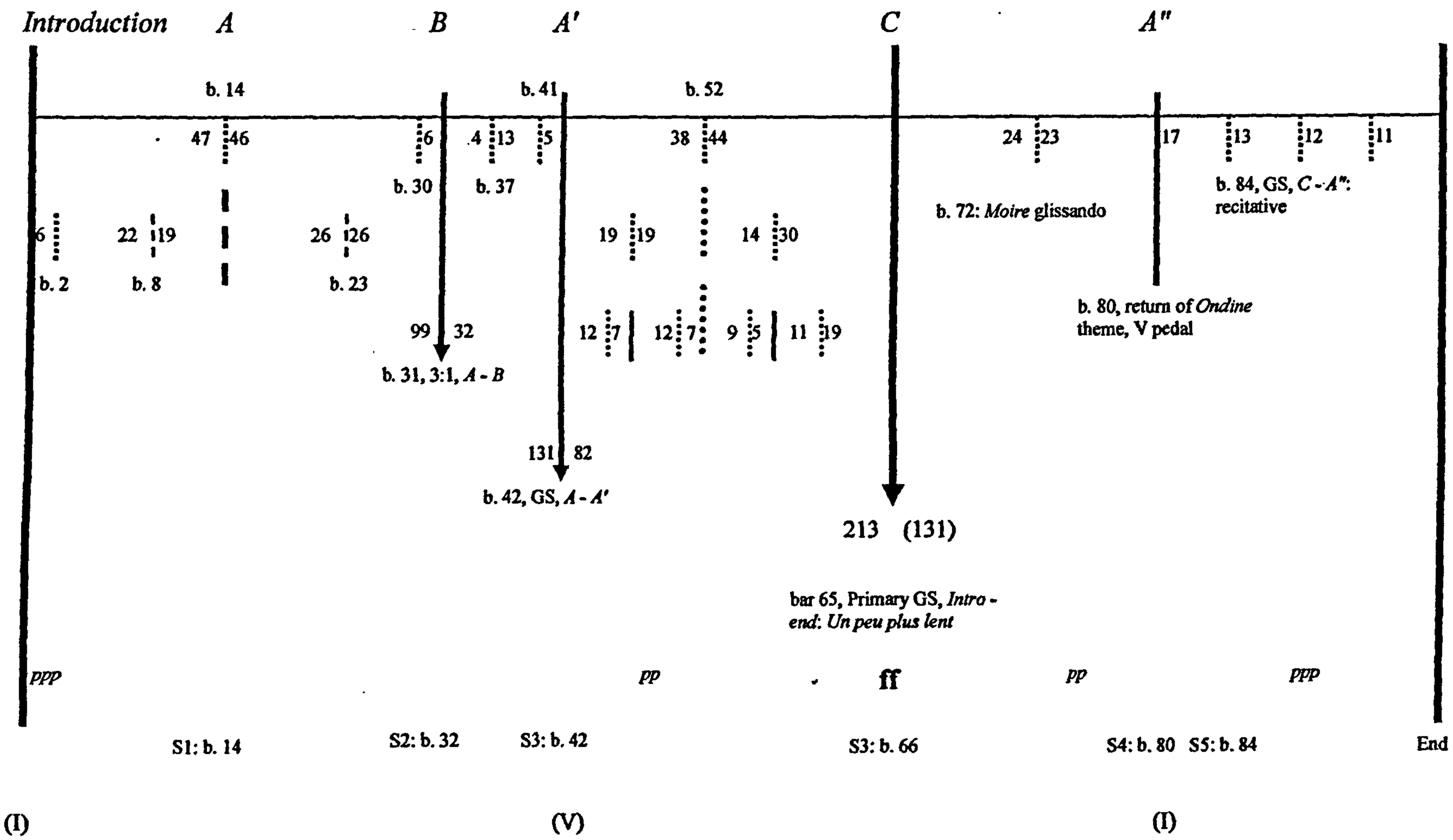
Example 2:12, sections A–A', elisionary frame of symmetry



GS proportions: difficulties of measurement

If all of *Ondine* is built from GS proportions (as in the first 65 bars), this suggests that the remainder of the piece, sections *C* to the end of *A"*, would have to be the equivalent of approximately 131 crotchets (213 multiplied by .618 yields this figure). As illustrated in *Example 2:13* the notated crotchets do not add up to this figure. The main difficulty of measurement lies in determining how the *Un peu plus lent* at bar 66, the *Encore plus lent* at bar 72 and the *au Mouvt (Un peu plus lent qu'au début)* at bar 75 affect the overall proportions. Additionally the *Très lent* at bar 84 and the tempo fluctuations of the cadenza (bar 88) make it problematic to deduce precise measurements of crotchets from the score alone. In order to solve these

Example 2:13, Ondine, GS relationships



difficulties, two performances by Merlet and Thibaudet were analyzed to determine how the proportions of these particular sections can emerge in real time (see *Example 2:14*). *Example 2:13* was created from Merlet's percentages. Of the two performers, his was extremely precise in terms of the large-scale GS divisions and his timings coincide with the formal divisions previously discussed. *Example* 2:*15* illustrates this point by comparing how accurate each performance was to the GS structure.[13] The differences in total performance time between each performer are probably accounted for by choice of tempi, with Merlet being faster at approximately m.m. = 57 for the crotchet (this is quite close to Ravel's notated marking of 58).

Example 2:14, Ondine: timings of Merlet and Thibaudet compared

Dominique Merlet: 365 seconds	***% of total (rounded)***	***Jean Yves Thibaudet: 383 seconds***	***% of total***
Bar 1, section *A*: 104 (seconds)	28	108 (seconds)	28
Bar 32, *B*, 33	9	34	9
Bar 42, *A'*, 88	24	91	24
Bar 66, *C*, 66	18	71	19
Bar 80, *A"*, 74	20	79	21
(Bars 80–83): 20	5	24	6
(Bars 84–87): 18	5	23	6
(Bar 88): 19	5	16	4
(Bar 89): 17	5	16	4

Example 2:15, Ondine, GS performance timings

Merlet (365 seconds)	**Thibaudet (383 seconds)**
A. Primary GS (bars 1 to end of piece): 225 seconds:140 seconds B. Sections *A* to end of *A'* = 225.57 seconds which is within one half second from the start of section *C* C: Bar 66 is culmination of extended dynamic contrast begun in the buildup from bar 52.	A. Primary GS: 237:146 B. Sections *A* to the end of *A'* = 233, which is within 4 seconds (rounded) from the start of section *C*

Example 2:15, Ondine, GS performance timings (continued)

A. GS (*A* to the end of *A'*): 139:86 B. Sections *A–B* = 137 seconds which is within approximately 3 seconds from this exact point of GS and accounts for a percentage difference of less than 1 percent	A. GS: 146:91 B. Sections *A–B* = 142, which is within 4 seconds from this exact point of GS and accounts for a percentage difference of less than 2 percent
A. GS (*C* to the end of piece): 87:53 B. 87 seconds is within one second of Section *C* (66 seconds) and the first 20 seconds of *A"* C. The beginning of bar 84 corresponds with the 5th stanza of text—*Ondine's* recitative	A. GS: 90:56 B. Sections *C* = 71 seconds and the first 19 seconds of section *A"*

Empirical performance data

Example 2:16 illustrates how the measurements from section *C* to the end of the piece are different than the crotchets notated in the score and provides additional insights into the selection of performance tempi if GS proportions are to emerge in performance. Thus, values in the fifth column which are labeled with a positive sign (+) means the pianist has slowed down over the course of the section and *vice versa* for negative (-) values.

Preliminary interpretative conclusions

Expression markings: effect on analytical findings

Several conclusions are now presented and the implications of these ideas are likely to inform performances of the future. Firstly, performers may question whether the *Très lent* marking at the beginning of bar 84 is prescriptive or descriptive; according to Merlet's interpretation, it is 'descriptive'. The timings of his performance suggest that this passage is essentially the same tempo, although slightly slower than the preceding section (bars 80 to the end of 83). (If Merlet is correct, this also helps the performer to realize that the *au Mouv*^{t} at the beginning of bar 75 is still in effect and is slower than the tempo found at the beginning of the

Example 2:16, Ondine, relationship of performance and notation

Section	Notated Crotchets	Performance Timing (seconds)	Equated Crotchets at ♩=58	Differences between equated and notated crotchets accounted for
A	99	104	100.53333	+1.53333 crotchets A. bar 29:*un peu retenu* B. bar 21: *Cédez légèrement* (?)
B	32	33	31.900001	-.099999 crotchets A. Performer likely sped up: negligible
A'	82	88	85.066671	+3.06667 A. Bar 65 is almost 2X as long as normal? B. *Retenez* at bar 65
C	47	66	63.800003	+16.800003 A. *Un peu plus lent* in bar 66 B. *Retenez* in bar 71 C. *Encore plus lent* in bar 72
A", bars 80-83	17	20	19.333334	+2.333334 A. Performer slowing? B. Extended time leading into bar 83?
bars 84-87	13	18	17.4	+4.4 A. *Très lent*
bar 88	24	19	18.366667	-5.633333 A. *Rapide et brillant* (pianist must speed up)
bar 89 to end	11+	17	16.433334	+5.433334 A. Fermata at the end of the piece

piece.) This further suggests that the performer does not need to slow down appreciably at this moment; for the listener, it will feel as if the motion is slowing anyway—bar 84 is notated in crotchets and quavers in contrast to the demisemiquavers of bar 83. In terms of the proportions, this passage illustrates the value of measuring time as opposed to 'predicting' crotchet pulses—it is more accurate. In actual performance, bars 84–87 are perhaps a little bit slower, but not much; by the score, bars 80–83 have 17 crotchets versus bars 83–87 which have 13.

Cadenza

The cadenza (bar 88) has 24 notated crotchets and is approximately the same temporal size as bars 80–83 and 84–87. The pulse of this section is likely a bit faster, perhaps even as much as two times the rate of the proceeding recitative; 24 notated crotchets are quite close to 26, and this is the exact double of bars 84–87, which has 13. Finally, Merlet's choice of performance tempi has called attention to Ravel's expression marking at bar 66. If Merlet is right, then the tempo relationship between sections *A'* and *C* suggests that *C* is approximately 3/4 the tempo of the previous section. Along this line of reasoning, this slower tempo would account for the largest number of additional crotchets in section *C*. Additionally the *augmentez* marking at bar 62 would appear to be a *crescendo* and not an *accelerando* as the dotted line continues through to the end of bar 65. Ravel likely offers the *Retenez* marking at the end of this section in order to emphasize the climax and change of tempo at bar 66 and the performer may think of this section as an *allargando*.

Symmetries: architecture builds from GS points

Having concluded that *Ondine* is constructed from proportions, the following discussion illustrates aspects of symmetry in relation to the GS divisions (see *Example 2:13*). Within section *A* (bars 1–31) the most direct division is at the end of bar 13. Earlier it was suggested that Brugnot's verse might also be reflected in the music and the change of texture at bar 14 may provide the impetus for thinking of the first 47 crotchets as the '...vague harmony casting a spell over [the man's] slumber'. Thus, the addition of the arpeggiated melody may be where Bertrand's poetry begins

(see *Example 2:13*; S1= stanza 1, etc.). In turn, the section from bars 14 to the end of 31 divides perfectly to correspond with the first and second halves of the first stanza.

This addition of the octave melody at bar 14 possibly portrays the image of *Ondine* brushing drops of water on the 'vibrant panes' of the man's windows. At the joint of the glissandi (bar 22) and the rippled water (bar 23) the scene changes to illustrate the pulsations of the starry night and is allied with the text of stanza 1 after the semicolon ('...and here, in a robe of watered silk, is the lady of the castle who, from her balcony, gazes at the beautiful, starry night and the beautiful, sleeping lake'). Having discovered the proportional element, the formal outlines can now have a finer point added, namely that section *B* is not overly small in relation to section *A*. The first 28 crotchets of *A* serve as the introduction to the piece (bars 1–7) and this sizing is related by GS proportions[14] to the dimensions of the first large musical division at the end of bar 13. The GS division at this level is additionally a near symmetrical relationship, with 22 and 19 being within two crotchets of the closest musical division.

GS division of bar 41

The next set of larger symmetries surrounds the point of GS for the first 65 bars at the end of bar 41. On either side of this division there is a near perfect symmetrical relationship which extends outward and corresponds with the return of the opening theme. On the left are two nearly identical temporal patterns, bars 30 to the end of 36 (20 crotchets) and bars 37 to the end of 41 (18 crotchets). These extended sequences may represent the periodicity of waves and the eventual finding of the way to the palace at bar 42, with the resumption of the opening melody being an iconic reference to *Ondine*. Thus, the frame of the harmonic ostinato described above (*Example 2:12*) creates a symmetrical relationship on either side of bar 37, and delineates each section for the listener. On the right of the division (bars 42 to the end of 51) there are two extended sequences, which break up into 12 + 7 segments. Each one paints an aural representation of the sisters 'caress[ing] with their arms of spray the cool islands of grass...' (stanza 3). The phrase splices are also related by GS proportioning, with 12 crotchets being a near perfect GS division of the 19 crotchet segment. Bars 52 to 65 are likewise built on a proportioned relationship,

within one crotchet of a near perfect 1:2 ratio that corresponds with the largest dynamic build-up of the piece leading to the GS division at the junction of bars 65 and 66.

Primary GS

Having laid the groundwork for the primary GS at bar 66—this is for the piece as a whole—it is now possible to understand the larger symmetrical patterns as they relate to this all-important climax of the music. On the right of the division are two nearly symmetrical sets of proportions: bars 66–79, and 80 to the end of the piece (bar 80 is the return of *A''*). There are on the left side symmetries created by the addition of the 5 beat elisionary pattern started at bar 41, with bars 41–65 grouping as a larger segment of 43 and 44 crotchets and presented against the 24:23 crotchet segment of bars 66–79 at the slower tempi. Thus, the beginning of the climactic section of the piece starts at bar 52 and the juxtaposition of the white and black note collections in bars 72–75[1] are the symmetrical balancing of this dynamic intensity. With this in mind, the performer can then interpret the juxtaposition of the glissandi as a musical representation of the moiré patterns first described in stanza 1.[15]

Within the sections to the right of the GS divisions the symmetries come into striking focus when considering that the return of the dominant harmony at bar 80 also corresponds with the return of the opening theme, suggesting that the veiled key at this point is actually C♯. Previously bar 84 was described as the point of GS in real time for bars 66 to the end of the piece. The cadenza at bar 88 is then placed within this pattern to balance the glissandi starting at bar 72. Thus, it appears that Ravel has made a conscious attempt to organize contrasting ideas to correspond with the proportions, while at the same time following the chronological ordering of the poetry.

Further implications for performance

Ravel's remark to Paul Layonnet that the rhythms of the opening ostinato figure do not matter seems an ironic statement by a clever composer. It is the exact

counting of the crotchets in this opening figure that helps to focus the answer to the question of a relationship between text and music. The pianist who takes an inordinate amount of rubato within the carefully crafted proportional scheme may in essence upset the larger formal patterning and in turn present a different interpretation of the text than that envisioned by Ravel. A careful reading of Ravel's notation at bar 83 suggests that a performer 'should not' take an extended dramatic pause at the end of this bar—to avoid severing the proportional relationships. Further, according to Perlemuter, Ravel wanted no *rallentando* and only a short pause on the rest[16] and this may be the reason for notating the fermata in the left hand part only. If the performer follows this intention of not taking too much time and keeps within the same basic tempo as the previous section (bars 80–83), then the audience is likely to feel an acute sense of estrangement and detachment, with the cadenza more sinister and furious, because of the abruptness created by this sudden and unexpected shift of mood. The indication of *Sans ralentir* at the end of the piece would thus validate Ravel's suggestion to Perlemuter of playing these bars as though nothing had happened.[17]

Alborada del gracioso (1904–05)

Although Ravel is a French composer, *Alborada* reminds the listener of his affinity towards Spain. Hélène Jourdan-Morhange, in a 1950 radio interview with Vlado Perlemuter, commented on the nature of Ravel's Spanish music:

> The works inspired by Spain renewed in some measure the style of the composer. They led Ravel to react, after his first compositions, against an impressionism from which he wanted to free himself. Thus in the *Miroirs*, after *Noctuelles, Oiseaux Tristes* and *Une barque sur l'océan*, which are all permeated with reflections of sky and sea, *Alborada* arrives like a meteor from its colourful country of origin, with its lashing accents and 'earthy' rhythms (Jourdan-Morhange and Perlemuter, 1990: 24).[18]

Manuel de Falla held that 'Ravel's Spain' was imparted to him by his mother, who was of Basque descent.

The rhapsody [*Rhapsodie espagnole*] surprised me by its Spanish character. . . .But how could I explain the subtly authentic Hispanic quality of our musician, knowing, by his own admission, that he had but neighboring relations with our country, being born near its frontier? I rapidly solved the problem: Ravel's Spain was a Spain ideally presented by his mother, whose refined conversation, always in excellent Spanish, delighted me, particularly when she would recall her youthful years spent in Madrid (Orenstein 1975: 8–9).

In a letter to Ferdinand Sinzig of Steinway and Sons in New York, Ravel explained the meaning of the title:

I understand your bafflement over how to translate the title 'Alborada del gracioso'. That is precisely why I decided not to translate it. The fact is that the *gracioso* of Spanish comedy is a rather special character and one which, so far as I know, is not found in any other theatrical tradition. We do have an equivalent, though, in the French theatre: Beaumarchais's *Figaro*. But he's more philosophical, less well-meaning than his Spanish ancestor. The simplest thing, I think, is to follow the title with the rough translation 'Morning Song of the Clown' ('Aubade du bouffon'). That will be enough to explain the humoristic style of this piece (Nichols, 1995: 7).[19]

Ravel does not specify what this 'humoristic' intent is, although it can be surmised that the song of the jester is either one of celebration or of un-requited love.

Formal outlines

Alborada is a sectioned form, based on a large-scale pattern of contrast and return (*Example 2:17)*. The listener may, at the joint of *B* and *A'*, anticipate a return of theme and tonal centre and this expectation is created from the resumption of the opening dotted-crotchet pulse and from the emphasis of the dominant pedal note to D. Ravel, however, foils the prospect of resolution with an abrupt tritone-shift to E♭ major.

Example 2:17, Alborada, formal divisions

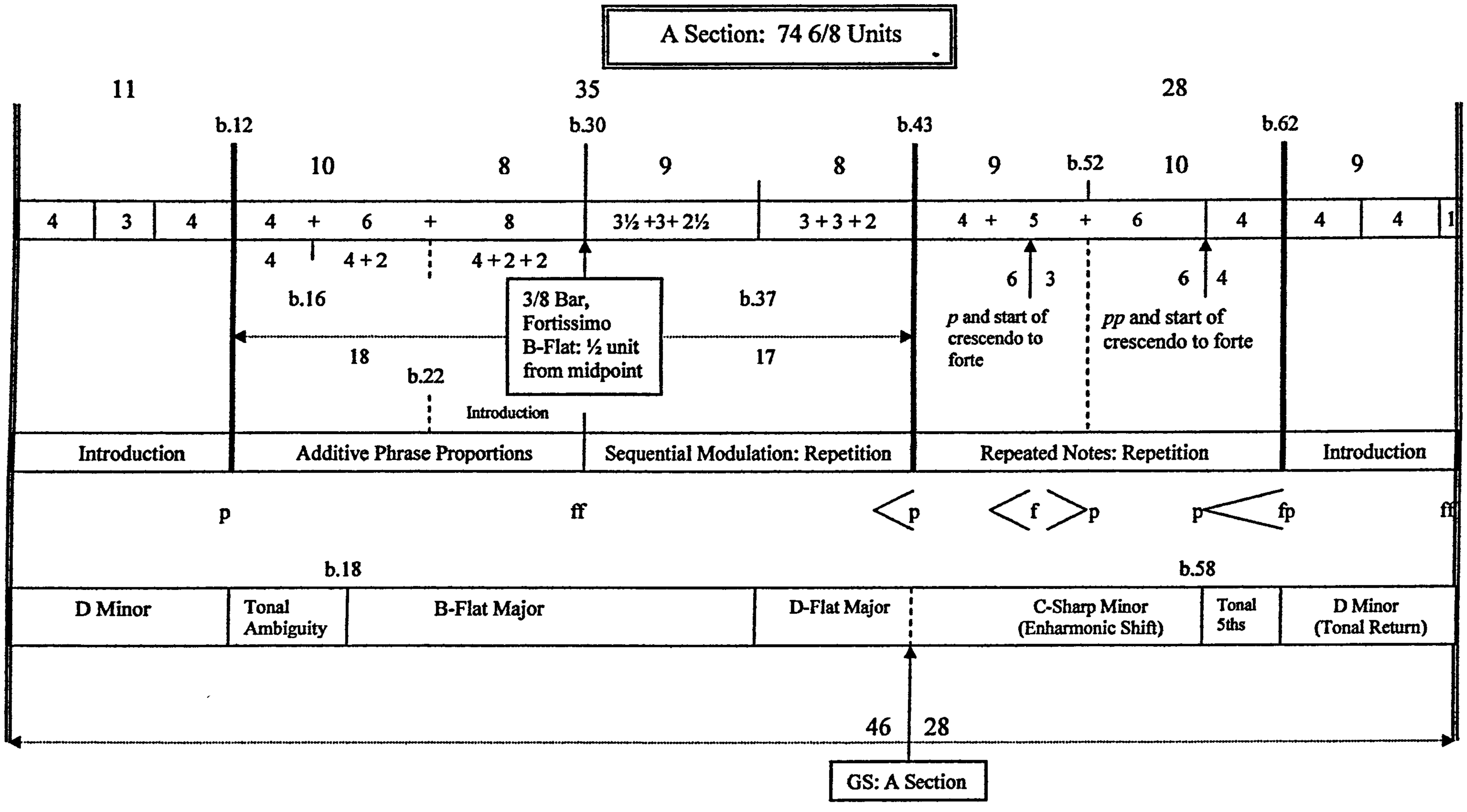
	A	*B*	*A′*
bar:	1	71	166

B: ambiguities of measurement

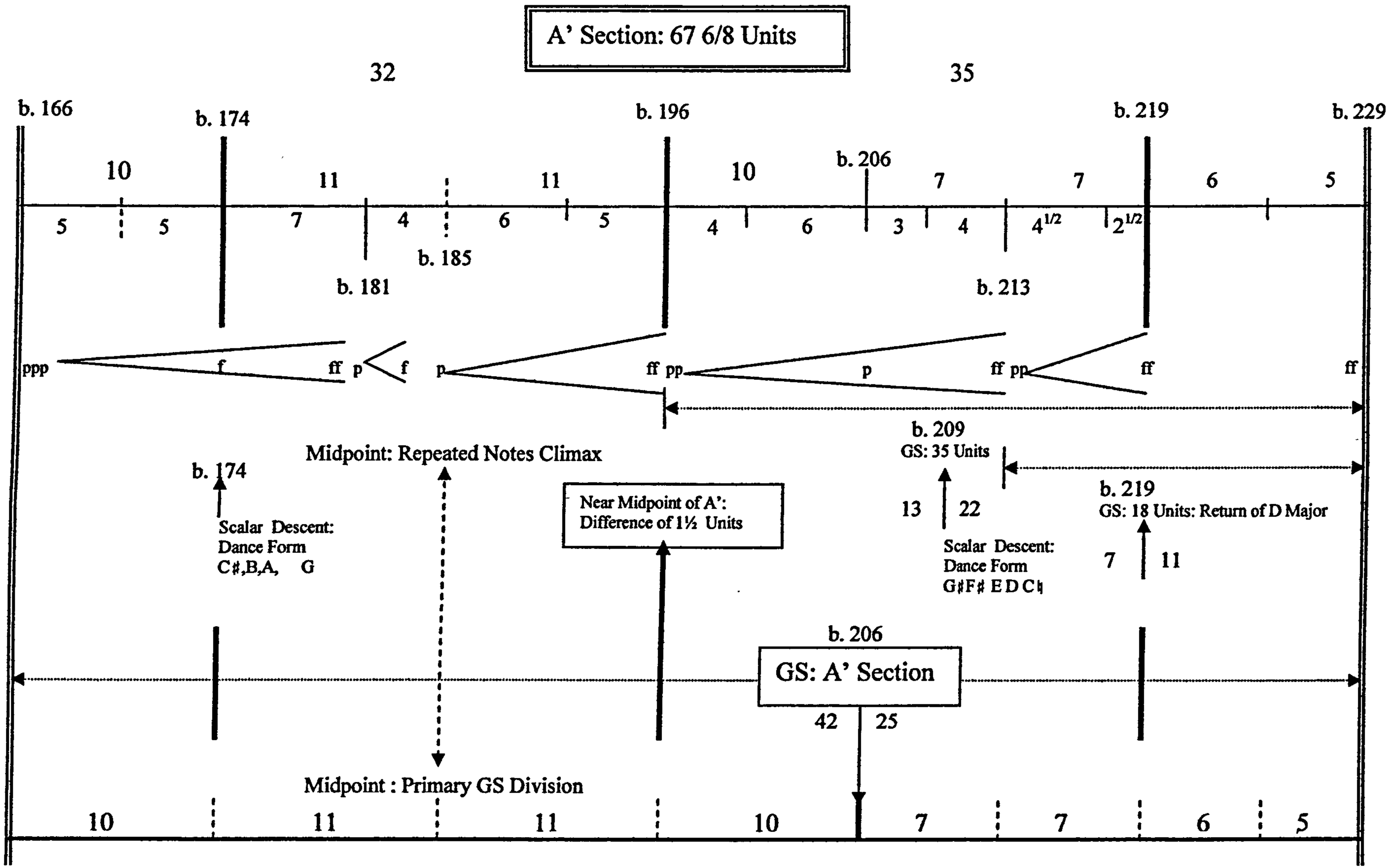
As illustrated in *Examples 2:18* and 2:*19*, the outer sections are constructed from GS and symmetrical proportions; for each section, the tempo stays constant and it is possible to measure this according to 6/8 units (or, by the bar, which is with some exception, the 'lowest common denominator'). Although it is 'tempting' to look for a comprehensive set of correspondences across the entire piece, this analytical approach, if selected, would produce an erroneous finding. The pulse does not extend across the joint of sections *A* and *B*—it is severed at the end of bar 70. Conversely, *B* and *A′* are joined together without a break. Here, it is possible to entertain the notion of a large-scale relationship.[20] Determining an accurate measurement is nevertheless problematic; Ravel did not indicate a specific metronome marking for the recitative material at bar 71. As a result, the temporal size of *B* varies from one performance to the next; hence, measured time will also be considered (this discussion is presented below).

Several recorded examples illustrate different approaches to the interpretation of this passage (bars 71–79[1]). This includes Dominique Merlet (*track 3*), Jean-Yves Thibaudet (*track 4*) and Eugene Ormandy (*track 5*); the writer's performance is also included for comparative purposes (*track 6*). Of the four, Ormandy's is closest to the 'letter of the law'. In his version the mechanized chords are played with exact strictness, in contrast to Merlet and Thibaudet who are slightly freer. If a performer takes a faster tempo for the recitative material, this shortens the proportions of *B*; the top portion of *Example 2:20* illustrates this point. In Merlet's case, bars 71 to the end of the piece represent 73% of the total; for the writer, the proportion is essentially the same—72%. Yet, for Merlet, bars 71–106 are 4% longer than the writer's performance. This point is returned to below.

Example 2:18, Alborada, A section proportions



Example 2:19, Alborada, A' section proportions



Example 2:20, Alborada, B section performance data: Merlet and writer

Dominique Merlet: 375 seconds	***% of total (rounded)***	***writer: 359 seconds***	***% of total (rounded)***
Bars 1 (start of *A*)–end of 42: 60 seconds	16	58	16
Bars 43–70: 41 seconds	11	39	11
Bars 71 (start of *B*)–106: 81 seconds	22	64	18
Bars 107–125: 30 seconds	8	30	8
Bars 126–136: 19 seconds	5	19	5
Bars 137–156: 31 seconds	8	34	9
Bars 157–165: 19 seconds	5	19	5
Bars 166 (return of *A*)–195: 45 seconds	12	47	13
Bars 196–229 (end of piece): 50 seconds	13	50	14

Merlet (375 seconds)	**writer (359 seconds)**
A. *B* to end of *A'*: 275 seconds B. GS of *B*– *A'* in measured time is 169.95 seconds which is approximately 10 seconds or 6 bars before the return of *A'* (at end of bar 160) C. If bar 166 is considered as point of measurement it is closer to a 2/3–1/3 relationship (65.5 : 34.49)	A. *B* to end of *A'*: 262 seconds B. GS of *B*–*A'* in measured time is 161.83 seconds which is approximately 3 seconds or 2 bars before the return of *A'* (in bar 164—isolated V pedal) C. Near perfect GS relationship from start of bar 166 (62.85 : 37.14)

Interpretation: section *B*

The interpretative question is determining whether the juxtapositions of the recitative and mechanized chords are connected or articulated. If time is taken at the end of the chords, for example in the middle of bar 79, this creates the sensation of a cinematic splice. Conversely, a 'literal' interpretation joins the contrasting ideas; there are no breaks. One clue, which potentially answers this question, is found at

bar 79. A crotchet and a quaver rest are placed in the faster tempo at the beginning of the bar, immediately followed by one-and-a-half crotchets at the slower rate. Accordingly, this type of juxtaposition may suggest the possibility of a proportioned pulse relationship.

Performance findings

As illustrated in *2:21*, the tempi in performance for the opening recitative of *B*, ranges from crotchet equals 47 to crotchet equals 65. Although each performer has chosen a different tempo, several generalizations are apparent. For the writer[21] and Merlet, the mechanized chords are nearly twice-as-fast as those of the recitative. For Thibaudet and Ormandy, the mechanized chords are nearly two-and-a-half times as fast as the recitative. Notably, each of the performers avoids an exact half-tempo relationship; intuitively, it may be aesthetically pleasing to the audience if this juxtaposition of tempo is slightly asymmetric. The question of measurement is re-focused by Ravel's tempi indication at bar 75. The quaver here is equal to the quaver of bar 1, and the crotchet-pulse equals 138; or, the dotted-crotchet is 92. If the pianist chooses to follow Ravel's marking with exactness, this relates the pulse of the mechanized chords to the return of the dotted-crotchet at section *A'*.

Example 2:21, Alborada, average metronome markings for recitative and mechanized chords

Bars 71–74 m.m. = ♩/♩.	***Bars 75–79[2]*** m.m. = ♩/♩.	***Bars 166–169*** m.m = ♩/♩.	***GS: B–A'*** Location
Dominique Merlet			
♩: 52 ♩.: 35	♩: 110 ♩.: 73	♩: 144 ♩.: 96	Bar 160
Jean-Yves Thibaudet			
♩: 47 ♩.: 32	♩: 121 ♩.: 81	♩: 133 ♩.: 89	Bar 159

Example 2:21, Alborada, average metronome markings for recitative and mechanized chords (continued)

Bars 71–74 m.m. = ♩/♩.	***Bars 75–79²*** m.m. = ♩/♩.	***Bars 166–169*** m.m = ♩/♩.	***GS: B–A′*** Location
Eugene Ormandy (Orchestral)			
♩: 56 ♩.: 37	♩: 148 ♩.: 98	♩: 130 ♩.: 87	Bar 163
Writer			
♩: 65 ♩.: 43	♩: 140 ♩.: 93	♩: 128 ♩.: 85	Bar 164

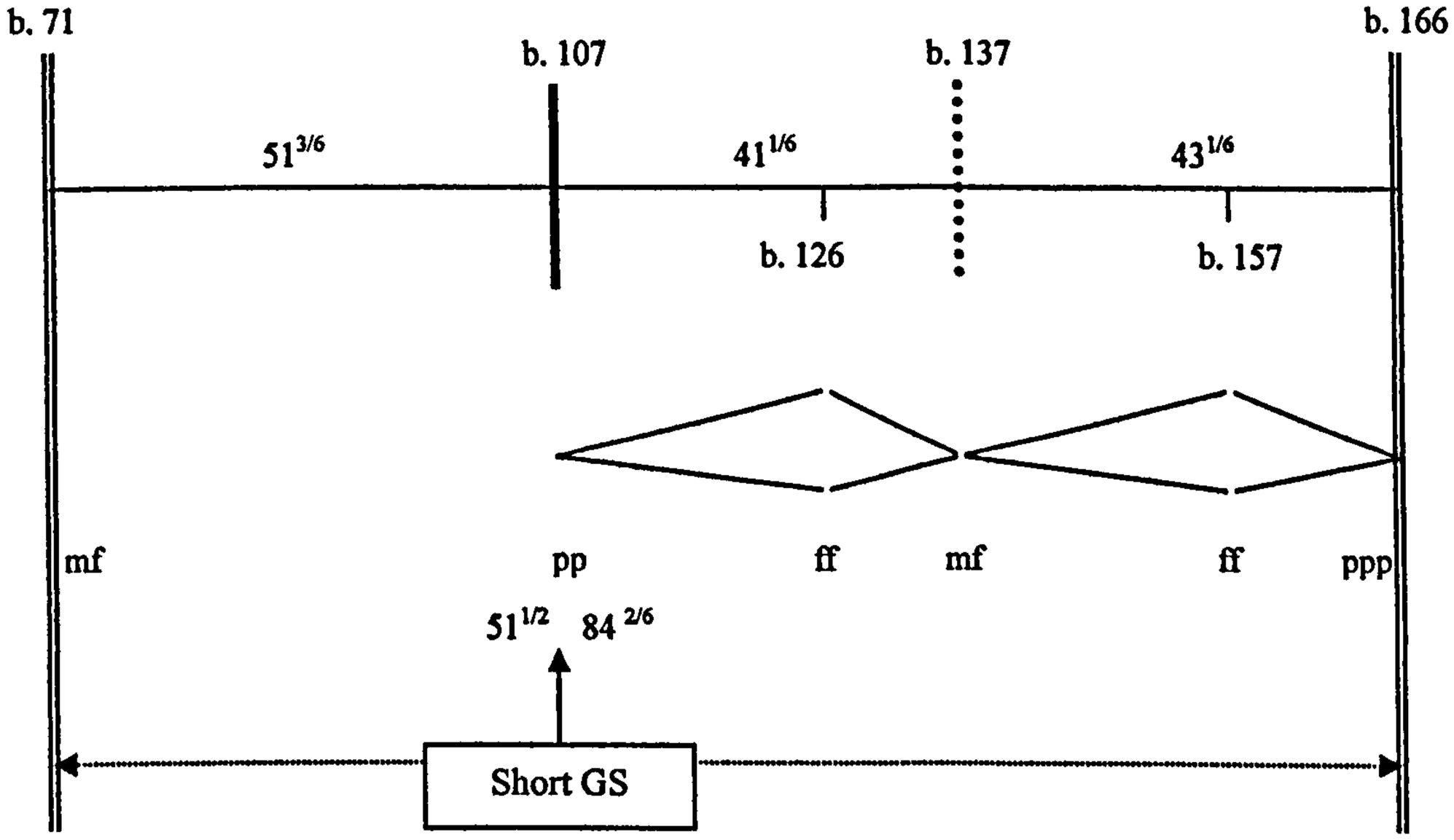
Example 2:22 outlines the proportions of *B*. In terms of the counting itself, each quaver of recitative is considered the same as one crotchet of mechanized chords.[22] If the proportions of *B* are considered in isolation, it does not necessarily matter if the tempi indication of bar 75 is followed; the findings of *Example 2:22* remain the same as long as there is a 2:1 pulse relationship. However, if the performer takes the mechanized chords slower than *tempo 1*, the passage at the end of *B* will have to speed up to accommodate the return of *A′*.

Proportional relationships: *B–A′*

Earlier it was mentioned that the surface activity is unbroken between sections *B* and *A′*. Because GS shapes *A*, *B* and *A′*, it was also determined to investigate if a comprehensive ratio binds the latter two sections together. Having considered Merlet's tempi relationships within *B*—his 'double' tempo relationship between the recitative and mechanized chords makes it possible to count from the score—the 136 units of *B* are nearly twice that of the 67 of *A′* (*Example 2:23*). If *B* and *A′* are added together, this constitutes a two-thirds to one-third relationship; 136 divided by 203 yields .669. Intriguingly, the dimensions of *B* were realized from a careful count of the score, based on the similarity of tempi between the writer and Merlet. In terms of the individual performances, this point of articulation suggests a

slightly different finding. For the writer, it is near GS; conversely, Merlet's rendition is closer to the ratio of two-thirds to one-third, and this is accounted for by the slower tempi of bars 71–106 alluded to above (see the bottom portion of *Example 2:20*).[23]

Example 2:22, B section proportions in terms of 6/8 units

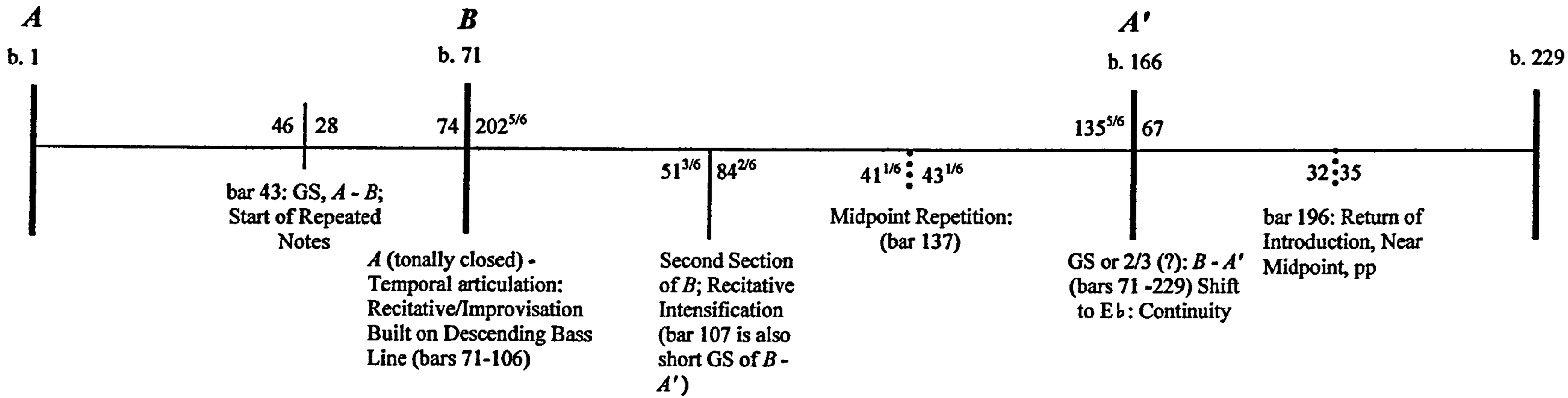


Formal articulation

Tonal and harmonic motion

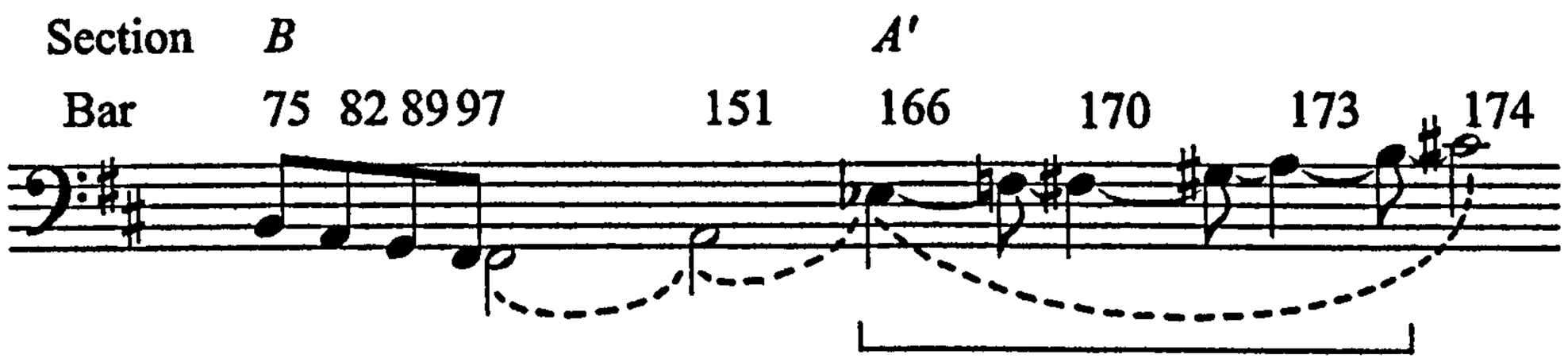
With this groundwork established, it is now possible to comment on the large-scale proportions (*Example 2:23*). As with the interior layout of *A*, sections *B* and *A′* are together built from five, larger units, that are structured around points of GS or symmetry. Throughout, the tonality works in tandem with these proportional divisions as an articulative agent. As mentioned above, Ravel marks the structurally-defining moment at bar 166 with an unexpected tritone resolution. The tension is not dissipated; it is heightened further, by the octatonic, harmonic-sequencing, which follows to the right of this division (*Example 2:24*). The tritone interval, itself a symmetrical pitch element, is also employed elsewhere; it is consistently placed with moments of GS. Other examples of this tendency include bars 179–181 where G7 resolves by tritone to C♯; it corresponds with the GS and dynamic division of the 11

Example 2:23, Alborada, large-scale symmetries around GS divisions



bar unit (*Example 2:19*). In further support, the GS division of the 24 bar segment, bars 196–212, resolves E7 to B♭ augmented in bar 196.

Example 2:24, Alborada, octatonic sequencing



Dynamics

In general, the dynamics co-function, along with the tonal and harmonic elements to shape the music through correspondence with symmetry and GS divides. Once again, the crux is the *ppp* marking at the beginning of section *A'*. Bar 166 represents the dynamic low-point of the piece; it is also consecutive with the shared pulse of sections *B* and *A'*. Dynamics are integrated elsewhere, in alliance with proportioned phrase structures and temporal cuts (*Example 2:19*: see end of bar 212 and start of bar 213). This type of placement is coincident with GS divides in one of two ways; firstly, it is a symmetrical shaping device, heard in conjunction with the midpoints of sections; this is true of section *A'* in the passage from bars 185–195. Secondly, dynamics correspond with the GS divisions of the interior groupings. An example is found at bar 175, where the *subito piano* is realized at this mathematical point.

Conclusions

Ravel has constructed *Alborada* by combining three, independent GS blocks. The defining formal moment comes at the joint of *B* and *A'*, and it is 'best' articulated if the performer 'does nothing' beyond following the instructions written in the score—in other words, by 'playing it straight'. Ideally, the pianist will have returned to the opening tempi by the end of this section; thus, there is no need to speed up or slow down; the return of the opening tempo is in effect from bar 150. Elsewhere, as

in the juxtapositions of the first part of *B*, pianists do not need to pause at the end of the recitative phrase. It is better to place the chords of bar 75, exactly on the second quaver of the elided crotchet. This creates an effect of continuity and does not call the larger structural relationships into question.

The discussion above has also demonstrated precision within the formal process as it relates to the appointment of thematic, dynamic and tonal elements. Marcel Marnat suggests that the improvisatory nature of *Alborada* demonstrates '...how much the composer liked to go right up to the limits of what is tolerable'.[24] Roger Nichols tempers this remark to conclude that '...the effect of improvisation should not be taken at face value. According to Burnett James, Ravel "once demonstrated to Maurice Delage that the structure of the 'Alborada' was as strict as that of a Bach fugue"' (Nichols 1995: 7) Paradoxically, the audience may hear the buffoon 'improvising', when in fact the antics to attract attention are premeditated through an exacting set of mathematical relationships.

Notes

[1] Geoffrey Chew: 'Articulation and phrasing', *Grove Music Online* ed. L. Macy (Accessed 19 July 2004), <http://www.grovemusic.com>

[2]Paris, La Schola Cantorum, July 1999/2000. Almost without exception, the French performers at the *French Piano Institute Festival*—Dominique Merlet, Pascal Devoyon, Abdel Rahman el Bacha and Alexandre Tharaud—cautioned the masterclass participants against an excess of rubato within French music. The same was also true of the non-French presenters: this included the American pianist Gail Delente, the organizer of the festival, who '...received the *licence de concert* from the École Normale de Musique, where she studied with Jules Gentil' (Timbrell, 263–263); the composer and pianist, Noël Lee (also an American, but a long-term resident of Paris), who after studying with Walter Piston at Harvard continued his studies in France with Nadia Boulanger; the Scottish pianist, Roy Howat, who studied with Février and for an extended period with Vlado Perlemuter from the mid 1970's (Timbrell, 156) to as late as 2000/2001, shortly before Perlemuter's death in 2002.

[3]This opening idea also represents a preliminary example of ambiguity. It may be a four-bar phrase; or, the prolongation of the G-major harmony from bar 1 to the end of bar 6, suggests that bar 7 (not in example), which coincides with the return of the opening motif and change of harmony on the downbeat, is the start of the second phrase.

In hindsight, the earliest performances of 1999 and 2003 may have inadvertently viewed the very beginning of the piece as a four-bar introduction, in effect causing a slight bit of slowing between bars 4 and 5. At the time of the viva performance, this passage was rethought as a six-bar phrase—the motion 'should' carry forward between bars 5 and 6. The six-bar finding which is presented below in

Example 2:5, was written more than two years earlier; it was also later reviewed in the final writing-up stage, but subsequently forgotten in the preparations leading up to the viva. Assuming that this was a 'conscious' idea at the time of first writing, the 'interpretation' did not emerge until Roy Howat pointed this out as a possibility approximately ten days before the 'final' recital (Howat, 2005). This suggests that analytical findings may at times present themselves as 'vague' ideas. Although they are seemingly precise on paper, they do not come to fruition until the idea is connected with something else. However, this is not always the case and contrasting examples are presented below in Chapter 6.

[4]In general, the phrase lengths of *Example 2:5* were determined by the harmonic line. Gary Wittlich and Deborah Martin (1989) provide numerous examples (Ravel is only briefly discussed) of larger progressions which form out of smaller segments. As an example, in cases where the phrase begins in tonic, composers often prolong the tonic triad with non-structural subdominant chords; later, the motion advances. In support, bars 9–16 of *Waltz 2* form an extended 8-bar phrase, although Ravel notates it as 4 units of 2. For the first four bars, the tonic is prolonged and the progression does not move forward. Although Ravel has notated the short phrase, the performer—because of the harmony—does not necessarily have to insert a break between bars 10 and 11; the two-bar units may join together. Conversely, if the performer chooses to pause, the two-bar units take the form of a rhythmic period (2+2), assuming that the remaining bars group as four. The start of bar 13 does not advance the harmony either, but the phrase which follows does. Here, the harmonic line is coincident with the crescendo, and it propels the phrase to closure at the start of bar 17.

Practicing the phrases in this manner may enable the pianist to communicate a 'natural' sense of inflection within the larger ideas, and this potentially explains why Ravel notated the two-bar groupings as he did; or, it may not. A practitioner of historical performance practice—Malcolm Bilsom springs to mind—may also advocate a more 'classical' approach (masterclass, Bloomington, Indiana: 1995–1996). A key point of Bilsom's argument is that classical composers wrote out the smaller phrase because they did not intend the longer line; they had different instruments which were well-suited to the shorter idea (special thanks to Roy Howat for reminding me of Bilsom's position: London, 2005). Having never played Ravel's piano, it is difficult to know if the resonance dies down quickly enough to consider this a 'musically viable option'. Because Ravel looked to Mozart as his model, this idea may be useful, although ultimately, the pianist will have to decide if this approach draws too much attention to something which does not have structural significance.

[5] The logic of *Waltz 8* is addressed below in Chapter 5.

[6] Merlet's performances are analysed throughout the thesis. The main reason for selecting Merlet is because his performances demonstrate—more-so than with any other performer—how closely the analytical findings 'may' fit with actual performance. Ravel's recordings were not considered; these were sometimes done under his name by a professional pianist—Casadesus is one example: 'R.C. accompanied M.R. to London in order to record piano rolls, and substituted for him in the very difficult pieces' (Orenstein [1990], 2003: 551).

Conceivably, pianists outside of the French performance tradition might have also been chosen. This would have been justified if the intent was to analyse performance as Narmour does, in order to suggest the 'best' performance in terms of the analysis. This thesis has a different aim, which

is to show the interpretative possibilities that result when performance and analysis are considered together. Accordingly, Merlet represents the 'best choice' as the 'control' factor. Occasionally, other performers such as Jean Yves-Thibaudet are referenced to illustrate a point of comparison, but this is not to suggest that Merlet's performances are 'definitive'; they 'may' be, or they 'may not' be. Thibaudet's playing exudes 'warmth' and 'dash', qualities which are well-suited to Ravel. Merlet interprets Ravel from a different vantage point—the composer seeking technical perfection through restraint and clarity. From this standpoint Merlet's recording are the ideal choice for study.

Early on in the project, it became apparent that the investigation of performance could become an 'all-consuming' task. Subsequently, it was determined that it was not necessary to study other performers beyond Merlet in order to answer the larger questions of the thesis. If Merlet's performances contradicted the early analytical intuitions, then the analysis was probably headed in the wrong direction. Conversely, if the findings of performance did agree, then this would not necessarily prove anything in relation to Ravel's 'conscious' or 'unconscious' use of proportion, although it would potentially validate the usefulness of the analytical findings to performance, given Merlet's reputation as a 'careful' performer.

[7] It is difficult to know exactly how fast Merlet took section *B* of *Waltz 7*—the dotted minim marking of 73 is an estimate. The other markings assume a close following of Ravel's notated markings.

[8] In this and subsequent chapters, track numbers refer to disc 1. Near the end of the thesis, the viva performance is also referenced, but on disc 2.

[9] According to the Oxford English Dictionary, *moiré* is '...a type of fabric (originally mohair, now usually silk) that has been subjected to heat and pressure rollers after weaving to give it a rippled appearance'.

[10] For readers unfamiliar with the concept of GS, Howat's *Debussy in Proportion* provides an excellent introduction to the subject: '...the Golden Section...is the way of dividing a fixed length in two so that the ratio of the shorter portion to the longer portion equals the ratio of the longer portion to the entire length (Howat pages 1–2)'. One method of calculating GS points is to multiply the total length in question—for example: *x* number of bars, y number of seconds, etc.—by .618. This yields the longer division of the segment in relation to the whole; the short division is calculated with the ratio .382.

[11]See Roger Nichol's preface to the Peters edition of *Gaspard de la nuit*, page 3 where he quotes C. Timbrell: 'An interview with Paul Layonnet', *Journal of the American Liszt Society*, xix (1986), 112–121.

[12] Like *Ondine*, *Une Barque* is also built from a series of ostinato patterns and the evocation of water is the subject matter.

[13] Future research beyond the scope of this thesis may also investigate Ravel's piano-roll recordings. However, in this particular case, Ravel did not record *Ondine*. For an excellent introduction to this topic see Orenstein [1990] 2003: 526–542.

[14] 28 crotchets divided by 47 yields .5957446, which is approximately a 2.2 percent difference from the exact mathematical GS point.

[15]Moiré creates a visual effect of motion: 'When you look through one chain-link fence at another, you sometimes see a pattern of light and dark lines that shifts as you move. This pattern, called a *moiré pattern*, appears when two repetitive patterns overlap. Moiré patterns are created whenever one semitransparent object with a repetitive pattern is placed over another. A slight motion of one of the objects creates large-scale changes in the moiré pattern. These patterns can be used to demonstrate wave interference.' See <http://www.exploratorium.edu/snacks/moire_patterns.html> (accessed 9 January 2006).

OED also gives a secondary definition, which relates to the ordering of the black and white glissandi: '...1953 H. A. CHINN *Television Broadcasting* i. 27 The most objectionable moiré is probably that produced by the blanking pulses because they usually represent the greatest possible black-to-white contrast ratio'.

[16] See Jourdan-Morhange and Perlemuter, 1990: 32.

[17] See preface to the Peters edition of *Gaspard.*

[18] Hélène Jourdan-Morhange was a violinist who gave first performances of a number of Ravel's works and was a close personal friend of the composer. At the age of 23 Perlemuter studied the complete piano works of Ravel, with Ravel.

[19] Letter in the possession of Arbie Orenstein and quoted in the preface to the Peters edition of *Miroirs.*

[20] The slight pause at the end of bar 195 does not call this into question.

[21] Live performance at the *Gina Bachauer International Piano Festival* in Salt Lake City, Utah (Assembly Hall, June 2003).

[22] Bars 71–74 are the equivalent of 8 bars of mechanized chords; the measured bars are each counted as one unit of 6/8. Hence bars 71 to the middle of 79 are $8:4^{1/2}$; bars 79–85 are $5:3^{1/2}$; bars 85–89 equal $7:2^{1/2}$; bars 91–106 are 11:10.

[23] The question of which performance is 'best'—GS or the 2/3 ratio—is taken up in detail in Chapter 6 below.

[24] See Marcel Marnat's quote in Nichols, 1995:7.

3 Continuity

In Ravel's music, ideas frequently connect across the larger sectional divisions to sustain the immediate attention of the listener. In contrast to formal articulation, which defines the constituent parts of an extended composition, continuity is concerned with flow; it is the thread that binds sections together. Consequently, continuity is embedded within the musical fabric, particularly in instances where a clear point of articulation ends the passage or section. Calvocoressi, a music critic and Ravel's fellow *Apache*, explained why listeners may hear Ravel's forms as experimental:

> When calling attention to some beautiful thing, he would often wind up with: 'Et puis, vous savez, on n'avait jamais fait ça!' [And then, you know, that hasn't been done before!] Questions of form seemed to preoccupy him far less. The one and only test of good form, he used to say is continuity of interest. I do not remember his ever praising a work on account of its form. But, on the other hand, he was very sensitive to what he considered to be defective form (Orenstein [1968, 1975], 1991: 119).[1]

If Ravel's intent was to hold the listener's attention, continuity can also be construed as a subversive formal element, enlisted as the means of transcending pre-conceived notions associated with existing, formal archetypes. Three examples are given in support; firstly, a discussion of the *Valses nobles* illustrates how performers may negotiate between waltzes, to create the effect of an unbroken line. Secondly, although the listener hears *Noctuelles* as fragmented, the findings demonstrate how fleeting episodes materialize into an extended whole; here, musical elements join to

veil, rather than demarcate the central moment of return. In the final example, a study of *Scarbo* outlines how larger blocks emerge from an understanding of proportioned tempi relationships.

Valses nobles: types of continuity

Motif, harmony and surface-pitch-relationships

In the hands of a lesser composer, a series of waltzes may become the equivalent of a musical montage, where the material relates 'too much'—that is, if the focus revolves around the saturation of an isolated motif. Conversely, individual waltzes may rely on an excess of contrast and suffer accordingly; or, the piece may have 'flow', but the effect is weakened by the mania of an unchanging pulse. The principal argument below suggests that continuity 'holds' the *Valses nobles* together. Accordingly, several sub-categories are advanced and each is ranked in order of relative importance.

As illustrated in the middle row of *Example 3:1*, motivic patterns reappear throughout the piece. Because these findings are significant in their own right, this discussion is held until the later chapter on motif and gesture. Harmonic process represents a second type; two examples illustrate. Firstly, in *Waltz 2* dissonance is associated with an expectation of resolution at the joint of bars 24 and 25. However, this motion continues past the mark; B♭ eventually falls by fifth at bar 26, where the secondary tonality is heard as E♭ major and not B♭. This is noteworthy because the E♭ in the bass is in a weakened metric position and does not coincide with the earlier structural downbeat. If the pianist chooses to approach the performance of this passage in this manner, it may be satisfying to the audience, more so than if the motion stops and starts at the beginning of bar 25. Hence, harmonic closure can be delayed across the joint of this new section, freeing the music to continue forward. In the second example, an 'A' pedal-note carries over from *Waltz 7* to *Waltz 8*; thus, tonal closure is not simultaneous with the beginning of the epilogue. Rather, continuity is the means of prolonging the harmony in advance of the eventual return to G.

Surface-pitch-relationships represent a third category; an example illustrates. The A♭ at the end of *Waltz 4* demonstrate an enharmonic association as an elisionary

Example 3:1, Valses nobles, continuity issues

Continuity	***Waltz 1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***
	Large-scale introduction Change of mode from G major to G minor		♩.♪ rhythm		Enharmonic connection with *4*: A♭ of *4* equals G♯ of *5*	Connected by cadential figure at the end of *6*; C pedal begins *7*		Epilogue Connection to *7* by extended pedal built on A pitch
Temporal Articulation	*Un peu pesant* at end of *1*; no fermata	*Ral* and short fermata	*Retenu* at end of *3*; no pause between*3* and *4*; short fermata at the end of *4*		*Ralenti* and short fermata	Cadential figure extends past fermata at end of *6*	Short fermata at the end of *7*	'Fades...' and 'dying away'
Borrowings	harmonic rhythm equals ♩♪	harmonic rhythm equals ♩♪ (echo of *1*)	Rhythmic motif of *1* equals accompanimental pattern of *3* Extended fifths relate to complete cycle of fifths of *1* (bars 57-60)	Symmetrical rhythmic pattern borrowed from *3*	New symmetrical rhythmic pattern	Hemiola rhythmic pattern (similar to *A* section of *1*)	Cadential figure from *1* articulates main sectional divisions	Extensive thematic borrowings
Form	*AA'BA"A*	*Intro: AA'*	*ABA'*	*ABA'BA'*	*ABA'*	*ABA*	*Intro transition: ABA*	*ABA'B'A"* (*B* sections function as transitions)
Key	G major	G minor	E minor/G major	? (C♯, A♭, C)/A♭	E major	C major	A major/ F major/ A major	A pedal/ G major

note shared with *Waltz 5*. If a larger pause is taken before the end of the bar, with the aim of articulating the waltz groupings outlined in *Chapter 2*, this potentially misinterprets Ravel's notational practice. As well as ending *Waltz 4*, the 'short' fermata is placed here because the tonality is transient; it does not become fully stable until the end of *Waltz 5*.

Types of continuity (continued)

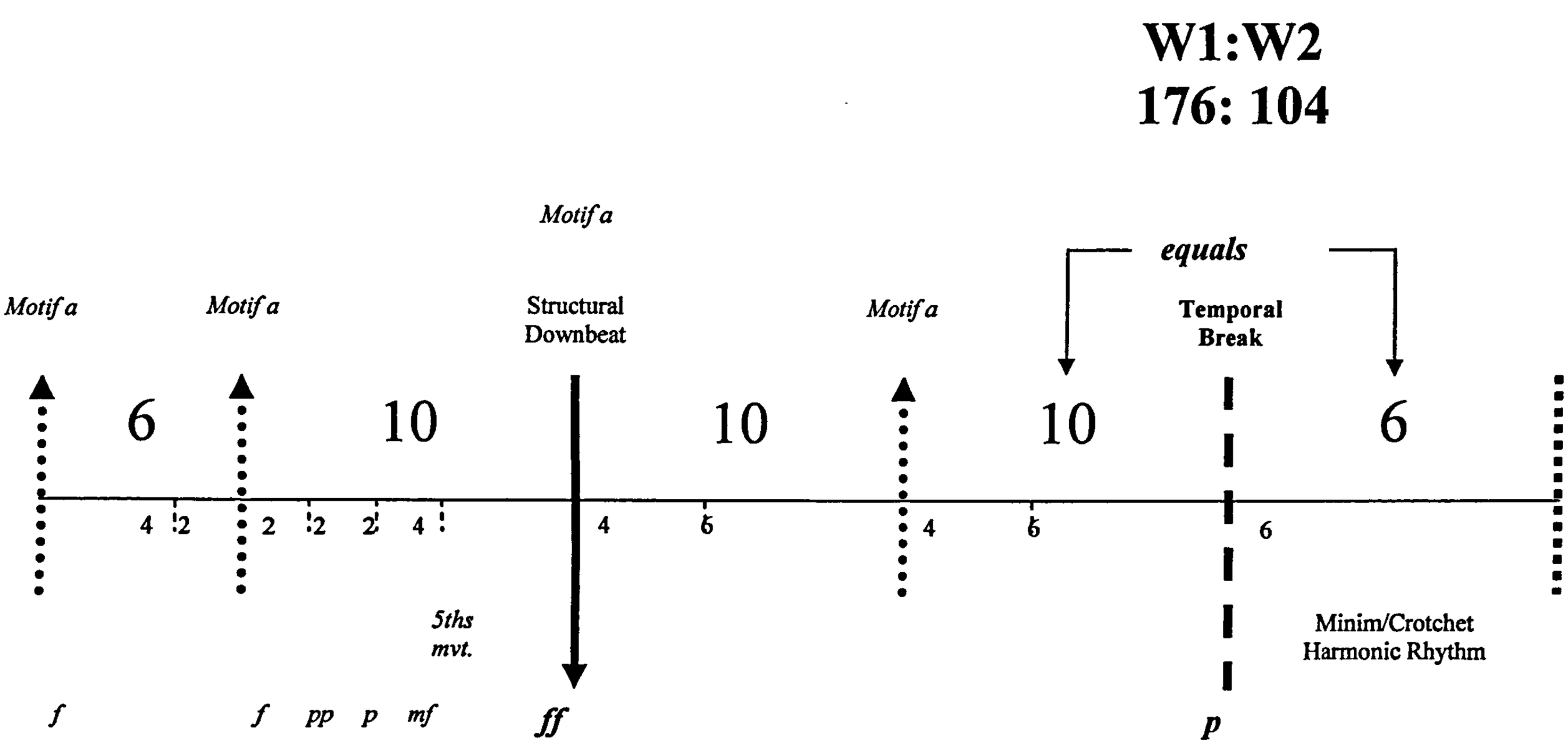
Pulse, pause and temporality

A fourth category illustrates the carry-over of the phrase length from the first waltz to the second (*Example 3:2*). On the surface, if this is a direct contrast of material, it also represents continuity. The phrase segments at the end of *Waltz 1* and at the beginning of *Waltz 2* are the same size when heard in 'real-time'. Although it is easier to achieve temporal continuity by notating pulse relationships based on common note-values, it is more difficult to create related correspondences from irrational mathematic relationships. In this case, the last 30 crotchets of *Waltz 1* equal the first 18 of *Waltz 2*.

At the end of *Waltz 1*, the audience will have already heard the re-interjection of the opening short-short-long motif several times. They do not expect it again at the head of *Waltz 2*; the motion has come to rest. However, a remembrance of the phrase length will remain until something else breaks the spell—an emotionally-charged, upward seventh, which is reminiscent of Wagnerian expressionism (*track 7* illustrates this point: *Waltz 1*, bars 65 through bar 11 of *Waltz 2*; Munch (1992)).[2] In performance, this suggests the pianist does not have to take a larger pause between the first and second waltzes. If this is the case, the indication *un peu pesant* of bar 79 does not necessarily mean to slow down; it is Ravel's prescription for highlighting harmonic closure. However, this decision of how much pause to take also represents a trade-off. Extra time articulates the first waltz, inferring to the audience that this opening is an introduction to the entire set; or, it may create a feeling of sluggishness if too much time is taken.

A second example illustrates a contrasting approach: a slight break at the end of *Waltz 5* is justified. As mentioned above, the tonal process has reached fruition in E major and the slowing at the end of *Waltz 5* is meant to close-off the passage of

Example 3:2, Valses nobles, waltzes 1 and 2, proportional relationship over temporal break



time. However, when the motion resumes, the three-times-as-fast tempi of *Waltz 6* carries the activity forward. Thus, Ravel posits a measured temporal relationship, although the melodic interest has changed dramatically.

Conclusions

If the pianist does not consider Ravel's tempi markings with exactness, the piece as a whole may sound disjointed or rambling. Henriette Faure who studied the *Valses nobles* with Ravel recounts the experience of her lesson with the composer when she was 17 years old:

> I began by playing the *Valses nobles et sentimentales* for him. Ravel, who was seated, got up, stood next to the piano, and proceeded to torment me in such a way that I haven't forgotten it for half a century, continually stopping me, criticizing the minutest details—a phrase, a rest, a pedal, an inflection . . . and beyond all of that, like a clock at the rear of the corridor, his inexorable 1–2–3, 1–2–3. It was exhausting, having to integrate fantasy with strictness, and giving a dreamlike or elegant passage the maximum of rhythm and precision. This torture lasted almost two and a half hours. Good! he said at the end, if you would like me to coach you on the other pieces, could you come to my home (Orenstein [1990], 2003: 558)?[3]

At the other extreme, pianists potentially run the risk of not taking enough time between waltzes, making the piece sound hurried. In several instances, a continuum of pulse carries across the waltz divisions; at other junctions it does not. Regardless of the compositional technique employed, it is the performer's approach, informed by analysis and intuition, which determines whether the motion stops altogether or unites with the next waltz. This is not meant to imply that the music 'communicates solely through what the performer does'; rather, it acknowledges that there is a musical basis for choosing 'to articulate' or 'to connect'—a basis which is entirely dependent on the context of the moment.

Noctuelles (1904–05)

According to Roger Nichols

...'Noctuelles' (Nocturnal Moths), is dedicated to the poet Léon-Paul Fargue and was inspired by his line "*Les noctuelles des hangars partent, d'un vol gauche, Cravater d'autres poutres*" (The nocturnal moths in their barns launch themselves clumsily into the air, going from one perch to another). Fargue was, like the moths and to some extent Ravel himself, a nocturnal animal, and the two men were still going for long night rambles together through Paris in the early 1930's (Nichols, 1995: 6).

Both men belonged to a group of artists who regularly met at the home of the painter, Paul Sordes, to socialize and discuss issues of art.[4] Fargue writes: 'We all read or played, whatever we had written or composed, in the most friendly atmosphere I have ever experienced'. Ravel's student and biographer, Roland-Manuel also adds that '...these activities often lasted well into the evening. At about one in the morning Fargue used to ring a bell to remind them that it was necessary to remember the neighbours and close the piano (Roland-Manuel [French version 1938], 1947: 32–33)'. In 1904, the gathering moved to Maurice Delage's summer house, which Fargue recalled as being '...neat as a doll's house, a little masterpiece of a house with no neighbours, where we could make music all night long when we had missed the last train home' (Roland-Manuel [1938], 1947: 34).[5]

Introduction to formal outlines

At first listen, *Noctuelles* sounds like a series of fragmentary sketches. However, it is not a discontinuous piece. Likewise, a classification of 'continuity' does not negate the effect of fluctuation across register, or the abundance of surface chromaticism that challenges the listener to discern its tonality.[6] Ultimately, it is this combination of pitch and registral instability, heard in consort with nebulous-sounding polyrhythms, which creates the 'affect' of fanciful impression. Depending on how one envisions *Noctuelles*, either as a generic, sectional-form, or in relationship to a well-known formal model, the performer is left to determine an interpretive stance from which to present the piece. Thus, if one chooses to hear sections *A* and *A'* as 'exposition' and 'recapitulation', and the whole as a 'sonata without development' (Howat, 2001) there are consequences associated with this

decision. Alternately, if the texture blurs the defining structural moments, continuity is elevated to the vanguard. Performers do not need to view either extreme as mutually contradictory; at various times, continuity is a component of the larger formal process, where the localized interest momentarily masks the effect of articulation.

Return: perceptual difficulties

The basic perceptual difficulty lies not in hearing the contrast of sections, but in pinpointing the moment of return for the opening material. As outlined in *Example 3:3*, *A* ends at the junction of bars 36 and 37; however, discerning where *B* finishes, and thus where *A'* carries forward, is problematic.

Example 3:3, Noctuelles, formal divisions

A	*B*	*A'*	*B'*	*A"*	
bar:	*1*	*37*	*88?*	*121*	*126*
			94?		

With the exception of the upper melody, the first two beats of bar 88 are the near equivalent of bar 4. Alternatively, bar 94 can be the point of return, from the concomitance of register, texture, motif and dynamic in proximity to the suspended motion of bar 93. In order to answer this question definitively, *A* is first examined.

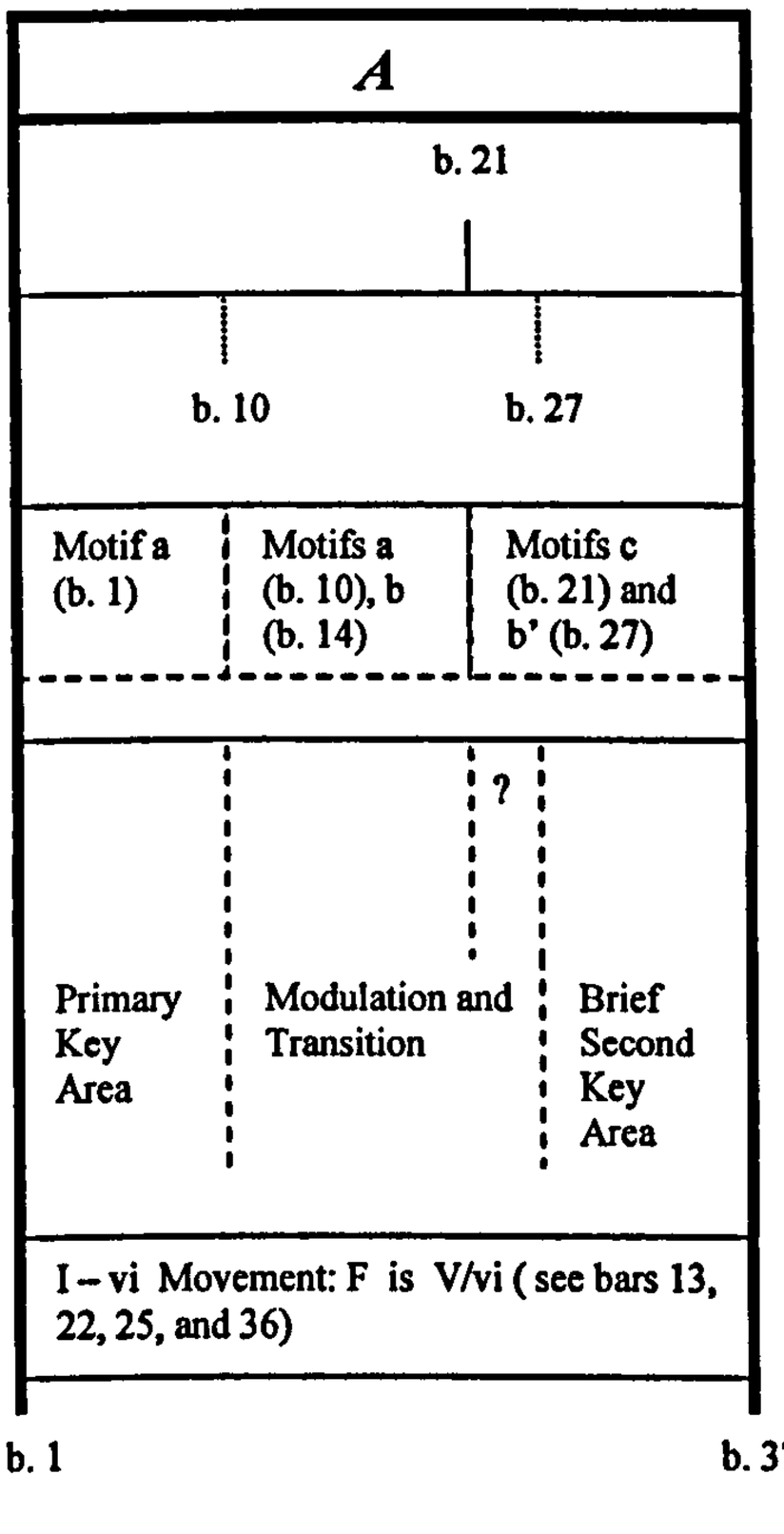
A: phrase segments and timing

As illustrated in *Example 3:4*, *A* falls into three parts and the sections are articulated by the coupling of key-relationships with alterations of surface activity and suspended motion. The strongest cadence of *A* is at the joint of bars 26 and 27 where closure emerges from a dominant-seventh-chord built on E♭ that resolves to an open-fifth A♭ in the bass. With formal articulation built in the score at bar 9, it is the performer's understanding of continuity, which enables the phrase structure to be clarified; the large-scale architectural relationships coalesce from these smaller,

sectional groupings. Consequently, the purpose of analysis (of *Noctuelles*) is to determine where ideas end or begin.

As an example, bars 1–3 represent an independent phrase defined by an implied tonal progression. (The melodically expressed harmonies of the left hand act as a neighbor group to prolong the dominant seventh chord in bar 1 before the eventual resolution to the tonic in bar 3.)[7] However, this effect is only temporarily perceived. In the sequence which follows, the performer must then decide whether to allow a sense of closure at the end of bar 5, perhaps with a slight break to emphasize the A-major harmony, or to envision bar 6 as a continuation of the two previous bars.

Example 3:4, Noctuelles, section A



If the pianist chooses the former option, this presupposes a feeling of harmonic rest at the end of bar 5. An effect of discontinuity is heightened because the expectation of a repetitive phrase length, one of 3 bars, is not forthcoming; E♭ major emerges *ex nihilo* to interrupt the structure and to disorient the listener. If the second alternative is selected, time is not taken between bars 5 and 6, in order to connect the harmony across, to the lower register; a recorded example illustrates this

point (*track 8*, *Noctuelles* bars 1–9).[8] Thus, the intrusion of E♭ major is logical; it defines the harmonic progression across the sectional divide going into bar 10. If, at the outset, *Noctuelles* appears to be in the middle of an idea, the E♭ foundational pitch at bar 6, which is sustained across the bar(s) via the damper pedal, clarifies the meaning of the A♭ seventh chord when the opening phrase returns at bar 10.

Grouped in this manner, the first 9 bars create an incomplete rhythmic-period. The 'complete' version, with 3 bar phrases at the outset, would be 12 bars long; in actuality this passage 'lacks' 3 bars because it is 3 + 6 rather than 3+3+6. As a result, a fragmentary episode is constructed from this summation of phrases, in contrast to a purposeful discontinuity that does not consider E♭ within the larger harmonic process; if the second phrase closes on A-major, the grouping is 3 + 2 + 4. Regardless of which interpretation the performer chooses (the first is preferable) a short breath between bars 3 and 4 sets up the sensation of structure and a laconic rendering of the wholetone dyad at the end of bar 9 ads to the discombobulated effect.

Conclusions: return re-visited

In light of these findings, the question of where the return begins is re-examined and a third option is proposed (*Example 3:5*): section *A'* begins at bar 83. The *pp* dynamic not only prescribes the volume in relation to the *decrescendo* of bars 80–82, it also solidifies the reference to the opening bars of *A*; and, if compared against the first page, it is two bars longer than the opening phrase (see bars 83–87 and 1–3). Alternately, if bar 88 is taken as the point of importance, performers may sub-consciously articulate this moment, by slowing down in the *decrescendo* at the end of bar 87 in order to stress the impending sectional close. Viewed in this manner, bar 87 does not need to slow; an extended ten-bar phrase is created to bar 93. Hence, a performer may imagine the microscopic space between bars 82 and 83 as an elisionary joint to infer the presence of continuity. Although an elongated phrase is not notated in the score, the motivic similarity of bars 83–87, and also of bars 88–90, hints at the possibility of an unbroken seam. This is further supported by the syncopated overlap of filigree in the alto voice across bars 87–88; here, the melodic answer is a registral and motivic variation of the previous idea begun in 84.

Example 3:5, Noctuelles, section B to end

B			*A'*			*B'*	*A"*
b. 63			b. 105		b. 121		
b. 51			b. 94	b. 111		b. 126	
Motif b"		Motifs a and (b)	Motifs a (b. 83) and b (b. 84)	Motifs a (b. 94), b (b. 98)	Motifs c (b. 105) and b' (b. 111)	b"	coda
(b♭): (vi) = Relative Minor Implied But Not Realized	G♭: Bars 51-54 (e♭): Implied But Not Realized (bars 55-62)	(A♭): (V of D♭) Deceptive Resolution to f (b. 80); 2nd Time More Emphatic	D♭: V – I	D♭: I – V/iii (C), b. 104	? D♭: I – V/V (b. 120)	Tritone Key: G	D♭: I
F Pedal: 4 Dominants Removed From D♭	B♭ Pedal (b. 55): 3 Dominants Removed From D♭	Pedals: B♭, E♭, F Re-Transition to Tonic	Veiled Tonal Return to Tonic	Literal Repetition Transposition by 5th	Brief Tonic Key Area	Semi-tone from V	Not V-I
(b♭): (vi) – f: iii. Extended Cycle of Fifths Motion Motif b: Large Pedal Outline (f, g♭, b♭: m. 37-62; b♭, e♭, f: m. 63-82)			A♭: V - D♭: I. Movement to vi in *A* Creates Additional Harmonic Tensions at End of Return				
b. 37			b. 83			b. 131	

Thus, one can connect the melody, the D crotchet at the end of bar 87, to the first C♯ of bar 88, or take a slight breath between bars to remind the audience of the original 'parsing' of bars 1–9.

In either scenario listeners may not know where they are in the form until bar 94; they may hear a shortened return, when in actuality the return of *A* has been lengthened by two bars; or, the audience may not realize that the resumption of the second phrase at bar 88 is already 5 bars into a structural repetition. Accordingly, this rationalized approach also maintains the near proportions of the first section of *A*, it being 9 bars long, in comparison with the 11 of *A′*. Subsequently, the junction of bars 93–94 can be taken in time and there is no need to precede this obvious return of theme with *ritardando*.

Scarbo (1908)

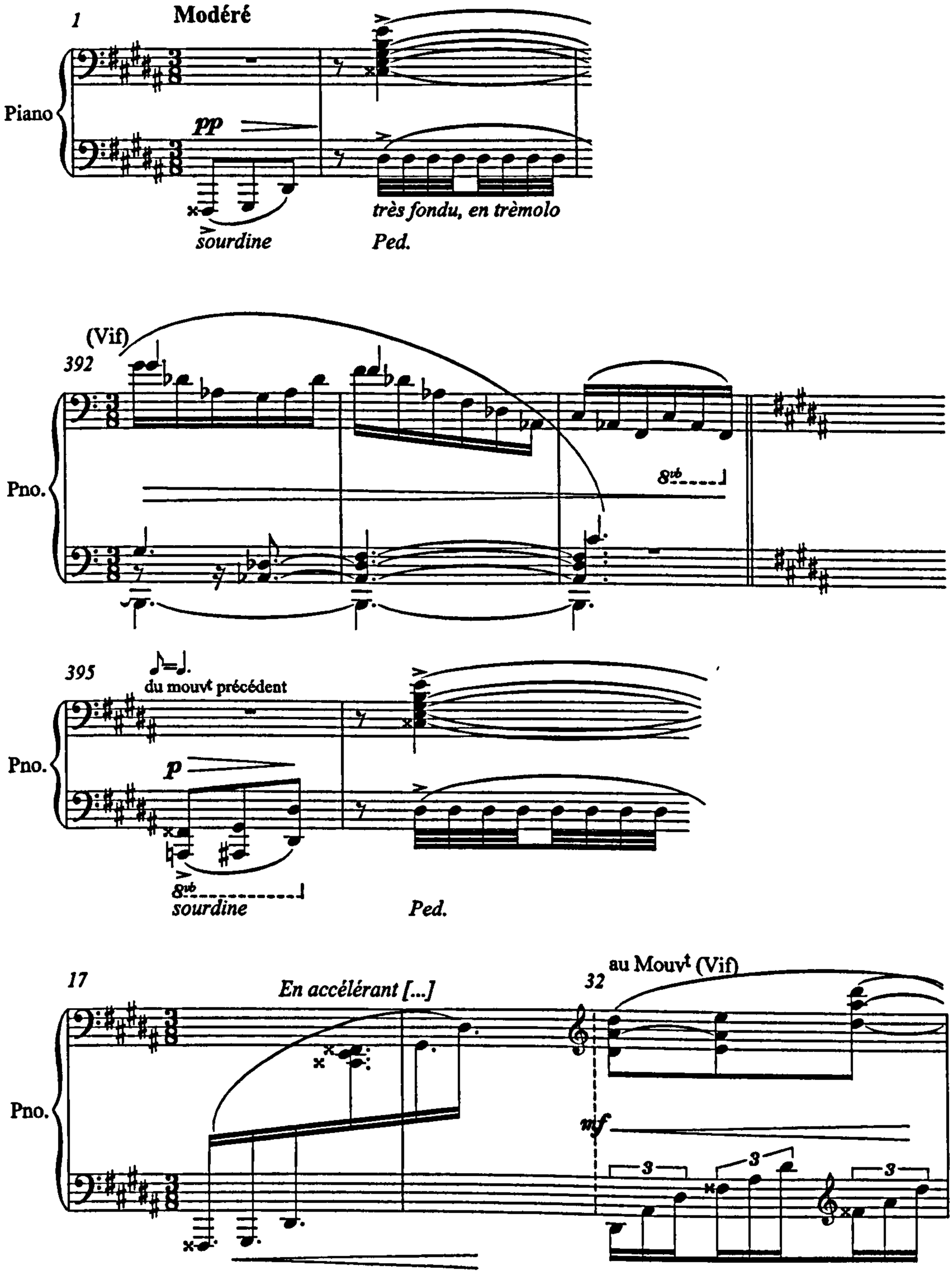
Continuity of pulse: interpretation

In the initial stages of learning *Scarbo*, at issue is determining how to rationalize Ravel's tempi indications. If it begins too fast, it is physically difficult to sustain the pyrotechnics over the course of the piece. Conversely, if it is too slow, the second half suffers a prolonged death once the bravura of the first half has been suspended. At the end of the Peters edition, Roger Nichols lists several performers who studied *Gaspard* with Ravel: Casadesus, Février and Perlemuter each set the basic tempo of bar 32 at ca. dotted crotchet = 90. Roy Howat, a pupil of Perlemuter, has suggested the following (see *Example 3:6*):

> ... bar 394 has to be pretty well the same tempo as bar 1. What he [Ravel] does indicate is that the whole bar at 394 has to be the [same] as a quaver in bar 395; by implication, this means that bars 32–395 are at a single basic fast tempo (with a bit of give for the *un peu retenu* at 366), with the bar going at the same speed as the quaver in bar 395 or bar 1. (Bars 2–6 actually need to move on a touch, you'll find, but Ravel's notation shows the essential pulse structure and continuity that he's after.) To get that relationship of bar 1 quaver to bar 32 whole-bar requires a three-fold increase of speed over the piece's first page, most specifically from bar 17 onwards. The only use of *un peu retenu* at 366 is just to let the

abrupt chord changes bite and articulate a bit—a touch under the fast preceding tempo—and again though he doesn't say so, from bar 372 one can revert to the fast tempo. ... If one starts the piece much faster than that [quaver = 88], then bar 395 will inevitably come out slower than bar 1, which makes little sense, because you want that sense of tempo gradually being spun up over page 1, to prepare for the same thing happening later in the piece (Howat, 2004).

Example 3:6, Scarbo, opening and return



Dominique Merlet's interpretation closely approximates the tempi advocated by Howat and the other pianists mentioned by Nichols (*Example 3:7*).[9] Over the course of the first page, and by the start of the second, Merlet accelerates to a speed nearly thrice as fast, with the rate for the dotted-crotchet of bar 32 the near equivalent of the quaver of bar 1. At bar 395, Merlet has taken a slightly faster tempo than at the opening; thus, Merlet and Howat are influenced by their close proximity to a received performance tradition, or are (perhaps) informing their interpretations with analysis.

Example 3:7, Scarbo, Merlet, tempi and pulse relationships, bars 1–447

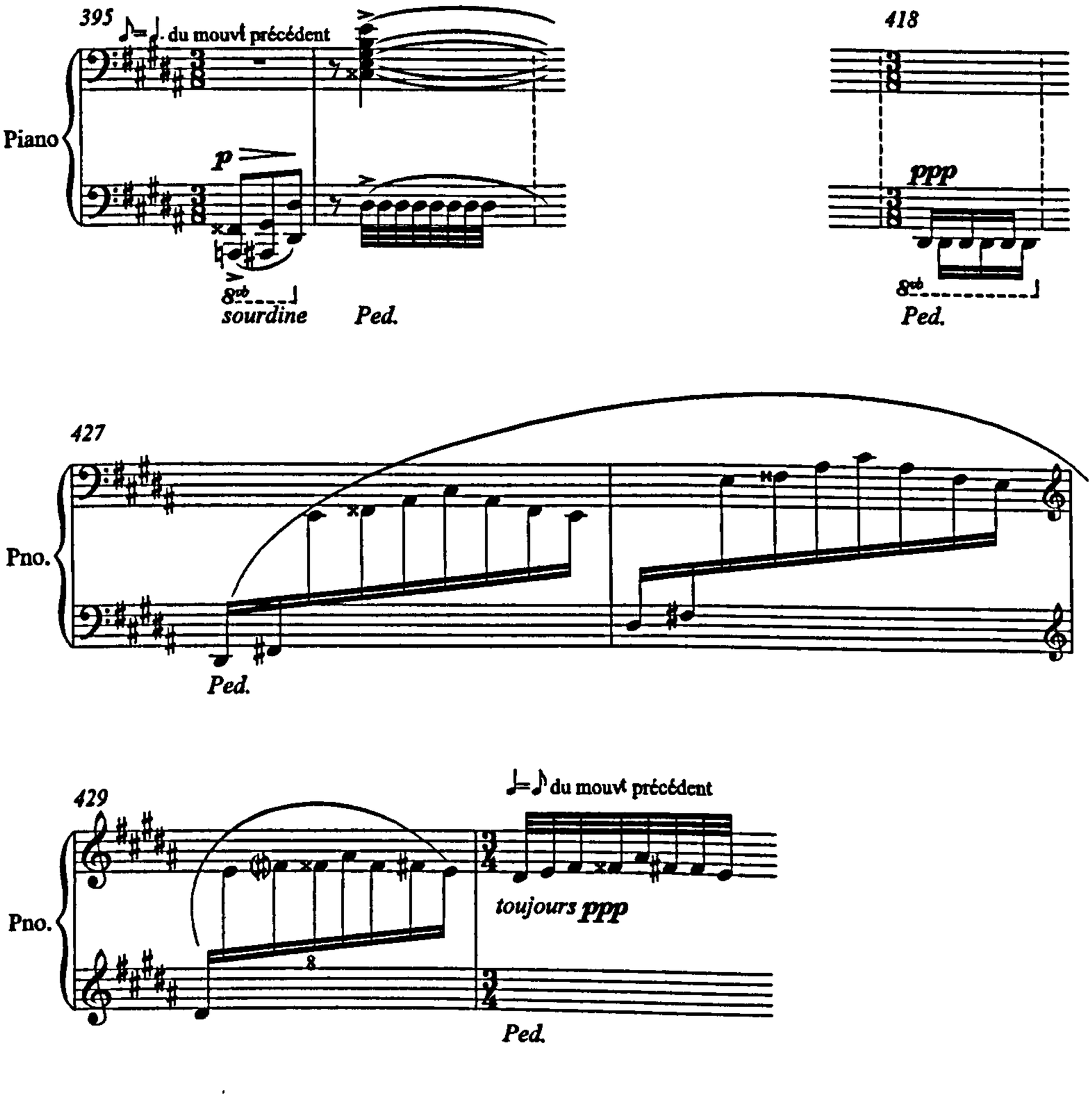
Bars	***Tempo***	***Change***	♪ (3/8)	♩. (3/8)	***Comments***
1–7	*Modéré*		84	28	
15–22		*En accélérant*	202	67	
23–31	*Vif*		207	69	
32–365	(*Vif*)	*au mouv^{t}*	267	89	♩. of bar 32 = slightly faster than ♪ of bar 1
366–371		*un peu retenu*	149	50	*allargando*: broadening at climax
372–381			247	82	resumption of general tempo
382–394		*expressif*	209	70	*'expressif* translates to 'take time'?
395–401		♪=♩. *du mouv^{t} précédent*	91	30	near return to opening tempo of bar 1
409–417			97	32	slightly faster
418–429			125	42	*accelerando*
		[Bar 430]	♩ (3/4)	𝅗𝅥. (3/4)	
430–447		♩=♪ *du mouv^{t} précédent*	77	26	change refers back to bar 395: ♩ of bar 430 is slower than ♪ of bar 395

A second decision entails choosing between two possible tempi at bar 430. The autograph specifies ♩ =♩.; the first edition and Ravel's corrected copy list ♩=♩ *du mouv[t] précédent.* Nichols suggests (see *Example 3:8*):

Either of these relationships can be made to work, but only if *mouv[t] précédent* is taken to refer to the tempo established at bar 395. From bar 418 some sort of accommodation has to be made to ensure a smooth transition at bars 429–30 (where the tempo relationship is effectively ♩=♩. *du mouv[t] précédent*). Casadesus, Février and Perlemuter all accelerate markedly from bar 422 (Nichols, 1991: 46).

Merlet's approach supports Nichol's observations in relation to the un-notated tempo increase from bar 418; it also agrees with Howat's practical ideas surrounding the *accelerando* across bar 430 (Howat, 2004).[10] As notated, the crotchet of 430 is the 'equivalent' of the quaver at bar 395; in practice, the crotchet equals 76 versus the quaver which is approximately 91.

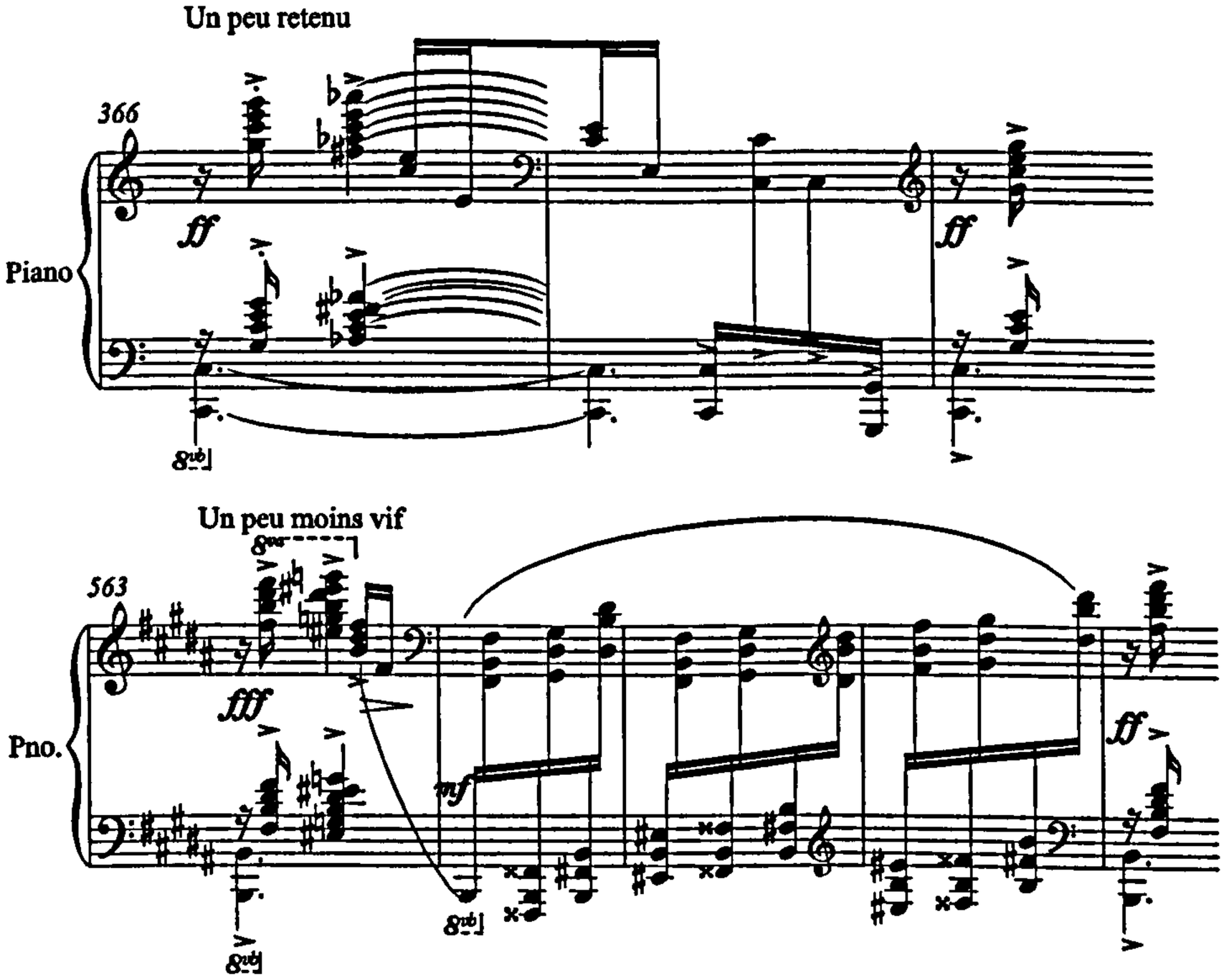
Example 3:8, Scarbo, pulse relationships



Introduction to shape

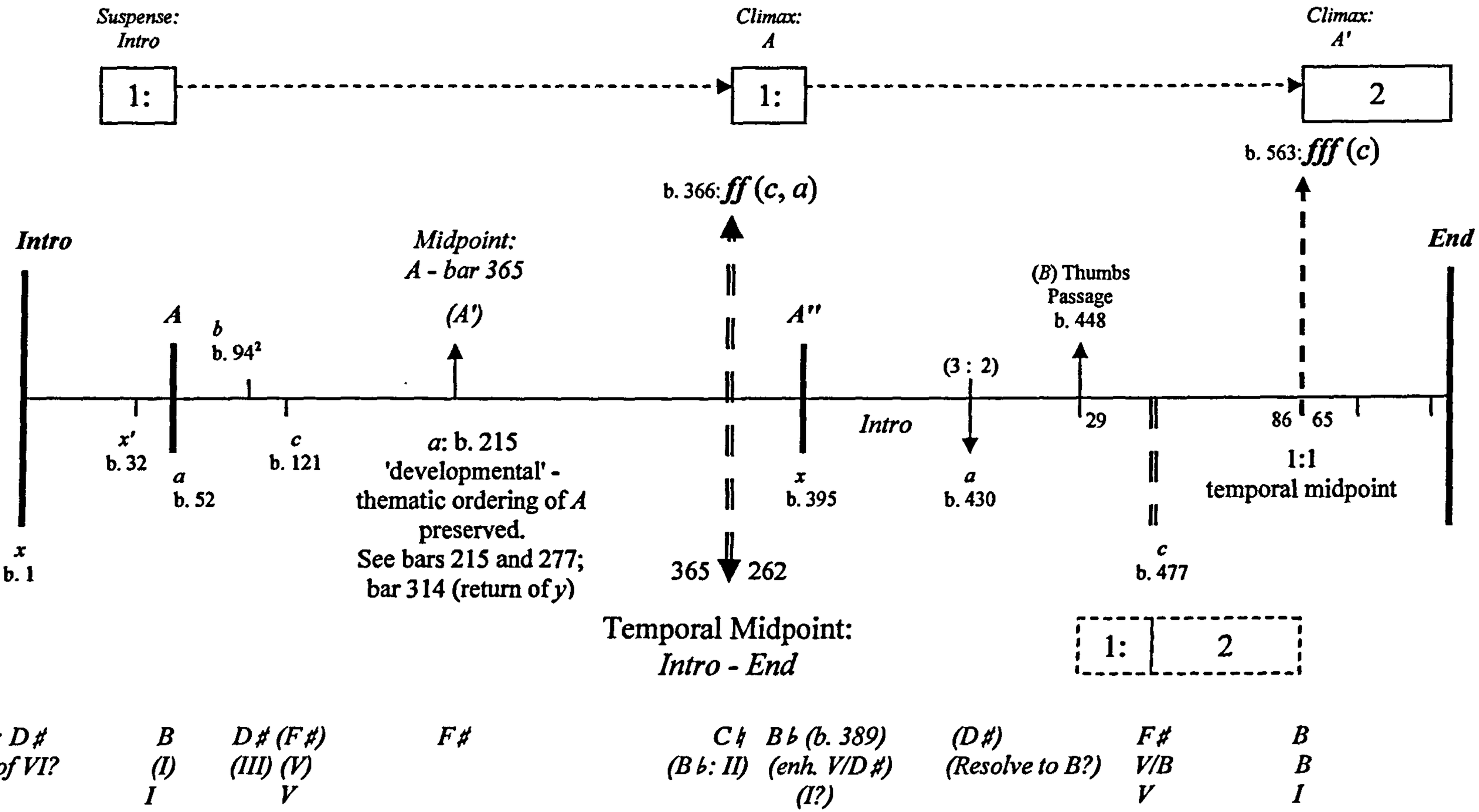
Having subjected Ravel's notation to the scrutiny of performance, it was determined to see what effect continuity has on musical shape. When listeners first encounter *Scarbo*, they are prone to hear and remember two dramatic climaxes (*Example 3:9*). They will also have an awareness of the element of return, given that the distinctly-recognizable-figure of bar 1 makes its presence known at bar 395. As illustrated in *Example 3:10*, the first dynamic climax divides *Scarbo* into two parts of near-equal length, with the return of the introductory material consecutive with the return of *A"*. From this vantage point, the re-entry of the introduction is slightly larger than its counterpart at the beginning. Further, motif *a* (*Example 3:11*) is not simultaneous with the return of section *A"*, and the B pitch-centre is missing, leaving the impression that the return is both an affirmation and a prolongation of D♯.

Example 3:9, Scarbo, climaxes



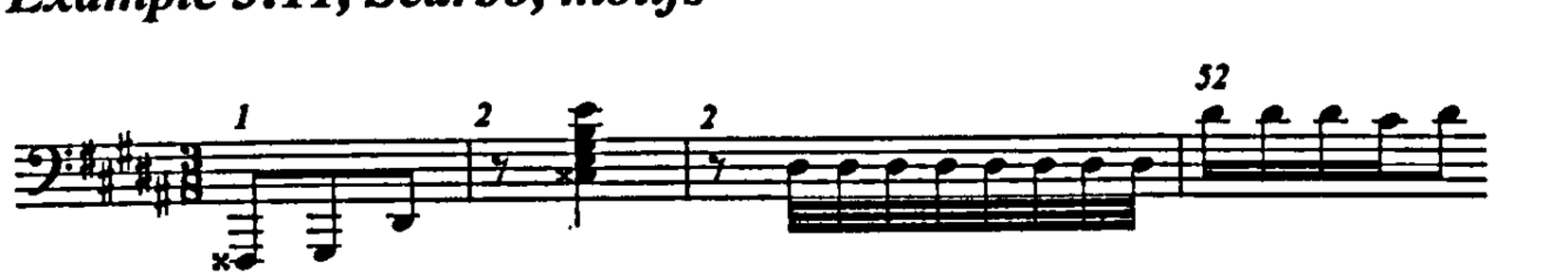
Consequently, the proportions mined from Merlet's performance suggest that Ravel has created a dramatic, binary-structure (*Example 3:10*). *Scarbo* may also be heard as a sonata form, but the organization of the musical content detracts from this effect. Firstly, unlike sonata forms which present a 'dramatic' opposition and resolution of opposing tonalities, *Scarbo* withholds the home-key of B until the close

Example 3:10, Scarbo, comprehensive proportions



of the piece. Secondly, with the expansion of motifs *x* and *a*, the return feels longer than the beginning—expositions and recapitulations tend to be the same length. Thirdly, motif *c* does not reappear until bar 477, further distorting the nod to 'recapitulation'; motif *b* is entirely absent.

Example 3:11, Scarbo, motifs



x flamenco chord 'side-drum'

Relationship of proportion to Bertrand's poetry

With the foregoing discussion in place, it is now possible to consider a relationship across performance, proportion and poetic element. As was the case with *Ondine*, in *Scarbo*, there is also a correlation between the text and the music (*Example 3:12*).

Example 3:12, Scarbo, musical animation of poetry

Stanza	Musical correspondence	Possible interpretation
Hoffman verse	Introductory page: bars 1–31	Initial fright
Bertrand 1	Bars 32–109	'Bees buzzing': tremolos starting bar 65
2	Bars 110–213	Scarbo scratching on silk curtains: bar 121
3	Bars 214–394	Scarbo's pirouette portrayed with extended keyboard flourishes: bars 228–234 and 249–255
4	Bars 395–579	Longest section of the piece; transmutation of Scarbo
5	Bars 580–end	Aural picture of Scarbo turning blue before vanishing

With the exception of bar 214, Ravel has placed the '*quelle horreur!*' theme (Orenstein, [1968, 1975], 1991: 172) at the beginning of each new section and this

repetitive device alerts the listener to the ending of the previous section by corresponding with the poetic refrain 'How many times...' A glance of Merlet's timings reveals that the fourth stanza accounts for 38% of the total length (*Example 3:13*).

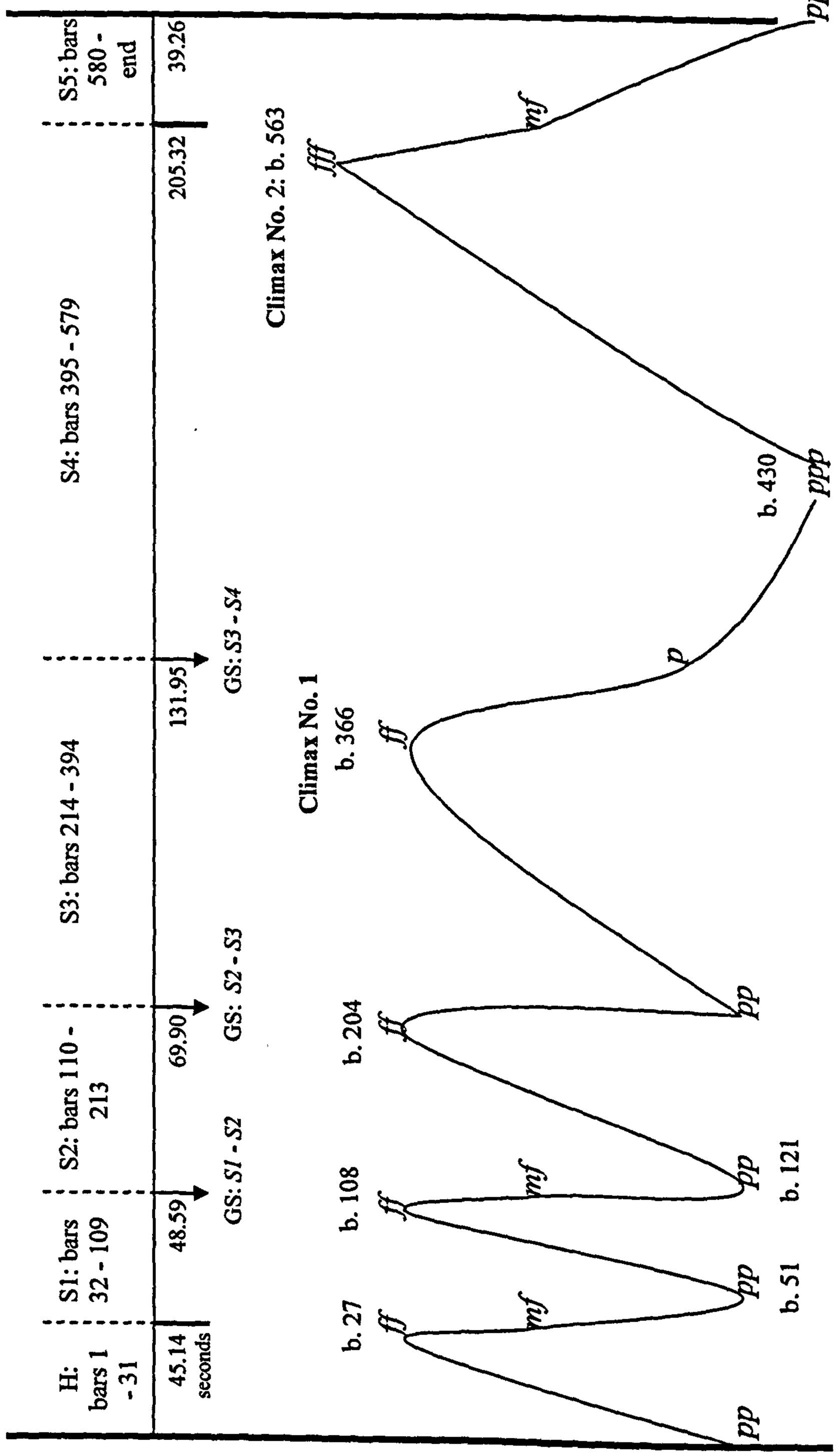
Example 3:13, Scarbo, Merlet, timings and prose relationship

Verse	**Bars**	**Timing (seconds)**	**% of total**
Introduction			
Hoffman verse	1–31	45.14	8.35678
'Exposition'			
Bertrand 1	32–109	48.59	8.99548
Bertrand 2	110–213	69.90	12.94061
'Development'			
Bertrand 3	214–394	131.95	24.42794
'Recapitulation'			
Bertrand 4	395–579	205.32	38.01095
Bertrand 5	580–end	39.26	7.26821
		540.16	**99.99997**

Since this is the near equivalent of the short division of *Phi* (.382), it was determined to investigate whether the performance data revealed GS proportions across the entire work. As illustrated in *Example 3:14*, Merlet's Scarbo is built from a terraced scheme of proportioned relationships. Consequently, Ravel's musical representations of the poetry are shaped by a temporal process which allows each successive section to grow larger as the piece progresses, with the former stanza related by (near) GS to the longer segment.[11] Whether Ravel or Merlet intended this correspondence of GS, musical and poetic texts is unknown, but it does enable the creative critic to celebrate the accomplishment of a composer who crafted the interaction of performance and compositional elements to withhold the defining climax until the closing moments of the piece.

If Ravel set out to make 'a caricature of Romanticism (Jourdan-Morhange and Perlemuter, 1990: 35),'[12] his intent may have also been to imitate an optical illusion through the medium of sound, realized through this dynamic of proportioned growth

Example 3:14, Scarbo, representation of fear through proportioned organic growth



and energy. At the beginning of the poem, the insomniac is terrified when realizing that Scarbo has gotten in the room; the flamenco-dancing, diminutive-elf must not be very large if the tenant has to look under the bed or in the fireplace. Stanza 2 alludes to the possibility of the eye being deceived—'...the moon is like a silver coin on an azure banner'—and this inversion of objects parallels the latter magnification of the fourth stanza, created from the viewer's perspective of looking upwards at the full moon, with a large gothic cathedral in the foreground. As in real life, the line of the horizon may make the moon loom larger than it actually is. By the time the listener has survived several episodes with the whirling Scarbo, the last a progression from distorted time to an 'all-out' accelerando, each of the elements listed above have converged to represent the extreme limits of fear.

Conclusions

The *Oxford English Dictionary* defines caricature in Art as a 'Grotesque or ludicrous representation of persons or things by exaggeration of their most characteristic and striking features'.[13] In *Scarbo*, Ravel has chosen the smallest object as the point of exploitation—the floppy, triangular cap, with its tiny bell, which grows to become the belfry at the top of a great Spanish cathedral. The performer's triumph may be that he or she has created a musical sleight-of-hand through a continuous approach to tempo, by allowing, rather than forcing, the proportions to emerge in performance. In the process, the challenge is not to be consumed by the 'transcendental jujitsu' (Orenstein [1968, 1975], 1991:171).

Notes

---

[1] This quote is from Calvocoressi's *Musicians Gallery: Music and Ballet in Paris and London*, 52.
[2] This particular example does not continue forward from the first to the second waltz; it was selected to illustrate the expressive quality of the upward seventh.
[3] *Mon maître Maurice Ravel*, 20, as quoted in Orenstein [1990], 2003: 558.
[4] This group included Paul and Charles Sordes, the poet Tristan Klingsor, the painters Edouard Benedictus and Séguy, Charles Guérin, Chanvin, and the musicologist M. D. Calvocoressi, Maurice Delage, D.E. Inghelbrecht, Lucien Garban, Marcel Chadeigne, Ricardo Viñes, the decorator Georges Mouveau, the designer Pivet and Ravel's brother Édouard (Roland-Manuel [1938], 1947: 33).
[5] The index to Roland-Manuel's book lists this group as the *Apaches* and the artists mentioned above eventually recruited the following members to its ranks: Joaquin Boceta (from Spain and interested in

the relationship between music and mathematics), Florent Schmitt, Déodat de Séverac, André Caplet, Paul Ladmirault, Cipa Godebski, Synnesvedt, Manuel de Falla, Maurice Tabuteau, the Abbé Léonce Petit. 'This little company held its meetings regularly right up to 1909, when it admitted its last member—a young composer, Igor Stravinsky' (Roland-Manuel [1938], 1947: 34).

[6] Of the 11 pitches present in bar 1, only the tonic is missing.

[7] This phrase comes to an end when the harmony resolves at the same time the hemiola grouping is made apparent in bar 3; it too is heard in combination with an accented E♭ appoggiatura, accents and the *crescendo* and *decrescendo*.

[8]Writer, *Gina Bachauer International Piano Festival*, Salt Lake City, Utah, USA (Assembly Hall, June 2003).

[9] The reader may also listen to Merlet's recording from 1990/1991.

[10] Roy Howat realizes this passage as follows (see *Example 3:8*):

> If you work out the continuity that results from that subtle accelerando, it means that if you have about [30] to the bar at 395, it moves up to say around 56 to the bar by bar 429. That then carries on as quarter [crotchet] = ca. 56 from bar 430. It's hard to define the tempo relationship across 429–430 except that obviously 32nd [demisemiquaver] = preceding 16th [semiquaver]. That's what Ravel really ought to have marked...The tricky thing is that the quarter from 430 onwards doesn't relate to bar 429 the same way as it relates to bar 395. Ravel tried to show this [but was not entirely successful] which is why Roger N. [edited it further]... [this change] makes the point that by 430 the quarter [crotchet] (or the whole of bar 429) needs to have almost caught up with the speed of an eighth in bar 395. In practice I think the quarter [crotchet] at 430 has to be a bit slower than the eighth [quaver] at 395, but of course a lot faster than the bar at 395 (Howat, 2004).

[11] This may represent a 'virtuoso' feature of Ravel's compositional craft—the ability to create a dramatic work without exhausting itself too soon. The reliance on the short-long division suggests that the moments of dramatic intensity coincide with the high or low point of the dynamic line. Ravel has successfully managed this feat with a quick tempo, through articulative moments of silence and with juxtaposed contrasts of dynamic extremes that coincide with the proportional divisions.

The mathematical logic is as follows: firstly, 48.59 seconds is the time in performance for stanza 1; this, + 69.90 seconds (stanza 2, bars 110–213) equals 118.49 seconds. Stanza 1 (48.59) divided by this figure (118.49) yields .4100767 which is a 2.80767 percent difference from the mathematical (.382) short GS segment. Secondly, the point of GS from the start of stanza 2 to the end of stanza 3 is at the end of bar 213, which places the 'development' section; it is removed by a difference of 3.57033 percent. Thirdly, the GS of stanza 3 to stanza 4 is at the end of bar 394, which is the beginning of the return; it is 1.87516 percent difference from the mathematical point.

[12] Jourdan-Morhange and Perlemuter recount the following:

H J-M Now let's go on to *Scarbo*, the last piece in the triptych. After the static picture of *Le Gibet*, the little dwarf, Scarbo, appears even more frantic by comparison. You know what Ravel wrote to one of his friends: "I wanted to write a more difficult piece than *Islamey*"!

V P And he stuck to his guns! He expected a flawless performance of the score and that requires a transcendental technique.

H J-M Apparently, in writing this piece, the craftsman Ravel thought: "pure technique", but the hidden flame within him sprang to life—a flame so powerful that it scorns any denial by those in whom it lives! So *Scarbo* oddly exceeds the intentions of its composer.

V P And one mustn't forget this. Virtuosity is essential, but it is not an end! When I worked at *Scarbo* with the master, he told me: "I wanted to make a caricature of romanticism", then lowering his voice, he added: "but perhaps I let myself be taken over by it".

H J-M I find the essence of Ravel in that honesty towards himself. In any case, that sentence gives the interpreter the precise character of the piece.

V P And in spite of its apparent extravagance, what perfection there is in the form!

H J-M This is not the first time that Ravel arrives at classicality by the pathways of fantasy!

[13] See *OED* online version.

4 Tonal pacing and harmony

Ravel, unlike many contemporary composers at the turn of the twentieth-century, did not abandon tonality. His forms are tonally closed and by the end of the piece the motion of keys has come full circle. However, this does not suggest that Ravel exploited a dramatic structuring of tonic and dominant key-relationships. Rather, his compositional aesthetic relies on a weakened sense of tonality. From a technical standpoint, this is accomplished by first defining a tonal centre, either discreetly, or vaguely, before the harmony falls by fifth as a dominant to the new section. The ambiguity of tonal structure also extends across moments of formal delineation. This is especially true at the lower levels of activity, where the interest of the immediate surface is often created from a layering of wholetone, pentatonic and/or octatonic pitch materials. Frequently, extended tertian harmonies define the section(s), and the additive symmetrical pitch element acts as the agent of continuity across these divides.

Three examples are given below in support of the observations above. In the first instance, the continued discussion of the *Valses nobles* outlines the harmonic impulse over the course of the first several waltzes to suggest how the pianist may shape this feature in performance. The second example, *La vallèe des cloches*, demonstrates how Ravel layers pentatonic ostinati, which are closely related to the diatonic centres, in order to create an ambiguous sense of tonality. *Le gibet* presents a third, contrasting perspective, by arguing that Ravel creates a feeling of stasis through *ad hoc* pitch collections which include both the diatonic and octatonic scales. It is proposed that an understanding of tonal process enables the performer to see beyond the immediacy of the moment to project a longer, unbroken line.

Valses nobles

For the *Valses nobles*, the movement of keys is relatively straight-forward. It consists of directed activity to the submediant, followed by a return to the tonic, through falling thirds. As such, the motion towards E in *Waltz 5* constitutes *the* point of arrival; the first four waltzes are related by this basic inclination. Within the introductory waltz, the dominant is first articulated before the surface-rhythmic-energy propels the harmony forward to the submediant. Although *Waltz 2* represents a juxtaposition of mood, it too keeps the same harmonic outlines. Hence, latent contrast is realized by the change of mode—from major to minor—with the logical outcome a submediant cadence in E♭. *Waltz 3* balances this tendency by exploring the closely-related keys of E minor and G major. *Waltz 4* eventually resolves to E major, but flitters off to A♭ to set up an enharmonic pitch-relationship with G♯ at the head of *Waltz 5*.

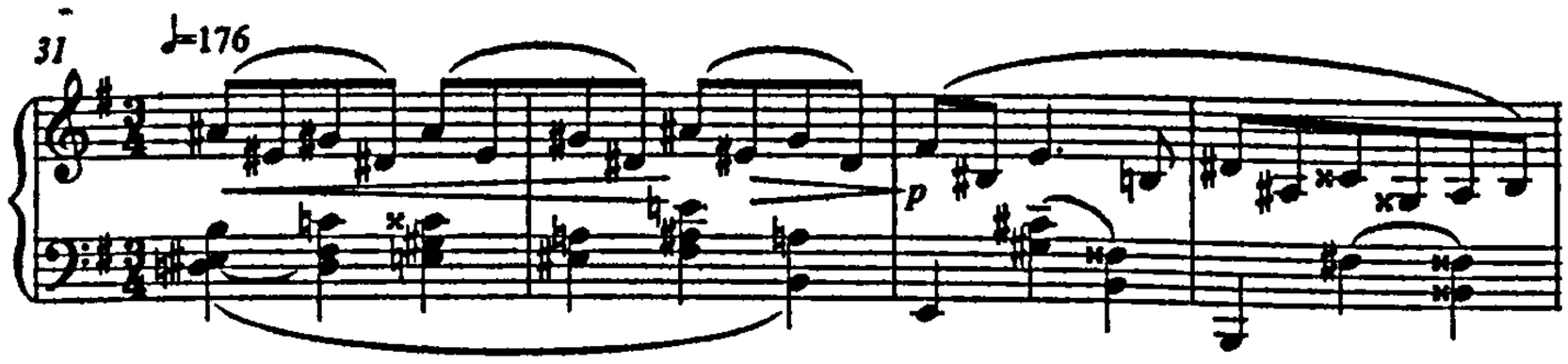
Performance

As music is an art-form experienced through the passage of time, it is the accumulation of references to the submediant, and to the E centre, which locate the tonal motion at the end of *Waltz 5*. E is realized in one of two ways. Firstly, as in *Waltz 1*, it is positioned within a proportional scheme which coincides with the transformation of the opening motivic cell. Secondly, it is prefaced by an added melody in the tenor voice of *Waltz 4* (*Example 4:1*).[1] This suggests *Waltz 5* is the central waltz of the series. It is the only one which is not 'reincarnated' and this scarcity validates its importance as the emotional focus. If one accepts this premise, then it is the performer's approach which encourages the listener to hear it in this manner. Several examples illustrate: firstly, the pianist can articulate the movement to E major in the first waltz, although this is not indicated in the score (*Example 4:2*). As a result, analysis enables the listener to rationalize why other performers interpret the passage as they do (*track 9*, bars 21–39: Merlet; *track 10*: Thibaudet). Secondly, the performer can envision the point of harmonic arrival, within the second waltz, at E♭, by emphasizing the B♭ chord as a dissonance that needs to resolve (*Example 4:3*). Thirdly, in *Waltz 3*, the performance is served if there is no slowing leading into the surprise return of G major at bar 57. Fourthly,

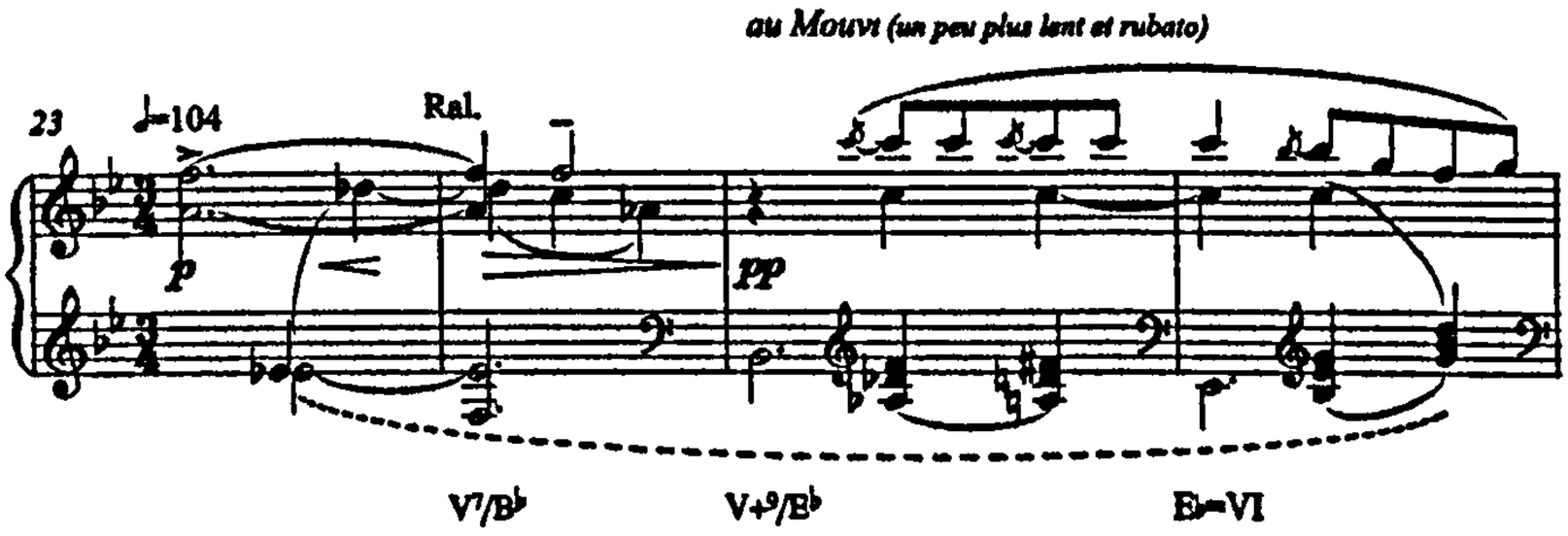
the extra voice alluded to above may be added (*track 11*, *Waltz 4* (complete): Merlet; *track 12*: Thibaudet). Conversely, if one chooses not to include this variant, E can be reinforced with other means. One method is to envision the resolution of the implied appoggiatura as outlined in *Example 4:4*; an alternate approach is to perform it as notated the first time and then include it when the passage is repeated. Regardless of what the performer chooses, he or she can withhold the resolution of E major until the end of *Waltz 5* by keeping the pulse going at the junction of bars 8 and 9. One may presumably hear the end of the first phrase as the point of tonal closure, but the continuative nature of the voice-leading suggests that the 'resolution' is a weakened articulation versus the stability at the end of the waltz, which coincides with slowing and a fermata.

Example 4:1, Valses nobles, waltz 4, bars 31–37[1], added tenor line

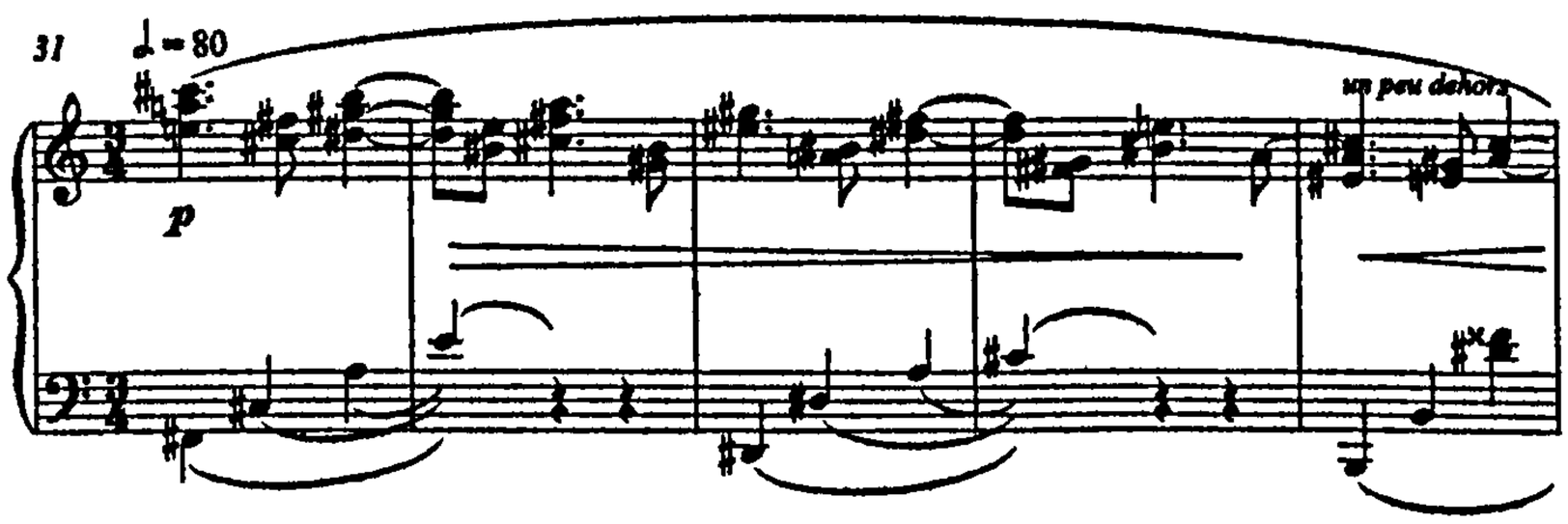
Example 4:2, Valses nobles, waltz 1, bars 31–34, hemiola articulation leading to E major

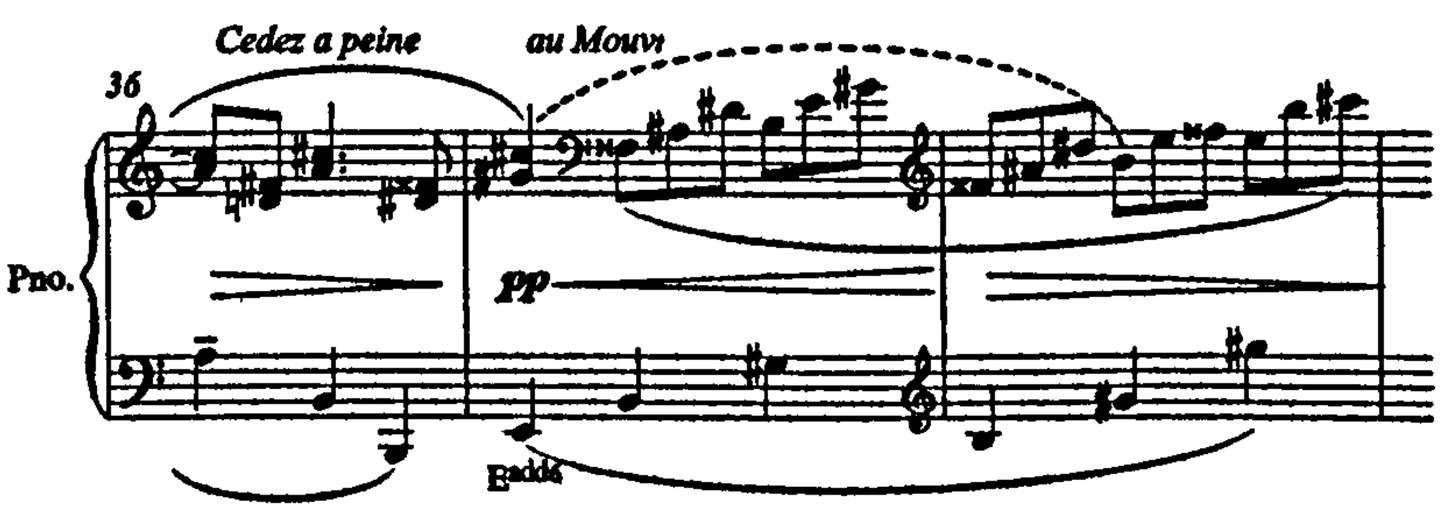


Example 4:3, Valses nobles, waltz 2, bars 23–26, harmonic motion extending past sectional articulation



Example 4:4, Valses nobles, waltz 4, bars 31–38, delayed resolution of C♯ suspension





La vallée des cloches (1904–05)

'Ravel told Robert Casadesus that "La vallée des cloches" was inspired by the many Parisian church bells which toll at noon' (Orenstein [1968, 1975], 1991: 160)... Although this reference links the musical programme to a specific place—Paris at the turn of the 20th century—listeners may, from the pentatonicism, associate it with musical traditions of Southeast Asia. Recently, Percy Grainger's orchestral

arrangement of *La vallée* was featured at the 2004 BBC Proms, which explored ties between music of Western composers and the ancient trade routes of the Silk Road.[2] Although Ravel did not comment specifically about *La vallée*, he did indicate that Javanese music influenced his work:

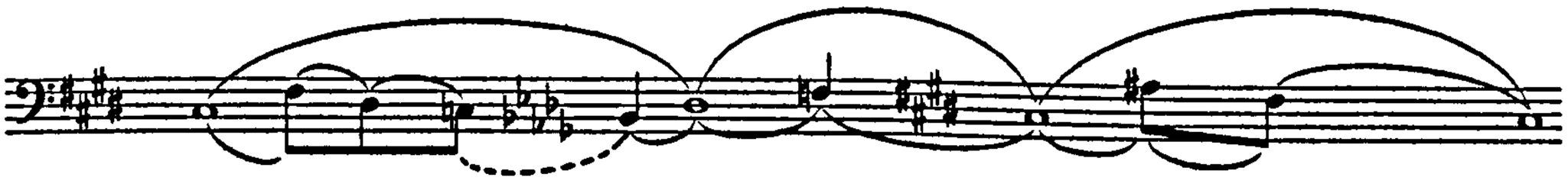
> —Aren't you especially attracted by Java because of your musical relationship with the Orient?
>
> "Yes, I yearn to see the country of the gamelan. I consider Javanese music the most sophisticated music of the Far East, and I frequently derive themes from it: 'Laideronnette,' from *Ma Mère l'Oye*, with the tolling of its temple bells, was derived from Java both harmonically and melodically. Like Debussy and other contemporaries, I have always been particularly fascinated by musical orientalism (Orenstein, [1990], 2003: 473)."

The publication of *La vallée* (1904–05) predates *Ma Mère* (1908–10) by approximately 4 to 6 years.

Tonal articulation

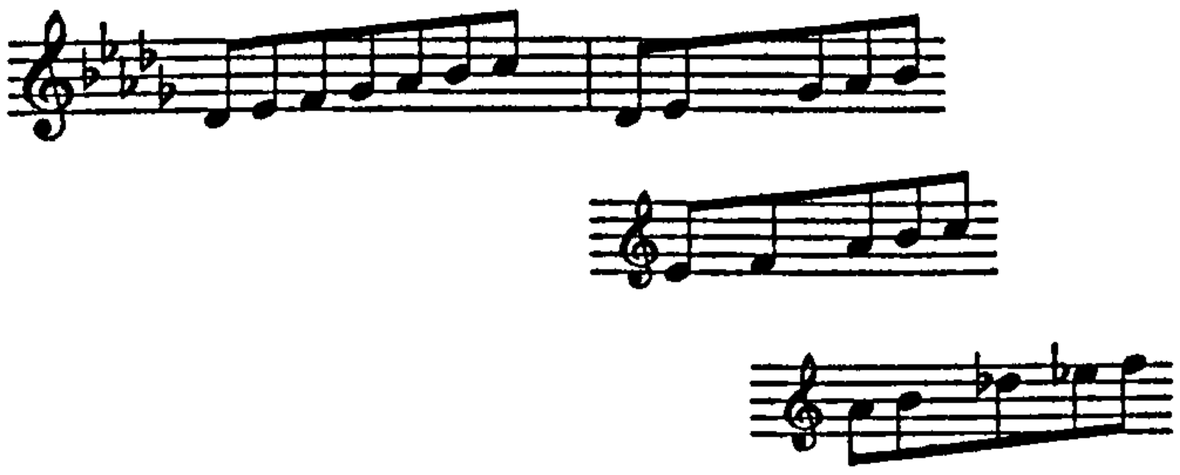
In addition to the pentatonicism alluded to above, *La vallée* is also shaped by tonal process. As illustrated in *Example 4:5*, the tonality is constructed from an extended prolongation of a C♯ centre through enharmonic reinterpretation. However, the tonic is never fully defined until the return of *B′*; from *A* to *B*; C♯ is weakened when it becomes a dominant to F♯. In turn, F♯ is only briefly tonicized within the octatonic descent from bars 12–19. Eventually, when C♯ returns at bar 42, this falling-thirds pattern balances the earlier motion, leading to the return of F♯ (bar 46). Hence, this passage extends the mood of contemplation and ritual with plagal coloring.

Example 4:5, La vallée des cloches, bass outline (arch form)

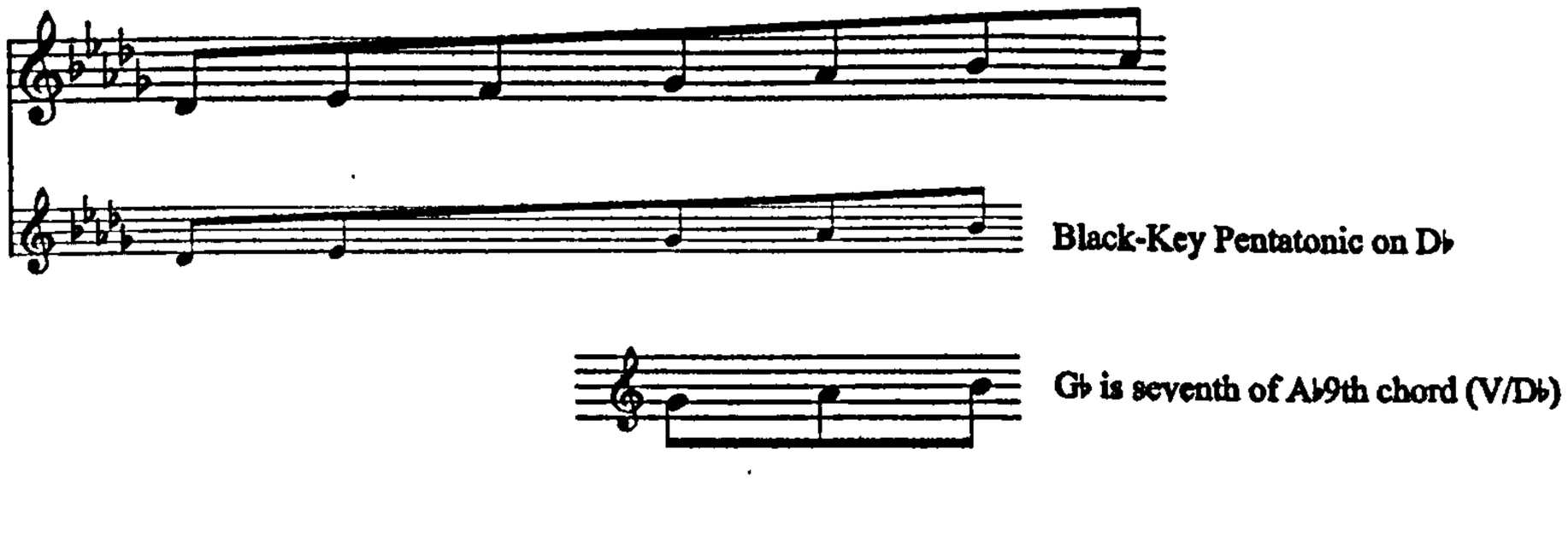


Ravel's choice of C♯ as the home centre is logical; it allows for direct exploitation of nuanced subtleties within a synthetic tonal and pentatonic framework—the melodic element and ostinati are derived from pentatonic subsets, which are mined from the diatonic scale. As illustrated in *Example 4:6* there are three possible transpositions of the black-key pentatonic scale within D♭ major: A♭, B♭ and E♭ are common pitches to each version. Accordingly, the extended melody of *C* is derived primarily from the middle transposition; the C♮ pitch, which frames the outer ends of the melody, is not present in either the upper or the lower transposition. G♭ is also purposely avoided until the end of the phrase, when it emerges to strengthen the possibility of resolution to D♭ (*Example 4:7*). Consequently, Ravel has enlisted a gradual filling in of elements to advance the harmonic line. A related example further illustrates; the pentatonic, melodic fragments of the second half of section *C* also prepare the listener to hear the eventual enharmonic tonal motion when A♭ falls as a dominant to C♯ (*Example 4:8*).

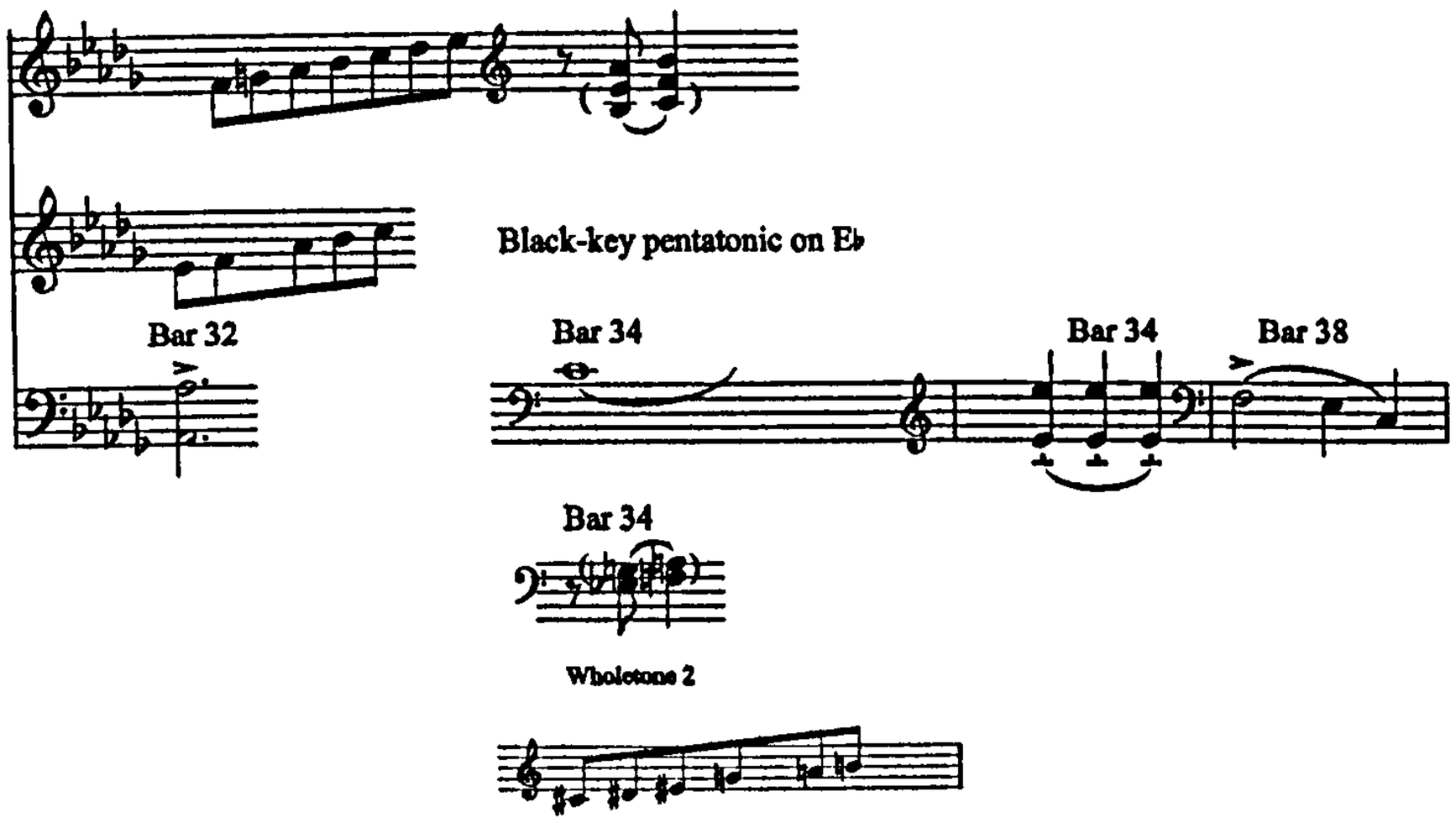
Example 4:6, La vallée, black-note pentatonic collections within D♭



Example 4:7, La vallée



Example 4:8, La vallée



Tonal ambiguity

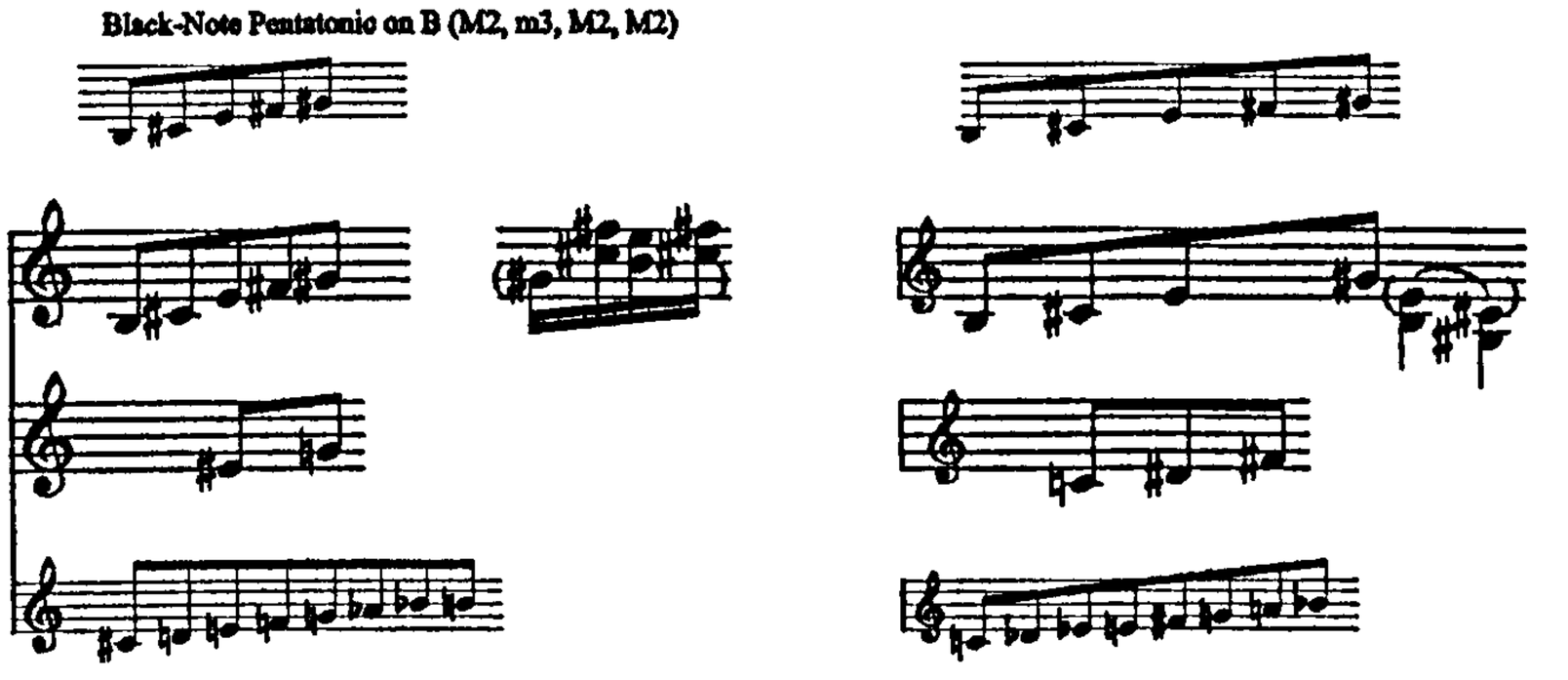
In a general sense, the harmonies support the tonal element. Although the harmonies may resolve along traditional lines, the resolution itself is not strongly articulated, as the voice-leading wanders across extended register within the collage of bells. *C1* (bar 20), the beginning of the interior passage, carries the greatest amount of tonal ambiguity. In the first phrase, B♭ is presented as a stable centre, before the ensuing movement to A♭ suggests the possibility of resolution to D♭. However, this is not readily apparent to the listener; an implied subdominant harmony, G♭, is presented on the structural downbeat, suggesting that this is the point of tonal arrival (bar 24). In turn, D♭ as an implied tonic is never firmly articulated because it is heard in a weakened metric position.

Symmetrical pitch element: function

This veiling of tonality is ultimately created from a layering of tonal and symmetrical elements (*Examples 4:9–12*). Over the course of the piece outside dissonance is introduced in the form of octatonic pitches, which alert the listener to the advent of a new section. As illustrated in *Example 4:9*, E♯ and G♮close off section *A*. Beyond clashing with the resultant triads, these pitches also service the

long-range harmonic motion; E♯ functions as the leading note to F♯ at the head of *B*. Although G♮ is not directly related to the tonal process, it is the common pitch that 'connects the dots' between the two transpositions of the octatonic scale at this joint of *A* and *B*. Although G♮ is not present in *B*, it does relate to the pitches which follow, namely F♯, E and C♮ in the low bass.

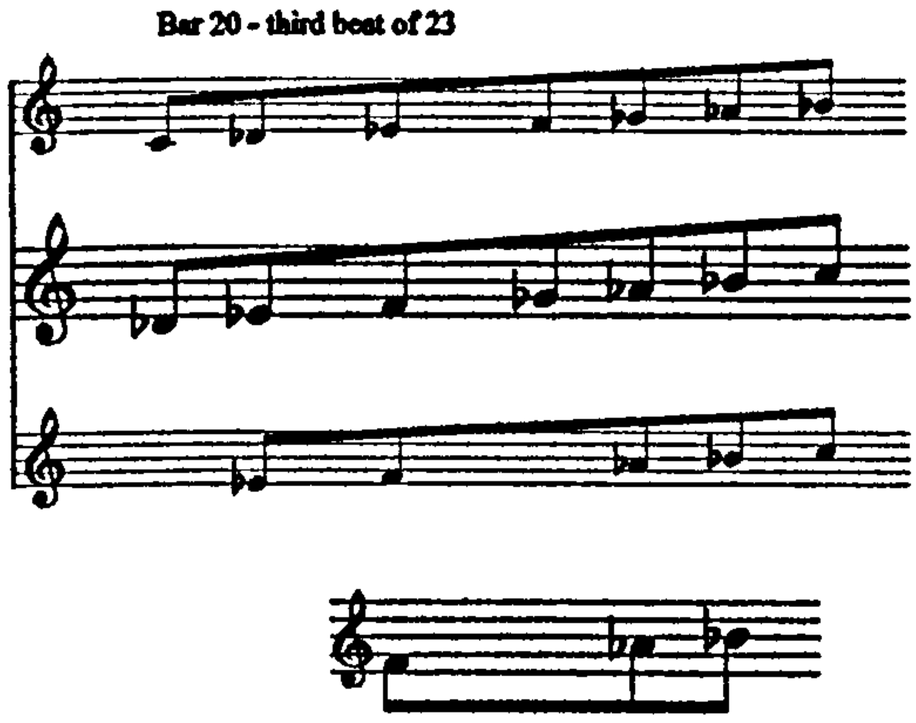
Example 4:9, La vallée



Octatonic 1
Section *A*: Bars 1-11

Octatonic 3 (accented C♮ & B♭, bar 16)
Section *B*: Bars 12-19

Example 4:10, La vallée

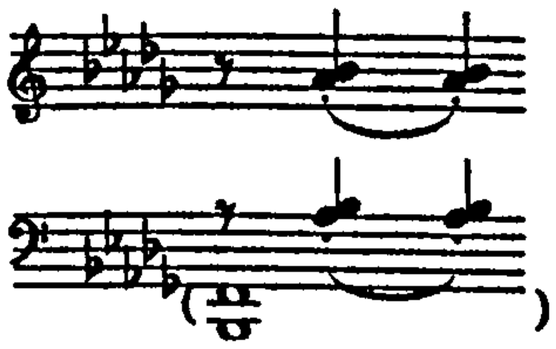


(C Locrian Melody? - begins and ends on C)

B♭/D♭ Modal Ambiguity

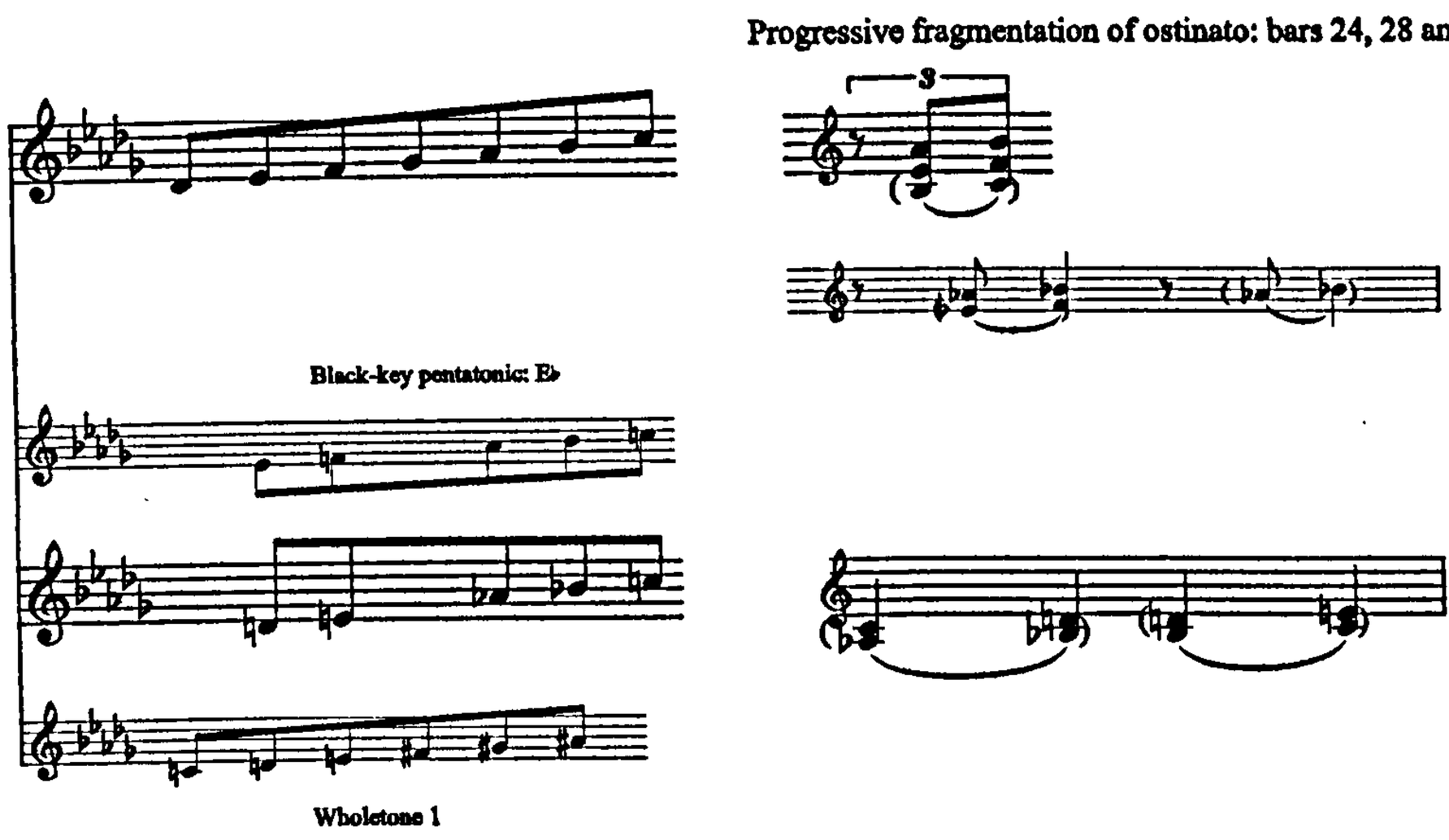
Black-note pentatonic on E♭
B♭ & C pitches in common with Octatonic 3

Bars 20-22

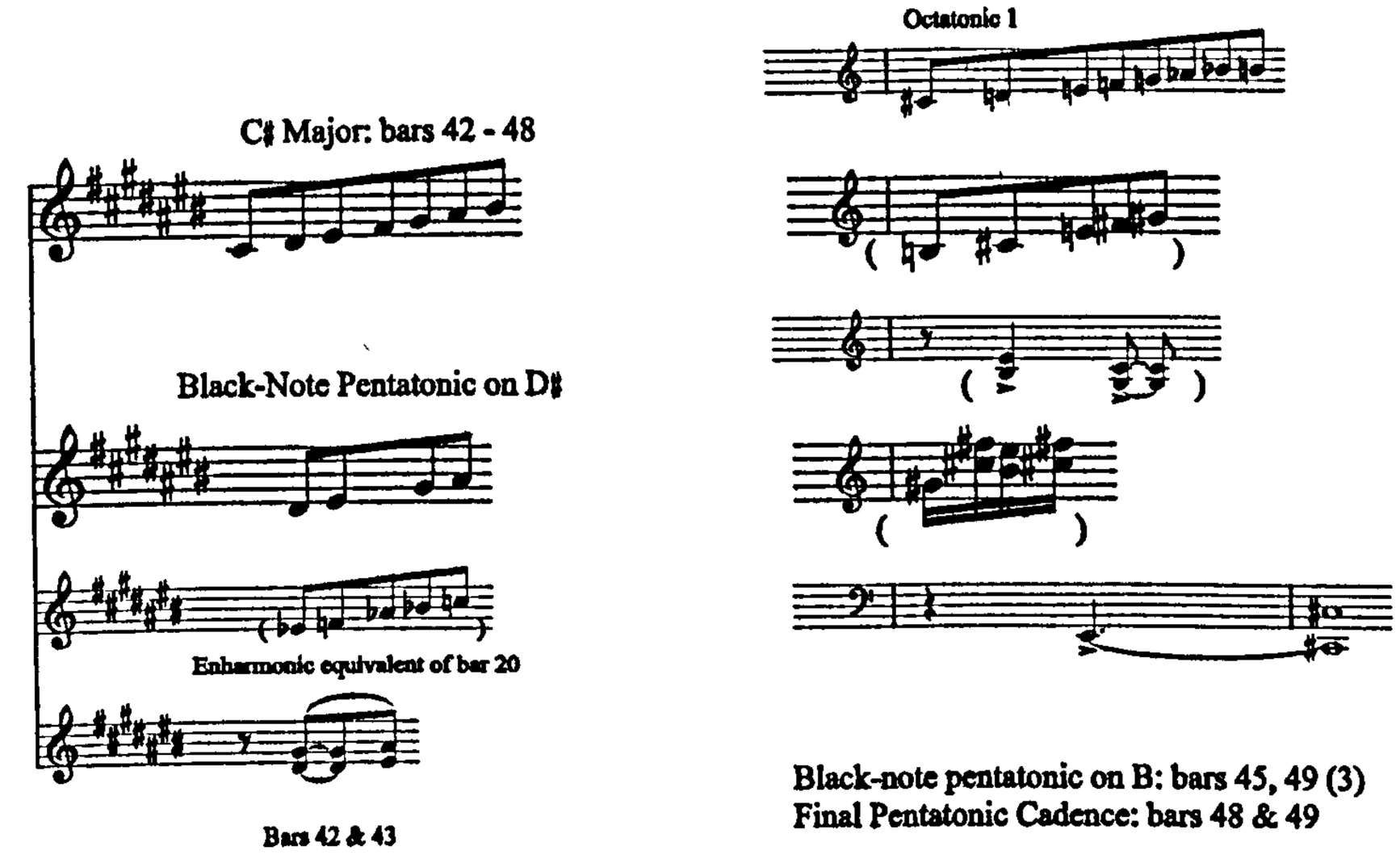


Bars 20 - 22: Temporary B♭ centre

Example 4:11, La vallée



Example 4:12, La vallée



In terms of performance, this suggests that the pianist does not need to change the pedal over the course of the first 11 bars. A sanitized approach would minimize the clash between E♮ and E♯, or between G♮ and G♯, but this potentially negates the effect of the dissonant buildup. The connection, by pedal, at the joint of bars 11 and 12 enables the low G♮ to bind sections *A* and *B* together when it falls by step to the next pitch in the scale. If the slowing of the surface ostinati articulates the divide itself, the octatonic continuity organically binds the sections together through slow-moving bass-pitches.

Sectional articulations: performance

With this understanding of harmony and tonal process, it is also possible to consider how the pianist may articulate the other sectional divisions of *La vallée*. Curiously, Ravel did not indicate any pedal markings from the end of bar 38 to the start of bar 42. Given the findings above, one approach is to pedal bars 38 and 39—each as separate blocks. As the cadence at the head of *B′* represents the strongest functional tendencies of the piece, this suggests that the pianist should pedal across the barline, and the fermata, from bar 40 to the start of bar 42, without changing the pedal (Howat 2001/2002). This ensures that the tonal relationship is made apparent to the listener.

Conversely, the fall of E to C♯ at the joint of bars 48 and 49 is the defining non-tonal feature of *La vallée*; this moment represents a multiplicity of meanings (*Example 4:12*). Firstly, from a formal perspective, this is where the tonal, pentatonic and octatonic threads merge. Secondly and thirdly, E and C♯ belong to the opening ostinato; the minor third is the defining interval of the pentatonic scale. Fourthly, this is also the moment where the plagal cadence within C♯ balances the earlier episode, heard at the end of *A*, where C♯ fell by fifth to F♯. Roy Howat suggests holding the pedal from bars 46 to the beginning of bar 48 (Howat 2001/2002). Later, the pianist can perform the E♮ at bar 48 as if it were a gong; from here the performer may keep the pedal to the end without changing. When the arpeggiated chord returns at bar 50 it is possible to voice the C♯ in the register immediately below middle C, rather than emphasizing the high F♯. This approach clarifies the tonal process for the listener; the piece is in C♯ and not in F♯.

Conclusions

The discussion above has demonstrated how *La vallée* is tonal, although the overlay of symmetrical pitch materials masks this effect. Additionally, Ravel did not indicate specific pedal markings, beyond the sustaining of bass notes as notated in the score. The benefit of analysis to performance is that each note is accounted for as being either within, or outside of, the diatonic element; this knowledge colors the pianist's approach to pedaling.

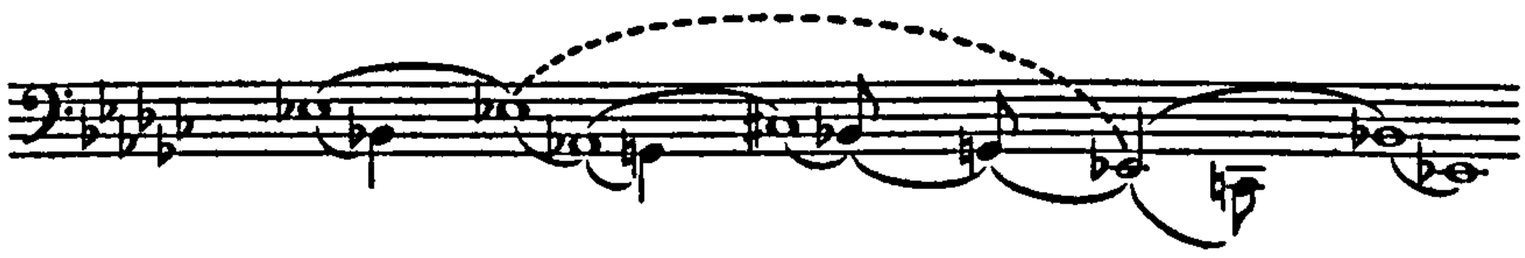
Le gibet

In an aural sense, listening to *Le gibet* is like looking at shifting patterns in a kaleidoscope. The focal point is B♭ and the interest lies in the unfolding of the harmony around this note. As the wheel rotates, ever so slightly, new permutations of color(s) emerge. By the end of the piece when the wheel has finished turning, the object returns, only to end where it first began. Consequently, *Le gibet* does not rely on a traditional formal model. It is built from symmetry and GS proportions, which determine the ordering and flow of musical events (*Example 4:13*).

Tonal ambiguity

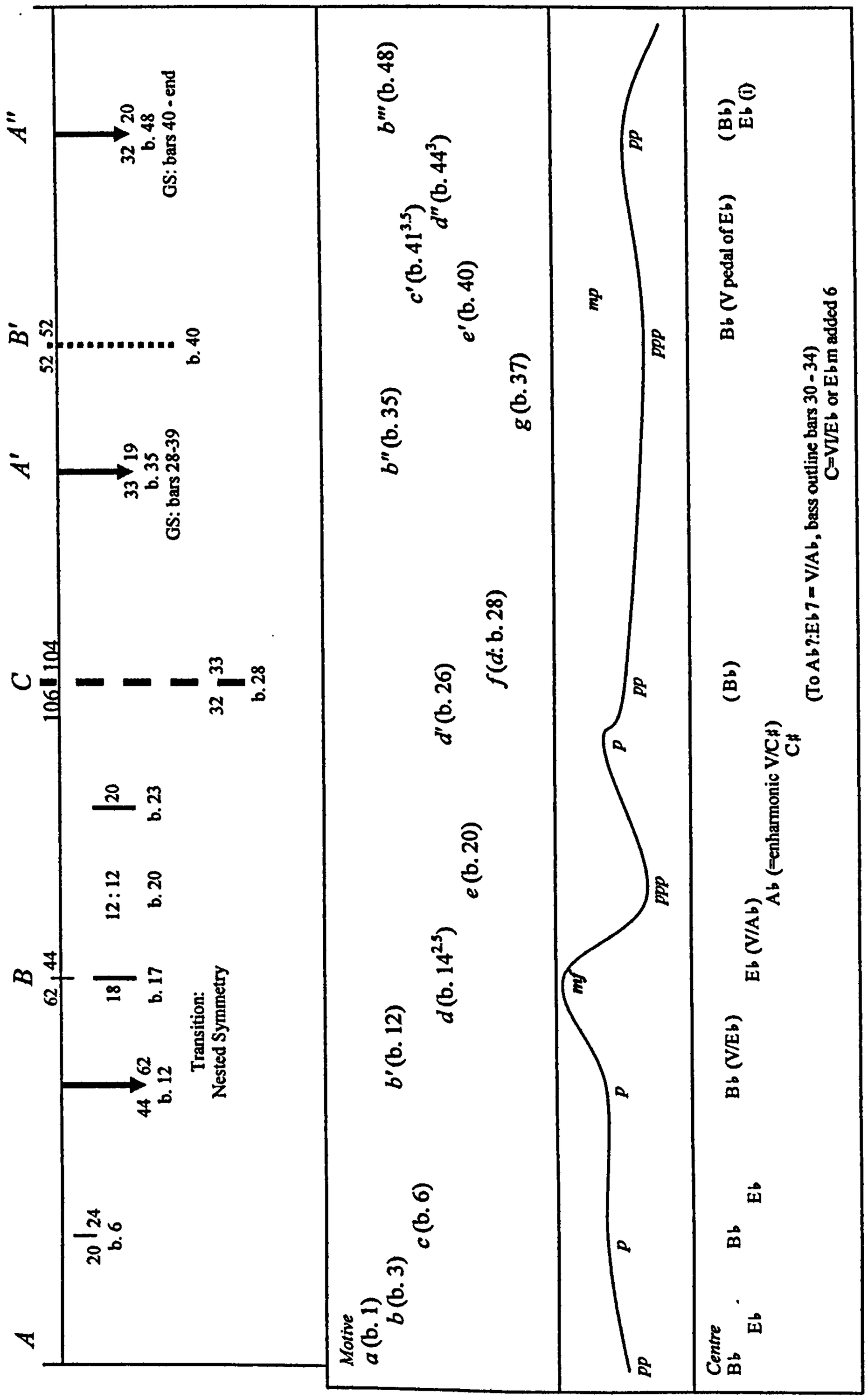
Because the piece begins and ends in the same key, and because the centres relate by fifth, *Le gibet* is considered 'tonal'. These details are outlined in *Example 4:14*. However, as with the *Valses nobles* and *La vallée*, *Le gibet* is constructed from a weakened tonal scheme. If, over the first page, the tonic is defined by the pianist, it is then destabilized when it becomes a dominant to A♭. Eventually E♭ does return, but it is not strongly articulated, suggesting the motion must go farther. *Le gibet* also relies on structuring by non-functional means; *C* is all octatonic (*Example 4:15*). The stacked tertian harmonies of this section may have functional overtones, but the triads do not resolve as dominants.

Example 4:14, Le gibet, bass outline

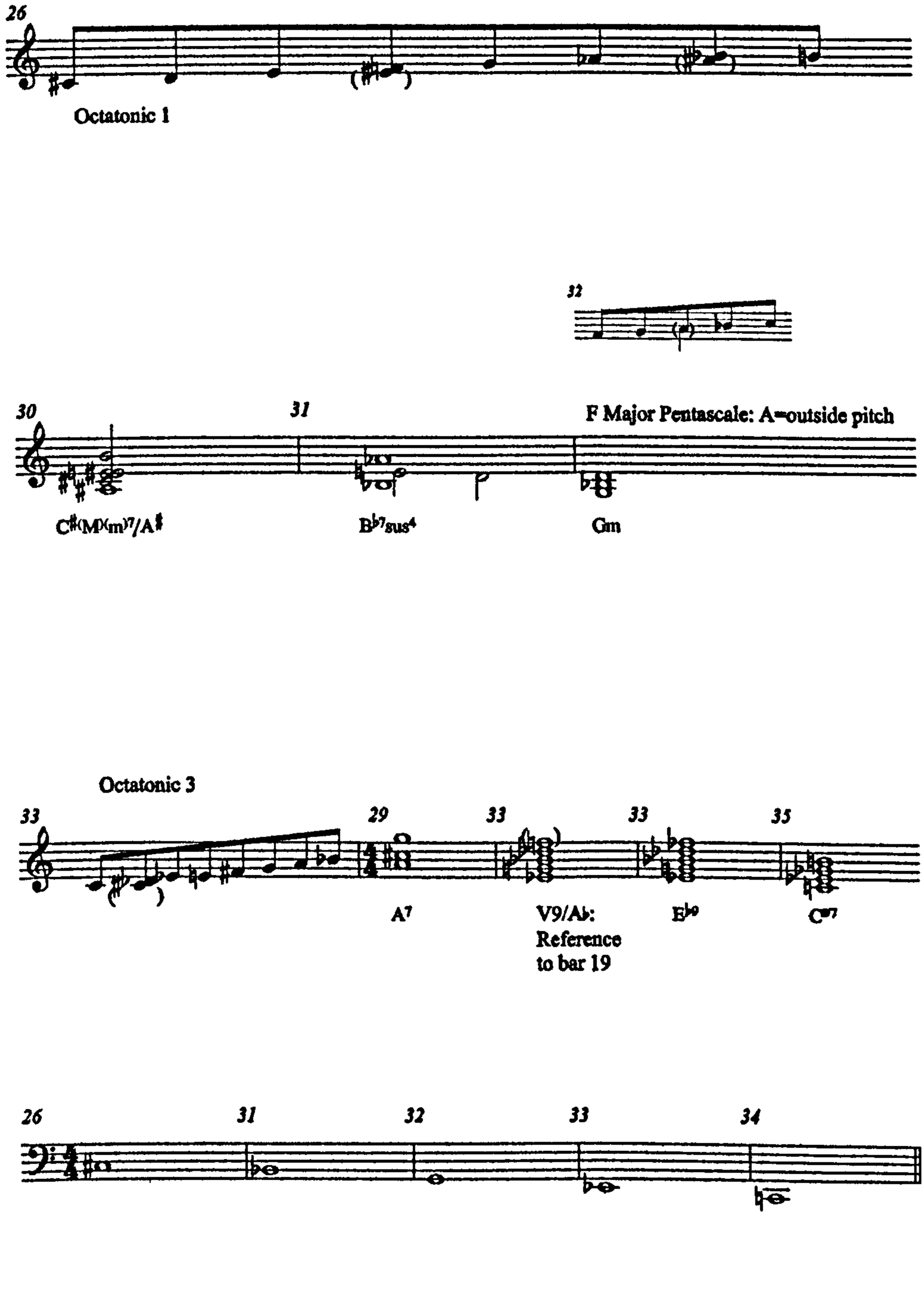


	A	***B***	***C***	***A'***	***B'A***
E♭ minor:	i V	i (iv)		(i)	V i
		V/iv			
		V/C♯			
Bar:	3 14	17 20 23	26 31	32 34 35	40 48

Example 4:13, Le gibet, GS and symmetrical relationships



Example 4:15, Le gibet, section C octatonicism, bass movement by thirds, non-functional triadic surface



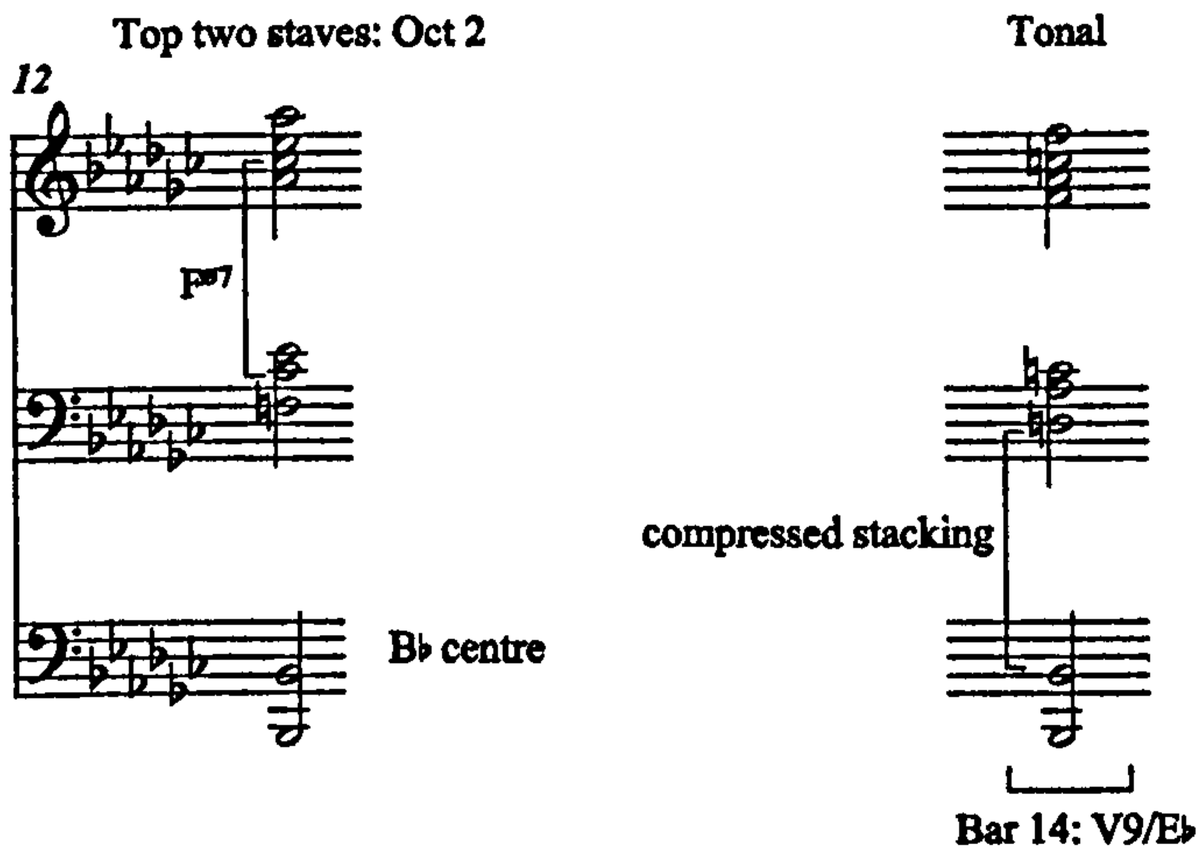
When the passage in question is tonal, the primary method for veiling the tonality is an ad-mixture of diatonic and octatonic elements. The opening key is first defined when bare, B♭ octaves, resolve to E♭ as an implied dominant. There is no difficulty in explaining the pitch content of the first five bars; it is all diatonic. Conversely, the new melodic fragment at bar 6 calls this stability into question; it is

octatonic. Ravel has juxtaposed the diatonic and octatonic collections in the form of a question and answer statement to present the main harmonic construct at the outset.

Dual centres

The ambiguities of *Le gibet* are also reinforced by competing centres. The ever-present B♭ makes logical sense as the 'other' centre; direct repetition defines centricity. Two examples illustrate; in the first instance, the duality of the opening section is mitigated by the subsumption of the octatonic element within the tonal framework (*Example 4:16*).

Example 4:16, Le gibet, resolution of competing centres



Hence, when the dominant ninth of bar 14 resolves to the quartal trichord of bar 15, it focuses the E♭ centre. A second example illustrates an opposite approach: the possibility of tonal progression is abandoned when the motion reduces to octatonicism. At bar 20, there are two centres, B♭ and A♭, A♭ having been articulated by the earlier tonic triad, which was reinterpreted as a dominant. At first, this passage represents an octatonic harmonization of the tonally inflected subdominant. However, the additive dissonance does not resolve; instead, the competing centres coalesce to a different transposition of the octatonic scale which includes B♭. Octatonic 1 is thus the point of arrival at bar 26 and A♭ is prolonged from bar 20 before it is enharmonically reinterpreted as a dominant to C♯. This suggests Ravel has kept the outlines of the fifths motion in place, but has replaced

the 'functionality' with an inclusion of symmetrical pitch content. (The same is also true of *Oiseaux tristes* where Ravel juxtaposes tonally ambiguous material against pure octatonicism as the means of creating nuanced contrast. Interestingly, both pieces are in E♭; each enlists a repetitive B♭ bebung figure; plagal structuring is elevated to the fore.)

Harmonic episodes

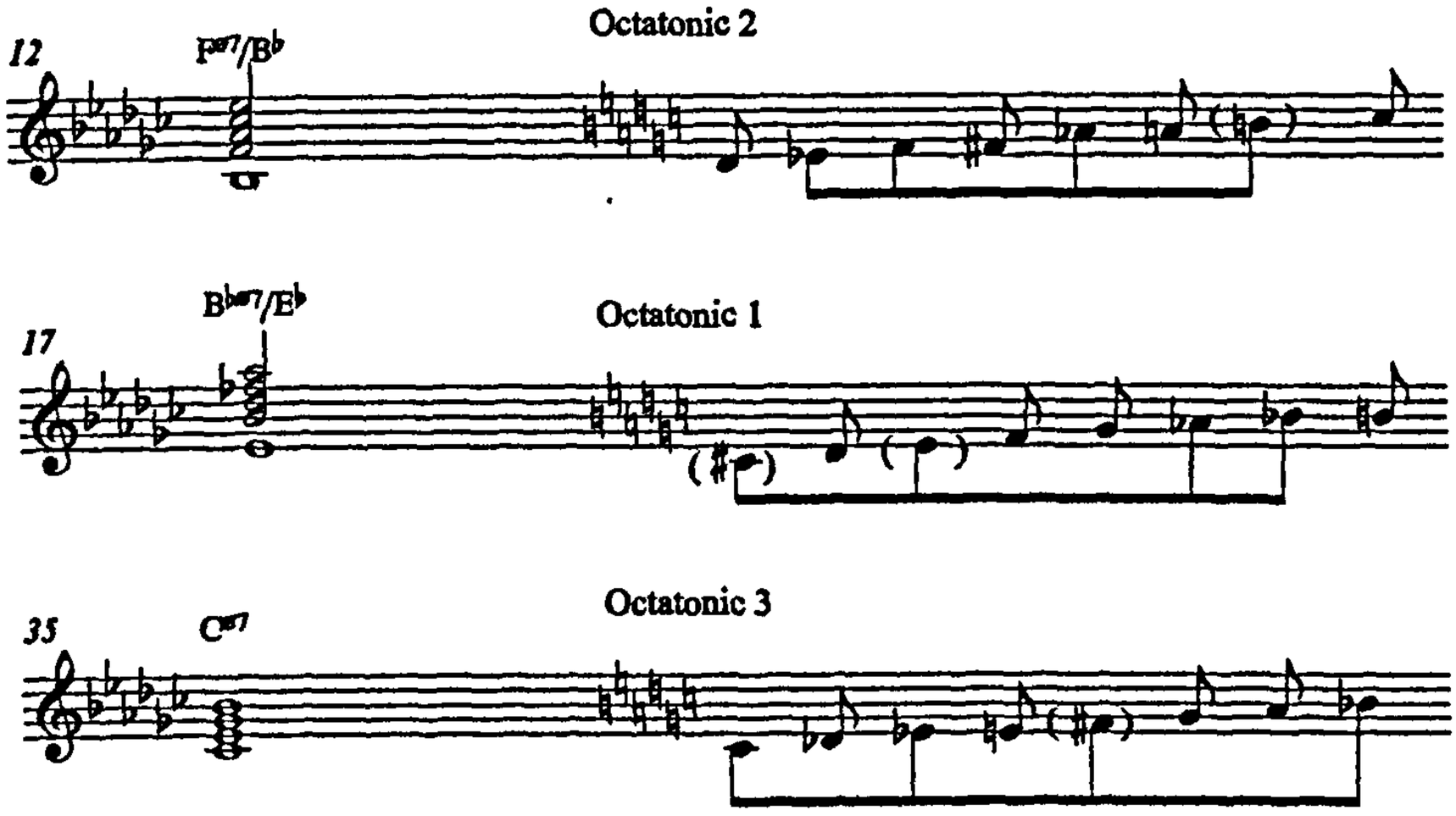
This harmonic outline, tonic to subdominant and back again, represents the basis of *Le gibet*; the initial seed of this impulse is found in bars 3 and 4. Accordingly, *Le gibet* can be summarized as follows: it is two variations, based on the expansion of this harmonic idea followed by a short coda at the end. In each successive instance, as the piece progresses, the motion becomes more vague and abstract. Given these findings, the formal design is reconsidered according to this understanding of harmonic pattern.

At a basic level, the strategically-placed, half-diminished-seventh chords define the larger sections of *Le gibet*. This happens in one of two ways: firstly, near the ends of sections these triads perturb the stasis. Secondly, the chords are transformed with the addition of the low bass note to become functional dominants—in turn, this propels the harmonic line forward. Consequently, the half-diminished chords are the link between the underlying tonality and the octatonicism (*Example 4:17*); once accounted for, the proportional relationships come into striking focus (*Example 4:18*). From the start of the piece to the return of the opening theme and *ad hoc* collection at bar 35, the GS is exactly at bar 23, which is the point of entry for the cycle of fifths sequence. Correspondingly, there is an immediate symmetry on either side of this division.

The proportions additionally work in tandem with the harmonic element to create a graduated return of the tonality. When E♭ returns at bar 35, this harmony does not feel stable; this is due to the low C♮ in the bass. Later, the stacked tertian dominant of bar 39 resolves to the B♭ diminished chord at bar 40. Here, the motion feels as if it has come to rest, although a diminished triad is not normally considered 'stable'. Consequently, because of how the proportions are conceived there is a feeling of preliminary return at bar 40. As the 'person in the poem' does not know

what they have seen until the very end, the listener may not fully realize what they have heard until the moment of articulated tonal return in the coda.

Example 4:17, Le gibet, relationship of half-diminished-seventh chords to octatonic collections

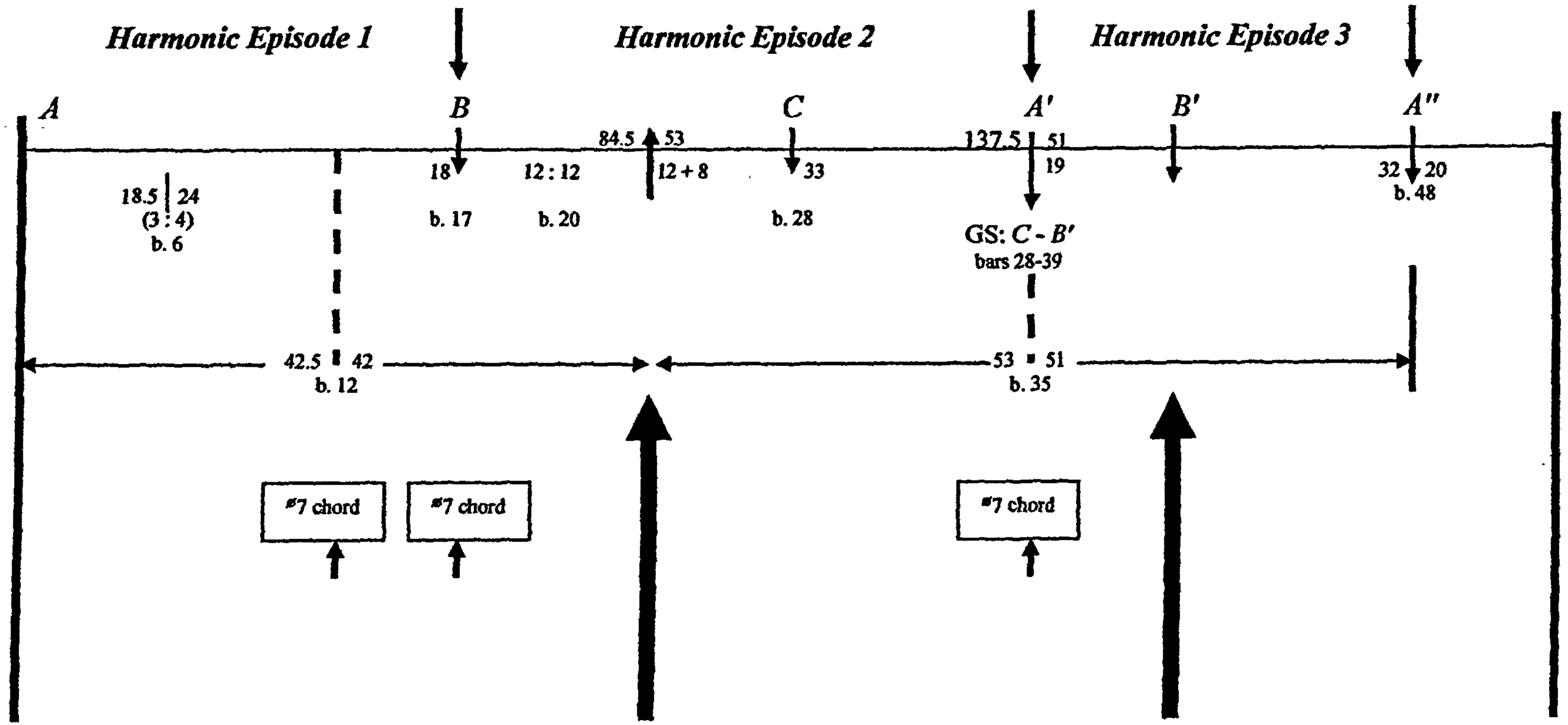


Conclusions

The arguments presented above have illustrated how complex centres are essentially static. In turn, the half-diminished seventh chords are the impetus for change. Metaphorically, they are like a flash of light, which sets the darkness into motion. The beginning of the third and final episode is also announced by the C half-diminished seventh chord (or the E♭ added sixth chord) at the beginning of bar 35. Curiously, there is no notated change of dynamic, although the analytical findings suggest the performer should do something to highlight this referential harmony. Conversely, analysis may not fully clarify the issue; the chord in question may be the least of the three half-diminished sevenths, although the common wisdom suggests not playing it too softly in order that the *ppp* contrast at bar 40 is apparent to the listener.

As with a kaleidoscope, Ravel uses mirrors—in this case the compositional equivalent is symmetry and GS—to look at an object. If the performer chooses to accept the interpretative stance of *Le gibet* as a series of three harmonic episodes, which connect across the planes of section and theme, there are several approaches to realizing *Le gibet* in performance. The first is to carefully plan the approach to the

Example 4:18, Le gibet, relationship of half-diminished seventh chords to GS structuring



joint at bars 16 and 17; as indicated by the tied notes, the damper pedal carries over, across this barline, to create an unbroken line of sound from bars 12 to 20 (Howat, 2001/2002). In the resolution at bar 15 the performer can emphasize the interior E♭ pitch as a nuance of coloring, so the voicing is not dominated by the top note. The pianist may also present the A♭ in the middle staff as an unresolved appoggiatura to G♭ by emphasizing it as if it were a dissonance that will resolve, although it never does. This same approach applies to the final chord of this bar. Here the E♭ is an unresolved suspension to D♭; if D♭ were present, it would define B♭ as a minor dominant.

At bar 17, the performer can, as Ravel has prescribed, mark the half-diminished sonority in a strong way to indicate that this is the beginning of the first variation. Within this section the performer may choose to create an unbroken sequence of ideas, being careful not to take too much time between bars 19 and 20; the harmonic articulation for the larger section happened earlier at the end of *A*. The pianist can also hear the extended dominant chord at the end of bar 19 resolving to A♭. Thus, a nuance of performance happens naturally if the performer can momentarily forget what is about to happen; instead of E♭ resolving to a minor triad, there is a Scriabin-esque, quartal coloring at play at the downbeat of bar 20.

In the bars that follow, the goal is to create an unbroken sequence from bars 20 to 25, envisioning the chords at the end of bar 25 as an improvisatory jazz progression that eventually tonicizes C♯ on the downbeat of bar 26. Since the end of this motion is a fifths based progression, and because the ending of the earlier sequence in bar 22 is chromatic, the performer may maximize the effect of this harmonic line as if it is spinning out, but without too much speeding up.[3] By connecting both sequences together, the performer creates a longer line and a spectrum of effects that transforms the mood from the mysticism at the beginning of bar 20 to an urbane coolness at the end of bar 25.

The main psychological difficulty for the pianist is accepting *Le gibet* on its own terms; it is meant to sound static. There may occasionally be a slight give and take of the basic tempo as it relates to the differences between sections which have a hierarchical tonal basis versus those that rely on a layering of the diatonic and octatonic collections. Likewise, in passages created by dual centres, the performer may choose to keep a very steady pulse. This takes into account Ravel's indications at the beginning, 'without speeding up or slowing down until the end of the piece.' In

essence, the pianist will have to determine how to be expressive within the confines of a strict pulse so as not to upset the proportional relationships.

A performance that Ravel especially liked was by Robert Casadesus (1899–1972). 'In 1922, M.R. heard R.C. play *Gaspard de la nuit* and congratulated him on his interpretation, particularly the way he played "Le Gibet," in a slow tempo, evoking the nostalgia that he desired, while still underlining the harmony, more like a composer than a pianist' (Orenstein [1990], 2003: 550–551). Perlemuter also advocated playing *Le gibet* with precision:

VP Yes, I admire it [*Le gibet*] very much, but perhaps it is one of the most complicated pieces to play because you must not be afraid of making it sound monotonous.

H J-M It is like a great classical *adagio* where you must not be afraid of wearying the public, otherwise you begin to hurry.

VP It all depends on one's inner capacity. In *Le Gibet* the haunting repetition of the bell must be unchanging from beginning to end.

H J-M What did Ravel have to say?

VP Ravel insisted on absolutely strict tempo. The grandeur of the piece depends on the rhythmical structure. It is not simply a bell swinging; Ravel asked for the 'scaffold' theme [bar 3] to be well marked, but without expression, whereas the answer should be very *cantabile* [bar 6].

H J-M It must be very difficult to produce all these different sonorities with only two hands.

VP Indeed, it is necessary to have complete control of the keyboard. Thus in this expressive passage, both hands play in unison with the sonority of the bell and at the same time with another sonority for the additional note which forms the chord.

H J-M In short, we are joining up with the great polyphonic technique of Bach! Is there a rule about playing in unison?

VP Yes, the left hand must be only an echo of the right.

Here, when you arrive at this extraordinary complexity of sounds (bars 20–26), above all, don't slow down, in spite of the difficulty of joining up the chords, which in spite of their unusual spread, must be played very *legato*, as Ravel marked (see page 18, line 2, bar 2 etc).

H J-M In spite of the strictness which Ravel demands in the whole piece, it seems to me that, all the same, there is one phrase whose pathos might advantageously be brought out [phrase starting in bar 28]

VP Actually, no. The pathos of the phrase, which is real, only takes on its whole grandeur when one observes exactly the intransigence of Ravel; he indicated: "a little marked, but without expression".

H J-M The curious thing is that this phrase, played in a slipshod manner, becomes a parody of Puccini!

VP That is why you must provide the expressive intensity in strict time.

H J-M And that's difficult! I admire the way you manage to keep that unified expressiveness which gives pathos to the whole piece. And at the end?

VP As always, don't slow down. This marvelous ending is obtained by sonority and not by slowing down. The phrase must melt into the *pianissimo* (Jordan-Morhange and Perlemuter, 1990: 33–34).

One pianist of Perlemuter's generation may have taken this to the extreme; Février reputedly recorded the work with the light of the metronome flashing. In contrast, Ravel's friend Ricardo Viñes never fully accepted the composer's tempi indications, feeling he would lose the audience. In a letter to Calvocoressi, Ravel weighed in on this point and expressed his intentions clearly:

You can reassure Mr. Mead: I'm presently working on 5 piano pieces (still counting the Sonatine as only 2), am busy finding a better pianist than myself for the 5 others, and will have everything ready for the month of June. I haven't informed him of this yet, because I don't know exactly when I will be able to go. I'm not asking Ricardo for 2 reasons: first, I think he's supposed to be in Spain about that time; second, I would especially like to have

Gaspard de la nuit recorded, and Viñes never wanted to perform these pieces, in particular "Le Gibet," according to the composer's intentions. I did say wanted: I don't know if you were ever present at one of those discussions in which he assured me that if he observed the nuances and the tempo that I indicated, "Le Gibet" would bore the public. And nothing would make him change his mind (Orenstein [1990], 2003: 219).

Notes

---

[1] Special thanks to Roy Howat for this transcription.
[2]http://www.bbc.co.uk/pressoffice/pressreleases/stories/2004/04_april/29/proms_themes.pdf, page 2 of 8; <accessed 16 November 2004>.
[3] See Perlemuter's comments below.

5 Motif and gesture

Introduction

The principal argument below suggests that the motifs of Ravel's compositions retain their identity across the passage of time. This does not mean that motifs are not altered or transformed—they are. In general, the motifs frame larger sectional divisions by being placed simultaneously with corresponding juxtapositions of diatonic and octatonic pitch materials. Ravel also relies on mono-thematicism as the means of creating continuity and nuanced contrast across these joints. If the motifs articulate the larger structure, they are also changed by it. Sometimes, after passing through the moment of proportional articulation, the motifs are put backwards to frontward. Hence, motifs are considered from one of two perspectives: they either mark the formal structure; or, the new division signals the transformation of the motif itself.

This suggests a focused approach to the construction of the musical narrative—an approach which does not rely on an excess of motivic saturation. It represents a limited alchemy, derived from the manipulation of intuitive or gestural elements. Consequently, the overall affect is achieved through a restriction of strategically-placed, non-developmental repetitions that 'home in' on a single cumulative event near the end of the piece. Three examples illustrate: In the first instance, the continued discussion of the *Valses nobles* rationalizes the process of motivic borrowings to show how motifs subscribe to larger temporal patterns. A second example, *Une barque sur l'océan*, traces the narrative thread of the motivic process. In the final example, *Oiseaux tristes* demonstrates how motifs and pitch collections are organized to create a programmatic impact.

Valses nobles

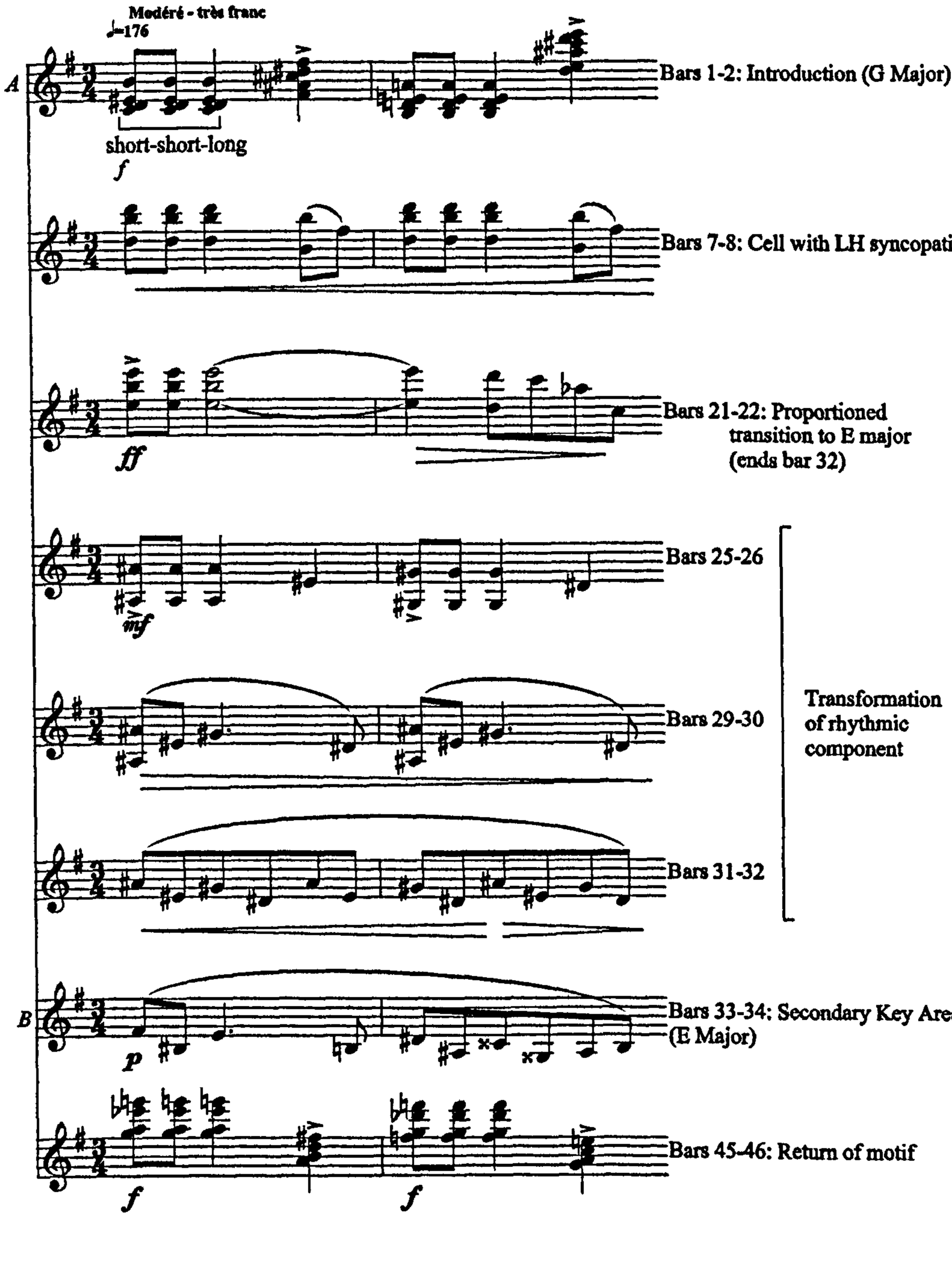
While performers of the *Valses nobles* have tended to focus written commentary on the return of motivic fragments in *Waltz 8*, the basic argument below suggests that this process of self-borrowing starts earlier, at the beginning. In general, motifs are not re-introduced unless there is a basis for doing so. An example illustrates this point (*Example 5:1*): the interjection of the opening motif in the middle of the *B* section, from *Waltz 1*, may seem an unexpected intrusion within the patterned sequences. However, in hindsight, this 'athletic-figure' is the parent-motif of the earlier cell; it formed the basis for the transition and articulation of the second theme. If this placement keeps the forward momentum active, it also reminds the listener of 'the stone from whence the pebble was hewn'. Although this particular reference is overt—it relates the return of the opening theme to its fragmented self—other motivic relationships are less explicit.

Motifs: perception

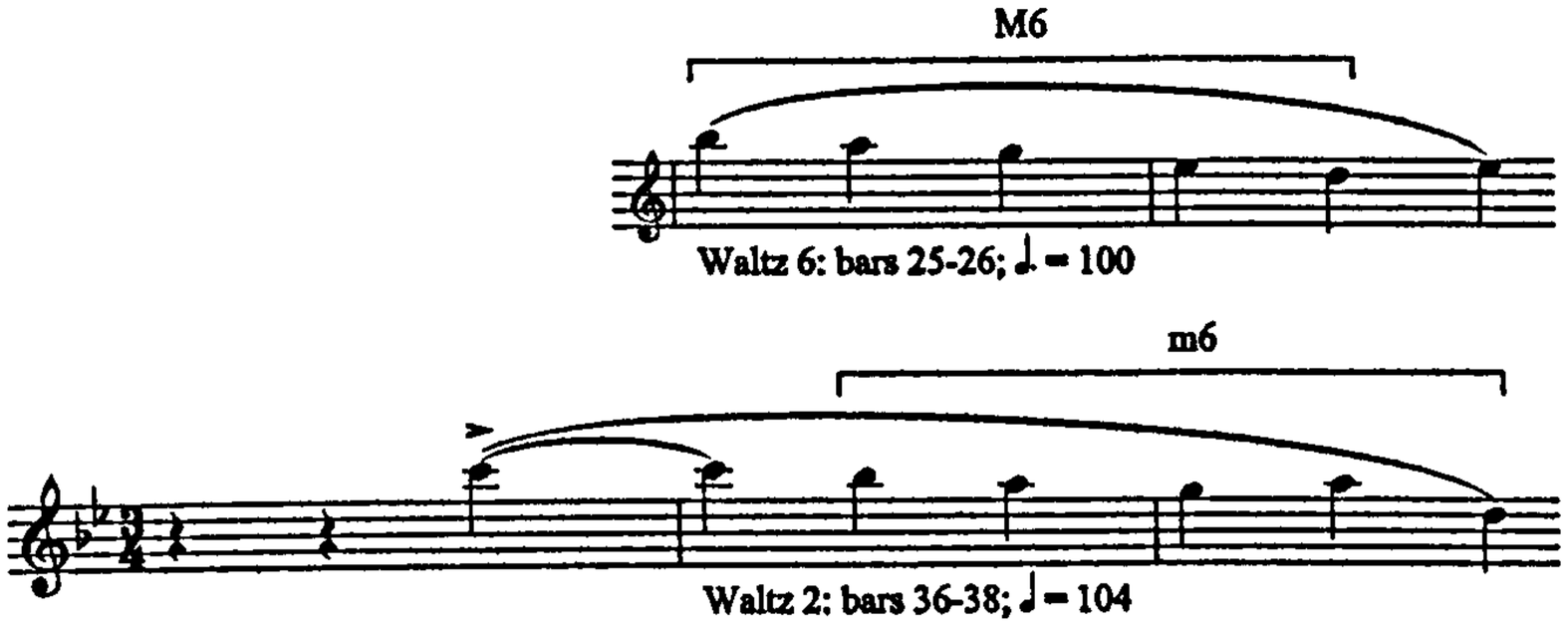
It is sometimes difficult for the listener to recognize consciously these types of associations. The root-cause is the abstraction of the motif from the context in which it was initially heard. Ravel extends this technique farther, by re-presenting motifs in (an almost) matter-of-fact or hidden manner; three examples illustrate. One may listen to the short, fragmentary idea of *Waltz 6* (*Example 5:2*) and sense that it is related to something that came earlier. However, it is difficult to pinpoint exactly where this was, until the realization of the falling sixth relationship. In the second instance, the climax of *Waltz 2* is the basis for the opening theme of *Waltz 8* (*Example 5:3*). What was, at first, an intense expression of emotion, has become an objective statement. *Example 5:4* illustrates an even more nebulous relationship: here, the harmonic rhythm of the opening motif is abstracted, and this underlying feature may not be perceived by the listener as the continuation of the earlier cell. The tempo is too slow to hear it as the offspring of the first, and the harmonic content veils the association. Ultimately, the contrast of tempo and change in mode distracts the listener's attention away from the awareness of this feature. However, this final example does offer an explanation for why the motif is heard as 'overt' in

the first waltz. It is drilled into the consciousness of the listener so it can then be relegated to the background, at a different level of processing.

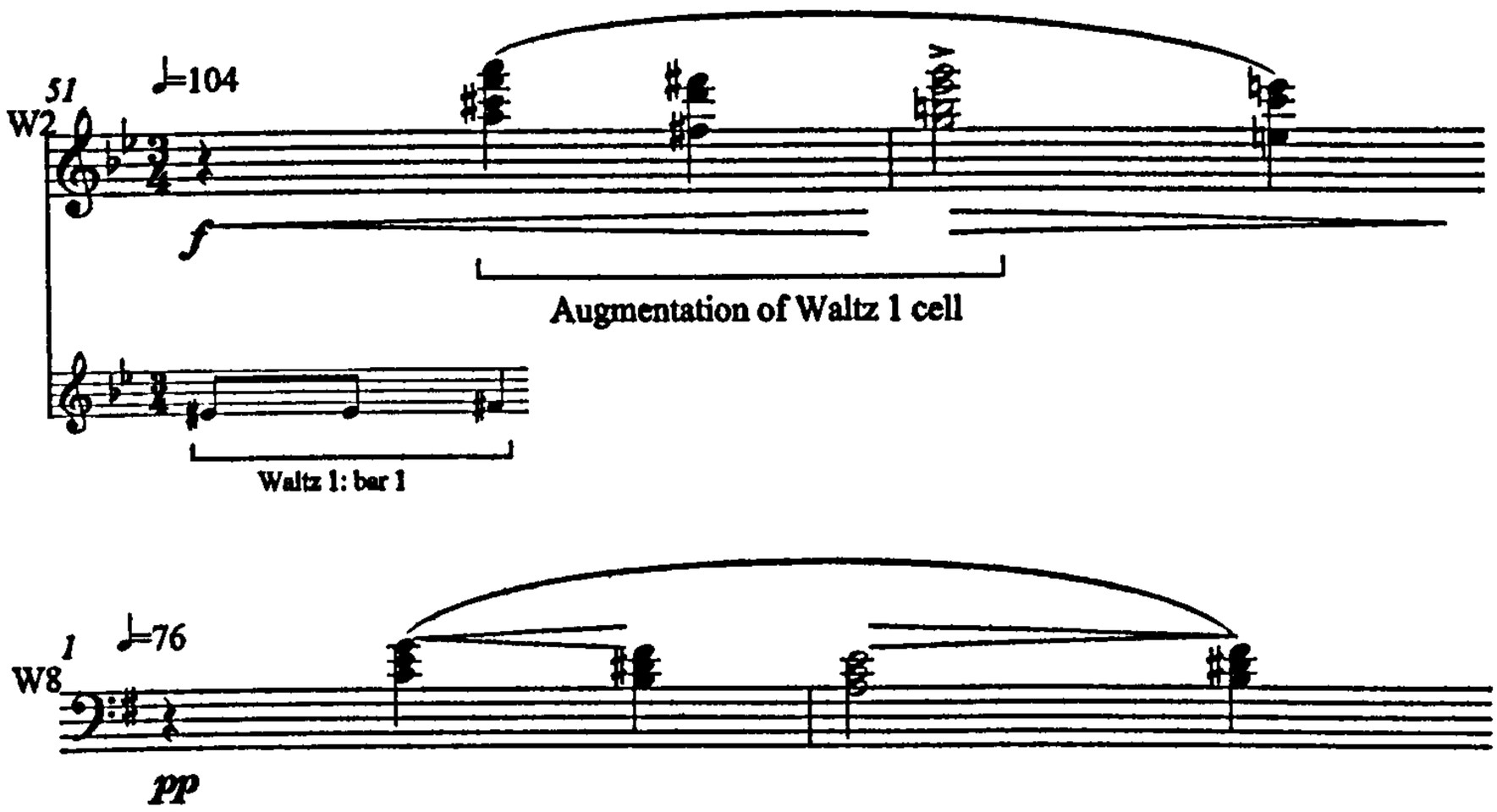
Example 5:1, Valses nobles, waltz 1, primary motif



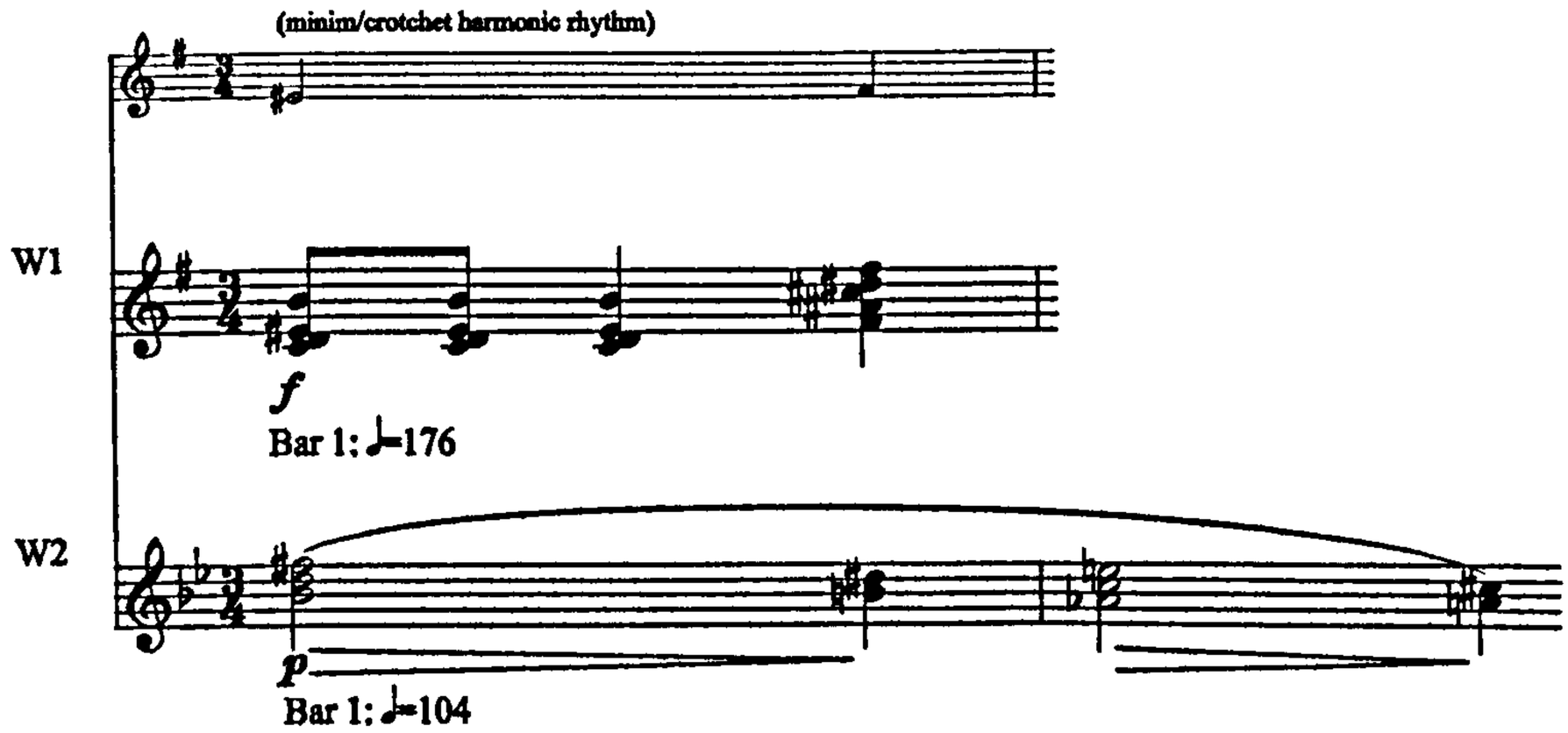
Example 5:2, Valses nobles, waltz 6, motivic references



Example 5:3, Valses nobles, waltz 2, thematic derivation



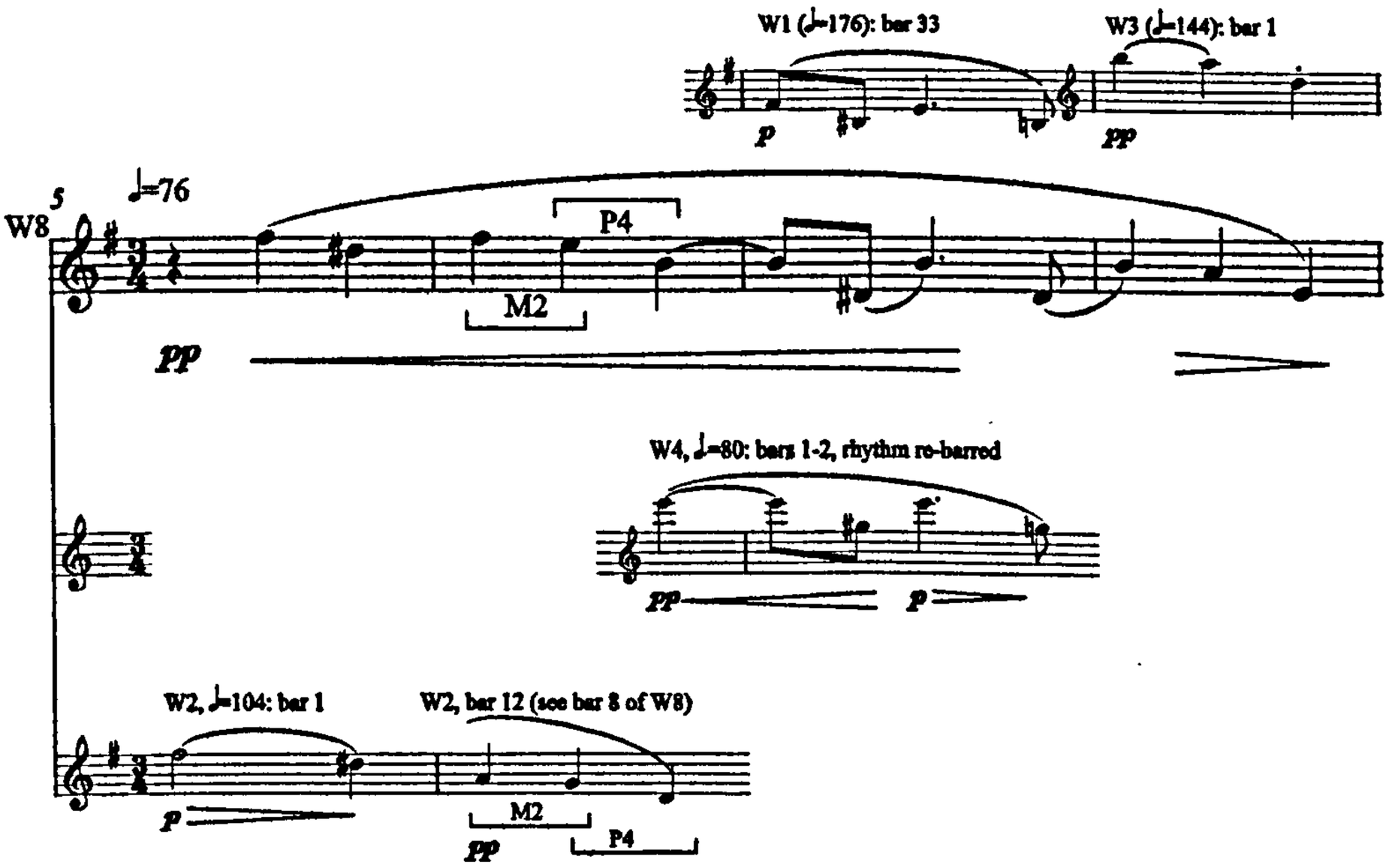
Example 5:4, Valses nobles, waltzes 1 & 2, head motif, harmonic continuity



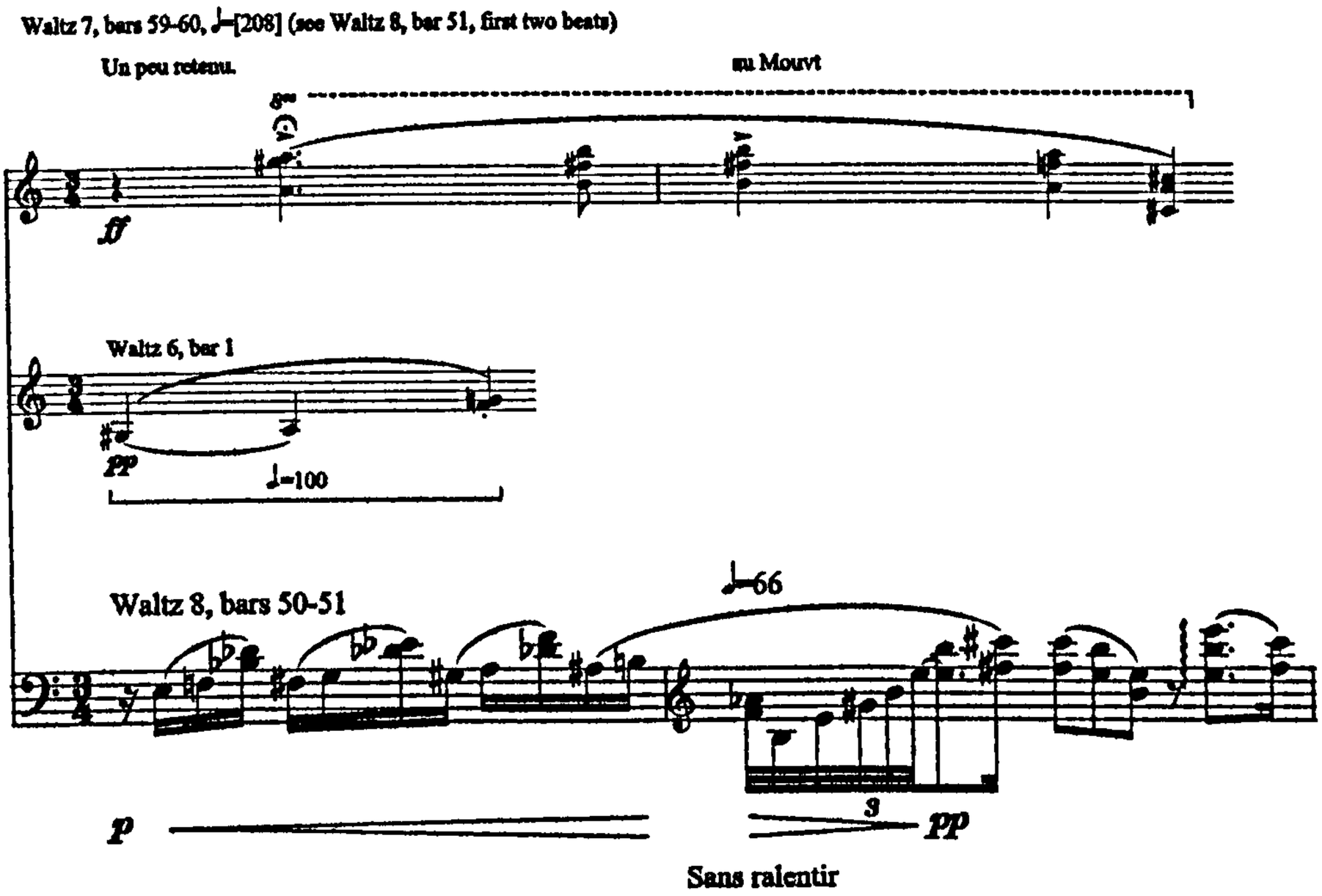
Waltz 8: borrowings

In retrospect, the more abstract motivic relationships create the greater impact on the listener when they are eventually understood. Along this line of reasoning, the interpreter is analogous to the director of the murder-mystery, who nonchalantly positions the camera on seemingly innocuous events that are later found to have significance. If the element of surprise is lost when the film is watched a second time, the viewer's interest in the earlier relationships has been focused. *Waltz 8* is the culmination of this tendency to relate pitch or rhythmic elements across the whole of the piece. The remainder of the theme of *Waltz 8* is itself constructed from a splicing of cells from earlier waltzes (*Example 5:5*). These and the other borrowings of *Waltz 8* are not random: motifs heard in close proximity are related. While these associations tend to demonstrate expansion or contraction of intervals, they also encourage the listener to recall more complex interactions. A direct example of this is the splicing of *Waltzes 6* and *7*. By re-joining both waltzes, this references the previous acceleration of time, realized in accordance with prescribed, temporal-pulse relationships (*Example 5:6*). *Example 5:7* further illustrates how the pitch contour is related, upon consideration of the basic gestural shape.

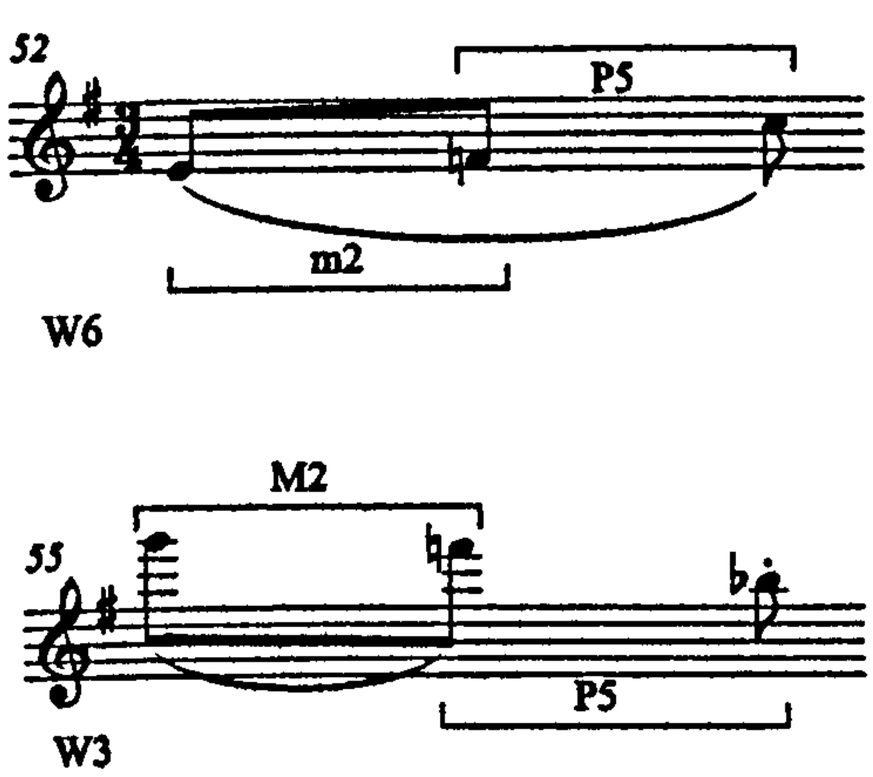
Example 5:5, Valses nobles, waltz 8, thematic splicings



Example 5:6, Valses nobles, waltz 8, juxtaposition of waltzes 6 & 7



Example 5:7, Valses nobles, waltz 8, intervallic plasticity



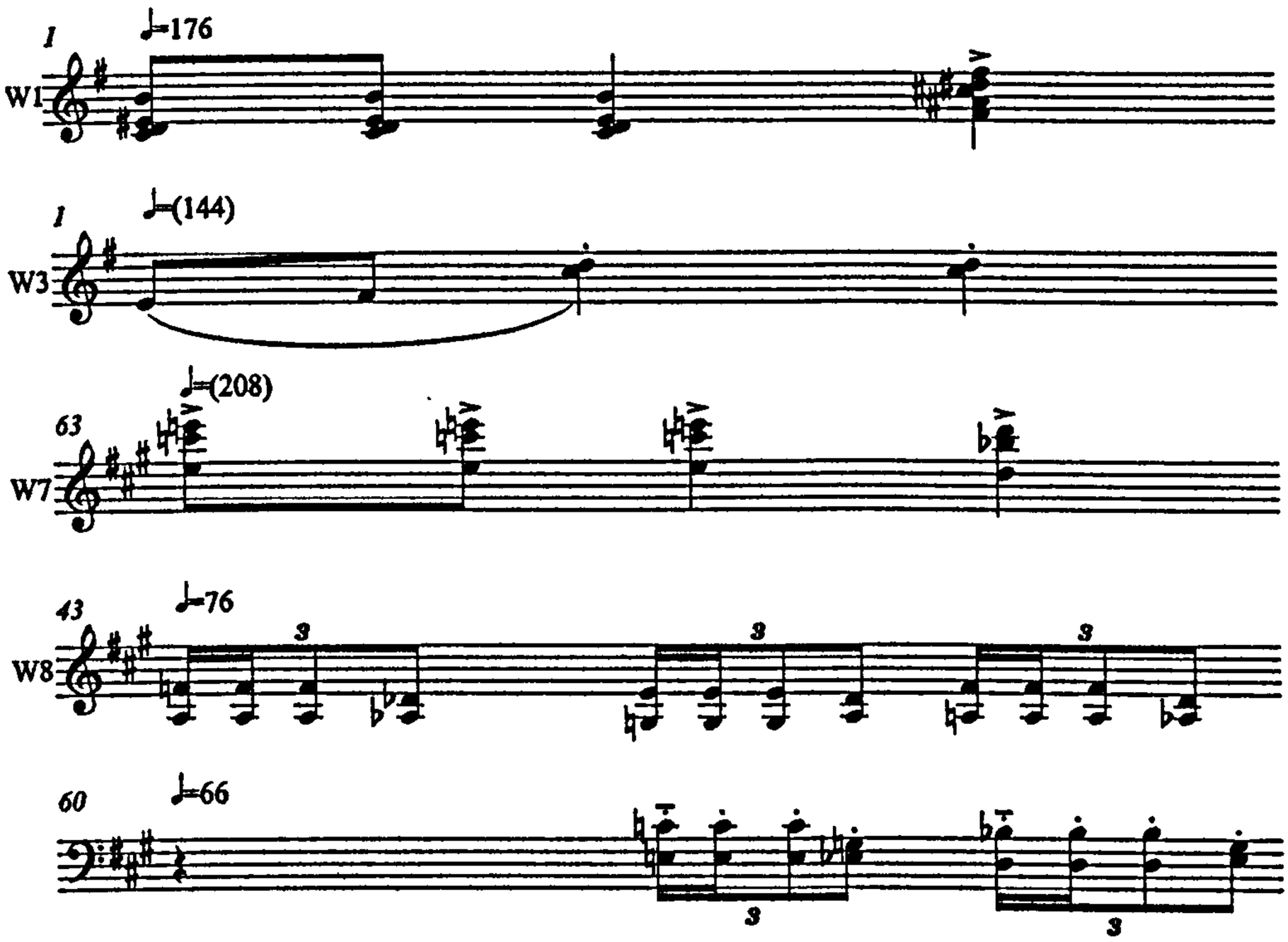
Waltz 8 borrowings: inverted invtervallic relationship

Waltz 1: Re-packaging in Waltz 8

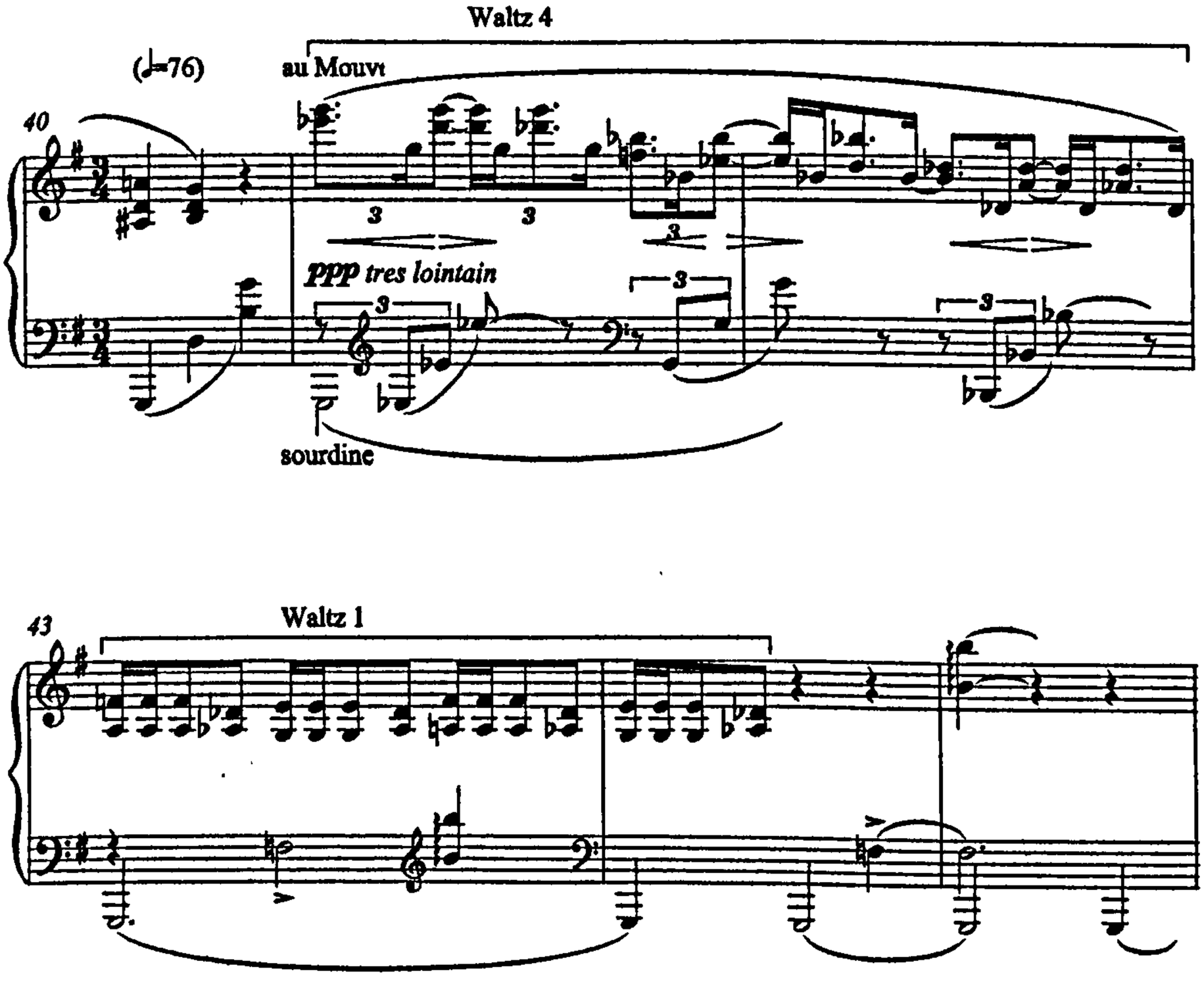
In cases where the references are obviously clear-cut, these types of motifs refer the listener back in time to an earlier bundling of musical processes. Consequently, they go to a deeper level than the examples above in shedding light on relational intersects. The opening motif at the head of *Waltz 1* is the most-direct borrowing within the whole of the piece (*Example 5:8*). Throughout, this opening motif returns and is placed to interrupt, or from another perspective, to define the

important structural moments. As such, when it returns in *Waltz 8* (*Example 5:9*), this allusion encourages the listener to re-process the earlier musical layers.

Example 5:8, Valses nobles, waltz 1 references



Example 5:9, Valses nobles, waltz 8, juxtaposition of waltzes 4 & 1



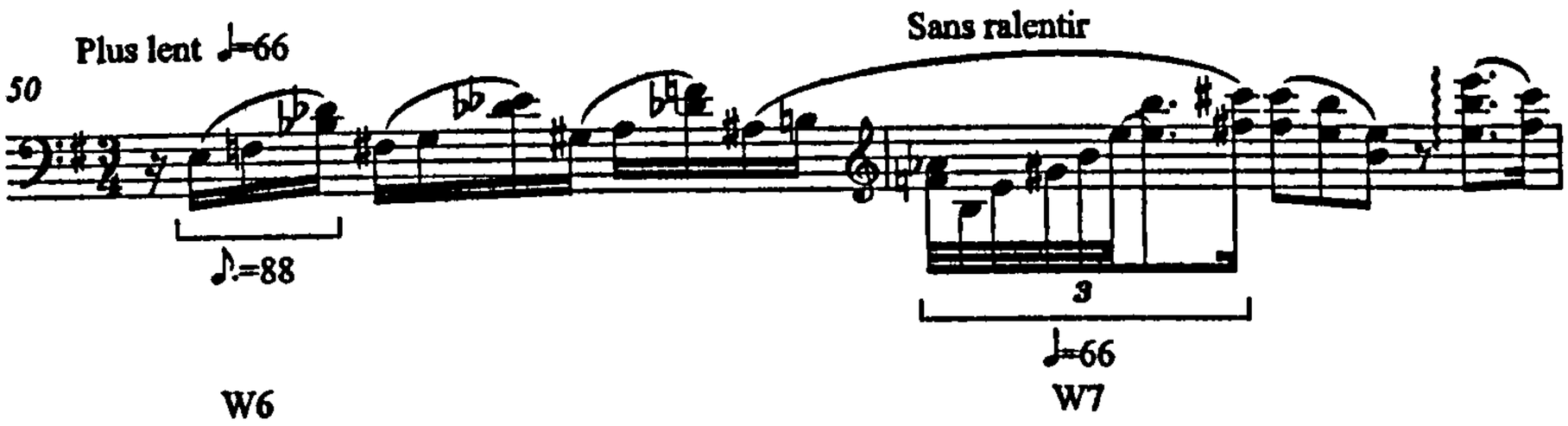
Waltz 4 housed the modulatory transition between the prolonged tonic, heard over the course of the first three waltzes and its subsequent re-definition as a dominant to C major. It follows from this understanding of motion that the juxtapositions of *Waltz 8* relate *Waltz 1* to *Waltz 4*. The rationale for understanding it this way is on account of the thematic fragmentation of the basic cell in *Waltz 1*, which was transformed to (then) become the rhythmic motif of the secondary area (previously illustrated in *Example 5:1*). In turn, this related rhythmic figure is the precursor for the main motif of *Waltz 4*. Thus, the placement of the opening short-short-long motif in *Waltz 8* corresponds with the closure in G at the end of bar 45, in conjunction with an attendant expectation of resolution to C major from the G7 chord. This moment was prepared earlier as the interruption in the sequential buildup at the articulation of the secondary tonality in *Waltz 1*, followed by the interjection of the entire first phrase. Likewise, the reference to *Waltz 4*, in *Waltz 8*, is also sequential, as was the passage from bars 33–44 of *Waltz 1*. The abrupt contrast of the opening motif further serves to keep the motion going within the expectation that the harmony will resolve.

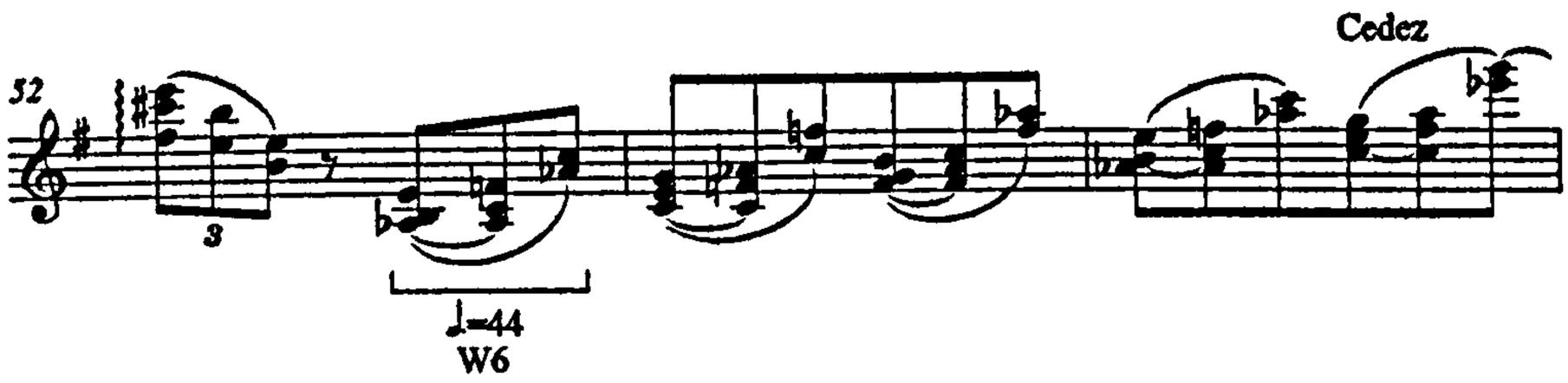
Borrowings: function

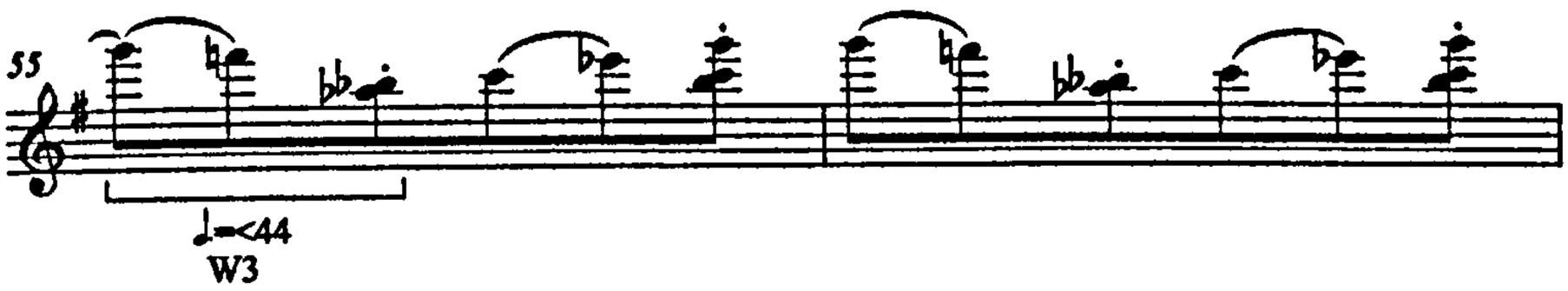
The musical borrowings thus serve dual roles: in addition to reminding the listener of past events, these fragments are also integrated into the immediacy of the musical moment, within the closed forms at the level of the individual waltz. The key example is the notated deceleration in the passage from bars 50–56, where the emphasis is directed towards a final, wearied conclusion (*Example 5:10*). Here, Ravel creates a feeling of winding-down through a layering of rhythmic levels, built from diminutive, mensural-pulse relationships within the confines of a strict crotchet pulse.

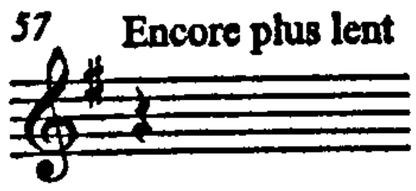
Of the eight waltzes comprising the *Valses nobles*, the *épilogue* is the one which relates motivic elements across an exacting set of tempi changes. The two metronome markings are crotchet = 76 (bar 1) and crotchet = 66 (bar 46). One may conceivably wonder why these particular tempi were chosen.

Example 5:10, Valses nobles, waltz 8, proportioned slowing









Beyond the resultant sizing of the larger sections created from strict observance of metronome markings, which serve to balance the different layers of structural activity, these particular tempi enable the motifs to be heard in relation to their original speed. Listeners are able to recognize these fragments, if the tempo is proportionally related in accordance with the original tempo. Thus, 76 and 66 represent the lowest common denominator (as it were) to hear the majority of the motifs of *Waltz 8* in a related manner to the basic tempo of the earlier waltzes (*Example 5:11*).[1]

Example 5:11, Valses nobles, waltz 8, borrowings and temporal relationships

Bars	*Waltz*	*Original tempo*	*Waltz 8*	*Relationship*
25–27	6	♩.=100	𝅗𝅥.=51	1/2 tempo of W6
41–42	4	♩.=80	𝅗𝅥=76	equivalent tempo (𝅗𝅥=♩.)
43–44	1	♩.=59	𝅗𝅥=76	𝅗𝅥 of W8 is nearly 25% faster than ♩. of W1
50	6	♩.=100	𝅗𝅥.=88	(near) equivalent tempo (𝅗𝅥.=♩.)
51–52[1]	7	♩.=69	𝅗𝅥=66	equivalent tempo (𝅗𝅥=♩.)
52[2]–54	6	♩.=100	𝅗𝅥.=44	W8 = (near) 1/2 tempo of W6
55–56	3	♩.=48	𝅗𝅥.=<44	(near) equivalent tempo (𝅗𝅥.=♩.)
59[2]–59	4	♩.=80	𝅗𝅥=66	W8 approximately 20% slower
60[2]–60	1	♩.=59	𝅗𝅥=66	(near) equivalent tempo (𝅗𝅥=♩.)
66–71	2	𝅗𝅥=104	𝅗𝅥=<66	W8=(near) 2/3 tempo of W2

Conclusions

One's dreams may juxtapose the events of life in seemingly arbitrary or absurd ways, as the means of balancing the inner psyche. Thus, involuntary associations may teach the conscious mind new modes of understanding, which are deeply felt but not easily articulated. *Waltz 8* is consequently envisioned as a metaphor for the subconscious. Here, Ravel has spliced seemingly disparate ideas to enable the listener to rationalize their earlier finite experience. Hélène Jourdan-Morhange's conversation with Vlado Perlemuter eloquently describes what the eighth waltz means to the rest of the collection:

HJM We must take some time to explain the eighth waltz, this epilogue which clasps echoes of all the preceding waltzes to its bosom. . . . 'A Dream of Waltzes' is the name which could be given to these misty memories if the title had not been debased by a piece of light music. Yes . . . it is surely a dream; all these waltzes rising gradually out of the blurred memory seem to be reborn. Like all second flowerings they no longer have the strength to bloom completely . . . these are only snatches of waltzes . . . they mingle gracefully and a little regretfully, but they fit well together in the Epilogue, where, in spite of the diversity of themes, the magnificent unity of the piece reigns supreme.

VP I shall interrupt you here, for Ravel was so keen on this unity of rhythm that we must stress it. It is, moreover, one of the difficulties of interpretation of this waltz.

HJM Can you give us some examples?

VP Here is the theme of the Epilogue [*Waltz 8*, bars 1–4], and here it is with the sixth waltz [bars 21–22]. Here is the Epilogue again with the fourth waltz [bars 40–41], and the evocation of the rhythm of the first [bar 43]. In no way must the beat change when the different rhythms of the scraps of waltzes appear.

HJM In fact, as you have done to convince me, they can be played to the metronome!

VP Ravel wanted the epilogue to be slow whilst keeping its waltz rhythm. The grace notes, the ornaments, must not be fuzzy, even when played gently, and must fall very precisely on the beat [bar 9].

HJM There's always the same Ravelian strictness, yet in this waltz there is a marking which is unique in the work of the composer. The last time the theme of the Epilogue returns, Ravel has written: 'A little more wearily'.

VP Basically it's a kind of rallentando which he doesn't want to admit to, and which indicates the melancholy mood which prevails throughout the Epilogue.

HJM Don't you find that the beautiful, sonorous phrase at the end is a tribute to the second Waltz, which is perhaps the most Ravelian [bars 66–69]?

VP In spite of the pianissimo marking, you mustn't be afraid of bringing out the melody of this admirable second Waltz (Jourdan-Morhange and Perlemuter, 1990: 55–57).

Intriguingly, Perlemuter does not mention why Ravel was so insistent on the point of keeping a steady pulse: analysis provides a rationale for doing so. By following the markings with exactness, the motifs will naturally appear; or, they will remain partially or fully-hidden from the listener. As is often the case, Ravel is completely clear in his notational practice. He prescribes exactly how to pedal, what tempi to take and where tempo fluctuations are (and are not) allowed. The interpretative dilemma lies not in knowing what to do, as much as it does in understanding why the pianist should follow Ravel's intentions.

The basic approach to the performance of *Waltz 8* is to present the half-tempo borrowings within the framework of the larger crotchet pulse in order to prepare the mind of the listener for the time when the motifs are directly revealed at their original, or close-to-original, tempo. At first, the listener may have a vague inkling they are hearing something already heard before. The realization only becomes apparent at the later return of the motif in relation to the tempo of the earlier waltz. Accordingly, one can also approach the performance of this piece as if Ravel had written *Waltz 8* first. Whether this has a basis in historical fact is almost a moot point for the performer—the pianist does not need to do anything out of the ordinary in terms of 'expressing' the earlier motifs. It would be a mistake to voice out the melodic outline, of bar 12, of *Waltz 2*, in order to infer a future relationship in *Waltz 3*. Yet, the performer can shape the tempi of the earlier waltzes in order that the latter tempi of the *épilogue* are not called into question. This suggests not beginning the piece too quickly. The re-emergence of the first waltz at the end is meant to be slightly faster than at the opening.

Une barque sur l'océan (1904–05)

Introduction: structural levels

Une barque sur l'océan is dedicated to the painter, Paul Sordes. Of the five pieces comprising *Miroirs*, it is, because of the demanding figuration, one of the more difficult to perform. According to Arbie Orenstein it is '...technically even more difficult than *Jeux d'eau*, to which it is spiritually akin (Orenstein [1968,

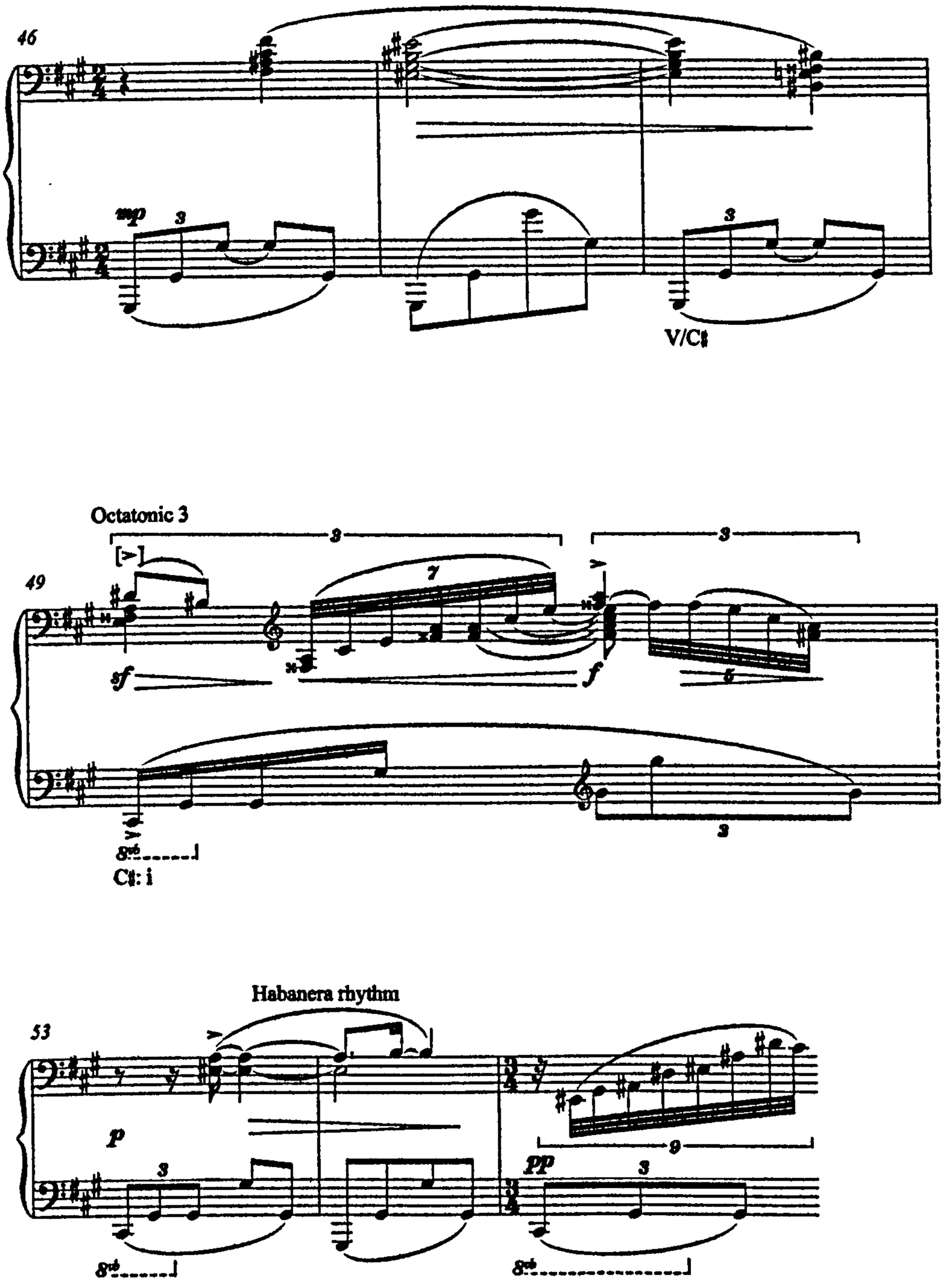
1975], 1991: 160).' As with *Jeux d'eau*, the task is to create an illusion of water—to the extent that listeners imagine the spray of salt on their faces as they reflect on the sounds of the ocean.

The principal argument below suggests that *Une barque* represents a perfect union of form and content. In order to advance this argument, the primary structural-level, form, is considered first, to offer a basis for understanding how the motifs subscribe to larger temporal patterns. Rather than fragment this discussion—for example, by presenting the portion relating to 'shape' in the chapter on 'formal articulation', with the motivic material here—the findings are presented in tandem. Thus, as outlined in the introductory remarks above, the motifs have a structural role; when heard in alliance with contrasting textures and centres, they articulate the larger sections. Conversely, the motifs are also imbued with dramatic immediacy, and their meaning is re-focused, when refracted through these moments of proportional correspondence. In this sense, the perspective of the motifs, when understood within the 'frame' of a larger palette is of supreme interest to the listener.

Form: mismatches of section and tonality

If, once the proportions are exhausted, *Une barque* represents a 'perfect union of form and content' it also demonstrates 'along the way' a mismatch of content and form. Regardless of the critical connotations attached to this type of pronouncement, hearing the piece in this manner is justified. As *Example 5:12* illustrates, *Une barque* is based on a large-scale, tonic and dominant relationship. However, in this interior section, the tonal return is not simultaneous with the resumption of the opening material; the secondary tonality is first articulated either at the joint of bars 48–49 or between 54 and 55. In spite of where the listener experiences closure, the dominant key is realized in advance of the return starting at bar 61.

Example 5:12, Une barque, tonal articulation



Block construction

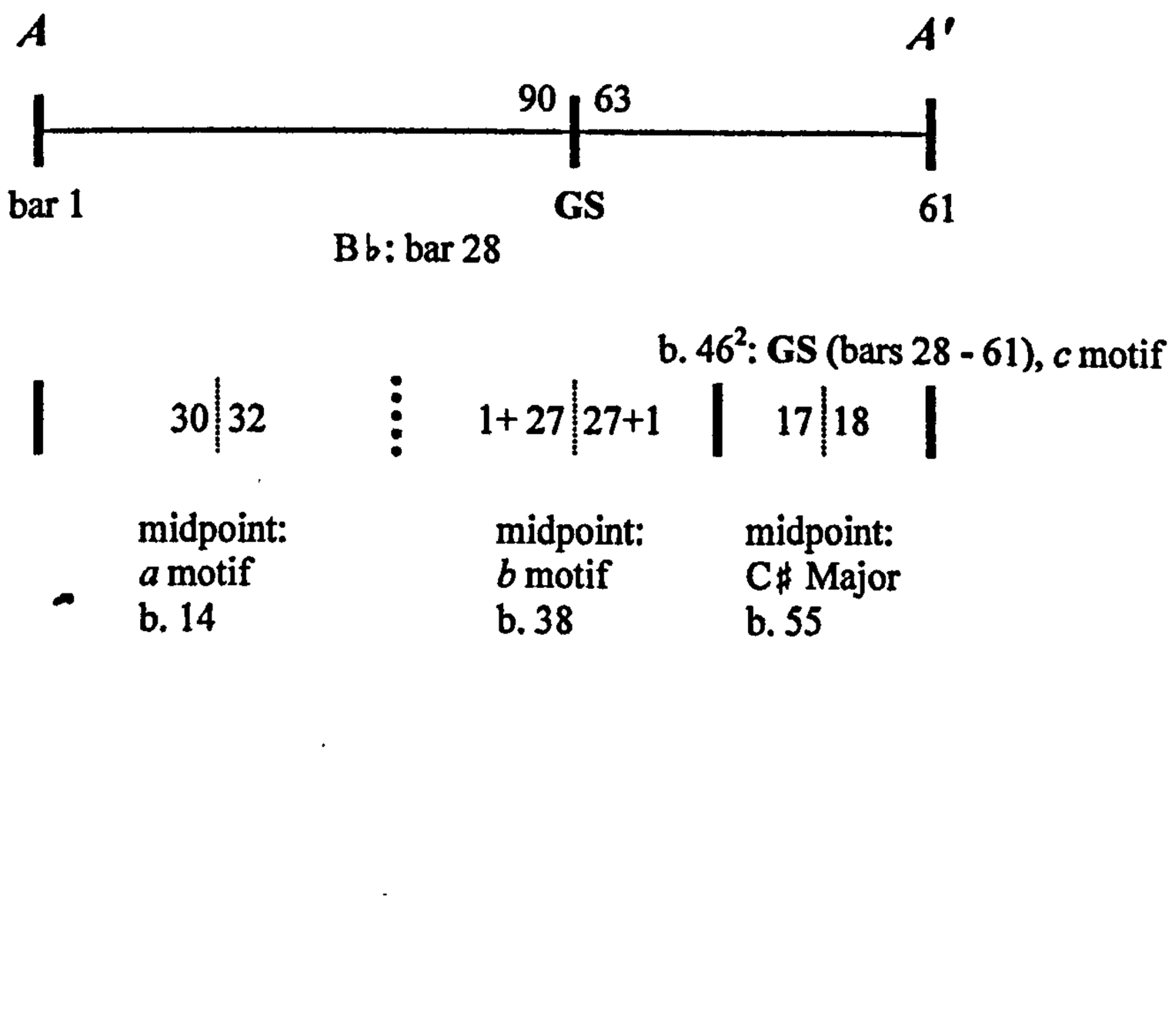
Une barque is also constructed from smaller component-parts that join together to form larger sections. These interior blocks are related proportionally and articulated by motivic sub-units, each derived from the opening ostinato. Although the motivic content may be compressed in the repetition, flotsam-like arpeggiation is expanded to take up the equivalent amount of musical space (*Example 5:13*).

Example 5:13, Une barque, block construction, bars 1–27

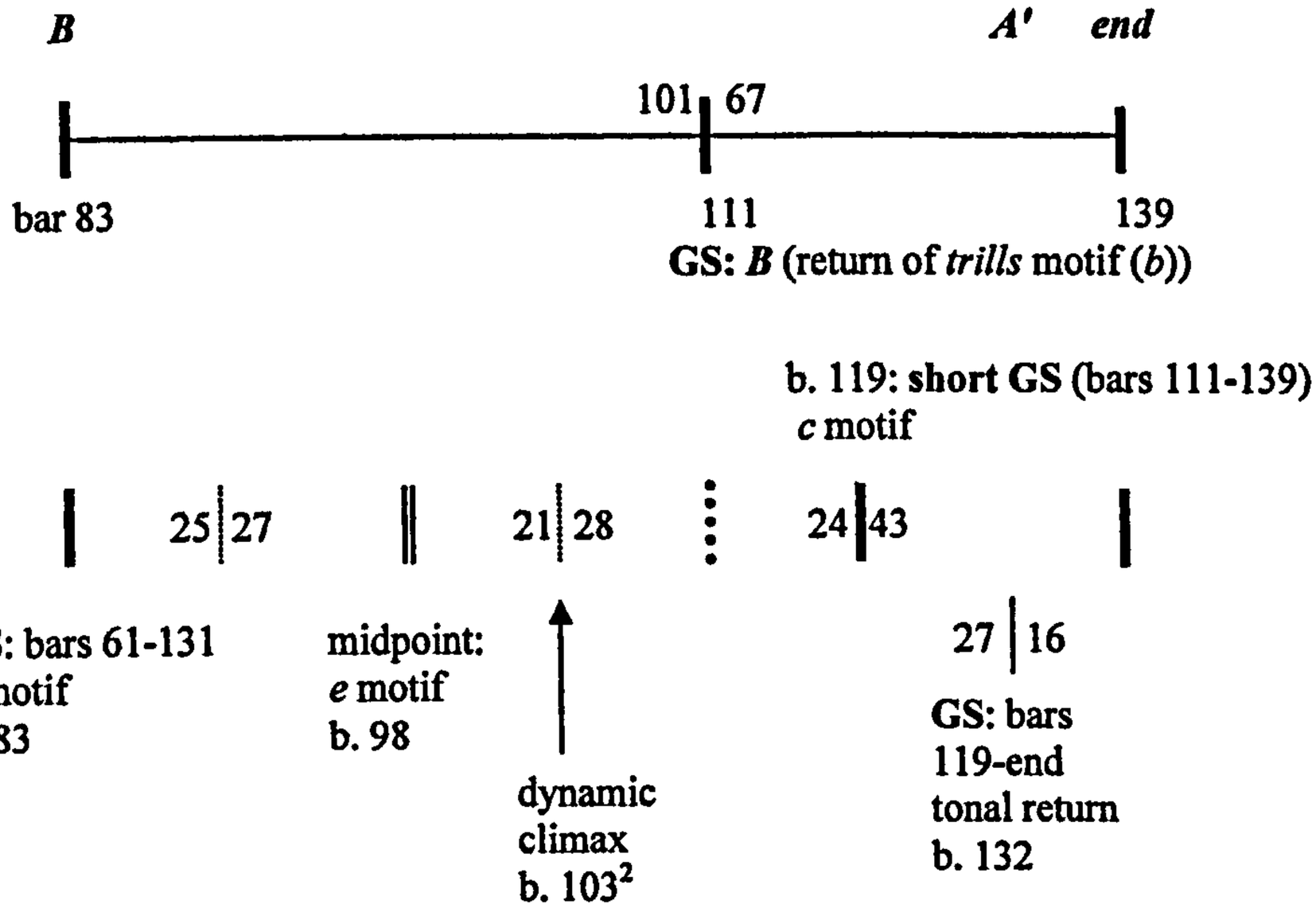
Bars 1–13: 30 crotchets			***Bars 14–27: 32 crotchets***		
groups	***sub-units***	***crotchets***	***groups***	***sub-units***	***crotchets***
3	1+1+1	6	2	1+1	4
4	2+2	8	2	2	4
3	3	6	3	3	6
3	1+1+1	10	2	1+1	8
			5	2+3	10

These, and other types of repetitive patterns are added together to create the larger sections. As Examples *5:14* and *5:15* illustrate, GS proportions determine how the musical events unfold.

Example 5:14, Une barque, symmetry around GS points, section A



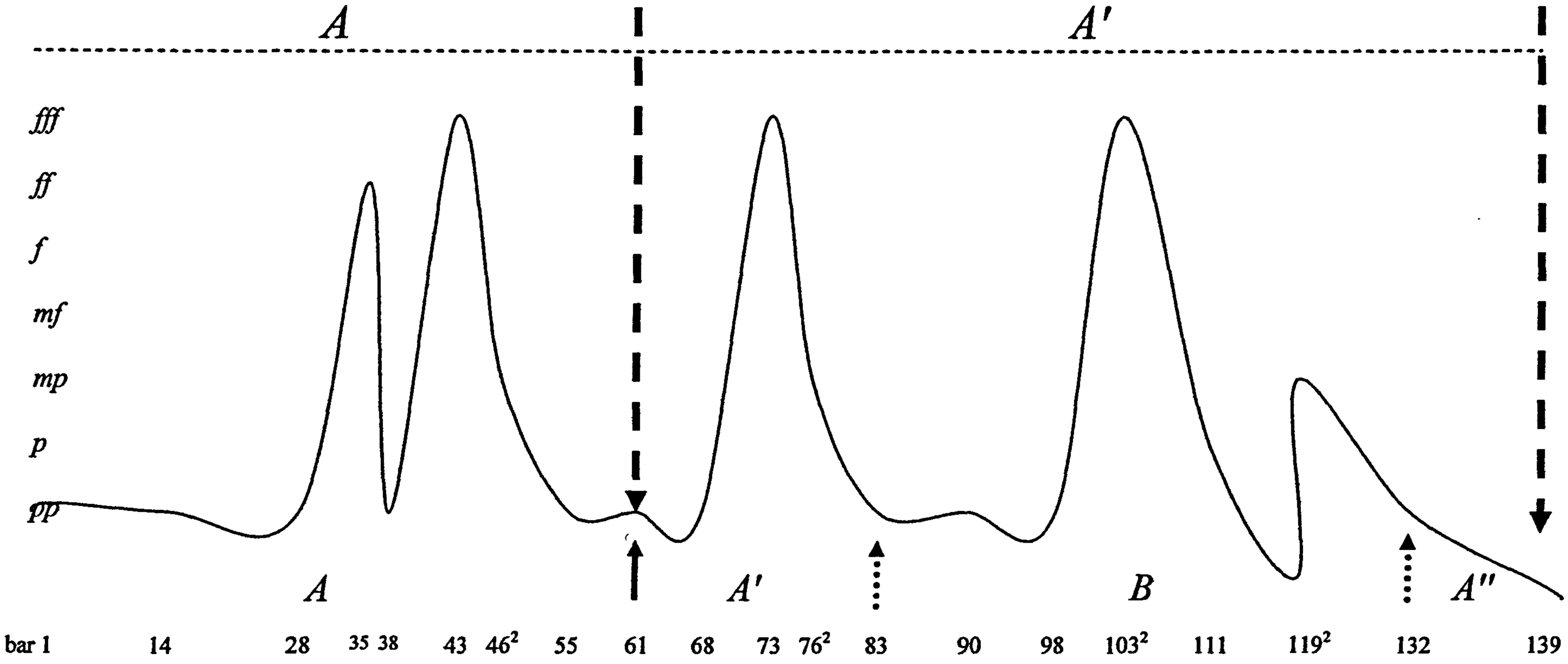
Example 5:15, symmetry around GS points, bar 83 to end



Thus, the motifs are arranged to pace the larger dynamic contour(s) outlined in *Example 5:16*. Hence, the two largest divisions are from bars 1–60 (*A*), and from 61 to the end (*A'*). If the piece is considered in this manner, the length of *A*, divided by the whole, is related by short GS to the longer division at the joint of *A* and *A'* (*Example 5:17*). The visual representation of Merlet's performance (*Example 5:16*) additionally suggests the first *ff* of *A* is a 'pre-wave,' gauged according to the first climax at the start of bar 43; the dynamic high point of bars 61 to the end of 82 (*A'*) is also *fff*, but it is secondary to the dynamic high-point of *A*, because it has had less buildup. The giant wave—Polynesians measure the swells of the Pacific in threes—is then heard as the most forceful.

For performance, this suggests the following: as the tonal and dynamic energy is complete by the end of the short segment, there is the risk of creating a defect in the structure, that is, if the pianist slows down in the buildup of the larger wave starting at bar 83. Rather than hearing this as the calm before the storm, the opposite is preferred; one can envision this bar as the beginning of the new momentum leading to the wall of water at the dynamic climax of bar 103^2. Roy Howat argues that this passage should not go slower; the feeling of forward momentum is right for the performer (Howat, 2001/2002). Both Merlet and Thibaudet interpret the passage as Howat advocates (*Example 5:18*) and in each case, bars 103^2–110 represent the fastest section of the piece.

Example 5:16, Une barque, proportioned dynamic waves



Example 5:17, Une barque, score versus performance comparison

Bars	***Crotchets: score*** [♩ = 58 environ]	***Short GS Segment***	***Difference from Mathematical GS Point***	***Percent Difference From Mathematical Point***
1-end	*376*: grace-notes of *bars 11, 12, 21, 22* not counted	376 X .382 = ***143.632***	*Bars 1-60* = ***149*** crotchets; difference of ***-5*** crotchets (negative values indicate GS point not yet reached)	149/376 = .3982765; 3982765 - .382 = .0142765; ***1.4 %***
	380: grace-notes listed above counted as crotchet pulses	380 X .382 =***145.16***	*Bars 1-60* = ***153*** crotchets; difference of ***-8*** crotchets	153/380 = .4026315; .4026315 - .382 = .0206315 ***2.0 %***

Bars	***Seconds: Merlet*** [♩ = 57 environ]	***Short GS Segment***	***Difference from Mathematical GS Point***	***Percent Difference From Mathematical Point***
1-end	***405.9***	405.9 X .382 = ***155.0538***	*Bars 1-60* = 159.76 seconds; difference of ***-5*** seconds	159.76/405.9 = .3935944 .3935944 - .382 = .0115944 ***1.1 %***

Bars	***Seconds: Thibaudet*** [♩ = 51 environ]	***Short GS Segment***	***Difference from Mathematical GS Point***	***Percent Difference***
1-end	***452.58***	452.58 X .382 = ***172.88556***	*Bars 1-60* = ***181.3***; difference of ***+8*** seconds (positive values indicate beyond GS point)	181.3/452.58 = .4005921 .4005921 - .382 = .0185921 ***1.8 %***

Example 5:18, Une barque, score/performance data

Section	*Bars:*	*Crotchets: Score*	*Seconds: Score* [♩ = 58 environ]	*Seconds: Merlet*	*Seconds: Thibaudet*	*Average m.m.: Merlet (rounded)*	*Average m.m.: Thibaudet (rounded)*	*% of total: Score*	*% of total: Merlet*	*% of total: Thibaudet*
A	1-13	30	31.03	33.85	39.99	53	45	7.8	8.3	8.8
	14-27	32	33.1	37.39	40.83	51	47	8.3	9.2	9.0
	28-37	28	28.96	25.15	27.23	67	62	7.3	6.1	6.0
	38-46[1]	28	28.96	28.55	31.7	59	53	7.3	7.0	7.0
	46[2]-54	17	17.58	17.62	21.89	58	47	4.4	4.3	4.8
	55-60	18	18.62	17.2	19.66	63	55	4.7	4.2	4.3
A'	61-67	14	14.48	16.98	21.42	49	39	3.6	4.1	4.7
	68-76[1]	28	28.96	29.19	30.5	58	55	7.3	7.1	6.7
	76[2]-82	17	17.58	17.85	20.22	57	50	4.4	4.3	4.4
B	83-97	52	53.79	45.6	47.47	68	66	13.6	11.2	10.4
	98-103[1]	21	21.72	20.04	20.42	63	62	5.5	4.9	4.5
	103[2]-110	28	28.96	22.89	22.25	73	76	7.3	5.6	4.9
	111-119[1]	24	24.82	26.27	31.9	55	45	6.2	6.4	7.0
	119[2]-131	26	26.89	32.82	46.24	48	34	6.8	8.0	10.2
A"	132-end	18	18.62	34.5	30.86	31	35	4.7	8.4	6.8
	Total	*381*	*394.07 (projected)*	*405.9*	*452.58*	♩ = 57	♩ = 51	*99.2*	*99.1*	*99.5*

Motivic framing: approaches

Ultimately, this larger dynamism is contained by the juxtaposition of contrasting pitch-collections at the head of each interior division (*Example 5:19*).

Example 5:19, Une barque, section A, progression of pitch materials

diatonic planing	wholetone/ octatonic	octatonic 2/ pentatonic (bar 43)	octatonic 3/ tonal	diatonic
bars: 1–27	28–37	38–42	46^2–55	55–60

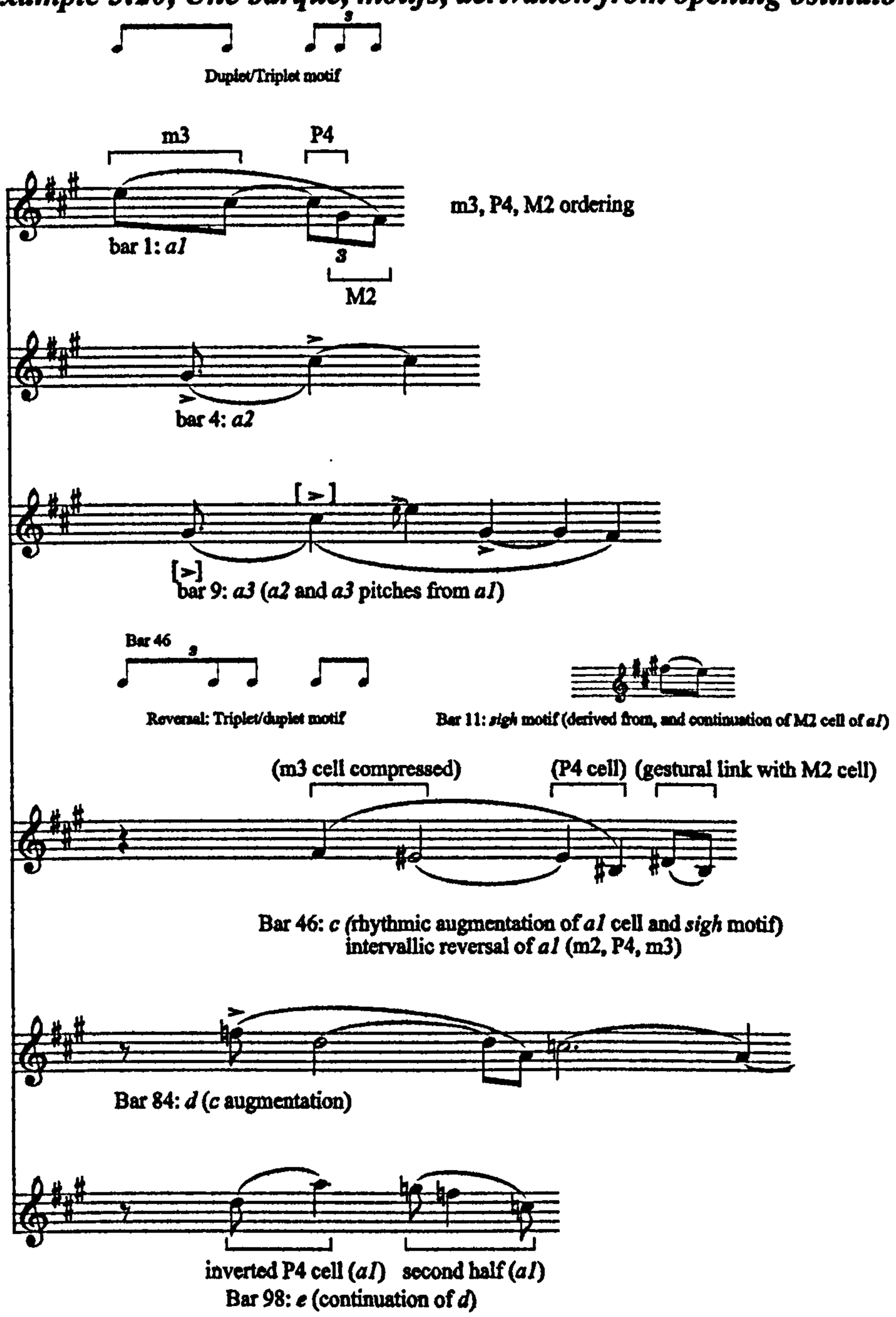
Example 5:20 further illustrates how the motifs are reversed when corresponding with these structural points; the acciaccatura of bar 28 is the first instance where the triplet is heard on the downbeat of the bar. Later it returns—also on the downbeat (see bar 46)—and is presented in isolation, and in conjunction with the altered, but related, theme. Hence, the symmetrical passage of bars 28–46^1 is framed by this cell, which remains un-changed to define the outer ends of the dynamic line (*Example 5:14*). In terms of performance, both Merlet and Thibaudet interpret the *sf* marking differently (see bar 28); Thibaudet attacks the first note of the figure (*track 13*; bars 21–29). In turn, Merlet's is much softer; he evidently hears the accent within the context of the *pp* dynamic at the end of bar 27 (*track 14*).

Motifs: creation of dramatic narrative

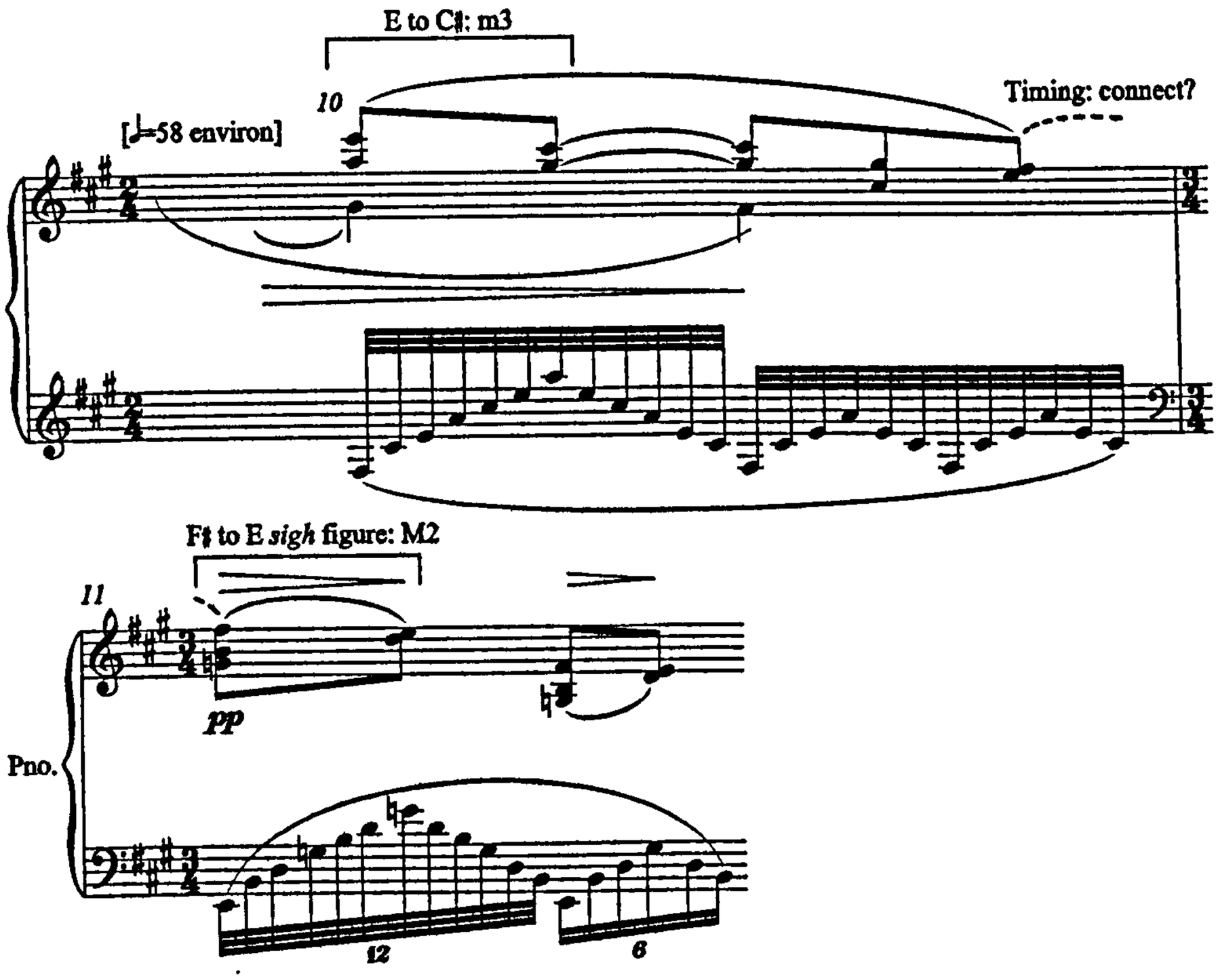
As demonstrated in *Example 5:20*,[2] each motif is related by augmentation, compression, expansion or inversion. In turn, the smaller cells interact with each other as separate entities and in association with the proportional relationships to create instances of dramatic intensity, which impact the listener. The French pianist, Abdel Rahman El Bacha, hears bar 11 as the first painful moment (*Example 5:21*).[3] It is, for all practical purposes, an iconic representation; audiences are prone to associate sigh-figures with tension. Here, the performer's approach can suggest one of two possibilities: this juncture is either a moment of articulation; or, it is a point of continuity. In support of the former, the bass falls by more than two octaves and is heard with the compressed inflection of the opening, falling-third idea. Conversely, the final dyad of the upper-ostinato figure (right hand bar 10) is comprised of two pitches, E and F♯. The first two pitches of the bar that follows are

also F♯ and E, and in the same register. Hence, this instance may be constructed as a moment of pitch continuity if less time is taken between bars 10 and 11 in order to connect the idea across the barline and expanse of register.

Example 5:20, Une barque, motifs, derivation from opening ostinato



Example 5:21, Une barque, sigh-figure

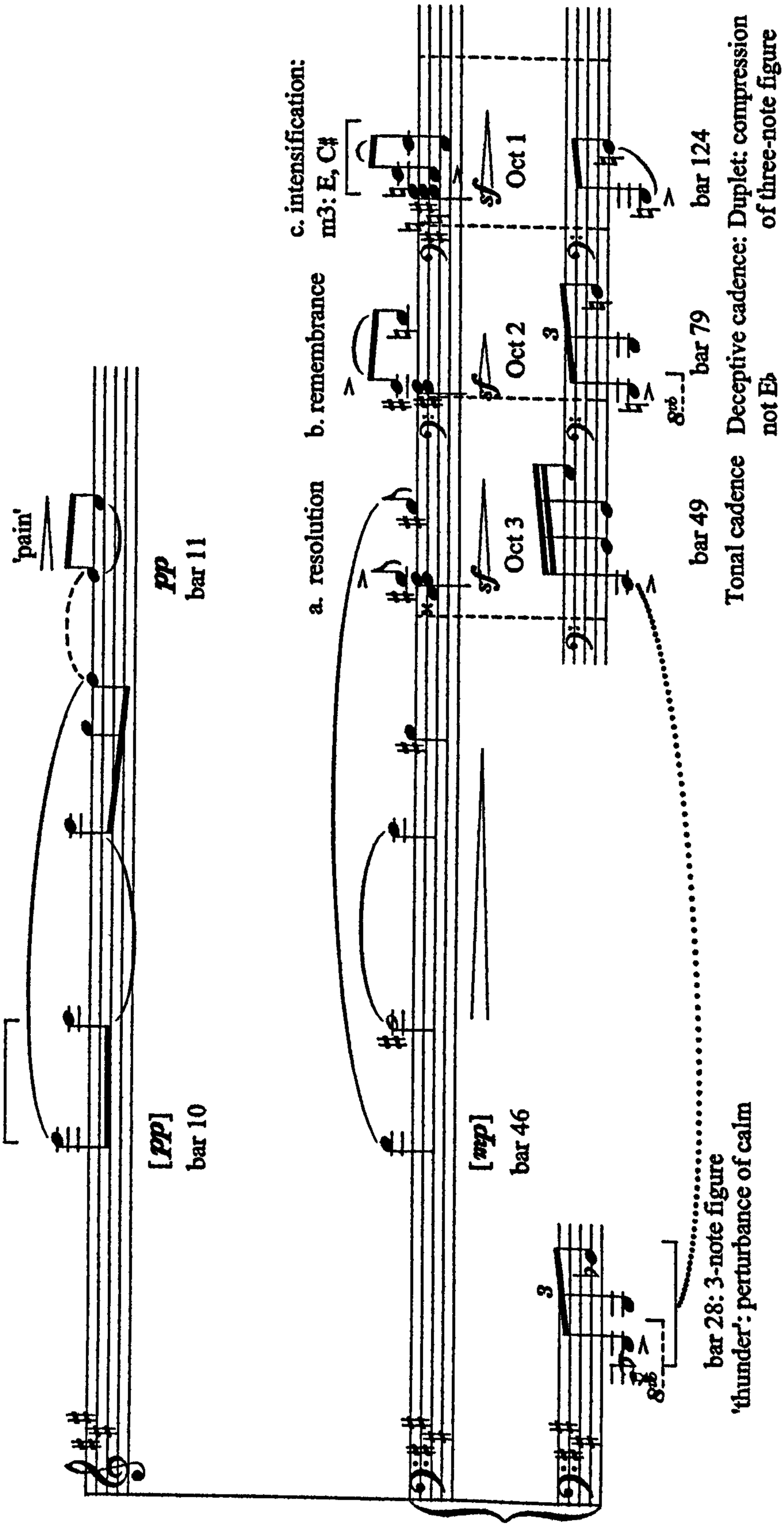


Example 5:22 re-focuses the question by isolating the motifs in relation to the drama inferred by the motivic narrative; the performer may consider a break between bars 10 and 11 as the means of presenting a longer theme at the juncture of bars 48 and 49. By attaching the two-note slur at the end of the augmented phrase, this recalls the earlier sigh-figure, and thus the 'pain', heard at the beginning of bar 11. Both it and the 'thunder' figures are linked throughout the rest of the piece and contribute to the collective impact by the time the opening m3 motif has come full-circle at the climax of bar 124.

Conclusions

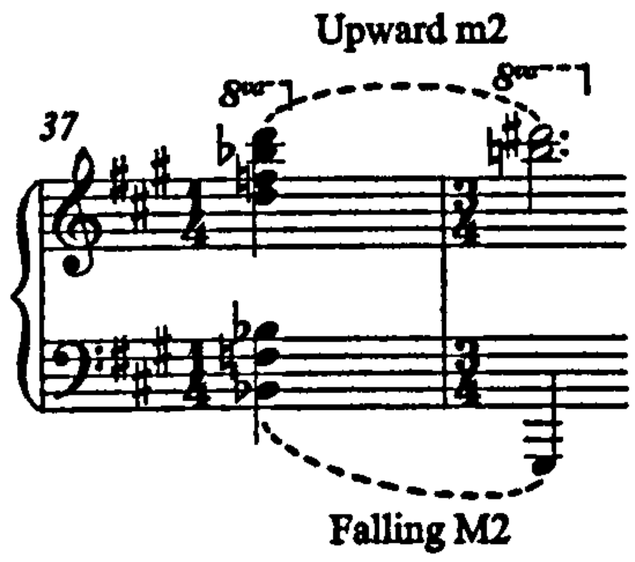
The GS findings above suggest that musical elements are continuous across the joints of sectional articulation. However, because of the overt placement of readily-identifiable motifs on either side of the divisions, it is the performer's approach which determines whether the listener will hear these seemingly disparate sections as joined or separated. A contrasting example is given to the earlier discussion surrounding bars 10 and 11 of *Example 5:22*. As illustrated in *Example*

Example 5:22, Une barque motivic narrative



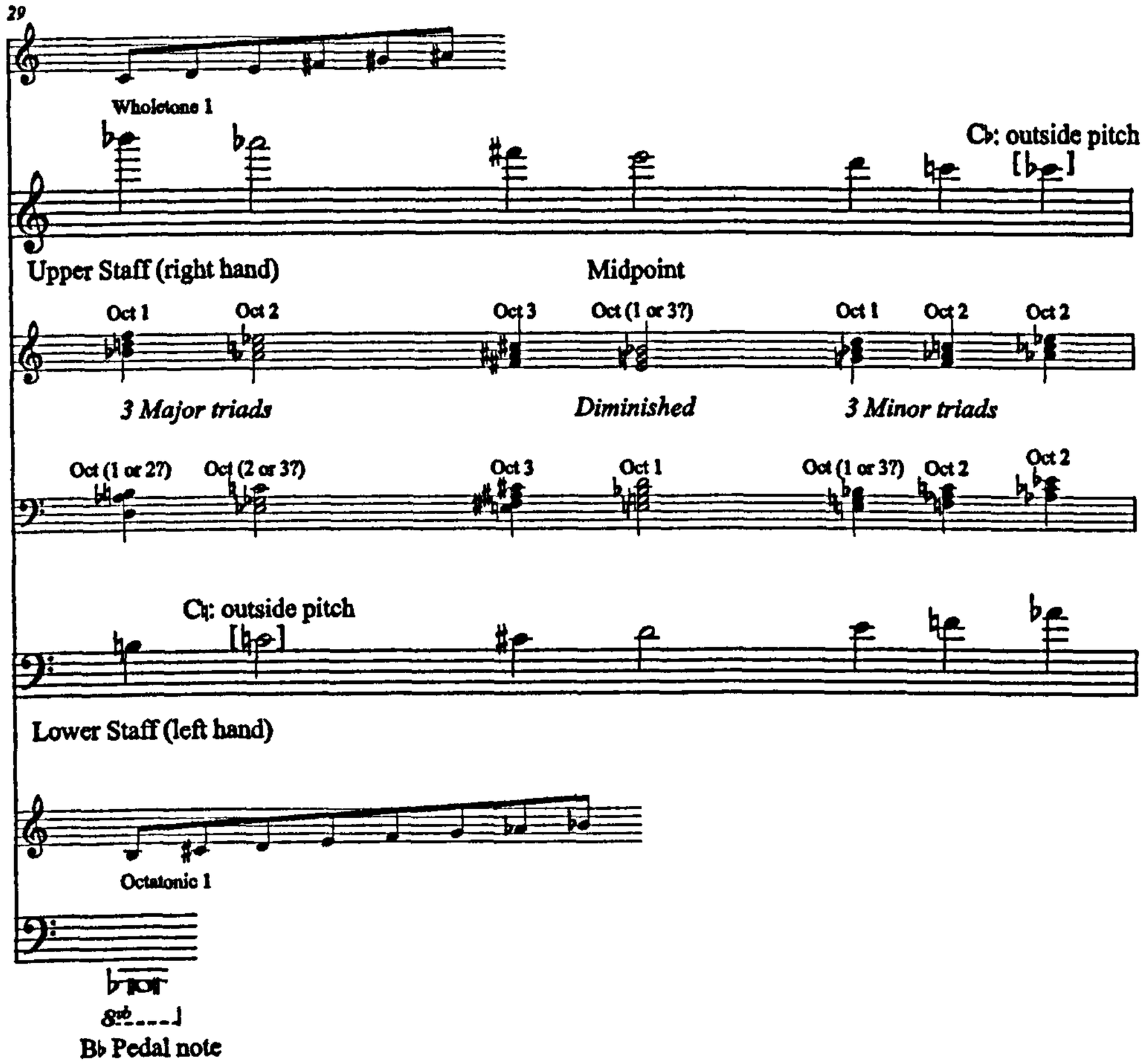
5:23, rather than breaking between bars 37 and 38, as was advocated for bars 10 and 11, the pianist can connect the harmony across the juxtaposition of blocks on either side of the midpoint divide.

Example 5:23, Une barque, harmonic continuity across register



In a similar fashion the low B♭ of bar 107 can be thought of as connecting to the low A♭ in bar 111; if the trilled figure of the right hand is not extremely bright or loud, it is easier to emphasize the B♭ pitch by tenuto before it falls to A♭.[4] In terms of this harmonic pacing, the tonality does articulate the structure, but the harmony is also not indicative of a functional tonality. In a related manner, the voices, as illustrated in *Example 5:24*, cross at the same time the register expands. Eventually, the harmony resolves to the octatonic collection at the start of bar 38, before a functional half-close on the dominant is articulated with pentatonic washes. Accordingly, at the start of the transition (bar 28) the performer can move the tempo forward, because of the energy and repetitive nature of the passage. Eventually, the pianist can choose to clarify a functional dominant to tonic resolution in C♯ by emphasizing the interior thumbs[5] before it settles on the new theme created from the reversal and merger of the earlier motivic cells.

Example 5:24, Une barque, B♭ prolongation, transition passage



Oiseaux tristes (1904–05)

Introduction to formal divisions

Imaginative listeners are inclined to hear *Oiseaux tristes* as a written-out improvisation which unfolds programmatically. A brief summary of events illustrates: In the first moments of the piece, the somber-mood and birdsong are introduced (bars 1–3). Later, at bar 13, a bird is attacked, perhaps by a tiger, and the sky is darkened when the entire flock of exotic tropical birds flies away. A sense of relief follows when the 'danger is out'. After a dream-like passage, *Oiseaux tristes* ends on a note of despair and gloominess.[6] If the performer accepts this type of narrative, *Oiseaux tristes* can be heard as a continuous form. However, sections are

also apparent; the larger divisions are articulated by slow-moving centres. If bars 10–19 group together, it is a ternary design (*Example 5:25*).

Example 5:25, Oiseaux tristes, formal divisions

	A	*B*	*A'*	*Cadenza*	*Coda*
key	E♭	(E)	(C/G centres)	A♭	E♭
bar	1	10	20	25	29

Conversely, the change of texture at bar 15, which coincides with the introduction of a new figure and increased surface energy, suggests the possibility of a separate fourth division (*Example 5:26*).

Example 5:26, Oiseaux tristes, formal divisions, version 2

	A	*B*	*C*	*A'*	*Cadenza*	*Coda*
key	E♭	(F♯/C♯)	(E)	(C/G)	A♭	E♭
bar	1	10	15	20	25	29

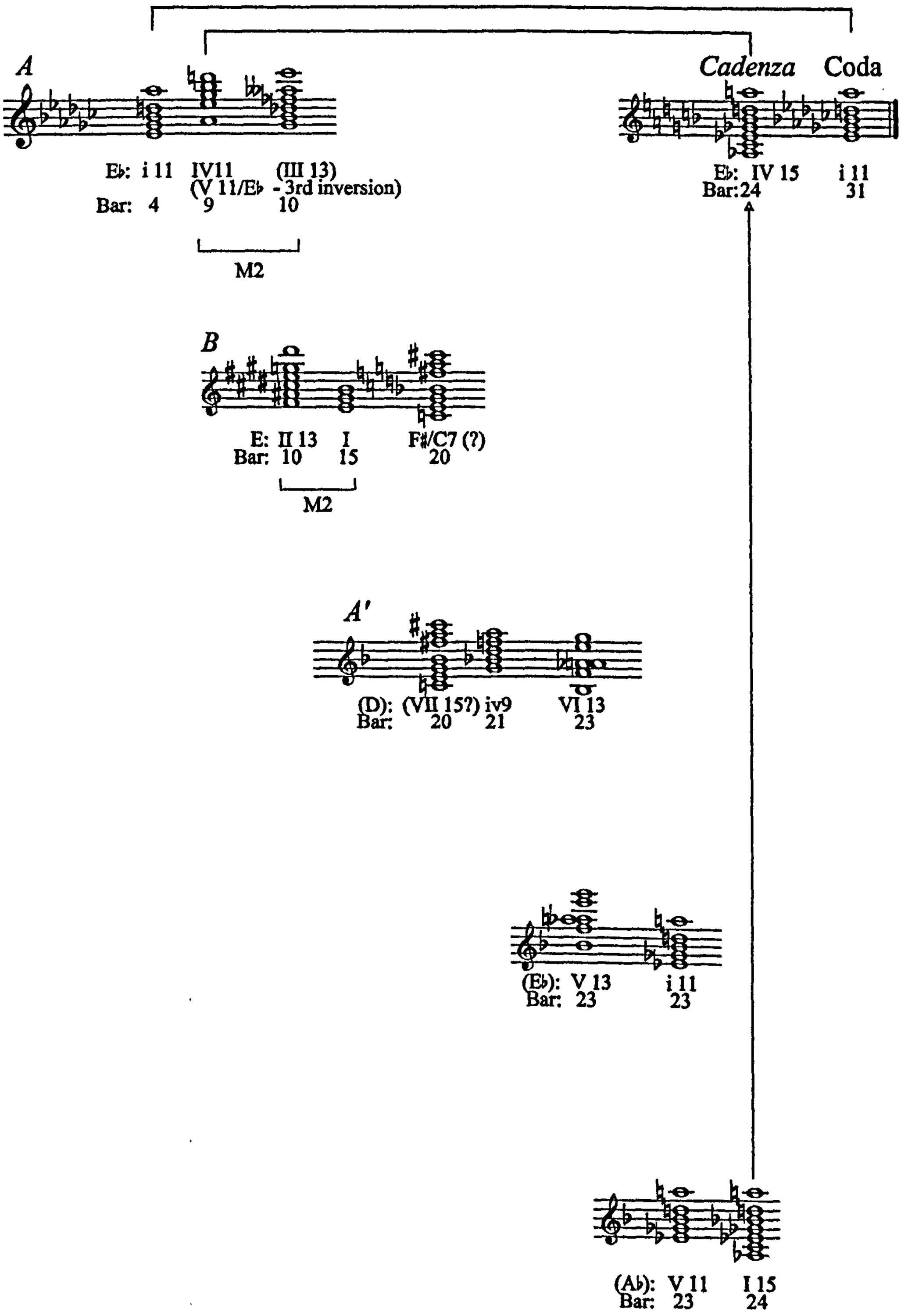
Tonal ambiguity: plagal approach

Oiseaux tristes is ultimately constructed from weakened tonal motion. It is a further example of Ravel's formula of vaguely defining a centre in the first instance, before it then falls by fifth as a re-defined dominant to the new section. *Example 5:27* illustrates how the subdominant harmonies act as the structural pillars within this framework. If one accepts the premise of this piece as tonal, it must also be conceded that the harmony is not always functional. The case in point is the resolution of the extended tertian sonority at bar 20; Roman numeral analysis does not provide the clarification.

Harmonic content: Ravel's analysis of bar 13

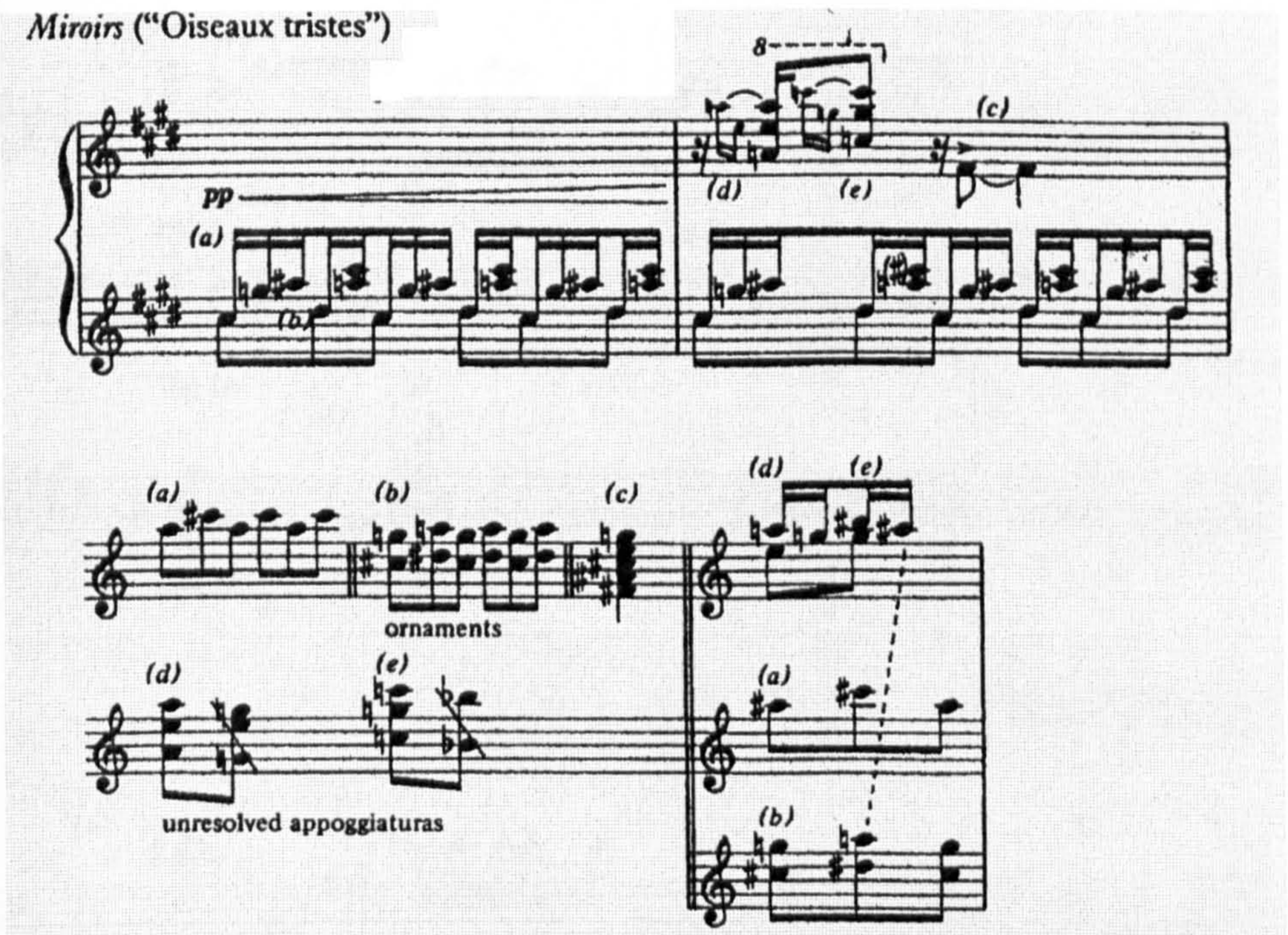
A second type of ambiguity is evidenced at bar 13, where the harmony is veiled from stacked layers of motifs. As illustrated in Ravel's analysis (*Example 5:28*), the individual elements of the harmony are isolated to demonstrate how the

Example 5:27, Oiseaux tristes, plagal structuring



top notes of the attacked chords act as un-resolved appoggiaturas.[7] This example accordingly suggests that Ravel envisioned that the listener would expect the dissonance to resolve, although it never does. Accordingly, this feature of composition relates to the earlier description of a possible programme: the need for resolution heightens the sense of uncertainty across this buildup of tension.

Example 5:28, Oiseaux tristes, Ravel's analysis of bar 13

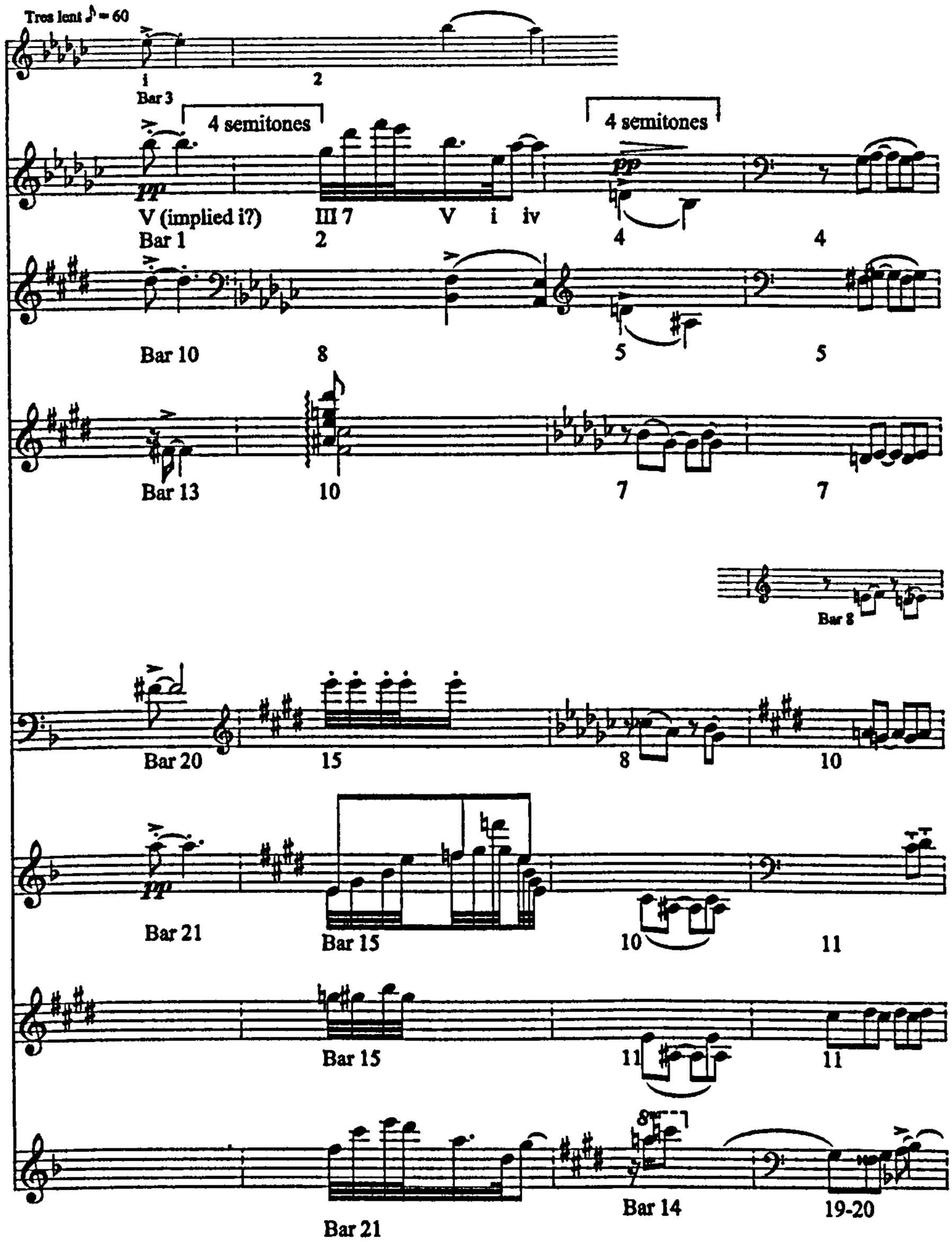


(e) The second version of (e) is the correct one. In fact, B♯ would be more correct than C♮. The resolution on the A♯ becomes quite natural, despite the A♮ in the lower part, whose ornamental role is obvious.

Example 5:29 presents the motifs of *Oiseaux tristes* in catalogue form and each are arranged in columns according to the headings at the top of the page, with the key signatures reading from left to right. In terms of role, the bebung motif defines each of the sections listed in *Examples 5:25* and *5:26*. This placement also enables the listener to associate musical processes across extended passages of time. The first inkling is the F♯ bebung motif at bar 20; it provides the clue to an understanding of the relationship between the harmony here and at bar 13. (In Ravel's analysis, the stacked pitches group as an F♯9th chord and these are labeled *c* in the first ossia, in the middle of *Example 5:28*.) Subsequently, this F♯ foundation is clarified within the context of the start of section *B*; it begins as an extended

harmony built over this bass pitch (bar 10).[8] By the time the pianist has gotten to bar 20, the dramatic immediacy of bar 13 has left, but the recollection of anxiety still remains, through the piercing of the texture.

Example 5:29, Oiseaux tristes, motifs



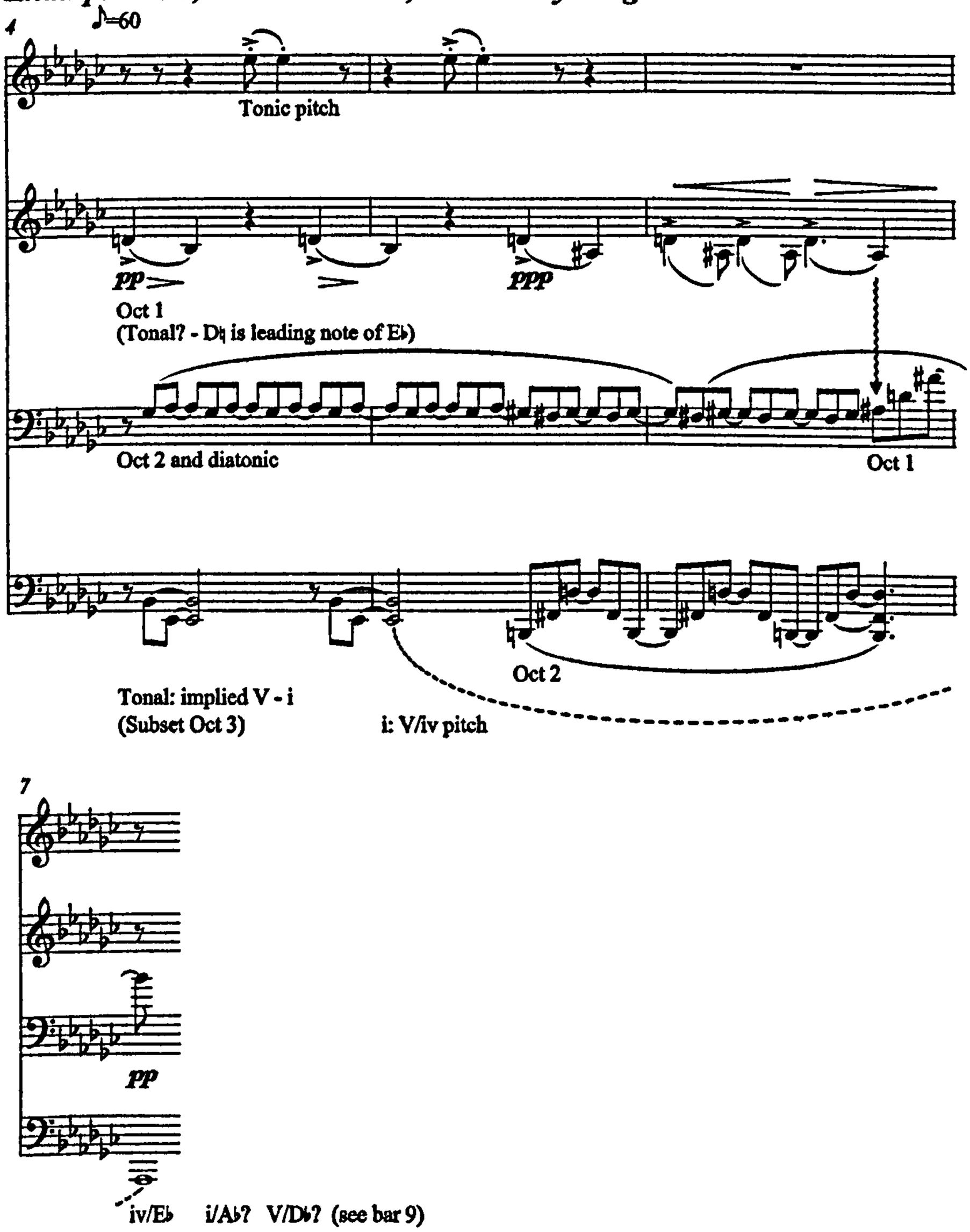
The collection of pitches at bar 20 is also closely related to the collection at bar 13. Hence, if bars 20 and 13 share the same basic pitch content, then bar 20 also relates to bar 10, because it too has the bebung motif. Accordingly, if Ravel understood bar 13 as a ninth chord built on F♯—the F♯ is not the lowest pitch of the harmony (see letter *c* of the middle ossia of Ravel's example)—the same also holds

for bar 20. Here, the bebung pitch is presented after the remainder of the harmony has been established. Thus, this resultant sonority completes the harmonic circle and frames both the beginning and the ending of *B*. Consequently, this unique harmony acts as a sonic reference point for the listener. In programmatic terms, the lost birds of the forest have not gotten any further in their searching. All they have done is experience a traumatic event, which is left un-resolved.

Formal divisions re-visited

In view of Ravel's elucidation of ostinati in bar 13, it was determined to see if octatonicism also played a role in the earlier *A* material; it did (*Example 5:30*).

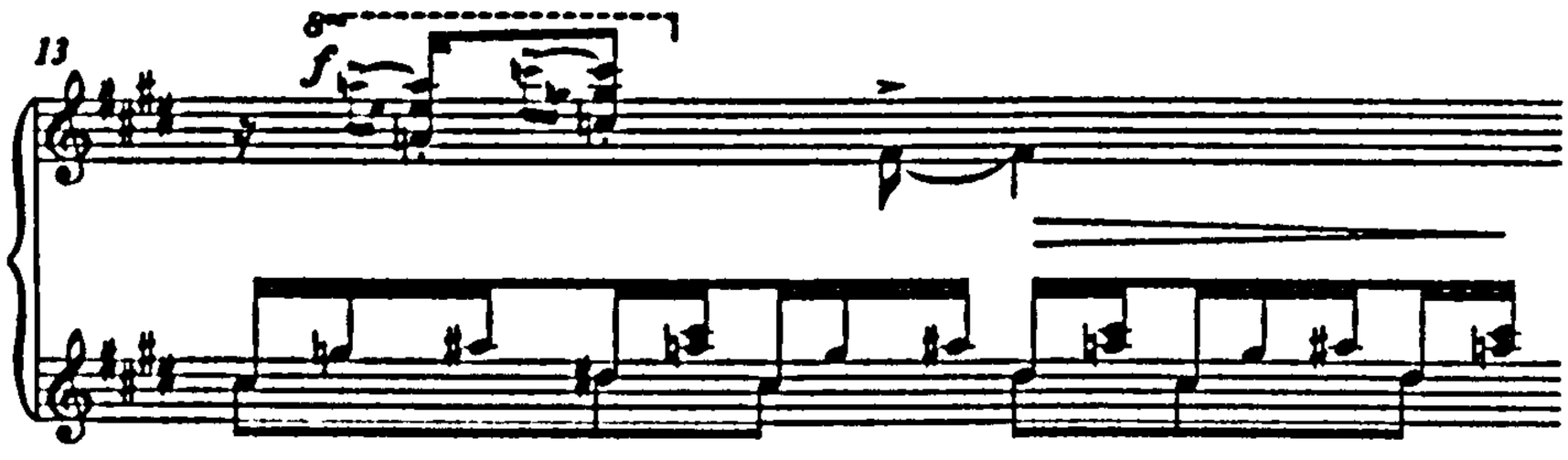
Example 5:30, Oiseaux tristes, ostinati layering



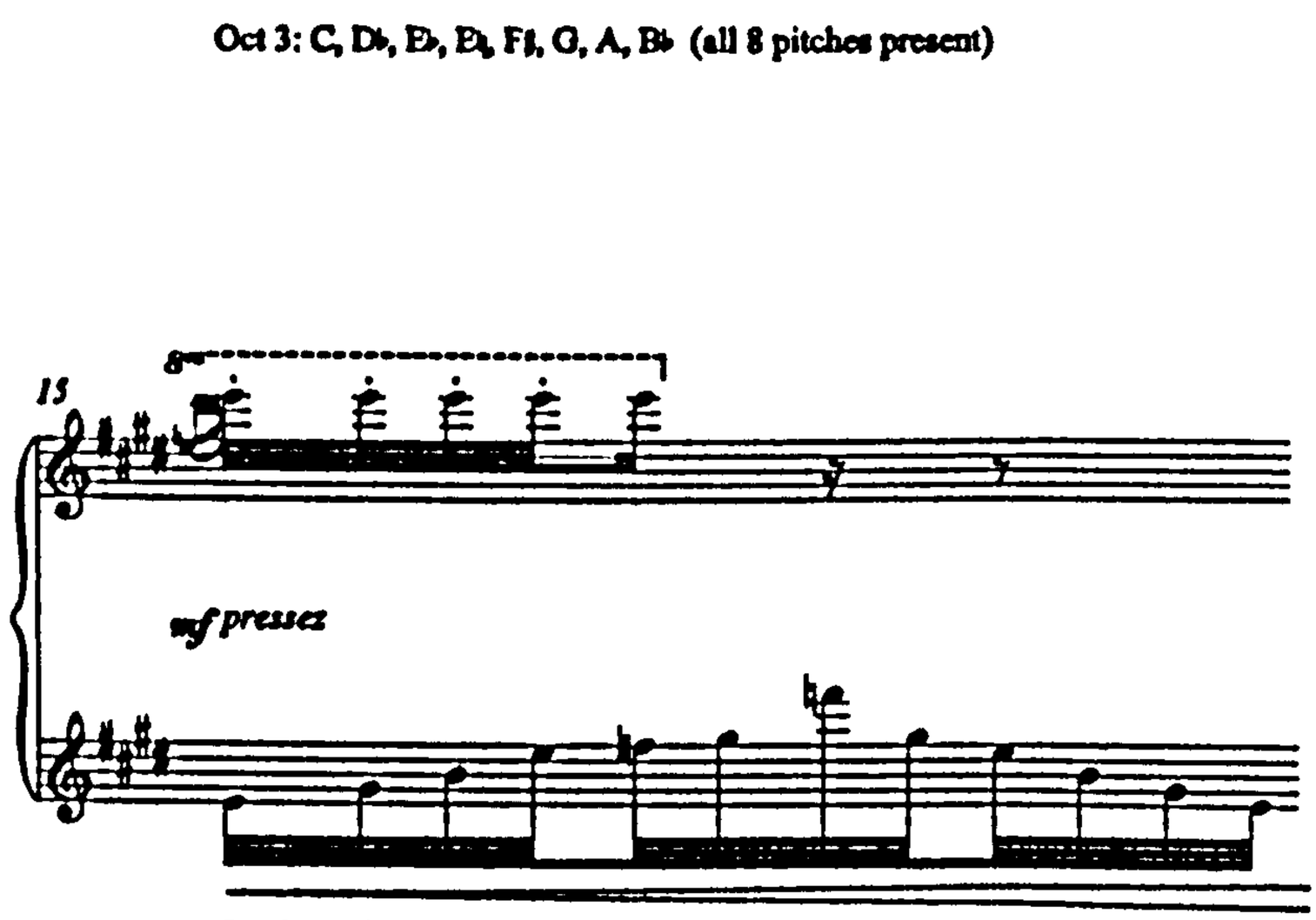
A is at least as octatonic as it is tonal; further, *B* is completely octatonic. The basic conclusion to be drawn is that although *Oiseaux tristes* is improvisatory in nature, the larger sectional divisions are articulated by contrasting pitch collections, which are also heard in consort with motifs. The first example of this is at the junction of bars 20 and 21 where the change of texture and harmony at bar 20 that corresponds with a new key signature in actuality belongs to section *B*, and not *A'* as was originally illustrated. Thus, section *A'* begins at bar 21 and not at bar 20. These points are also confirmed by listening to bars 17–24. Merlet (1990/1991) and Thibaudet (1992) pause slightly at the juncture of bars 20 and 21; they also take more time here than between bars 19 and 20, suggesting a conscious decision to hear bar 21 as the start of the new section.

A second example advances the pentatonic argument further by illustrating a more abrupt juxtaposition of contrast: the change of collection at the joint of bars 14 and 15 is not prepared (*Example 5:31*).

Example 5:31, Oiseaux tristes, B section articulation



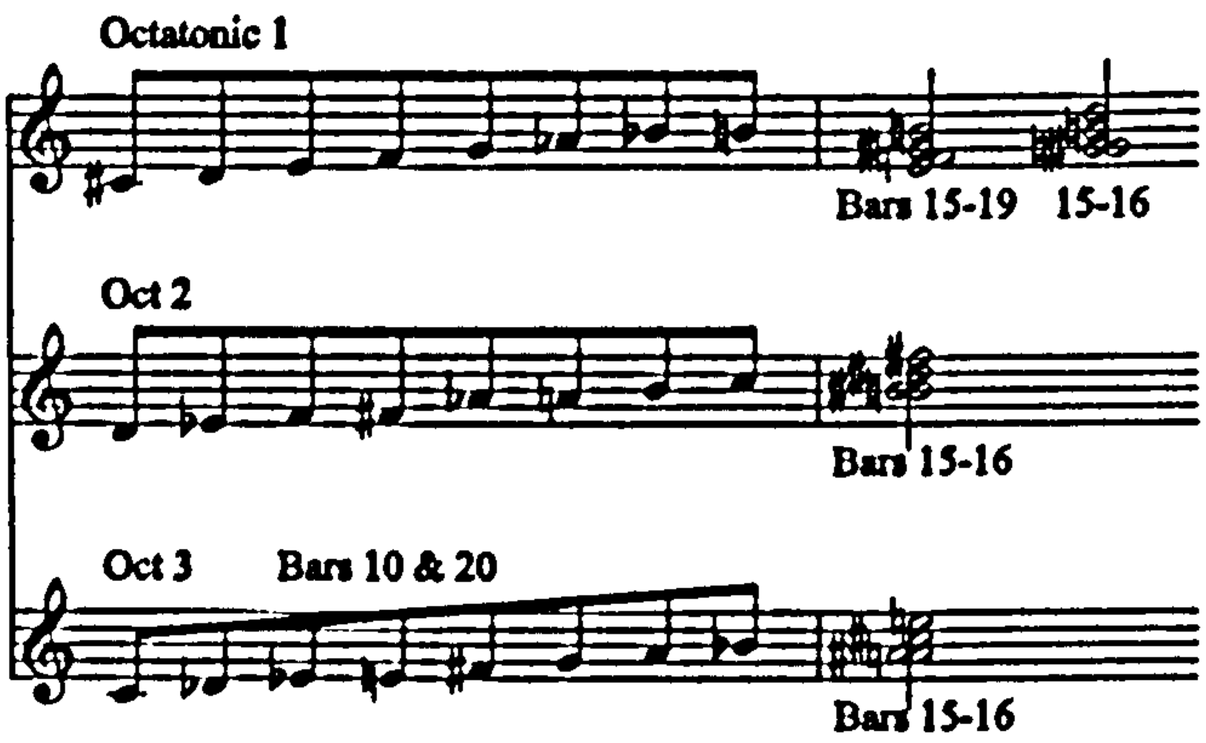
Oct 3: C, D♭, E♭, E♮, F♯, G, A, B♭ (all 8 pitches present)



Oct 1: C♮, D, E, F, G, A♭, B♭, B (E major = subset of oct 1)

Thus, this too contributes to the programmatic idea of the birds flying off as they alight to become disconnected from their immediate surroundings. Bars 15 and 16 are practically psychedelic with the full spectrum of octatonic colors, heard across the extended registers of the piano (right side of *Example 5:32*).[9] Consequently, *Oiseaux tristes* is heard as a binary form (*Example 5:33*), from the motivic relationships outlined above and from the pitch content itself. This second large-scale division, *A'*–end of *coda*, is an abstract rendering of the first, *A–B*. Curiously, although the harmonies are not chromatic as first thought, it is a resultant chromatic motif within the voice leading, which precedes the important juncture of the octatonic collection and the return of tonality (*Example 5:34*).[10] In order to keep the continuity over this point the performer can realize the voice-leading as notated.[11]

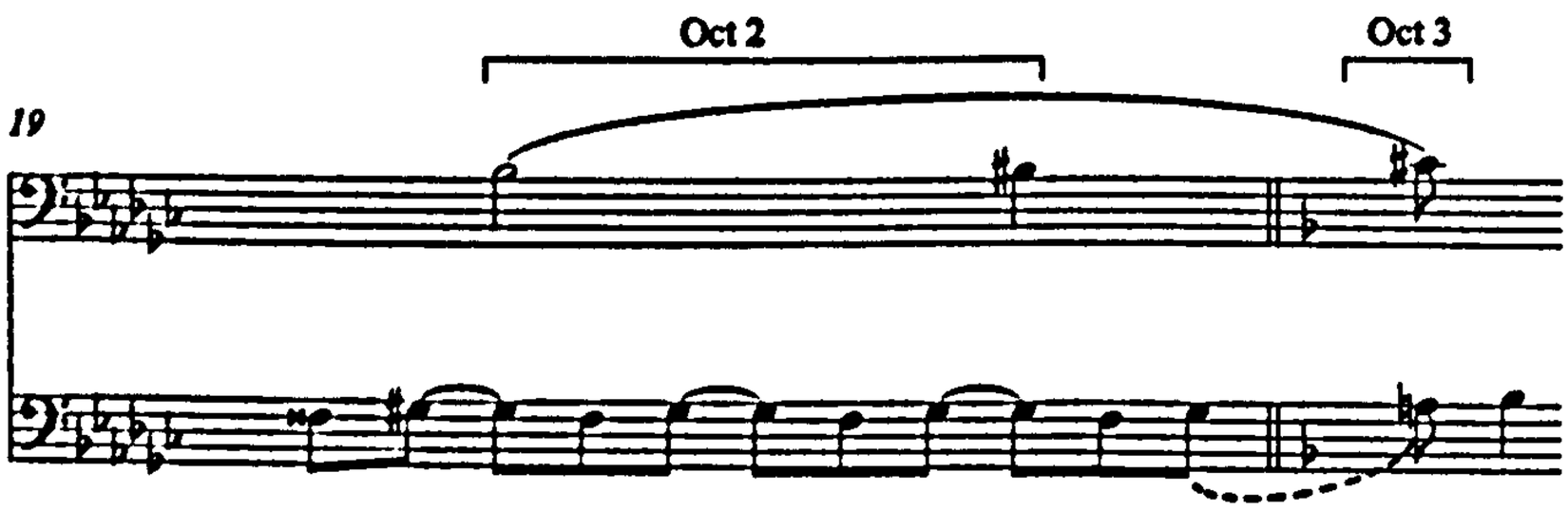
Example 5:32, Oiseaux tristes, octatonicism



Example 5:33, Oiseaux tristes, formal divisions

	A	*B*	*A'*	*B' (Cadenza)*	*Coda*
key	E♭	F♯/E centres	(E♭)	A♭ centre/ octatonic	E♭
bar	1	10	21	25	29

Example 5:34, Oiseaux tristes, resultant chromatic voice-leading



Gestural relationships

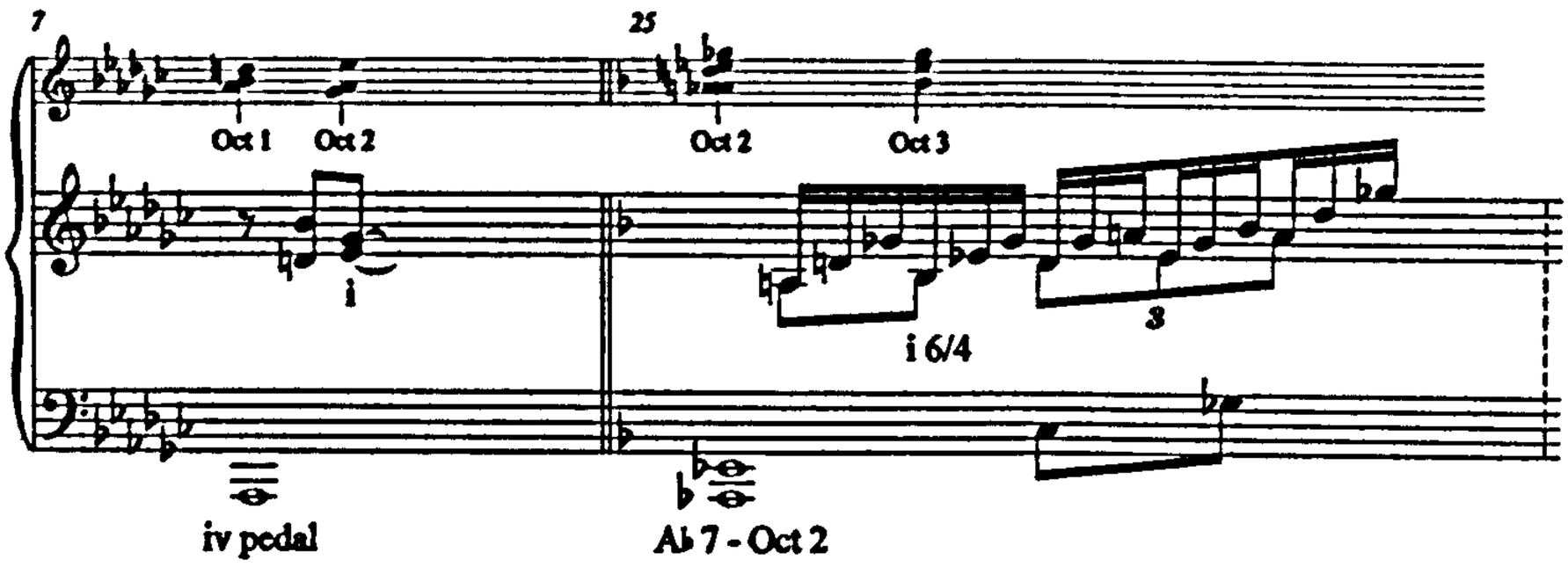
If the motifs clarify the starting and ending points of the larger sectional divisions, the opposite is also true: associations of referential pitch collections and motif enable the listener to understand how the arpeggiated figures heard throughout are derived from the arabesque at the head of the piece. The case in point is the pattern of juxtaposed tonality and octatonicism at the end of *A'*. At bar 21, *A* returns full-circle with the transposition of the earlier passage down by semitone and eventually, at the *pressez* (*Example 5:35*), the arabesque motif is heard for the first time with an octatonic harmonization. By the time this figure has gotten to the penultimate and ultimate crotchets of bar 25, the motif has broken down into its basic gesture as an arpeggio. The moment of real understanding is realizing how this motif carries on at the beginning of bar 26. Although it is not notated in the score as an arpeggio, the relationship comes into striking focus with the earlier material. The resultant E major harmony of bar 26 is a reference to bar 15. Thus, this latter gesture was derived from the earlier arabesque figure, which in turn suggests the arpeggiated chord at the beginning of bar 10 is also a transformation of this same motif. In practice, this means that the chords from bars 26–28 can all be arpeggiated, with each of the notes flowing naturally from the lower foundational bass pitch.

Conclusions

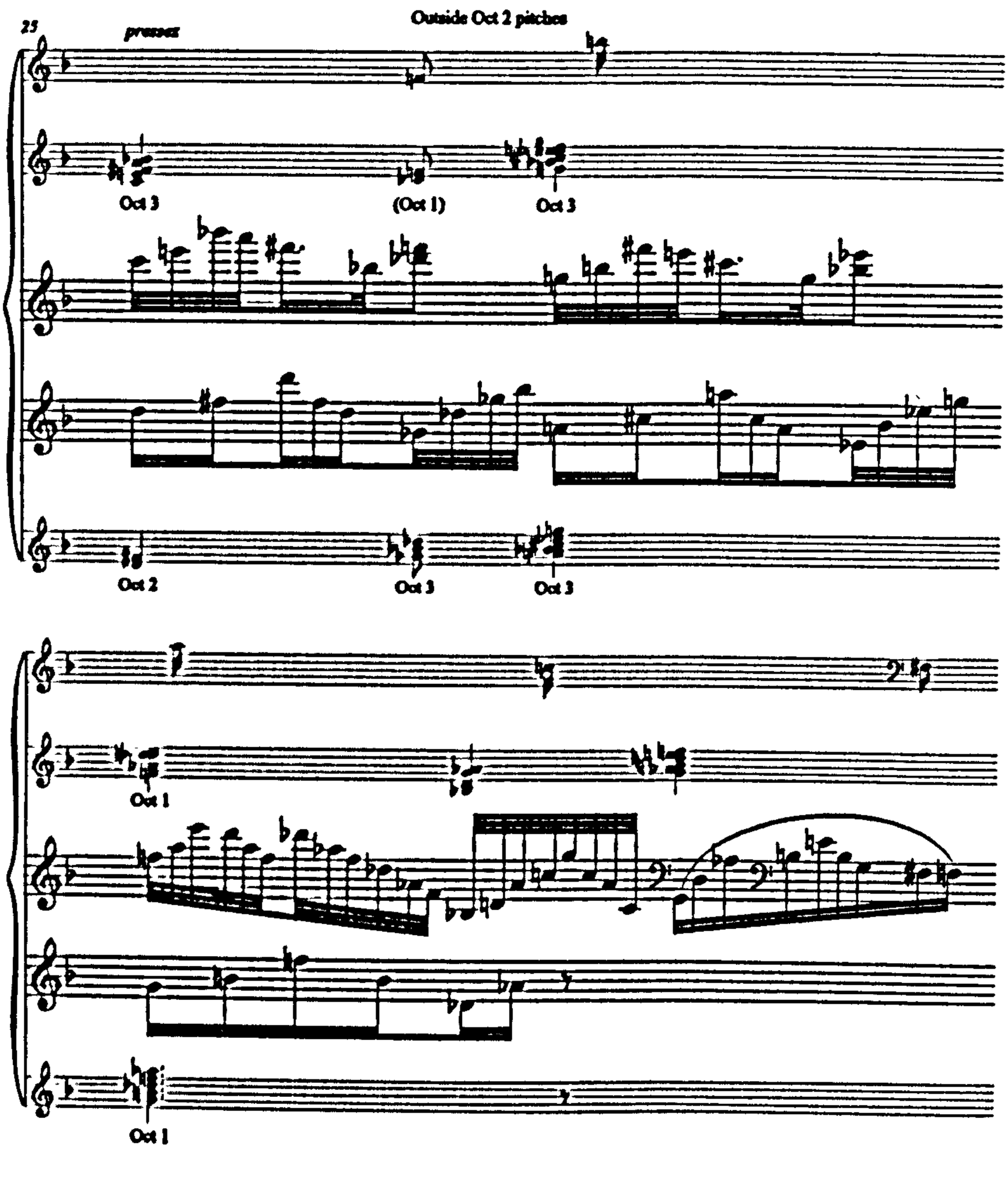
In the early stages of presenting this piece to the public, *Oiseaux tristes* was considered a difficult piece to understand:

> The *Miroirs* (1905) form a collection of piano pieces which mark a rather considerable change in my harmonic evolution; this disconcerted musicians who until then had been thoroughly accustomed to my style. The earliest of these pieces—and, it seems to me, the most characteristic—is "Oiseaux tristes," the second composition. In this work, I evoke birds lost in the torpor of a very somber forest, during the hottest hours of summertime (Orenstein, [1990], 2003: 30).

Example 5:35, Oiseaux tristes, arabesque motif relationships

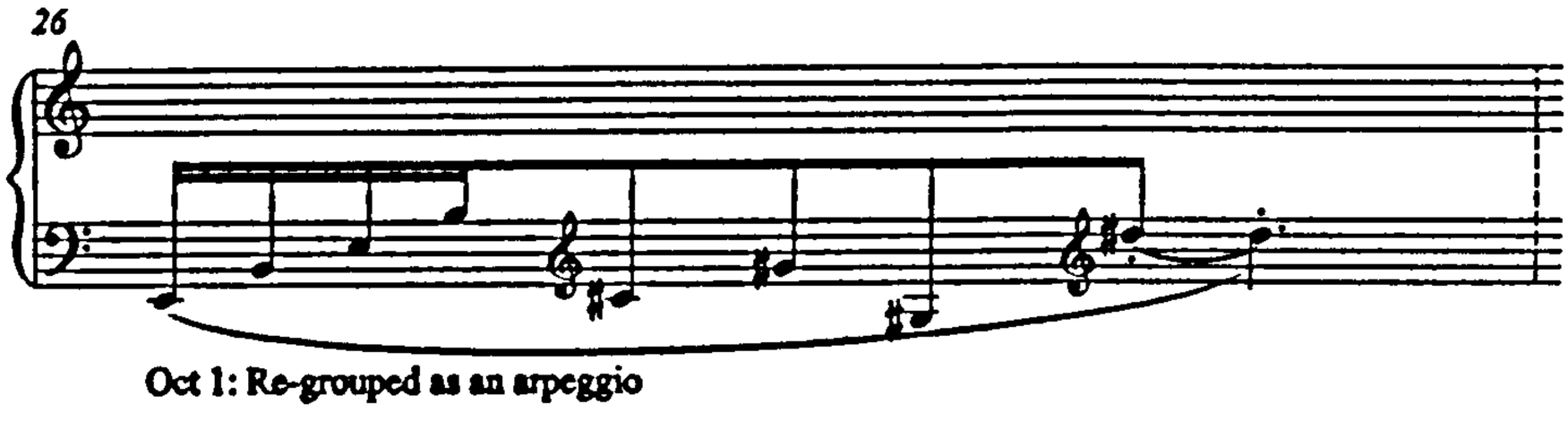


Section *A (ending)* *Cadenza (beginning)*

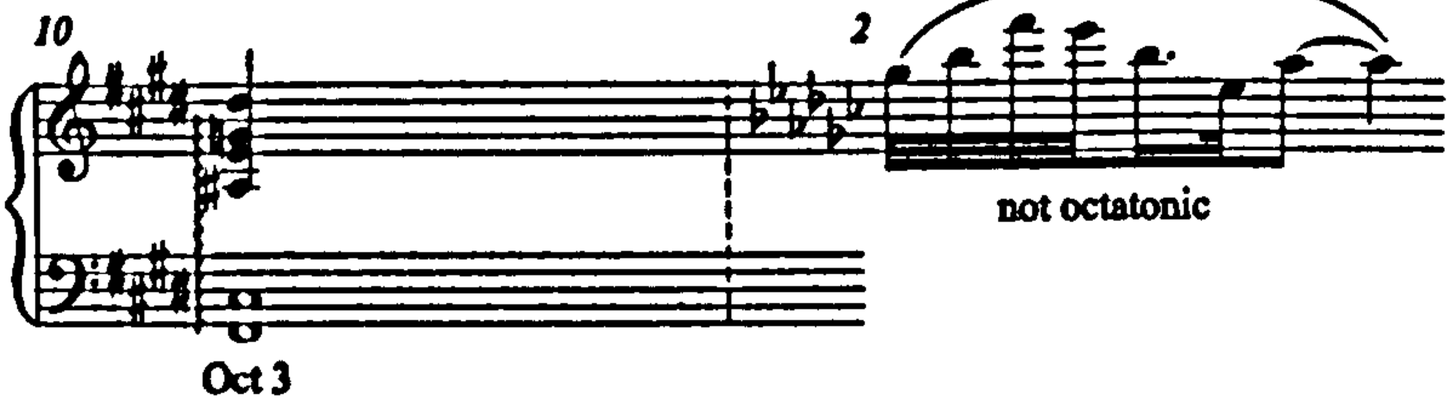


Example 5:35, Oiseaux tristes, arabesque motif relationships (continued)

Coda (beginning)



Section *B (beginning)* *A (beginning)*



If the reception of *Oiseaux tristes* was disconcerting for the composer, this is partially accounted for by the un-resolved appoggiaturas that Ravel referred to in his own analysis of bar 13. Noticeably, Ravel did not mention the octatonic nature of this passage.[12] He further implied that this harmony was tonal, by the way the C♮ pitch should be notated; appoggiaturas tend to resolve as seconds rather than thirds ('...In fact, B♯ would be more correct than C♮').

Because of the inherent ambiguities created from a layering of ostinati, *Oiseaux tristes* relies on motifs to connect the underlying pitch content across extended passages of time. In performance, this suggests the motifs should be performed in a similar manner whenever they return, to enable the listener to hear the nuanced contrast(s) created by the juxtapositions of tonal and octatonic collections. Thus, all of the bebung figures should be performed with the same articulation; bars 1 and 7 would be exactly the same.[13]

In terms of the opening arabesque, Ravel wanted it compressed. Perlemuter suggested that bar 2 '...must not be played strictly in time, but more briskly...' Ravel also wrote the words *plus bref* on Perlemuter's score. In Perlemuter's opinion, 'You must not be afraid of lingering on the long note. As soon as you compress the outline of this arabesque, it stands out'. Perhaps this movement to the B♭, followed by a lingering on the A♭ was the closest approximation in Ravel's mind to the song

of a blackbird heard while walking '...in the drowsy heat of a summer morning' (Jourdan-Morhange and Perlemuter, 1990: 21)...

In performance, the pianist can feel the pull from bar 13 leading into the *pressez* at bar 15.[14] As the electromagnetic charge increases exponentially, the result is inevitable; the rhythmic figure, comprised of the first five attacks of the arabesque is compressed like matter in a black-hole at the beginning of bar 15. Although this prescription may seem contradictory—the bulk of this thesis has suggested keeping a steady pulse unless Ravel prescribes otherwise—the harmonic stability, coupled with the build-up of the ostinato and the increase of surface rhythmic energy suggests moving forward to heighten the dramatic impact. Bar 15 is the logical outcome of this approach. The performer can then go to the end of this section, without dawdling across the change of texture at the beginning of bar 20 in order that the junction between the end of bar 20 and the start of 21 becomes the defining structural moment of the piece.

Ultimately, it is the motifs, which are first perceived in association with contrasting and referential-pitch collections that alert the audience to an understanding of the larger harmonic patterns. In retrospect, the analysis above also suggests that the principal tonal and harmonic relationships are derived from within the arabesque figure itself. This simple gesture, the falling second, heard within the ornamental complexity of the prolonged B♭ pitch, forms the basis of *Oiseaux tristes*. As illustrated in the top ossia of *Example 5:29*, the rhythmic placement of B♭ to A♭ acts as a hidden impulse. Beyond the surface harmonic allusions outlined in *Example 5:27*, this cell is also reflected in the large-scale sectional divides, first in the bass at the end of *A*, when A♭ falls by step to F♯, and later in section *B*, when the abstracted rhythmic fragment sounds the alarm, announcing the tonal movement from F♯ to E. This falling two-note idea is also indicative of the listener's awareness of tonal ambiguity. B♭ to A♭ is the skeletal outline of a regressive progression—V to iv in the key of E♭—which happens both at the beginning of the piece and at the bottom of the first page (bar 9).

Additionally, the entire arabesque motif interrupts the flow of melancholy, first at bar 2, between the isolated dominant and tonic pitches of bars 1 and 3, and later in the cadenza at the start of bar 25. Whereas the bebung motif sounds serious and dark at bar 1, bar 3 feels less ominous, from the dominant seventh coloring expressed melodically in the first three pitches. The other motifs stay the course

throughout the piece, but it is the arabesque figure that forms the basis of the more abstract relationships. This includes the link between the octatonic collections and the formal divisions, which were first discerned in analysis through an understanding of the arpeggiated accompaniment in association with the D♯ bebung motif at the *au movement* (bar 26).

Notes

[1]If Ravel had revised the metronome markings in the later orchestral version, this would potentially undermine the argument presented above. As Professor Peter Hill of Sheffield University has pointed out, the original piano manuscript of *Pavane* is much faster than the orchestral version. However, this is not the case for the *Valses nobles*; Ravel kept the same markings in place for both versions. As a side-note, Ravel did not necessarily want the tempo of *Pavane* to 'drag':

> **H J-M** ... Vlado, did Ravel give you any advice about this Pavane?
>
> **VP** No. When I brought it to him, he pulled a face and said: "Oh, have you been studying that?" He wasn't interested.
>
> **H J-M** We all know that he did not want it to be played too slowly, according to the anecdote told by Charles Oulmont. When he was very young, Charles Oulmont played this *Pavane* to Ravel, too slowly, which brought out this observation from the amused composer: "Watch out, little one, it's not a Pavane défunte pour une Infante!" ... (Jourdan-Morhange and Perlemuter, 1990: 4)

[2] Special thanks to Roy Howat for pointing out this reversal of motif at bar 46 (2001/2002).

[3] French Piano Institute, *Schola Cantorum*, Paris, July 1999.

[4] Special thanks to Roy Howat for this and the other performance suggestions referenced below (Howat, 2001/2002).

[5] Howat, 2001/2002.

[6] The comments above represent an amalgamation of remarks by Roy Howat (2001/2002), Dominique Merlet (French Piano Institute, 1999) and the writer.

[7]See Orenstein [1990], 2003: 517, 521 (Italics according to Orenstein):

> *'René Lenormand's* Etude sur l'harmonie moderne *was published in 1913. Lenormand (1846–1932), himself a composer and pianist, analyzed selected passages in the works of some 40 colleagues, most of them contemporary Frenchmen, and in his preface he thanked those composers who were kind enough to offer their assistance. ...*
>
> *Lenormand's work includes some twenty analyses of Ravel's music; on the basis of an unpublished manuscript, it turns out that many of these analyses are entirely by Ravel himself. Moreover, Ravel's manuscript seems to be incomplete, and it is probable that other comments about*

his music are also his own. ... With a keen, almost detached intellect, Ravel discusses complex chords with pedal points, chromatic alterations, or unresolved appoggiaturas, and in the example from Valses nobles et sentimentales, *he indicates an awareness of a larger structural prolongation. ...*'

[8] In consideration of the harmonic prolongation, this suggests there does not need to be a change of pedal from bars 10–14.

[9] Numbering of the octatonic transpositions according to Straus, 1990: 97.

[10] Howat, 2001/2002.

[11] Howat, 2001/2002.

[12]Ravel's use of the octatonic scale was probably conscious: 'It is difficult to determine whether or not Ravel was thinking specifically in terms of the octatonic collection when he composed "Un Grand Sommeil noir" [1895]. The strictness with which he adheres to his mediant progressions and the voice leading of his accompaniment—particularly from measure 33 through measure 36—suggest that this is likely. In any case, he was clearly thinking in terms of symmetrical divisions of the octave by thirds and tritones'. ... See footnote 29, page 544 of Steven Baur, 'Ravel's "Russian" Period: Octatonicism in His Early Works, 1893–1908', Journal of the American Musicological Society, Volume 52/3, 1999, 531–592.

[13] Merlet, *French Piano Institute*, 1999/2000.

[14]Howat, 2001/2002.

6 Conclusions

Introduction

With the detailed analytical findings in place, it is now possible to return to the central issue of this study—how analysis is of use to the performer. This question has been investigated from one of three perspectives: performance by itself which does not consider analysis in the first instance; performance and analysis simultaneously; or, analysis in advance of performance. Summary discussion is presented below which outlines the relative advantages or disadvantages of each approach. Firstly, two earlier performances of the *Valses nobles* are chronicled in the form of a recorded case-study to illustrate how performance changed once the piece had been analysed. Secondly, the continued discussion of *Une barque* and *Alborada* illustrates how analytical understanding may 'spark' interpretative thought. In the third category, an extended discussion alerts the performer to a potential 'trade-off' if analysis is not considered as part of the learning process.

Part I: 'before' and 'after'

In recent years, the 'before' and 'after' advertisement has become a readily-identifiable form of marketing—it offers 'objective' proof to the consumer in support of goods, services or procedures. Accordingly, no firm hoping to make a profit would be foolish enough to display an 'after' photograph which looked worse than the 'before' version. If perchance 'after' is not better, the consumer might be induced

to concede that the claims were accurately stated, but because of the results, would be disinclined to purchase.

In this sense, the performer attempting to rationalize performance and analysis is in a similarly untenable position. If the 'before analysis' version sounds better, the pianist has manufactured extra work for himself; or, has wrongly interpreted the piece. Conversely, if the 'after analysis' recording shows a marked improvement over the earlier 'intuitive' approach, this is because the performer has intentionally made it so, in order to validate the usefulness of analysis to performance. As the means of accounting for interpretative decisions, the pianist's primary recourse is to bring to light an earlier rendition—one, in hindsight, which is probably better left at the 'level of the subconscious'. The performer must then, by inference, laud the later rendition to show why it is better. In turn, because it purports to be 'new and improved', listeners are prone to be skeptical of this pretence.

Edgar Allan Poe: 'The philosophy of composition' (1850)

The American poet, Edgar Allan Poe, offers a useful take on this dilemma, by suggesting the possibility of an author articulating how they came to write something—mistakes and all. Although this article deals with literature and not music, Poe's ideas may be considered in relationship to the performer writing about analysis and performance:

> I have often thought how interesting a magazine paper might be written by any author who would—that is to say, who could—detail, step by step, the processes by which any one of his compositions attained its ultimate point of completion. Why such a paper has never been given to the world, I am much at a loss to say—but, perhaps, the autorial vanity has had more to do with the omission than any other cause. Most writers—poets in especial—prefer having it understood that they compose by a species of fine frenzy—an ecstatic intuition—and would positively shudder at letting the public take a peep behind the scenes, at the elaborate and vacillating crudities of thought—at the true purposes seized only at the last moment—at the innumerable glimpses of idea that arrived not at the maturity of full view—at the fully matured fancies discarded in despair as unmanageable—at the cautious selections and rejections—at the painful erasures and interpolations—in a word, at the wheels and pinions—the tackle for scene-shifting—the step-ladders, and demon-traps—

the cock's feathers, the red paint and the black patches, which, in ninety-nine cases out of the hundred, constitute the properties of the literary *histrio* (Poe, 1850: pages 1–2 of 8).

Methodology

In the spirit of Edgar Allan Poe and Bruno Repp's empirical findings above—not to mention recent musicological writing which encourage music as 'process'—the discussion below illustrates the differences between two performances of the *Valses nobles et sentimentales*. The earlier performance was in 1999 and was recorded with a portable DAT machine.[1] In contrast, the second performance of 2003 was recorded professionally in a larger hall,[2] with a different type of instrument—a Hamburg Steinway versus a rebuilt, New-York Steinway. Because of the difference in sound reproduction, the reader may potentially misinterpret this as purposeful, along the lines of the 'doctored' 'before and after' photograph. This is, in actuality, accounted for from practical concerns. The earlier performances were either not recorded at all, or, as in one case where a recording does survive, it was of no value because the piece was not recorded in its entirety.[3]

This lone surviving version was the fifth of five initial public performances, the first separated from the last by a period of approximately six months. By this time, the interpretation had settled, having benefited from earlier public coaching as well as a private lesson.[4] Eventually, the *Valses nobles* were set-aside; they were not practiced again until the early spring and summer of 2003. The preliminary analytical work subsequently began in the late spring and early summer of 2002, finishing in the early spring of 2003, before being reconsidered again in 2004 and 2005.

In hindsight, it is difficult to recall the cognitive processes which shaped the musical decisions at the early stages of the learning process in 1998/1999; no written or verbal record was kept which indicates how the interpretation developed. One 'remembrance' is sure; this first set of performances was not directly influenced by the techniques which form the basis of this thesis—namely, a consideration of the interactions between larger and smaller structural levels. However, the technique of memorization was itself systematic and somewhat analytical. The *Valses nobles* were memorized from the end to the beginning on a phrase by phrase basis, according to an awareness of larger sectional divisions. The bulk of the practice time

was spent drilling technically-oriented patterns according to the phrase structure. Thus, the primary approach to interpretation was in all probability gestural, or cast in imitation of recordings (especially Jean Yves Thibaudet) and verbally transmitted performance practice. Fortunately, it is much easier to reconstruct the latter performance; an earlier analytical draft serves as a *de facto* historical document. Many of these findings eventually found their way into Chapters 2–4, although the discussion of motif and gesture in Chapter 5 was not fully formed in advance of this performance. Accordingly, the writing presented above in Chapters 2–4 served as the basis for this particular interpretation.

In the spirit of Poe's hypothesis, written samples from this earlier draft are presented below to illustrate how analytical thought contributed to this rendition. Although many of these ideals did not survive the 'editing room', it is hypothesized that these 'crudities of thought' are of some value to the reader. This material is given below as it was first presented, with limited editorial intervention.[5]

Analytical draft: selections (2003)

[Introduction: Approach]

...a musical work may be imagined by the performer as an autonomous object. If music exists as its own entity, then the performer is bound to certain elements in performance. (That is, if in the economy of performance, the notes themselves are considered 'non-negotiable' currency.) Conversely, while formal structure may exist in the imagination of the performer or the analyst, it does not exist in sound, until a performer organizes and presents a temporal landscape, that the listener may perceive the emergent structure. Thus, 'the piece' becomes dualistic (through performance) in that it remains recognizable as an entity: but it will also change from one performance to the next, depending on the performer's approach to timing issues. Some performers may choose to let chance run its course, with intuition guiding the performance; others may be curious, and feel a need to justify their musical ideas and thus rationalize their efforts through analysis (1–2).[6]

After a consideration of musical elements—form, tonality, the patterning of individual waltzes, harmony and motif—the analysis then speculated as to how these findings may merge with representations of performance. The subtext was to suggest that the *Valses nobles*, if considered as a set, are built from GS proportions, a finding which has since been abandoned:

This suggests that *Example 12* [see *Example 2:7* above, which is an edited version of this earlier attempt] has value because it may enable the performer to consider several elements simultaneously...While the analyst has the luxury of presenting ideas in isolation it is not possible for the performer to do so, as music is the 'sum of its parts'. Thus, this act of graphically visualizing the music enables the performer to create an as yet un-imagined representation which then provides further impetus for thinking of a horizontal unfolding of structure, as well as informing performance decisions relating to the localized level...(10–11)

Performance *Gestalt*: Tensions Between Tonal Process and Proportion

...The discussion below speculates as to how the performer may build the entire performance around the generalized idea of tension created between waltz patterning and tonal and temporal processes, with the objective being to create in the listener a cumulative effect by the end of the piece (12). ...

...The performer can think of a grand temporal line in the sense of someone planning a journey across the continent, with the general traffic speeds in place on the larger map. It is not until one travels the road that the specifics (in this case analogous to the expression markings in the score) are understood. Thus, a temporal line which is considered as a structural feature can be described as follows: firstly, prolongation of the opening tempo by its return to the same tempo in waltz 3, with it eventually put in half; and waltz 6 proportionally related to 5. This temporal element further bolsters the argument of elements being out of phase with each other, the rationale being that the performer can imagine the element of disconnect at the level of the listener's sub-conscious and infer through their choice of tempo subtle temporal connections that bind the contrasting waltzes together (14–15).

In the final portion of this first draft, the discussion then proposed a general approach to interpretation, one based on an imagined disconnection between phrase boundaries and harmonic line at the level of the individual waltz; one which is analogous to an overlap at the larger levels of activity—waltz groupings and tonal process.

Non-concomitant Elements: Waltz Level (Localized)

The discussion above has demonstrated that musical elements are not in phase with each other although the proportions bind the musical elements together by the end of the

piece. This point is further illustrated to suggest that localized variants of this idea are also seen within individual waltzes. In turn, the performer can recognize these details (which build together like circumstantial evidence) in presenting the larger musical argument to the listener. Earlier it was suggested that E major is alluded to in the first 4 waltzes before it is finally realized in waltz 5. This point is now re-visited to suggest how a performer who is cognizant of this feature is better positioned to condition listener's minds and can thus contribute to the comprehensive effect of structural understanding. ...A brief description highlighting points relating to *Example 5* [see *Example 2:5* above] puts the discussion in context to suggest emergent details within the score (16–17). ...

Conclusions

...The first conclusion to be drawn is that there are several musical elements which are slightly out of synchronization with each other, which makes one at first wonder how the piece holds together; it does, but it is only a cumulative effect when the proportions have worked themselves out. ...In a sense while the harmonic line in the first four waltzes is directed towards E major, the cadence in E major at the beginning of 5 may in fact extend to the end of 5, thus illustrating that the progression of keys is related to the proportions, but out of phase with the grouping described above. Conversely, Ravel's tempo markings would not match up with the tonal plan, although it would be at odds with the patterning of waltz groupings (23).

...Under this approach to performance, the performer would do something at the beginning of 5 to let the listener know that this is the most important waltz of the set. Thus, from this perspective, the performer is intentionally accepting an asymmetrical pattern to begin with by envisioning the first half of the piece as waltzes 1–5, with the size of individual waltzes concurrent with proportion and phrase structure (23).

Valses nobles: performance findings

With the intent of the performer established, the discussion below illustrates how the performance of the *Valses nobles* changed over the course of this initial four-year period. Both performances are included in their entirety (*track 15*, 1999; *track 16*, 2003), and selected differences are summarized in table form (*Examples 6:1–9*).[7] The reader is encouraged to listen first to both performances before proceeding to the juxtaposed examples which present extracts of selected passages (*tracks 17–50*).

Length

As illustrated in *Example 6:1*, the second performance was slower. The major difference was that the earlier performance neglected to take the repeat of *Waltz 4*. In contrast, the 2003 version did take the repeat, in order to affirm the importance of C major. Because *Waltzes 1–3* represent a prolongation of the opening tonality,[8] it was determined that the repeats 'should' be taken, not only because the composer had indicated to do so, but because this undermines the extended prolongation of the G centre. Thus, in relation to the large-scale structure, it was imagined that this would create a second set of tensions within the harmonic line at the level of the individual waltz (tonic and dominant relationships), in opposition to the larger mediant structuring across the entire piece, construed as being consecutive with the temporal midpoint.

Example 6:1, Valses nobles, 'before' and 'after' timing comparison

Waltz	*1999*	*2003*	*Change*
1	72.91 (seconds)	77.61	+4.7
2	117.35	127.04	+9.69
3	86.37	76.85	-9.52
4	34.8	62.9	+28.1
5	68.4	74.33	+5.93
6	35.99	35.1	-.89
7	146.43	155.72	+9.29
8	201.2	205.15	+3.95
Total	763.45	814.7	+51.25

If the second performance had not taken this repeat, the difference in real time would be approximately 25.46 seconds; itself an appreciable amount. Over the course of the entire piece, the tempos had evened out and were, on average, almost 7% slower than in the earlier version. Only one tempo was faster and this was *Waltz 3*. At the time of analysis, it was unclear what this particular tempo should be, because Ravel did not indicate a precise metronome marking. It followed from the analytical findings that *Waltz 3* may be in a similar tempo to *Waltz 1*; both share the

common designation of *moderato* as well as the same short-short-long rhythmic motif. Thus, it was decided that the tempo of *Waltz 3* would be the same general tempo as *Waltz 1*.

Returns: ritardandi

As illustrated in *Examples 6:2–9*, the earlier performance, if faster overall, tended to slow down in advance of the sectional returns (see *tracks 23* and *24*; *33* and *34*; *41* and *42*). Interestingly, the 'stutter-step' passage leading into the return of *Waltz 6* was approached differently in 2003. Whereas Ravel notates this as a *rallentando*—the first performance picked up on this—the later version does not slow noticeably; this moment was elided. This particular finding was not expected. When the preparations were made for performance, it was clearly understood that this was a place to slow down. If the second approach is more aesthetically pleasing—a longer harmonic line results—it may also run counter to Ravel's marking. In retrospect this may suggest a third option—if the 'informed intuition' is correct, Ravel's marking is the compositional equivalent of suppleness as opposed to the motion coming to a grinding halt.

Micro-timing: phrase-structure and harmony

Beyond this specific difference, the later performance additionally tended to focus on the harmonic workings of the bass-line. Hence there is an improved harmonic clarity which goes beyond venue, acoustic, or recording device, and the second performance tends to articulate sectional divides differently than in the former instance. Whereas the first performance often pushed forward without regard—this was based on the performer's wholesale adoption of French performance practice—the second version judiciously groups waltzes together, based on tonal or harmonic process.

Example 6:2, Valses nobles, waltz 1, selected differences

Bar(s)	*1999*	*2003*
1–4	***track: 17*** *a.* tempo: hurried *b.* 2 bar groupings present	***track:18*** *a.* tempo: settled *b.* 2 bar grouping clarified
5–20	***track: 19*** *a.* left-hand chords too pronounced in hemiola passage starting bar 7 *b.* continuing on from section *A to B*—no pause between bars 20 and 21	***track: 20*** *a.* less accented left-hand chords starting bar 7 *b.* orchestrated inflection on chords (bars 17–18); final sounding cadence (bars 19–20); breath between bars 20 and 21; un-intentional break between right and left hand on downbeat at start of new section (bar 21)
21–34	***track: 21*** *a.* dramatic *cres.* and *desc.* in bars 31 and 32—imitative of recordings *b.* active tempo (frenetic)	***track: 22*** *a.* understated articulation of E major leading into bar 32 *b.* stable tempo (controlled) *c.* harmonies underlined according to phrase structure—downbeats of bars 21, 23, 25, 26 and 27
45–64	***track: 23*** *a.* broadening leading into return (bars 59 and 60) *b.* wrong notes	***track: 24*** *a.* less slowing in cycle of fifths leading to the return (up to bar 61) *b.* fewer wrong notes
65–W2, bar 2	***track: 25*** *a.* cadence in wrong key in bars 79–80 *b.* no break between *W1* and *W2*	***track: 26*** *a.* correct notes of cadence played at end of *W1* *b.* slight articulation between end of *W1* and beginning of *W2*, although continues from *W1*

Example 6:3, Valses nobles, waltz 2, selected differences

Bar(s)	*1999*	*2003*
9–16	***track: 27*** *a.* temporary memory loss (bars 15–16)	***track: 28*** *a.* security within memory; bass interest
17–26	***track: 29*** *a.* F^7 chord accented in bar 24; resolution ends at B♭ before falling to E♭ in bar 26	***track: 30*** *a.* B♭ accented in bar 25; heard as a dominant to E♭ in bar 26

Example 6:4, Valses nobles, waltz 3, selected differences

Bar(s)	*1999*	*2003*
W2, bar 57–W3, bar 4	***track: 31*** *a.* slight pause between *W2* and *W3*	***track: 32*** *a.* continuance of sound between *W2* and *W3*; prolongation of opening tonality over the course of *W1–W3* *b.* more rubato starting in bar 56 of *W2* *c.* more sprightly tempo (*Waltz 3*)
48–57	***track: 33*** *a.* slowing leading into the return	***track: 34*** *a.* no slowing leading into return; some memory issues

Example 6:5, Valses nobles, waltz 4, selected differences

Bar(s)	*1999*	*2003*
complete	***track: 35*** *a.* repeat not taken; worried about memory loss *b.* slight pause before G♯ of last bar *c.* extra voice of bars 31–34 not added	***track: 36*** *a.* repeat taken to emphasize C major as important tonality *b.* no pause taken leading into final G♯ for purposes of continuity *c.* extra voice of bars 31–34 not added; E Major emphasized in bar 37 by bass emphasis in bars 35 and 36 (more bass than 1999 version)

Example 6:6, Valses nobles, waltz 5, selected differences

Bar(s)	*1999*	*2003*
1–16	***track: 37*** *a.* slowing leading into pauses (bars 12 and 16)	***track: 38*** *a.* same approach to long phrasing; no slowing leading into the pauses, but slight breaks at end of bar
17–W6, bar 4	***track: 39*** *a.* little pause between *W5* and *W6*	***track: 40*** *a.* articulated pause between *W5* and *W6*

Example 6:7, Valses nobles, waltz 6, selected differences

Bar(s)	*1999*	*2003*
17–52	***track: 41*** *a.* slowing leading up to return as notated by Ravel	***track: 42*** *a.* less overt slowing leading into return at bar 45; longer line created

Example 6:8, Valses nobles, waltz 7, selected differences

Bar	*1999*	*2003*
W6, bar 53–W7, bar 23	***track: 43*** *a.* slight pause between *W6* and *W7*; *W7* separated *b. Tempo 1* begins at bar 19, not bar 17	***track: 44*** *a.* little pause between *W6* and *W7*—both joined together *b. Tempo 1*, begins at bar 17 as notated by Ravel
39–114	***track: 45*** *a.* boisterous climax leading into bar 63 *b.* fast middle section starting bar 66	***track: 46*** *a.* more calm—climax is imitation of orchestral recording (Ormandy) *b.* middle section related to tempo of *A* section

Example 6:9, Valses nobles, waltz 8, selected differences

Bar	***1999***	***2003***
W7, bar 131–W8, bar 4	***track: 47*** *a.* no pause between *W7* and *W8*; strange effect of joining *7* and *8* together	***track: 48*** *a.* articulated pause between *W7* and *W8*
41–49	***track: 49*** *a.* return of opening motif (brazen)	***track: 50*** *a.* return of opening motif more like a dream (less overt) *b.* better pedal connection between bars 45 and 46 *c.* accent of F in bar 44—G^7 as dominant of C (remembrance of *W4*)

Conclusions: *Valses nobles*

Overall, the 2003 performance was less 'ragged' and more refined than the version of 1999. The earlier performance, in principle, should have had less anxiety attached to it—a faculty recital ideally has less pressure than the setting of an international festival. In actuality, the second performance, if not free of concern was more relaxed.[9] This may have been because of a conscious understanding of musical structure, which had been conditioned to 'play out' over the course of the performance. Whereas the earlier performance did not take the repeat within the fourth movement in order to avoid the possibility of a memory lapse—interestingly this same type of lapse also happened earlier—in contrast, the performance of 2003 carried forward at this point. If the earlier performance was served by inarticulate intuition, the second relied on clarity of analytical thought, even if the initial findings detailed above would be rethought over the course of the next two years.

In general, the largest area of refinement was at the level of tempo and temporal shape. As a direct result of the analysis, there was a better sense of where to take time and where to keep the music moving forward. In several instances, the earlier performance was frenetic across moments requiring articulation. At other times it articulated individual waltz movements, which could have joined together.

Interestingly, the earlier performance was in line with some of the later analytical findings, but a rationale for doing so was not consciously understood at the time of performance. In contrast, the 2003 performance had an over-riding conception, which guided every phase of the decision making process at the time the performance was prepared.

A good deal of the improvement may also be accounted for from the intervening private study with Roy Howat, in which new technical approaches were systematically adopted. Interestingly, until making the 'before' and 'after' comparisons, it was forgotten that the 2003 performance did not receive direct instruction from Roy Howat, versus the earlier performances which were coached by two different artists. The *Valses nobles* were not studied with Roy Howat until the summer of 2004, one year after the fact. Accordingly, it appears that the later analytical thought may have supplanted the earlier 'prescriptions' conveyed from performers to student.

'Before' reconsidered

In light of the marketplace metaphor proposed above, the 'before and after' approach may overstate the claim to respective value. Hence, the discussion below considers what may have been lost in relation to the earlier performance. If the 2003 approach is more settled, it is also less exuberant than its predecessor. One example of this is the lead-in to the articulation of E major in the first waltz. Whereas the first performance articulated this moment in a striking way, primarily because other performers were doing so, the 2003 performance treated this moment less dramatically.

Because of the over-riding intent to articulate E major, this moment represents an approach which may have been 'too subtle'. Thus, this feature was presented in an innocuous manner in the first instance; accordingly, the length of time between the fourth and fifth waltz was shortened. The rationale was that the listener would need to hear this pitch immediately, in order to prolong this localized moment of tonal ambiguity. In reflecting on the aesthetic effect, it is likely that performances of the future will construe this moment slightly differently. A♭ is probably not lost in the mind of the listener if the fermata is observed in advance of

the third beat of the bar. Thus, the feeling of urgency, which changed halfway through the duration of this elided note, may instead reflect the relative calm which pervades this particular moment, giving the performer a split-second more to compose him or her self.

The decision to set the tempo for the third waltz in accord with the speed of the opening waltz may have been 'too literal'. This is probably a 'classic' case of taking an analytical finding at face-value in order to 'bring-out' a hidden motif. The earlier performance took this waltz slower, although there was no analytical basis for doing so. A second example of tempo change is the difference between the tempi of the first and the middle section within *Waltz 7* (*tracks 45* and *46*). In 1999 this was quite fast; later it was substantially slower, not because the performer's technique had declined in the intervening years. Instead, this was caused from over-doing Abdel Rahman el Bacha's earlier suggestion that this passage be played like a dream.[10]

Approaches to color represent a final category of changes in the future; the opening *f* dynamic of the first waltz in the 2003 performance was too loud in relation to the *ff* marking at point of return. The findings above suggest that there is no reason to broaden at this climax; the continuity is already built into the notation. As such, the stronger dynamic here coincides with the proportional focal point; it is potentially weakened if the opening dynamic is too strong.

Part II: Analysis and practice

With this preliminary example advanced, it is now possible to consider the second approach to analysis and performance—performance and analysis pursued simultaneously. Two examples follow; the first, *Une barque*, demonstrates how analytical findings may be construed to infer dramatic meaning as a quasi-programmatic narrative, based on a supposed interaction of motifs, heard within the context of a larger proportional frame.[11] The second, *Alborada*, illustrates how a performer may approach timing according to an analytical understanding of phrase structure. Although each piece is considered from a different perspective—in the former case analysis has been enlisted to infer dramatic meaning when there is no

verbal text attached other than the title—in the second, analysis has become a tool for understanding the advice of expert performers—each example attempts to imagine the listener through musical notation.

Accordingly, the aim below is not to validate a particular rendition or to illustrate how performance may itself become 'an act of analysis'; nor is the intent to prescribe to other performers what 'must' be done in performance. Rather, the discussion illustrates how analytical findings may be re-construed by the performer to service the early stages of interpretative thought. In a practical sense, other performers may take the analytical findings presented above in Chapters 2 (*Alborada*) and 5 (*Une barque*) and determine an equally valid interpretation based on their own experiences as musicians. Thus, the discussion which follows is speculative—as such, it does not include performed examples.

Une barque

In the case of *Miroirs*, Cook's ideas of performativity, Tarasti's musings on semiotics and Cone's formalism have prompted the possibility of a 'performance practice', which relates to Ravel's claim that Edgar Allan Poe was his greatest teacher of composition (Orenstein [1990], 2003: 454.[12] In short, the first step for the performer is to gain an analytical awareness of musical relationships. As Poe suggests in his 'Philosophy of composition', if one is to eventually unravel the complicated threads of a plot, the writer, or in this case the performer, may, of necessity, construct the ending first, in order to manage the inevitable twists and turns leading to the *dénouement*:

> Charles Dickens, in a note now lying before me, alluding to an examination I once made of the mechanism of "Barnaby Rudge," says—"By the way, are you aware that Godwin wrote his 'Caleb William's backwards? He first involved his hero in a web of difficulties, forming the second volume, and then, for the first, cast about him for some mode of accounting for what had been done."
>
> I cannot think this the *precise* mode of procedure on the part of Godwin—and indeed what he himself acknowledges, is not altogether in accordance with Mr. Dicken's idea—but the author of "Caleb William" was too good an artist not to perceive the advantage

derivable from at least a somewhat similar process. Nothing is more clear than that every plot, worth the name, must be elaborated to its *dénouement* before any thing be attempted with the pen. It is only with the *dénouement* constantly in view that we can give a plot its indispensable air of consequence, or causation, by making the incidents, and especially the tone at all points, tend to the development of the intention. ...

For my own part, I have neither sympathy with the repugnance alluded to, nor, at any time, the least difficulty in recalling to mind the progressive steps of any of my compositions; and, since the interest of an analysis, or reconstruction, such as I have considered a *desideratum*, is quite independent of any real of fancied interest in the thing analyses, it will not be regarded as a breach of decorum on my part to show the *modus operandi* by which some one of my own works was put together. I select "The Raven" as most generally known. It is my design to render it manifest that no one point in its composition is referable either to accident or intuition—that the work proceeded step by step, to its completion with the precision and rigid consequence of a mathematical problem (Poe, 1850: pages 1 and 2 of 8).[13]

Motif and narrative

In this approach to performance the pianist is analogous to the film director who seemingly has a gift for innocuously suggesting the importance of mundane events early on, which develop psychological significance across the passage of time. Thus, as in Poe's essay, the musical ideas leading up to the *dénouement* may be planned and practiced in advance of the performance. Accordingly, the pianist constructs the motivic interactions from analytical findings, and prepares the audience to hear the dramatic impact of the narrative coalescing at the climax of a strategically-placed moment.

Thus, the motifs as 'actants' may be 'intoned' within the context of the larger GS proportions. Although this may sound 'coldly calculated' (Howat: [1983] 1999: 177) the potential effect is one of spontaneity, if the pianist is able to be in the 'eternal present', by apprehending the past and the future at the same time. In imagining the cycle of dynamic energy outlined above in Chapter 5, one performance strategy is to keep the opening 'simple' in order that the architectural proportions may emerge. Initially, the performer may not need to be overly concerned with the many repetitions of the opening motif(s). In principle, this is the opposite of 19th-century

performance practice—these early repetitions of bars 1–10 are preparing the listener to understand the interactions which will become apparent later in the piece (see *Example 5:22*). Thus, if the motifs are first heard as 'understated', each may, over time, garner a history when the repetition creates an awareness of cumulative meaning in the mind of the listener. This is primarily realized through the physical gestures of performance. The technique itself is well-known to pianists; the two-note slur figures are performed with a down-up motion of the wrist.

As suggested earlier, the relative stasis is first perturbed by the rhythmic figure of bar 28. Bars 1–27 are essentially static; this opening section is a two-part, large-scale, harmonic prolongation. Further, B♭ has not yet asserted itself until this point in the piece, although this new three-note figure is related gesturally to motif *a* by the abstraction of the triplet rhythm. Programmatically, this may represent the storm on the distant horizon or it may imply a presence of greater immediacy. Accordingly, the performer may choose to envision the attack between the low A and B♭ as a strong acciaccatura; later in bar 29, the sigh-figure then reenters into the consciousness of the listener. In comparison to when it was first heard at bar 11, it has now become malleable, altered and hidden within a complex texture (B♮ to C in the left hand).

After this process of prolonging B♭ (bars 29–37), the motif changes to become the trill figure at bar 38. This suggests that a different harmonic coloring may be attached; as an undertone of foreboding that will eventually end benignly, once the storm has passed (bars 38–43). Consequently, the pentatonic movement to F♯ major highlights the parallel major, in advance of the tonal movement to C♯. (This, in turn, leaves behind the bright and 'sparkling' water that reflects the glistening sun.) Eventually, after the black-key glissandi in bar 44, motif *c* becomes an important point of summation, as the cadential process combines motif *a* and the sigh figure of bar 11 (bars 46–49).

The analytical understanding of this motivic transformation and the subsequent joining-up of material suggests that Ravel's expression marking can be interpreted as a dramatic moment. Performers steeped in French performance practice tend not to take many liberties with the score unless the composer indicates an instruction to do so. The marking *très expressif* may be one of those rare moments to 'linger', in order that the rhythmic augmentation of motif *a*, the quaver tied from the first to the second beat in bars 1–10, is realized by the listener; it later

takes the form of a minim tied across the barline to the crotchet in bars 47–48. Accordingly, Ravel alerts the listener to this possibility by putting motif *a* backwards to forwards, with the skeletal texture of the triplet figure of the left hand heard in isolation. In turn, the performer may consider the coloring of this harmonic resolution as though it is 'quite definite', although the surface motion may obscure the effect. Ravel's accent above the left hand C♯ in bar 49 may be there for that very reason in order that the listener makes the tonal connection, while the right hand is creating the background surface of the water.

The outgrowth of this discussion now comes into focus at bars 76–79[1]. As illustrated earlier in *Example 5:22*, the sigh-figure of bar 11 is combined with the percussive triplet figure of bar 28 and is successive with a deceptive tonal cadence—it begins the extended proportional buildup to the conclusive dynamic wave at bar 103. Whereas this triplet figure at the beginning of bar 76 shares the same rhythm as the later figure at bar 79, the performance may also be served, if the pianist imagines both motifs in terms of what they 'do'. Ultimately, the latter version helps the listener recall the earlier reference to the B♭ of bar 28, to encourage the listener to perceive that the storm on the far-distant horizon is starting to 'brew' afresh. This is perhaps the most dramatic moment of the piece until this point. Associating this motif with the sigh figure of bar 11 further encourages the listener to understand the evolution of the figure. Its meaning was generated from the first evocation of pain in bar 11 and was immediately associated with 'storm clouds'. Thus, the extended proportional passage starting in bar 83 and repetitive history of motif *c* works psychologically to eventually culminate in the most dramatic moment of the piece, at the downbeat of bar 124.

Along the way the symmetry of drama has been balanced; the storm that first turns to brightness (bar 43) has itself undergone a transformation with the rush of water in bar 103. For the listener, the performance has been building to a dramatic climax at bar 124 because the proportions, dynamics and repetitive elements have worked in tandem to create this emotional return to the opening motif—the two pitches of the sigh figure at bar 124 are those heard at the beginning of bar 1 (E to C♯). Thus, the whole process of motivic evolution and continuity has come full circle with its eventual disintegration (the octave C♯'s in bars 128–131) before returning to motif *a* (bar 132) to conclude the process.

Alborada: phrase structure

As previously illustrated above, Ravel has created large-scale relationships from proportional patterns that coincide with the musical elements of *Alborada* to define important structural points. Two facets of this discussion are illustrated below: firstly, the analytical observations of an additive, proportioned phrase structure are considered in detail (outlined earlier in *Example 2:18*); secondly, this demonstrates how an understanding of structure may be planned in advance of performance. As a result, performers aware of this proportional impulse, who agree with this interpretation, have a basis for making timing decisions, in order to segment carefully the interior ideas to create shape in the mind of the listener. Section *A* serves as the illustrative example; consequently, each subsection is briefly discussed to give the reader an understanding of how musical articulation is achieved in performance. (Section *A'* is not discussed; after the preliminary example of *A* has concluded, readers can make similar types of inferences for the outer section if they so choose.)

Section *A*

As illustrated in *Example 2:18*, the sectional divisions of *A* are structured outward from the primary Golden Section (GS) point at the junction of bars 42 and 43. On either side of this division there are exact mathematical proportions that asymmetrically produce the interior shape of this tonally-closed form. Working left to right, *A* begins with an *introduction* (D minor) formed from an irregular 4 + 3 + 4 phrase structure. In performance, the first four bars naturally break into two-bar phrases if the basic pulse is felt in three. Thus, this understanding enables the performer to condition the mind of the listener to expect a continuation of this pattern at the start of the third two-bar phrase, in order that the interruption of the *f* dynamic at bar 5, which interjects in the middle of the phrase, comes as a surprise.[14]

Vlado Perlemuter suggests that performers can begin the piece with the *una corda* depressed. This allows the performer to play more firmly in the keys—to grasp literally the opening chords as though imitating the sound of a plucked Spanish guitar. Thus, the possibility for interest is hinted at in the notation by the placement of the new triplet motif at bar 6; the *una corda* pedal may be released to declare the

forte dynamic.[15] Performers may further emphasize this effect by returning to *p* in bar 7 and from pedaling the harmony at the end of bar 11.[16] (Pedaling for this particular section is taken up in more detail below.)

Bars 12–29 contrast with the first 11 bars of the piece; they are constructed from additive sequences of 4 bar units that increase by 2 bars in each successive instance. This phrase grouping also corresponds with the division of the midpoint at the junction of bars 29 and 30; shortly before, the introduction returns (bar 22), but in the key of B♭ major, to close off the section. Thus, the first 29 bars masquerade as a ternary form that is nested within the larger binary division of bars 1–42 (11 + 10 + 8). In order to maximize this proportioned idea, the performer does not need to do anything out of the ordinary, other than take slight breaths between the phrase groupings—between bars 15 and 16; nothing between 19 and 20 (feeling this as part of the *diminuendo*), and a short breath between 21 and 22.[17]

All of this seemingly points to the classical idea of a structural phrase dissonance, one which begins in the introduction, and is eventually resolved by a return to periodic phrase lengths, heard consecutively with the thematic return of the opening bar. As bars 1–29 represent a three-part division, articulation is happening on several fronts; firstly, by the unexpected interruptions of the phrase structure within the first 11 bars. Secondly and thirdly, through a rhythmic pedaling of bars 8 and 9—*tre corde* on the first dotted crotchet of bar 6; *sec* on the second dotted crotchet; pedal across the entirety of bar 7; *sec* in bar 8; *tre corde* across bar 9, with *pizzicato* on the downbeat of bar 8 and in the open fifths of bar 10.[18] Thus, a purposeful contrast of the additive section corresponding with the return of the opening introductory material (bar 22) resolves the apparent disconnect of the first 11 bars.

Bars 30–42 present the most direct form of symmetry – repetition, and this division is articulated by a sequential key change to D♭ major at the midpoint (bar 37). Ultimately a performer 'should' do something—anything but slow down—to emphasize this moment at the beginning of this section (bar 30), in order that the later symmetry at the junction of bars 36 and 37 registers in the mind of the listener. At bar 30, Perlemuter's approach was to play the low B♭ with the side of his fist as a way of surprising the listener—as an orchestral sound, without any effort. Ideally this helps the performer avoid the risk of missing the note altogether; or, in a positive sense to get a better sound, by not tensing up from trying to pound the note in an

effort to reach *ff*. Whether Perlemuter did this with a GS division in mind is unknown, but it does clarify the important structural moment in performance; it is the beginning of the new submediant tonality (B♭).

Performers may also conceivably wonder why Ravel did not add the octave here. In this case it is easier to get the orchestral effect without it. Once the idea has been heard, there is no need to present it again, which perhaps explains why Ravel varies the sequence by adding the octave pitch to the D♭ in bar 37. Consequently, the performer does not need to do anything special in terms of *rubato* to articulate this division. The analytical findings have merely alerted the performer to the discovery of an orchestral effect. Prior to the downbeat of bar 30, the dotted crotchets in bars 28 and 29 can be slightly accented (these are not notated) to maintain the dance-like feel before hearing the effect of B♭.

With the discussion of bar 30 in place, the following discussion illustrates how bars 30–36 are imagined in order to feature the D♭ tonality at bar 37. In preparation of this point, the performer can sensitize the listener to the phrase and dynamic structure by taking a slight breath between bars 32 and 33 in order to give the *ff* dynamic time to resonate. However, a pause 'should not' be taken going into bar 37.[19] Rather than thinking of the *ff* flourish at the end of bar 36 as a harmonic gesture, the interior counterpoint which is voiced by the ever present thumbs outlines a voice-leading that articulates the D♭ tonality. The GS point is next simultaneous with the *subito p* at the start of bar 43, allied with the nuance of modal inflection—the enharmonic shift from D♭ to C♯. Again, the performer does not overtly have to emphasize this point, other than by trying to not slow down appreciably. Dominique Merlet suggests that these orchestral effects can be made apparent if a difference is made between the repeated notes (*sec*) and the glissandi (*una corda* and *tre corde*).[20]

In bar 52, the continued repeated-notes section divides within a half beat of the midpoint of the second section of *A*. Like bars 12–29, this passage (bars 43–61) is part of an additive phrase sequence where the sub-sections increase by one bar and create a 4 + 5 + 6 pattern before the periodicity of the introduction returns at bar 62 with four-unit phrasing. The recurring trope for performers is that the sectional joints are already articulated by changes in dynamics that coincide with the midpoint proportions. Thus, the main element at play is the dynamic line.

This suggests starting quietly at bar 47 in order to build up to the *f* at bar 49; down to *p* at bar 52, without having slowed down in the process. Performers will

often taper at the junction of bars 57 and 58, but a different approach advocated by Roy Howat maintains the pulse across this division. At the beginning of bar 58 he envisions the grace note as an extra quaver and takes the F♯ of the upper staff with the left hand. In turn, the hemiola grouping that follows is highlighted with pedal in the first half of bar 58 (*sec* in the second half) and with pedal throughout bar 59. Thus, if the performer chooses his approach, proportional relationships are not called into question and the section is defined at the end of bar 61. Like Brahms, Ravel marks sectional divisions with hemiola groupings and the pedaling here (bars 58–61) references the earlier pedaling for the *introduction* (see bars 6 and 7) because it is heard in conjunction with the return and subsequent closure of the opening tonality.

Part III: Analysis in advance of performance

Introduction

The final category considered below is analysis before performance. Ultimately, the question for the performer is determining whether analysis is helpful to the learning process, or if it 'should' come later. Whereas Wallace Berry suggests that analysis is 'the only basis' for interpretative thought, John Rink presents a contrasting methodology. His approach was to perform the Brahms Op. 116 intermezzi 'intuitively' (Rink, 1995); later, he went back and analysed the Brahms to reconsider how his own performance would change in the future. Considering the provocative nature of this position, Rink's ideas are re-examined below.

John Rink: 'intuitive performance'

It is not possible to know if this practice 'works' for Rink; his article does not include a 'before and after' recording. If the earlier discussion of the *Valses nobles* has demonstrated that there are 'better' ways of performing Ravel's music—presumably the earlier performance would have been more satisfying if the music had been analysed—this is not meant to suggest that Rink's position is without merit. It has much to offer, particularly for the musician who sets out to produce an analysis that takes 'intuitive' performance as its starting point. In contrast to Berry's work

which does not take performance into account, Rink's approach confirms a fundamental tenet of performance studies—'musical works can no longer be understood in terms of scores without regard to the performance acts that they inspire'.[21]

Considerations

In deciding whether to perform 'intuitively' or with analysis, there are several issues to consider. In support of intuition by itself, Rink's purposeful avoidance of analysis does prevent the analysis from 'clogging up' an interpretation. However, it may do so at the expense of a performer's limited practice time. If the outcome of Rink's position rightly suggests that the pianist who did not get it 'quite right' in the first instance can analyse and then return to the practice room and make changes, it does not fully articulate the difficulty which the performer faces of undoing months and/or years of work. As Peter Hill has argued, technique follows from analytical understanding (Hill, 2002)—Hill's own ability to play an awkward passage in Mozart's K. 488 piano concerto changed once he had internalized the notes, by relying on aural memory as opposed to kinesthetic sensation. The writer has also had a similar experience; the timing of the return for *Noctuelles* literally fell into place, once it was understood that the *pp* dynamic of bar 83 was a reference to the opening bars of the piece.

Conversely, other types of physical change require greater commitments of time and energy. As Bruno Repp's empirical findings have demonstrated (Repp, 1995), timing is easily engrained, perhaps as early as the first sight-reading of a piece. Whether or not musicians fully accept this conclusion (this point is returned to below), Repp's data does suggest the wisdom of having a degree of musical understanding in place before the pianist starts to work at the keyboard. Unlike Schumann's *Träumerei*, which is playable at sight, the dilemma for the player of Ravel is that it is nearly impossible to experience the music as music until it has been practiced and learned. One solution to this conundrum is to consider analysis and performance *together*, *before* embarking on the phase of intense preparation which is necessary for public performance. This accepts the practicality that some physical work is necessary, although, ideally, this will be limited.[22] Once the performer

knows the music well-enough to analyse the piece in a preliminary way,[23] the next step is to investigate proportion—both from the score (if possible) and from a recording—someone else's.[24] This does not mean that the pianist imitates what he or she hears—in fact, it is the opposite; once the proportions are 'mined', it is 'best' to avoid listening to the recording altogether—to keep all possibilities open (the pianist is not obligated to keep the proportions either). Ultimately, this frees the pianist from committing to technical habits at this early stage of the process, while at the same time making it possible to deduce 'shape' in an accurate way. More importantly, the resultant analytical diagrams offer the pianist a basis for reconsidering his or her own ideas.[25] Hence, the performer is able to re-imagine the music through the medium of visual representation—through an understanding of interrelated musical relationships, in ways that are not possible by intuition alone.[26]

Introduction to analysis: Ravel and GS

The question which inevitably arises is whether or not Ravel consciously wrote GS pieces. He did not discuss this publicly and the enigmatic statement presented earlier in the Preface—'My *Trio* is finished. I only need the themes for it' (Stuckenschmidt, 1969: 149)—is not enough to settle the question. Several of the pieces did not come 'into focus' until performance had been considered, suggesting that the GS proportions may have been intuited by the composer, or, potentially by individual performers.[27] For most readers, it is a 'stretch' to imagine someone sitting at the piano with stopwatch in hand to refine precise proportions. However, considering that the person in question is Ravel—a person fascinated with the technologies of his time—it may not necessarily be that 'far-fetched' of an idea. In support, film composers are frequently asked to write music for very exacting periods of time. Although Ravel was of a different age, he could have anticipated measured time as a possibility for GS, in effect advancing the idea beyond Debussy's fascination with Fibonacci sequences.

Beginning an analysis

Ultimately, the question of awareness (or lack thereof) may be a 'red herring'—proportional relationships, whether purposeful or intuited are present in Ravel's music.[28] As Nicholas Cook has suggested, '...what matters about analysis is not so much what it represents but what it does, or more precisely what it leads *you* to do' (Cook, 1999: 249). Along these lines, performers may choose to analyse Ravel's music on their own.[29] In terms of where to start—either with content or with proportion—both approaches are possible. If proportion is investigated first, this may point out the placement of themes or the important dynamic climaxes. This is helpful if there is already an instinctive basis for hearing these moments as 'important'—it confirms the intuition. Conversely, this may potentially steer the analysis off-course; there is no context from which to understand the music; this, by itself, argues for the necessity of waiting until later to analyse proportion. Initially, the analysis may be as simple as figuring out where the larger sections are, through a study of key relationships; or it may take the form of determining how the phrases group; to take an extreme example, it may investigate harmony with set-analysis.[30] However, when the proportions are added, the understanding of content is likely to 'evolve' further. This is because it is possible to relate the individual layers to the overall length.

As this thesis has demonstrated, there are two primary ways to measure proportion: the first is to count beat-patterns; the second is to measure time by the clock. In cases where accuracy 'solely by the score' is at issue, the following may work: with the score in hand, the timings from the compact disk player are noted on scratch-paper, corresponding to the important structural moments.[31] The segments—at this point either by the score or from measured time (but not both together)—are then tested with a pocket calculator by multiplying the number of seconds (or bars) by the GS ratios; .618 for the long division and .382 for the short one. These findings are then drawn in 'freehand' on a clean sheet of paper, with bar numbers, and simplified layers of analytical understanding ranked in order of importance. After this initial sketching is complete—it takes time to experiment with the presentation—the diagrams may be (in the final step) drawn to scale with a pencil and graph-paper or finalized in Microsoft Word.[32]

Analytical ambiguity revisited: Berry

The discussion above has advanced the possibility of visual representation as a basis for musical understanding. The most interesting and challenging part of this process is sitting down at the piano and experimenting with the analytical findings, by attempting to join the tiny details of the score to the understandings of the larger shape. While it is relatively easy to comprehend a two-dimensional 'picture', it is an entirely different matter to realize the music in sound as a horizontal line unfolding across a continuum of time. The ideal is to build the performance outwards from the 'climax', both in terms of moving towards it, as well as away from it. Nevertheless, this approach is not direct or straight-forward—it is not simply a matter of graphing out the piece and then playing the analysis; it takes much 'trial and error' to understand the music, before it becomes something that is worth presenting to the public.

Because of the analytical complexity of Ravel's music, there are potentially instances where contradictory possibilities will emerge; Ravel's music does not play itself. Earlier, Berry left the question unanswered as to what the pianist 'should' do when more than one option is available; it is a given that the performer will have to choose the 'best' possibility and 'interpret'—'there is no escape'. In this sense, the performer 'should' welcome analytical ambiguity because it presents an opportunity to experiment with the findings. If Repp has demonstrated through empirical study that timing patterns are entrenched early on, the practical experience of this project has repeatedly shown that analytical thinking provides the quickest means for change. It is never a mistake to explore possibilities within the music. If something has been done once, it can be done again; or, if a mistake has been made, it can be undone, that is, if there is better thinking to replace the earlier idea.

Making choices: examples

Several short examples are presented below which illustrate how the performer may elevate one analytical finding over another. Firstly, the discussion of Chapter 1 has demonstrated how the *Valses nobles* may be thought of as either a binary or ternary form. 'Binary' was chosen in 2003 because it offered greater elegance than merely hearing the piece as a three-part form. It also accepted Ravel's

practice of not notating longer fermatas unless the fermata is listed with the word *long* directly above it. Ultimately, by the time of the performance at the viva, the analytical thinking had become generalized, and the writer had 'moved on' to reconsider the piece orchestrally (*disc 2, track 1*). The intent of the latest version was to realize the interior voice leading—to avoid harmonic closure in E major until halfway through the piece. If the earlier finding remained intact, it was general enough to allow for a reconfiguration of the musical content.

In the case of *Noctuelles*, the most recent version did 'nothing' at the moment of return; two recorded examples illustrate the subtle differences between the performances of 2003 and 2005 (*disc 1, tracks 51* and *52*: bars 61^2-93). In 2005, bar 83 was not articulated to the audience, the overriding intent being to connect the larger theme across both phrase segments. It was thought that this would be more subtle, less obvious than creating a short gap. A third and final example was *Une barque*, in which the choice was made to pause slightly between the harmony at the bottom of the first page and the start of the second (bars 1–13 are heard at the beginning of the recording of *disc 2, track 4*; also see *Example 5:22*).[33] If segmented in the first instance, the later reference would be made known to the listener when the two smaller ideas join to coincide with the tonal motion to the dominant at the moment of proportional interest.

Part IV: Conclusions (*dénouement*)

As the discussion above has illustrated, the effect of analysis on performance is at times a difficult process to account for. This is because 'an analysis' is not as definitive as the 'objective' data would suggest. When analysis and performance are considered as a complex of ideas, written-down analyses are also transient, as are the multiplicity of individualized interpretations which are recorded. The pianist who attempts to make performance and analysis true to each other may find that the result is a set of analytical findings which change over time. What the performer does in performance does not necessarily represent what the performer has written on paper, or what the composer has notated. In turn, the pianist who writes about this

experience can not guarantee the manner in which the reader will relate subsequent performances to the analytical findings. Analysis and performance, if considered together, are too multifaceted to be summarily reduced to a direct 'cause' and 'effect'.

Ultimately, this thesis proposes that analysis is useful to the performer, primarily as the means of understanding music in advance of performance. It goes beyond being a 'problem solving device' or a resource for rationalizing what the pianist 'does'; over time, it has become a basis for creative interpretation.[34] It is impossible to know if Ravel would have approved of these experimental practices which attempt to join aural understanding and visual representation to an act of performance. At the very least, logic suggests that he would have preferred 'an interpretation' which sounds better than 'just playing'.

When advising younger composers, Ravel did not advocate individuality for its own sake and the same might also apply to performance:

> If you have nothing to say, you can not do better, until you decide to give up composing [or performing] for good, than say again what has already been well said. If you have something to say, that something will never emerge more distinctly than when you are being unwittingly faithful to your model (Orenstein, [1968, 1975] 1991: 119).[35]

Ravel's 'model' was itself derivative of three areas—the writings of Edgar Allan Poe, systematic musical training which included analysis, and the compositional aesthetic of Mozart.[36]

> ...As a young man, Ravel was attracted to paradoxes of all sorts, and in later years he enjoyed exploring the paradoxical aspect of art with colleagues. Although he stated that art was "false" and "a marvelous imposture," this notion must be seen in its proper perspective—namely, that he believed art to be a quest for beauty, rather than truth, an idea he derived from the writings of Poe (Orenstein [1990], 2003: 18).

> Ravel's art strove neither for passion nor for truth, but rather for "the contemplation of the Beautiful," through the satisfaction of the mind, by means of the ear's pleasure. Thus, a final paradox was perfectly stated by Keats, who already knew that by creating his own beauty, Ravel would thereby create his own truth (Orenstein [1990], 2003: 22).

Ravel's views of the nature and meaning of art were primarily based upon his formative studies at the Conservatoire, his reading of Baudelaire and Poe, and, of course, his personal amalgam of these and other elements. He stated that his objective as a composer was to seek "technical perfection. I can strive unceasingly to this end, since I am certain of never being able to attain it. The important thing is to get nearer to it all the time." How was one to approach the objective of technical perfection? According to Ravel, one submitted to a thorough and rigorous academic training. In addition to analyzing scores and studying the traditional precepts of harmony, counterpoint, and orchestration, together with his colleagues at the Conservatoire, he wrote four-part fugues in open score, using the soprano, alto, tenor, and bass clefs. Ravel believed this type of training to be crucial, as it developed the technical skills which were needed to solve compositional problems (Orenstein [1990] 2003: 19). ...

I have never felt the need to formulate, either for the benefit of others or for myself, the principles of my aesthetic. If I were called upon to do so, I would ask to be allowed to identify myself with the simple pronouncement made by Mozart on this subject. He confined himself to saying that there is nothing that music can not undertake to do, or dare, or portray, provided it continues to charm and always remains music.[37]

I am sometimes credited with opinions which appear very paradoxical concerning the falsity of art and the dangers of sincerity. The fact is I refuse simply and absolutely to confound the *conscience* of an artist, which is one thing, with his *sincerity*, which is another. Sincerity is of no value unless one's conscience helps to make it apparent. This conscience compels us to turn ourselves into good craftsmen. My objective, therefore, is technical perfection. I can strive unceasingly to this end, since I am certain of never being able to attain it. The important thing is to get nearer to it all the time.

Art, no doubt, has other *effects*, but the artist, in my opinion, should have no other aim (Orenstein [1990], 2003: 38).

Final statement: Ravel, Poe and the performer

As the reader approaches the end of the thesis to listen to the 'final' performance (*disc 2, tracks 1–9*),[38] a closing idea suggests that the pianist, like Ravel, may also choose to adopt Poe's mantra of consciousness in art. If Ravel looked to Poe as a source of aesthetic interest, the pianist may also choose to read Poe along the lines of performance and analysis. In doing so, the pianist has a basis for working backwards.

I had now to combine the two ideas, of a lover lamenting his deceased mistress and a Raven continuously repeating the word "Nevermore"—I had to combine these, bearing in mind my design of varying, at every turn, the *application* of the word repeated; but the only intelligible mode of such combination is that of imagining the Raven employing the word in answer to the queries of the lover. And here it was that I saw at once the opportunity afforded for the effect on which I had been depending—that is to say, the effect of the *variation of application.* I saw that I could make the first query propounded by the lover—the first query to which the Raven should reply "Nevermore"—that I could make this first query a commonplace one—the second less so—the third still less, and so on—until at length the lover, startled by the original *nonchalance* by the melancholy character of the word itself—by its frequent repetition—and by a consideration of the ominous reputation of the fowl that uttered it—is at length excited to superstition, and wildly propounds queries of a far different character—queries whose solution he has passionately at heart—propounds them half in superstition and half in that species of despair which delights in self-torture—propounds them not altogether because he believes in the prophetic or demoniac character of the bird (which, reason assures him, is merely repeating a lesson learned by rote) but because he experiences a phrenzied pleasure in so modeling his questions as to receive from the *expected* "Nevermore" the most delicious because the most intolerable of sorrow. Perceiving the opportunity thus afforded me—or, more strictly, thus forced upon me in the progress of the construction—I first established in mind the climax, or concluding query—that to which "Nevermore" should be in the last place an answer—that in reply to which this word "Nevermore" should involve the utmost conceivable amount of sorrow and despair.

Here then the poem may be said to have its beginning—at the end, where all works of art should begin—for it was here, at this point of my preconsiderations, that I first put pen to paper in the composition of the stanza:

> "Prophet," said I, "thing of evil! prophet still if bird or devil!
> By that heaven that bends above us—by that God we both adore,
> Tell this soul with sorrow laden, if within the distant Aidenn,
> It shall clasp a sainted maiden whom the angels name Lenore—
> Clasp a rare and radiant maiden whom the angels name Lenore."
> Quoth the raven—"Nevermore."[39]

Notes

[1] Faculty recital, Brigham Young University—Hawaii, McKay Auditorium, Laie, Hawaii, autumn 1999.

[2] Gina Bachauer International Piano Festival, Temple Square Concert Series, Assembly Hall, Salt Lake City, Utah.

[3] In these cases, the 'technician' was a family member not properly trained to use the recording device.

[4] The masterclass was with Abdel Rahman el Bacha in Paris; private instruction with Allan Chow of Northwestern University in Chicago.

[5] The initial analytical observations are of limited value, because they are not sufficiently formed to present the piece as an organized whole.

[6] Other reasons are suggested below in the final portion of the chapter.

[7] Although the juxtaposed examples tend to focus on improvements within the performance, the complete versions do give the reader a sense of where the earlier performance was in some cases 'better'. Overall though, these instances are limited!

[8] This was a position subscribed to as of June 2005.

[9] This may also be argued the other way round; more anxiety meant more focused practice.

[10] Masterclass, *French Piano Institute*, Paris, La Schola Cantorum, July 1999.

[11] The exact metaphor stemming from analytical thought is not important; the analytical findings advanced above could have equally suggested the cyclic nature of oceanic reefs as opposed to the narrative presented below.

[12] 'The American poet's "Philosophy of composition," M. Ravel declared, wherein he relates in detail the methodical and almost scientific process which he brought to the conception and development of "The Raven," influenced the French composer more than any other artistic creed in deciding to abandon the vagueness and formlessness of the early French impressionists in favor of a return to classic standards. ...

Modern composers must steer a middle course between emotion and intellect if they are to create significant and lasting music. "Poe proved that art must strike a balance between these two extremes, for the first leads only to formlessness and the second to the dry and abstract." '

[13] Along these lines, the American astro-physicist, Mario Livio has suggested the following in his introduction to *The Golden Ratio*: 'The famous British physicist Lord Kelvin (William Thomson; 1824–1907), after whom the degrees in the absolute temperature scale are named, once said in a lecture: "When you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind." Kelvin was referring, of course, to the knowledge required for the advancement of science. But numbers and mathematics have the curious propensity of contributing even to the understanding of things that are, or at least appear to be, extremely remote from science. In Edgar Allan Poe's *The Mystery of Marie Rogêt*, the famous detective Auguste Dupin says: "We make chance a matter of absolute calculation. We subject the unlooked for and unimagined, to the mathematical formulae of the schools' (Livio, 2002: 1).

[14] Howat, private piano lesson, London, 2001/2002.

[15] Dominique Merlet, French Piano Institute, La Schola Cantorum, 1999/2000.

[16] Merlet, French Piano Institute, La Schola Cantorum, 1999/2000.

[17] Howat, private piano lesson, London, 2001/2002.

[18] Howat, private piano lesson, London, 2001/2002.

[19] Howat, private piano lesson, London, 2001/2002.

[20] Merlet, French Piano Institute, Paris, 1999/2000.

[21] Royal Holloway Department of Music Website, 'Performance Studies Pathway', <http://www.rhul.ac.uk/Music/postgraduate/mmus_path_performance_studies.html>, accessed 2 January 2006.

[22] For example, this may involve playing complex arpeggiated harmonies as blocked triads, or soprano and bass lines to simplify the music.

[23] The details of this are explained below.

[24] Analysing proportion first is also a possibility and this point is taken up in detail below.

[25] The mechanics of how to do this are also taken up in detail below.

[26] The analytical diagrams are somewhat analogous to performance because musical elements are apprehended at once. Whereas analysis offers the luxury of isolating individual elements—in performance, the pianist has to 'multi-task'; an awareness of chronological intersects drives the thought.

[27] It is not known if Dominique Merlet consciously uses GS analysis to play Ravel.

[28] In performance, the realization of this understanding often depends on the pianist's choice of tempo, more-so than on the proportional findings themselves; a short example illustrates this point. With *Alborado* it does not matter whether the continuity across sections *B* and *A'* creates a 2/3 to 1/3 relationship, or if it is closer to GS. The 'greater' wisdom suggests keeping the same pulse across the measured chords of *B* and at the return of the opening figure at the start of *A'*.

In practice, this decision is made at bar 1; it will depend on the piano and the acoustic in which the piece is performed. At the time of the viva at York, it was not possible to play the repeated notes at Ravel's m.m. marking of  . equals 92. (The piano was well-prepared by the technician. This question usually depends on the particular instrument; some pianos with lighter actions make this a possibility. Roy Howat suggests that this tempi marking represents the 'upper limits' of the tempo (Howat, 2005) and he advocates a slower tempo to 'bring off' the Spanish dance elements.) Because of this, a decision was made several days before the recital, to set the basic tempo at a slightly slower speed—to slow the recitative material of *B* in order to avoid calling the larger pulse relationships into question, both within *B* and between sections *B* and *A'*. If the recitative phrases had been performed at the earlier faster tempo of 2002, this would have 'skewed' the larger proportions created from juxtapositions of free and 'mechanical' time.

[29] The initial question which formed the basis of this thesis was to see if Ravel, like Debussy, had also written his music using GS. The 'end goal' was not to produce a critical statement about Ravel's compositional practice, it was to analyse the music, in order to create a 'better' performance.

[30] When it became apparent that the harmonic complexity could not be fully accounted for from Roman numeral analysis alone, *Le gibet* was investigated in this manner. Ultimately, it was decided not to include the specifics of these findings—the resultant abundance of microscopic detail did not fully explain the harmony either. However, this mechanical approach did reveal several important harmonic relationships, which were vaguely alluded to in Chapter 3: 'Thus, a nuance of performance happens naturally if the performer can momentarily forget what is about to happen; instead of E♭ resolving to a minor triad, there is a Scriabin-esque, quartal coloring at play at the downbeat of bar 20. ... By connecting both sequences together, the performer creates a longer line and a spectrum of effects that transforms the mood from the mysticism at the beginning of bar 20 to an urbane coolness at the end of bar 25'.

By the time of the viva performance, the resolution had been reinterpreted in more generalized terms, as a harmonic variant of the A♭ triad in relationship to E♭. This is not to suggest that the heightened sensitivity to the resolution was abandoned—it remained. The *ppp* at bar 20 was there to reflect an ethereal harmony created from a nuanced contrast of inflection within the underlying fifths progression.

[31] *WavePad* software is also freely downloaded, making it possible to isolate attack points with a greater degree of precision and accuracy.

[32] In Word 2002, gridlines can be put on the screen from the draw menu.

[33] This approach was the same as the earlier performance in 2003.

[34] It is also not needed as a tool for 'cultural veneration', particularly for Ravel who is already universally recognized as a 'great' composer.

[35] Thus, for Ravel, imitation was not necessarily something to be shunned: '...The home [Le Belvédère] has been preserved exactly as Ravel left it, and it offers some important insights into the composer's unique personality: a Japanese garden, many Japanese prints, and Arabic coffee set—showing his penchant for the exotic—and finely wrought bibelots, mechanical birds, music boxes and carved statuettes—showing his predilection for perfectly crafted miniatures of all sorts. ... ...To these small, immaculately polished rooms, which were tended by his faithful housekeeper Madame Reveleau, who had served the Ravel family for many years, the composer added his Siamese cats, upon whom he lavished loving attention. Ravel's mischievous humor often came to the fore when guiding his friends through the villa, for when his guests gazed in admiration at a "rare" Monticelli, he would enjoy informing them that it was an imitation' (Orenstein, [1990] 2003:8).

[36] Many other composers may also be added to this list, although Mozart reigns supreme (see below).

[37] Orenstein writes the following in relation to Ravel's views of Mozart (see footnote 2 on pages 38 and 39): 'It is fitting that Ravel turned to Mozart for aesthetic counsel, as he revered the Austrian master above all other composers. Indeed, throughout his career, Ravel emulated Mozart's clarity of expression, perfection of workmanship, and his unique ability to balance classical symmetry with the element of surprise. Ravel once observed that his own music was "quite simple, nothing but Mozart," a statement which contains a goodly element of truth. In a letter to his father dated September 26, 1781, in which he discussed *The Abductions from the Seraglio*, Mozart wrote about Osmin's aria in act I as follows:

For just as a man in such a towering rage oversteps all the bounds of order, moderation, and propriety, and completely forgets himself, so must the music too forget itself. But as passions, whether violent or not, must never be expressed in such a way as to excite disgust, and as music, even in the most terrible situations, must never offend the ear, but must please the hearer, or in other words must never cease to be music, I have gone from F (the key in which the aria is written), not into a remote key, but into a related one, not, however, into its nearest relative D minor, but into the more remote A minor. (Alfred Einstein, *Mozart, His Character, His Work*, New York: Oxford University Press, 1962, pp. 384–85.)

[38] In reality this performance is a 'snapshot' in time; it does not pretend to be 'definitive'.

[39] Poe, 1850: pages 4 and 5 of 8.

Bibliography

Agawu, Kofi, 1996: 'Analyzing music under the new musicological regime', *Music Theory Online—The Online Journal for the Society for Music Theory*, Vol. 2.4.

Baur, Steven, 1999: 'Ravel's "Russian" Period: Octatonicism in His Early Works, 1893–1908', *Journal of the American Musicological Society*, Vol. 52, No. 3, 531–592.

BBC Proms, 2004: 'Online version of press packet', (accessed 16 November 2004),<http://www.bbc.co.uk/pressoffice/pressreleases/stories/2004/04_april/29/proms_themes.pdf>.

Berry, Wallace, 1989: *Musical Structure and Performance* (New Haven: Yale University Press).

Bowen, José A., 1993: 'Mendelssohn, Berlioz, and Wagner as conductors: the origins of the ideal of "fidelity to the composer"', *Performance Practice Review*, Vol. 6, No. 1, 77–88.

1993: 'The history of remembered innovation: tradition and its role in the relationship between musical works and their performances', *The Journal of Musicology*, Vol. XI, No. 2, 139–173.

2001: 'Bibliography of performance analysis (current as of July, 2001)', compiled José Bowen, (accessed 1 July 2005), <http://134.53.194.127/bowenja2/Perf-Biblio.html>.

Botstein, Leon, 2001: 'Analysis and criticism', *The Musical Quarterly*, 85/2, 225–231.

Brendel, Alfred, 2001: *Alfred Brendel on Music* (Chicago: A Cappella Books).

Burkhart, Charles, 1983: 'Schenker's theory of levels and musical performance' in David Beach (ed.), *Aspects of Schenkerian Theory* (New Haven and London: Yale University Press), 95–112.

Chew, Geoffrey: 'Articulation and phrasing', *Grove Music Online*, ed. L. Macy (Accessed 19 July 2004), <http:www.grovemusic.com>.

Clarke, Eric F., 1995: 'Expression in performance: generativity, perception and semiosis' in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation*, (Cambridge: Cambridge University Press), 21–54.

2002: 'Understanding the psychology of performance' in John Rink (ed.), *Musical Performance: A Guide to Understanding* (Cambridge: Cambridge University Press), 59–72.

Clynes, Manfred, 1986: 'Music beyond the score', *Communication and Cognition*, Vol. 19, No. 2, 169–194.

Cohn, Richard, 2005: '"This music crept by me upon the waters": introverted motives in Beethoven's "Tempest" Sonata (New York and Oxford: Oxford University Press), 226–235.

Cook, Nicholas, 1987: *A Guide to Musical Analysis* (New York: George Braziller).
1987: 'Structure and performance timing in Bach's C Major Prelude (WTC I): an empirical study', *Music Analysis*, 6/3: 257–272.
[1990] 1992: *Music, Imagination and Culture* (Oxford: Clarendon).
1995: 'The conductor and the theorist: Furtwängler, Schenker and the first movement of Beethoven's Ninth Symphony', in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press), 105–125.
1999: 'Analysing performance and performing analysis' in Nicholas Cook and Mark Everist (eds.) (Oxford: Oxford University Press), 239–261.
2000: *Music: A Very Short Introduction* (Oxford: Oxford University Press).
2001: 'Between process and product: music and/as performance', *Music Theory Online—The Online Journal of the Society for Music Theory*, Vol. 7, No. 2.
Cone, Edward, 1977: 'Three ways of reading a detective story—or a Brahms Intermezzo', *Georgia Review* 31: 554–574.
Dunsby, Jonathan, 1989: 'Guest editorial: performance and analysis of music', *Music Analysis* 8/1–2, pp. 8–20.
1995: *Performing Music: Shared Concerns* (Oxford: Clarendon).
1997: 'Acts of recall', *Musical Times*, 138: 12–17.
El Bacha, Abdel-Rahman, 1999/2000: Masterclass, *French Piano Institute Festival*, (Paris: La Schola Cantorum).
Folio, Cynthia, 1991: 'Analysis and performance of the flute sonatas of J.S. Bach: a sample lesson plan', *Journal of Music Theory Pedagogy*, 5: 133–159.
Gabriellson, Alf, and Juslin, Patrick N., 1996: 'Emotional expression in music performance: between the performer's intention and the listener's experience', *Psychology of Music* 24/1: 68–91.
2003: 'Music performance research at the millennium', *Psychology of Music* 31/3: 221–272.
Hewitt, Angela, 2002: 'Ravel: complete solo piano music—excerpts from the sleeve notes', *Hyperion Records Online*, (accessed 27 May 2005), <http:www.hyperion-records.co.uk>.
Hill, Peter, 2002: 'From score to sound' in John Rink (ed.), *Musical Performance: A Guide to Understanding* (Cambridge: Cambridge University Press), 129–143.
Horton, Julian, 2001: 'Postmodernism and the critique of musical analysis', *The Musical Quarterly*, 85/2, 342–366.
Howat, Roy, 1983 (paperback 1986) reissued 1999: *Debussy in Proportion, A Musical Analysis* (Cambridge: Cambridge University Press).
1995: 'What do we perform?' in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press), 3–20.
2000: 'Ravel and the piano', *The Cambridge Companion to Ravel* in Deborah Mawer (Cambridge: Cambridge University Press), 71–96.
2001/02, 04, 05: Private piano study (London).
2004: Email correspondence in possession of writer (London/Laie, Hawaii).
Howell, Tim, 1992: 'Analysis and performance: the search for a middleground' in John Paynter, Tim Howell, Richard Orton, Peter Seymour (eds.), *Companion to Contemporary Musical Thought*, 2 vols. (London: Routledge), vol. II, pp. 692–714.

Kivy, Peter, 2002: *Introduction to a Philosophy of Music* (Oxford: Clarendon).
Kerman, Joseph, 1985: *Contemplating Music: Challenges to Musicology* (Cambridge, Mass.: Harvard University Press).
1996: 'Review article' on Jonathan Dunsby, *Performing Music: Shared Concerns*, *Notes—Quarterly Journal of the Music Library Association* 53/1: 94–95.
Kramer, Lawrence, 1995: *Classical Music and Postmodern Knowledge* (Berkeley, California and London: University of California Press).
Lester, Joel, 1992: 'Review of Berry 1989', in *Music Theory Spectrum* 14: 75–81.
1995: 'Performance and analysis: interaction and interpretation' in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press), 197–216.
1998: 'How theorists relate to musicians', *Music Theory Online—The Online Journal for the Society for Music Theory*, Vol. 4.2.
Livio, Mario, 2002: *The Golden Ratio: The Story of Phi, the World's Most Astonishing Number* (New York: Broadway Books).
Maddocks, Fiona, 2001: 'Intimate letters', *BBC Music Magazine*, April: 30–32.
Manuel, Roland, [1938] 1947: *Maurice Ravel*, trans. Cynthia Jolly (London: Dennis Dobson—Contemporary Composers).
McEwen, John B., 1929: *Tempo Rubato or Time-Variation in Musical Performance* (London, Oxford University Press).
Merlet, Dominique, 1999/2000: Masterclass, French Piano Institute Festival (Paris: La Schola Cantorum).
Meyer, Leonard B., 1961: *Emotion and Meaning in Music* (Chicago and London: University of Chicago Press).
Milstein, Dana, 2003: '*Gaspard de la nuit*: Humor, the Eau-Forte, and the chiaroscuro vignette' (West Chester: College Literature), internet version, pp. 1–13.
Moiré patterns, 2006: (accessed 9 January 2006), <http://www.exploratorium.edu/snacks/moire_patterns.html>
Narmour, Eugene, 1988: 'On the relationship of analytical theory to performance and interpretation', *Explorations in Music, the Arts, and Ideas*, in E. Narmour and Ruth Solie (eds.), (Stuyvesant, New York: Pendragon), 317–340.
Orenstein, Arbie, [1968, 1975] 1991: *Ravel: Man and Musician*, [New York: Columbia University Press] (Mineola, New York: Dover).
[1990] 2003: *A Ravel Reader: Correspondence, Articles, Interviews* [New York: Columbia University Press] (Mineola, New York: Dover).
Oxford English Dictionary Online, <http://dictionary.oed.com/entrance.dtl>.
Perlemuter, Vlado, and Jourdan-Morhange, Hélène, 1990: *Ravel according to Ravel* (London: Kahn and Averill).
Philip, Robert Marshall, 1992: *Early Recordings and Musical Style: Changing Tastes in Instrumental Performance 1900–1950* (Cambridge: Cambridge University Press).
Poe, Edgar A., 1850: 'The philosophy of composition', in *The Works of the Late Edgar Allan Poe*, vol. II., 1850, pp. 259–270, (accessed 31 May 2005), <http://www.eapoe.org/works/essays/philcmpb.htm>.

Ravel, Maurice, 1911: *Valses nobles et sentimentales* (Paris: Durand).
1986: *Piano Masterpieces of Maurice Ravel* (Mineola, New York: Dover).
1991: *Gaspard de la nuit*, ed. Roger Nichols (London: Peters).
1995: *Miroirs*, ed. Roger Nichols (London: Peters).
1997: *Le Tombeau de Couperin and Other Works for Solo Piano* (Mineola, New York: Dover).
2001: *Le Tombeau de Couperin and Valses nobles et sentimentales in Full Score* (Mineola, New York: Dover).

Repp, Bruno H., 1995: 'Expressive timing in Schumann's "Träumerei:" an analysis of performances by graduate student pianists', *Journal of the Acoustical Society of America*, 2413–2427.

Rink, John, 1990: 'Review article' on Wallace Berry, *Musical Structure and Performance*, *Music Analysis* 9:3: 319–339.
1995: *The Practice of Performance: Studies in Musical Interpretation*, ed. John Rink (Cambridge: Cambridge University Press).
1995: 'Playing in time: rhythm, metre and tempo in Brahms's *Fantasien* Op. 116' in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press), 254–282.
2001: 'Perahia's musical dialogue', *Musical Times*, 142 (2001), 9–15.
2002: *Musical Performance: A Guide to Understanding* (Cambridge: Cambridge University Press).
2002: 'Analysis and (or?) performance' in John Rink (ed.), *Musical Performance: A Guide to Understanding* (Cambridge: Cambridge University Press).
2003: 'In respect of performance: the view from musicology', *Psychology of Music* 31/3: 303–323.

Royal Holloway Department of Music, 2006: 'Performance Studies Pathway', (accessed 2 January 2006), <http://www.rhul.ac.uk/Music/postgraduate/mmus_path_performance_studies.html>

Schenker, Heinrich, 2000: *The Art of Performance*, ed. Heribert Esser, trans. Irene Schreier Scott (New York: Oxford University Press).

Schmalfeldt, Janet, 1985: 'On the relation of analysis to performance: Beethoven's Bagatelles op. 126, nos. 2 and 5', *Journal of Music Theory*, 29: 1–31.

Scruton, Roger, 1997: *The Aesthetics of Music*, (Oxford: Clarendon).

Senju, Mariko and Ohgushi, Kengo, 1987: 'How are the player's ideas conveyed to the audience?', *Music Perception* 4 (4), 311–324.

Sessions, Roger, [1950] 1962: *The Musical Experience of Composer, Performer, Listener*, [Princeton: Princeton University Press] (reprinted Atheneum).

Shaffer, Henry L., Clarke, Eric F., and Todd, Neil, P., 1985: 'Metre and rhythm in piano playing', *Cognition*, 20: 61–77.
1995: 'Musical performance as interpretation', *Psychology of Music*, 23: 17–38.

Straus, Joseph N., 1990: *Introduction to Post-Tonal Theory* (Englewood Cliffs, New Jersey: Prentice Hall).

Tarasti, Eero, 1994: *A Theory of Musical Semiotics* (Bloomington: Indiana University Press).

Taruskin, Richard, 1988: 'The pastness of the present and the presence of the past' in Nicholas Kenyon (ed.), *Authenticity and Early Music: Symposium Papers* (Oxford: Oxford University Press).

Timbrell, Charles, 1999: *French Pianism: A Historical Perspective* (Portland, Oregon: Amadeus Press).

Tong, Chee Yee Jennifer, 1994: 'Separate discourses: a study of performance and analysis', (Ph.D. diss., University of Southampton, 1995).

Wittlich, Gary, and Martin Deborah S., 1989: *Tonal Harmony for the Keyboard* (New York: Schirmer Books).

Discography

McCarrey, Scott, 1999: 'Ravel: *Valses nobles et sentimentales*', unpublished recording in possession of writer (Laie, Hawaii: David O. McKay Auditorium, Brigham Young University—Hawaii, Department of Fine Arts, Music Department, *Faculty Recital*).

2002: 'Ravel: *Miroirs*, unpublished recording in possession of writer (York: Sir Jack Lyons Concert Hall, York University, Department of Music, *Music Society* lunchtime concert).

2003: 'Ravel: *Miroirs* and *Valses nobles et sentimentales*', unpublished recording in possession of writer (Salt Lake City, Utah: *Gina Bachauer International Piano Festival*, Temple Square Concert Series, Assembly Hall).

2005: 'Ravel: *Gaspard de la nuit*, *Miroirs* and *Valses nobles et sentimentales*', unpublished recording in possession of writer (York: Sir Jack Lyons Concert Hall, York University, Department of Music, 'Viva' performance, 15 December 2005).

Merlet, Dominique, 1990/91: 'Ravel: complete piano solo works', Circé 87125/6 [2discs].

Munch, Charles, 1992: 'Ravel: *Valses nobles et sentimentales*', Sony SBK 48 163.

Ormandy, Eugene, 1992: 'Ravel: *Alborada del gracioso*', Sony SBK 48 163.

Thibaudet, Jean-Yves, 1992: 'Ravel: Complete piano solo works', London 433 515 [2 discs].

Track listings for compact discs

Compact disc 1: listening examples			
Track	***Title***	***Performer***	***Page(s) in thesis where track is discussed***
1	*Valses nobles*: Waltz 4, bar 47–Waltz 5, bar 16	Merlet	54
2	*Valses nobles*: Waltz 4, bar 47–Waltz 5, bar 16	Thibaudet	54
3	*Alborada*: bars 71–79[1]	Merlet	70
4	*Alborada*: bars 71–79[1]	Thibaudet	70
5	*Alborada*: bars 71–79[1]	Ormandy	70
6	*Alborada*: bars 71–79[1]	Writer	70
7	*Valses nobles*: Waltz 1, bar 65–Waltz 2, bar 11	Munch	86
8	*Noctuelles*: bars 1–9	Writer	92
9	*Valses nobles*: Waltz 1, bars 21–39	Merlet	106
10	*Valses nobles*: Waltz 1, bars 21–39	Thibaudet	106
11	*Valses nobles*: Waltz 4—complete	Merlet	107
12	*Valses nobles*: Waltz 4—complete	Thibaudet	107
13	*Une barque*: bars 21–29	Thibaudet	145
14	*Une barque*: bars 21–29	Merlet	145
15	*Valses nobles*—complete (1999)	Writer	169
16	*Valses nobles*—complete (2003)	Writer	169
17	*Valses nobles*: Waltz 1, bars 1–4 (1999)	Writer	172
18	*Valses nobles*: Waltz 1, bars 1–4 (2003)	Writer	172

Compact disc 1: listening examples			
Track	***Title***	***Performer***	***Page(s) in thesis where track is discussed***
19	*Valses nobles*: Waltz 1, bars 5–20 (1999)	Writer	172
20	*Valses nobles*: Waltz 1, bars 5–20 (2003)	Writer	172
21	*Valses nobles*: Waltz 1, bars 21–34 (1999)	Writer	172
22	*Valses nobles*: Waltz 1, bars 21–34 (2003)	Writer	172
23	*Valses nobles*: Waltz 1, bars 45–64 (1999)	Writer	171, 172
24	*Valses nobles*: Waltz 1, bars 45–64 (2003)	Writer	171, 172
25	*Valses nobles*: Waltz 1, bars 65–Waltz 2, bar 2 (1999)	Writer	172
26	*Valses nobles*: Waltz 1, bars 65–Waltz 2, bar 2 (2003)	Writer	172
27	*Valses nobles*: Waltz 2, bars 9–16 (1999)	Writer	173
28	*Valses nobles*: Waltz 2, bars 9–16 (2003)	Writer	173
29	*Valses nobles*: Waltz 2, bars 17–26 (1999)	Writer	173
30	*Valses nobles*: Waltz 2, bar 17–26 (2003)	Writer	173
31	*Valses nobles*: Waltz 2, bar 57–Waltz 3, bar 4 (1999)	Writer	173
32	*Valses nobles*: Waltz 2, bar 57–Waltz 3, bar 4 (2003)	Writer	173
33	*Valses nobles*: Waltz 3, bars 48–57 (1999)	Writer	171, 173
34	*Valses nobles*: Waltz 3, bars 48–57 (2003)	Writer	171, 173
35	*Valses nobles*: Waltz 4—complete (1999)	Writer	173
36	*Valses nobles*: Waltz 4—complete (2003)	Writer	173
37	*Valses nobles*: Waltz 5, bars 1–16 (1999)	Writer	174
38	*Valses nobles*: Waltz 5, bars 1–16 (2003)	Writer	174
39	*Valses nobles*: Waltz 5, bar 17–Waltz 6, bar 4 (1999)	Writer	174
40	*Valses nobles*: Waltz 5, bar 17–Waltz 6, bar 4 (2003)	Writer	174

Compact disc 1: listening examples			
Track	***Title***	***Performer***	***Page(s) in thesis where track is discussed***
41	*Valses nobles*: Waltz 6, bars 17–52 (1999)	Writer	171, 174
42	*Valses nobles*: Waltz 6, bars 17–52 (2003)	Writer	171, 174
43	*Valses nobles*: Waltz 6, bar 53–Waltz 7, bar 23 (1999)	Writer	174
44	*Valses nobles*: Waltz 6, bar 53–Waltz 7, bar 23 (2003)	Writer	174
45	*Valses nobles*: Waltz 7, bars 39–114 (1999)	Writer	174, 177
46	*Valses nobles*: Waltz 7, bars 39–114 (2003)	Writer	174, 177
47	*Valses nobles*: Waltz 7, bar 131–Waltz 8, bar 4 (1999)	Writer	175
48	*Valses nobles*: Waltz 7, bar 131–Waltz 8, bar 4 (2003)	Writer	175
49	*Valses nobles*: Waltz 8, bars 41–49 (1999)	Writer	175
50	*Valses nobles*: Waltz 8, bars 41–49 (2003)	Writer	175
51	*Noctuelles*: Bars 61^2–93 (2003)	Writer	190
52	*Noctuelles*: Bars 61^2–93 (2005)	Writer	190

Compact disc 2: York Recital, 15 December 2005			
Track	***Title***	***Performer***	***Page(s) in thesis where track is discussed***
1	*Valses nobles et sentimentales*	Writer	190, 192
Miroirs			
2	*Noctuelles*	Writer	192
3	*Oiseaux tristes*	Writer	192
4	*Une barque sur l'océan*	Writer	190, 192
5	*Alborada del gracioso*	Writer	192
6	*La vallée des cloches*	Writer	192

Compact disc 2: York Recital, 15 December 2005			
Track	***Title***	***Performer***	***Page(s) in thesis where track is discussed***
Gaspard de la nuit			
7	*Ondine*	Writer	192
8	*Le gibet*	Writer	192
9	*Scarbo*	Writer	192