

## Debussy – Life and Times

- Debussy was born in 1862 into a poor family in Saint-Germain-en-Laye. His pianistic talents were in evidence from an early age (he was taught by Verlaine's mother-in-law), and by the age of 10 or 11 he had entered the Paris Conservatory. Though his ability was recognized here, his teachers were far from convinced though by his innovative musical style.
- In 1880 Debussy was hired by Nadezhda von Meck (Tchaikovsky's former patroness) to teach her children the piano. With her he also visited Russia and much of Europe and became familiar with the music of Russian composers that would influence his own compositions.
- In 1884, at the age of 22, he won the Prix de Rome, the conservatory's top composition prize, which allowed him to study for three years in Rome – though he returned after only two years. While there, he met Liszt and also became acquainted with the music of Wagner, and, though in later years he rebelled against the German's musical style, Wagner's influence on Debussy was profound and lasting.
- In 1889 Debussy attended the Paris World Exposition, where he heard a Javanese gamelan orchestra, with its variety of gongs, bells, metallophones and xylophones. These sounds, along with the music's pentatonicism, were soon incorporated into his own music.
- Debussy's association with painters and poets, however, were to influence him more than his friendship with musicians. His life was spent as a composer, performer and critic. He died in Paris in 1918 during the First World War.
- Debussy occupies an important position in musical history in the transition from Romanticism to Modernism at a time when Impressionism and Symbolism were emerging in *fin de siècle* France. (Though these were two distinct movements, they shared a number of artistic ideals). At first, commentators tended to consider Debussy as being influenced by Impressionism, a genre associated with art. Debussy intensely disliked this label, writing, in 1908: "I'm trying to write something else, what imbeciles call *impressionism*". More recently, the importance of Symbolism on Debussy and his music has been recognised. This was a poetic movement that reacted against naturalism and realism in favour of spirituality and imagination. The poems of Baudelaire, Mallarmé and Verlaine, the leading poets of the movement, attempted to evoke rather than describe, so having much in common with Impressionism. The term itself was coined in 1873 (originally intended pejoratively) in a review of Monet's "Impression: Sunrise", though the negative criticism was aimed exactly at that which Monet intended to achieve – a vague and unfinished state. Similarly, Symbolism tried to "create a sensuous world of ambiguous and evocative psychological experiences and intense sounds in order to evoke rather than depict". Symbolist poets often used words for the sake of the music contained in them rather than for their meaning. [Verlaine's poem "Art poétique" begins "De la musique avant toute chose..." ("Music before everything else...")] Debussy's use of non-functional sonorities like parallel dominant 7<sup>th</sup>/9<sup>th</sup> chords could be considered a musical counterpart to this.

## Debussy's Musical Style

- One of Debussy's most important contributions to Modernism is his treatment of harmony, specifically his role in the “emancipation of dissonance”. His harmony tended not to restrict itself to the progressions typical of those in the common-practice period of the Western tonal tradition. In contrast with later 19<sup>th</sup> century harmony, Debussy eschewed traditional chord functions, and, instead, used sonorities that did not resolve or relate to each other in the usual way. As mentioned above in relation to the Symbolist aesthetic, the individual effect of a chord and the overall effect of a section became emphasised at the expense of the familiar tension-resolution pattern. Harmonic function is not entirely eliminated, of course, but cadences become increasingly rare and dissonances tend to “resolve” to other dissonances. In a Debussy cadence, the final chord frequently functions as a point of repose not because it is consonant, but because it is less dissonant than what came before.
- Chords are often chosen for their sonority, in which both scoring and registration can become important elements. Most chords are based on 3rds (tertian harmony), with 7<sup>th</sup> and 9<sup>th</sup> chords being common. (Chords are sometimes extended even further). Sometimes, the 3<sup>rd</sup> of a triad is omitted, leaving a bare 5<sup>th</sup>, an important departure from the norm that was to have an influence on his contemporaries and followers. Sometimes, these intervals were used in parallel, this organum-like style sometimes being used for archaic effect, as in “La cathédrale engloutie” (“The submerged cathedral”). These intervals were also frequently used as pedal points, with the harmony above creating dissonance with the sustained pedal notes. [Pedal points occur frequently in Debussy's music, not only as a source of dissonance, but also as a means of creating tonal stability in a passage in which there is harmonic ambiguity.] Debussy's parallelisms went against the prescribed rules of traditional harmony, which prohibited the use of parallel 5ths and 8ves.
- Debussy's use of modes had an effect on his harmony, too. Modality is often cited as an important feature of Debussy's music, and many passages can be found that contain notes that are reminiscent of Dorian or Phrygian rather than minor, or Lydian or mixolydian rather than major. Debussy acquired these pentatonic and modal characteristics mostly from the Russian nationalist composers, though his initial interest in pentatonism was inspired by the Javanese gamelan music he heard at the Paris Exposition. The use of these modes had the effect of breaking down the traditional tonal system and of forming a new one based on new scale formations. In the whole-tone scale (a favourite of Debussy's) there was no differentiation at all in its constituent intervals, while the pentatonic scale also restricted the notes available to the composer. The subdominant tends to have a more important role in Debussy's music than the dominant.
- It is only relatively recently that analysts have come to identify the use of the octatonic scale in the works of composers such as Debussy and Ravel. This is partly because, unlike Stravinsky, who employed the scale for large stretches of a composition, Debussy tended to use it for shorter passages and juxtaposed its use with other harmonic styles, taking advantage of notes shared between the different types of modes. “Nuages” from the “Three Nocturnes” provides a good example of this compositional method.

- From early on Debussy was aware that his harmonic concepts demanded new forms and that the traditional forms that relied on former tonal practices were not adequate in this respect. Throughout his letters and essays from the turn of the century onwards, Debussy constantly wrote of his desire to break away from both the standard harmonies and rigid formal types of earlier music to attain a more intuitive art with more freedom for the artist. In 1907, for instance, he spoke of his aversion towards the mere mechanisms of “rigorous, traditional forms”. He considered sonata form to be an outmoded formula, “a legacy of clumsy, falsely interposed traditions”. The working out of themes and motifs he regarded as a species of dull “musical mathematics”. Instead, Debussy tended to employ short lyric forms – preludes nocturnes, arabesques. His forms, too, tend to be a series of waves, whose principal themes recede into the background and continue as ostinatos while other versions of themselves or new material is superimposed. Although the thematic content of even large-scale works is fairly limited, alterations in texture and rhythm disguise motivic shapes to the point that they often become mere suggestions of themselves. Juxtapositions are not prepared; bridge passages may be entirely absent or only briefly suggested. Many of the early pieces have a symmetrical shape with an emotional peak about two-thirds the way through, usually in a central section that is based on its own thematic material. This is followed by a return to opening material. Rarely, though, does the return function as a literal recapitulation. Instead, the material continues to transform itself. Some analysts (like Howat and Parks) have identified what they consider to be the use of the Fibonacci (and Lucas) series in several of Debussy’s works; Boulez went even further, remarking that Debussy “overthrew not so much the art of development as the very concept of form itself”.
- Another formal type sometimes employed by Debussy was “through-composed” form, a continuously developing form that lacks ternary form’s symmetrical shape and rotational (cyclical) form’s regular alternation of material. Debussy’s “additive” approach to form building, in which typically 2-bar units are combined through an arch-like process has been both criticised and praised by commentators.
- The subtle harmonies of the Impressionists demanded complementary timbres. Debussy usually employed a large orchestra, but loud passages tend to occur infrequently. The strings are often divided and muted; harps are used subtly to add a distinctive colouring; in the woodwind, flutes, oboe and cor anglais are often used for solos, their lower ranges being exploited; horns and trumpets, also often muted, are heard in short pianissimo phrases; percussion instruments are another source of unusual timbre, such as the use of antique cymbals in the “Prélude à l’après-midi d’un faune”. The expressive scope of the string section is augmented, with all manner of combinations of arco and pizzicato, divisi part writing, “sul tasto” and tremolo, resulting in a new variety, flexibility and beauty of string sound. In his solo piano music Debussy exploits the instrument’s wide range to create timbral juxtapositions of deep, dramatic bass registers in contrast with the higher register’s more “glittering” sonorities. The complex resonances of Debussy’s piano writing require careful use of the pedals, the damper pedal in particular. Sometimes, in his orchestral works, timbre assumes an almost structural importance. Works such as “Jeux” or “Jeux de vagues” (from “La Mer”) exhibit a pointillist orchestral technique, which was further developed by composers such as Webern and (later) Boulez.

- Like timbre, rhythm and tempo in Debussy function to characterise entire pieces or individual passages. Often, accompaniments consist of nervous, propulsive ostinatos, while the melodic material appears in languorous, rubato-like rhythms. While changes in time signature occur with nothing like the frequency they do in the music of other contemporary composers (Stravinsky in particular), even in passages with an unchanging time signature, rhythms are so subtle that it is often difficult to determine the first beat of the bar. Elsewhere, when textures do possess regular rhythms, they are often overlaid with ornamental melismata that seem to contradict them. On the other hand, changes of tempo can be frequent in Debussy’s music, as is the directive “rubato” – “Reflets dans l’eau” adds “tempo rubato” in brackets after the work’s opening “Andantino molto” direction. This preoccupation with creating a sense of rhythmic freedom is also evident in the tempo direction for “Jeux de vagues” (“La Mer”) - “dans un rythme très souple”. Debussy distrusted metronome markings, remarking in a letter to Durand: *“You know what I think of metronome marks: they’re right for a single bar ... There are “those” who don’t hear music and who take these marks as authority to hear it still less!”*
- Debussy’s early compositions (such as the slow movement of the String Quartet) were characterized by a highly personal, intimate lyric style such as that found in the music of Gounod. Other works, such as “Nuages”, can have minimal melodic content.

## Reflets dans l’eau – Debussy

### Introductory notes

Composed in three days in Eastbourne just after Debussy had completed “La Mer”, “Reflets dans l’eau” (“Reflections in the water”) is the first of three piano pieces that make up the first set of “Images” (1905). (The remaining pieces are “Hommage à Rameau” and “Mouvement”; a second set was composed in 1907). Though positioned first, “Reflets” was actually the last of the three pieces to be written. An earlier version of the piece dates back to 1901, but Debussy was dissatisfied with this and decided to write another version, based, he remarked, “on different idioms and in accordance with the most recent discoveries of harmonic chemistry”. [Other than their connection with water, “Reflets dans l’eau” and “La Mer” both share the same D flat major tonic key; in addition, motif **B** of “Reflets” (see below) is the “cyclic motif” of “La Mer”, while motif **A** (see below) is the retrograde inversion of the motif that is the basis of the first and last climaxes of “La Mer’s” first movement.

In contrast to earlier musicologists, who were content to accept what was considered to be Debussy’s uncomplicated use of traditional simple forms such as ternary and rondo, more recently, analysts have devoted considerable time and effort in uncovering the more complex layers that underlie these apparently simple structures. Howat’s identification of the use of the Golden Section/Fibonacci series in certain works by Debussy will be mentioned briefly at the end of the analysis, but even when musicologists agree on the “basic” form being employed in a work, there can be as many ways of dividing up sections/subsections as there are analyses. For instance, it is generally agreed that “Reflets” is in a simple rondo form, but analysts have come to different conclusions over the number of principal sections and/or the letter designations appropriate for each section. Debussy’s method of what has been called “additive variation” is often at the heart of the discrepancies in analyses. In this process, new musical ideas are combined with previous material that is then gradually eliminated, resulting in a continuous transformation of ideas. This sometimes happens at the point of two formal sections, so that the new section appears to begin

# Debussy - “Reflets dans L’eau”

almost before the previous section has ended. This has been likened to a “cinematic dissolve”, in which one visual image gradually shifts into another. “Reflets” contains a number of examples of this, which partly accounts for the discrepancies in bar numbers allotted to different formal sections as identified by different commentators. For the purposes of this analysis, Howat’s rondo divisions and section nomenclature will be employed, in part because they can then be used to illustrate his interesting theories on Debussy’s use of the Fibonacci series, but other possibilities will also be suggested.

Howat writes:

“In orthodox terms the piece’s construction is irregular, best described as an unusual species of rondo form built on two recurring motifs, **A** and **B**. **A** begins and ends the piece, defining a rondo outline with principal returns in bars 35 and 71. It then returns in bar 81, marking the beginning of the coda. **B** is a more melodic development of **A**, beginning with **A** in retrograde. **B**’s appearances form contrasting episodes in the rondo scheme, with principle entries in bars 24, 50 and 78. Of those three episodes the final one is very short and the central one much the more important; after its entry in bar 50 **B** dominates the entire climactic section until bar 70.” (See **Ex.1**)

**Ex.1**

Motif A

Motif B

[Bar 1] *pp* [Bar 24]

This gives the following formal outline:

Section	A	B	A	B	A	B	A [Coda]
Bar	1	24	35	50	71	78	81

Howat, however, adds the following:

“In itself this thematic ABABABA sequence is not indistinct; what blurs the form is that the tonal plan and dynamic shape, especially in the later part of the piece, follow a course quite independent of the thematic sequence, marking a series of separate musical turning points, particularly important at bars 43, 48, 56 and 69. This is the reason why the term “rondo” by itself is an inadequate description of the piece’s processes. What is much clearer about the piece is its shape – dramatic and dynamic shape – as opposed to its more academic formal aspects.”

Concerning the piece’s use of tonality in the overall structure, he writes:

“In “Reflets” the actual keys enunciated form a surprisingly classical sequence of D flat (D flat) - E flat – A flat7 – D flat. However, the brevity with which some of them are defined draws attention to the bars where the tonality is discernible (mostly bars 1-8, 15-16, 35-42, 56-58 and finally 69 onwards), setting the intervening chromaticism off in dramatic fashion. The piece’s climax manages to combine the best of both worlds, starting with a surprise modulation to E flat before making a further crescendo into some of the piece’s most intense dissonances.”

[It should be noted that some editions give incorrect bar numbers due to the insertion of a bar-line inserted in the middle of the cadenza-like bar 23. This is not present in the autograph copy, and is not reproduced in the Durand edition recommended by the WJEC. This means that page 2 ends with bar 25 (not 26), with the total number of bars in “Reflets” being 94 (not 95)].

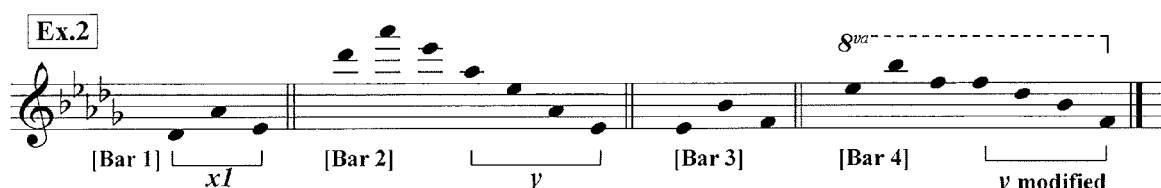
Included in these notes are questions related to the particular passage just discussed. Some of these provide an opportunity for teachers/students to delve more deeply into the matters mentioned in the notes, while others call for those concerned to consider musical features that are important but beyond the scope of a brief analysis such as this. These questions can either be answered individually or form the basis of group/class discussion.

## Analysis

### Bars 1-23 [A1]

Bars 1-8 consists of a repeated 4-bar phrase in a diatonic D flat major, all of which occurs over a drone-like (double) pedal in the bass. The RH states rising and falling, disjunct 3-part chords, the uppermost line of which states a 3-note motif ("x1") that, after an immediate repetition an 8ve higher in bar 1, is immediately subjected to modification, both metric and melodic, in bar 3 – see **Ex.2**. The pitch content continues to rise in bar 3, but the semiquaver rest that precedes "x1" is eliminated, with "x1" now beginning on B flat rather than D flat; and, instead of being repeated, it continues on its downward path in a series of repetitive 4ths/5ths, making a new motif ("y") - see **Ex.2**. Bars 3-4 mostly repeat the previous material's format, but the change of chord (and its cadential function) requires an overall change in pitch content. Howat's **A** motif adds a further 3-note motivic layer to bars 1-2, this motif actually being related to "x1", a relationship that becomes apparent in subsequent bars. [The pianist Marguerite Long, who asked Debussy for advice on playing his music, reported that Debussy referred to the opening motif as "a little circle in water with a little pebble falling into it".] Howat states that "the asymmetrical rise and fall across bars 1-2 sums up the piece's overall shape"

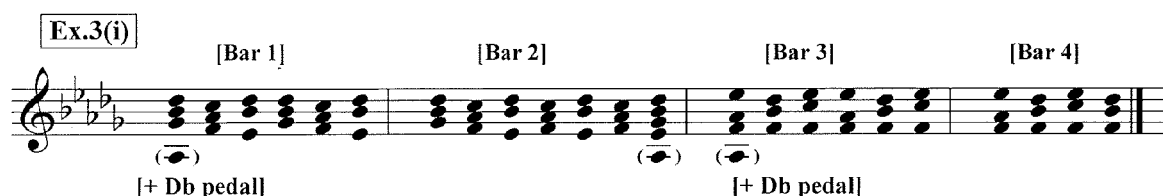
**Ex.2**



- In what way is "y" related to "x1"? (Look at the constituent intervals).

How should we understand the harmony of bars 1-4? The disjunct nature of the RH chords obscures its harmonic basis. If we disregard "x1" and arrange the underlying chords in a more conjunct voicing, we end up with something like that shown in **Ex.3 (i)**, which indicates that beneath the surface of these "musical ripples" (notwithstanding the tonic pedal) lies a quite static harmonic foundation. The apparent Fm (or D flat major7) chords are mere embellishments of the prevailing A flat-based harmony. **Ex.3 (ii)** illustrates the harmony of bars 1-8. The chord in bars 5-6 is common in Impressionist music (as well as 20<sup>th</sup>/21<sup>st</sup> pop music – it was a favourite of 10cc, for example) and can be described in more than one way: as a dominant 11<sup>th</sup> with the 3<sup>rd</sup> omitted or as a chord that in some ways combines both dominant and subdominant characteristics – in pop terms it would be labelled here as Gb/Ab or Ebm7/Ab. The chord's dominant function is given greater significance by the anticipatory A flat in the bass at the end of bars 2 and 6, and greater import still by the A flat on the first beat of bar 5, the start of the second phrase. So the underlying harmony in bars 1-8 is merely a repeated dominant-tonic progression.

**Ex.3(i)**



**Ex.3(ii)**

[+ Db pedal]

$E^b m^7/A^b$   $D^b 6$

The process of motivic modification continues in bars 9-11, with a re-ordered version of "x1" in bar 9 ("x2"), to which is appended an additional falling major 2<sup>nd</sup>, so making the new version sequential – see **Ex.4 (i)**. This is answered by "y's" falling 4ths/5ths (bars 9<sup>3</sup>-10<sup>1</sup>), while bar 10 extends bar 9's version of "x2" to 6 notes, adding another repetition of the falling 2<sup>nd</sup>. "y's" answer is similarly extended to 6 notes (10<sup>4</sup>-11). But bar 10 introduces yet another new motif ("z1") – see **Ex.4 (i)** – which is almost immediately inverted in an inner voice in bar 13 ("z2") – see **Ex.4 (ii)**. (In this instance a retrograde version of "z" gives an identical shape to its inverted form). But even this is not the end of the network of motifs Debussy has constructed, with the appearance of yet another version of "x" ("x3") in bar 12 – see **Ex.4 (iii)**.

**Ex.4**

(i) [Bars 9/10] inversion/retrograde of z1 (ii) [Bar 13] (iii) [Bar 12]

$x2$   $z1$   $z2$   $x3$

- Is there another example of motivic connection in bars 9-14, this time involving the interval of the falling major 2<sup>nd</sup>? (Look back at bars 1-2).

Bars 9-14 have introduced new harmonic material, too. Though the melodic material has remained diatonic, the harmony has become chromatic, with bar 9 consisting of a chromatically rising bass line that (mostly) supports dominant 7<sup>th</sup>/13<sup>th</sup> chords. (The second chord, on A natural, is a French 6<sup>th</sup> chord; this is the result of Debussy's preoccupation with maintaining the integrity of the melodic motif at this point, which necessitates a slight change in what would usually be a chain of parallel dominant-type chords, though these chords have no real dominant function, of course). Mark DeVoto has this to say on Debussy's use of parallel dominant 7<sup>th</sup>/9<sup>th</sup> chords: "Instances of parallel chords are certainly colouristic, but it is important to recognize that they nevertheless are essentially melodic events, whose specifically harmonic function is suspended; moreover, they are guided by the chromatic scale, almost never the diatonic." Here, then, the important element is the melodic motif that the chords support.

Bar 10 extends the "sequence" by two notes (C and D flat), the final chord being D flat13, which resolves onto G flat6 at the end of bar 11, making a dominant-tonic progression on the subdominant – V<sup>13</sup> of IV-IV<sup>(6)</sup>. (The subdominant is a tonal area that is exploited later in the piece). Another dominant 13<sup>th</sup> in bar 12 (on A flat) leads us to expect a tonic D flat major chord, but, instead, the harmony in bar 13 is slightly ambiguous, though it retains the RH notes from bar 12 (in a different order), so making the new motif "z1". This chord is an example of Debussy's use of a sort of "buffer" harmony, a chord that links two passages with a distinctly different harmonic basis that functions as a connective "transitional" chord, i.e., one with characteristics of the harmony on either side. (There is another example a few bars later). The bass note in bar 13 is an unexpected D natural, which is retained in the next bar and which introduces the piece's first octatonic

harmony).

Melodically, bar 14 builds on the falling major 2<sup>nd</sup> motif as used in both "x2" and Howat's **A** motif, extending it sequentially. There is a harmonic sequence, too, with bar 14<sup>1-2</sup> being repeated a perfect 4<sup>th</sup> lower at 14<sup>3-4</sup> (actually notated as an augmented 3<sup>rd</sup>.) The types of chords used in bar 14 (diminished and dominant 7ths) along with the minor 3<sup>rd</sup> partitioning (14<sup>1-2</sup> and 14<sup>3-4</sup>) suggest the use of the octatonic scale here. [See "The octatonic scale – a brief note" at the end of this analysis]. **Ex.5** shows how bars 14 and 15 relate to the octatonic scales. The B flat ("soprano") and F double-flat ("tenor") on beats 1&2 and the F ("soprano") and C flat ("tenor") on beats 3&4 are "chromatic" embellishments (suspension, passing notes). The dissonant A flat in bar 15 does not belong to the octatonic scale. Rather it functions as a type of dominant to lead into the next passage (16→), which returns to D flat major. The A flat attracts to itself pentatonic figuration (G, D and E flats), which also pave the way for the pentatonicism of the next bars, the rit. indication also suggesting that a "structural" event may be on the horizon.

**Ex.5**

Collection II

Collection III

- What else is interesting about the pentatonic figuration in bar 15?

Indeed, what links the motivic network Debussy has constructed thus far is that it consists of individual motifs that are all pentatonic, even if their harmonic setting has been otherwise. This is exploited in bars 16-17, where the RH continues to concern itself with the falling major 2<sup>nd</sup>; this time repeated a minor 3<sup>rd</sup> lower. In so doing, Debussy also refers to Howat's **A** motif – see **Ex.6**.

**Ex.6**

Motif A

Pentatonic scale in 16-17

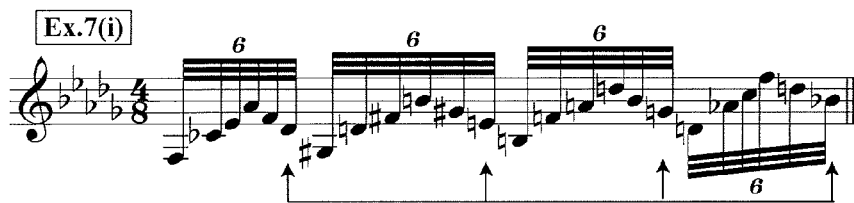
- Discuss the LH part in bars 16-17<sup>2</sup>.
- How does this employ/extend Debussy's motivic network?
- Can you think of a (programmatic) reason for Debussy's use of motifs in these 2 bars?

In bars 16-17<sup>2</sup> the "harmony" becomes more linear, the bare 4ths/5ths in the RH sounding organum-like – cf. the composer's "La cathédrale engloutie" for a similar harmonic effect. Alternatively, there is also a strong gamelan feel to the music here, as, initially; the LH's contrary motion semiquavers present a slightly different, but related, pattern of intervals, the music becoming almost heterophonic. [You should have touched upon this use of intervals in your

answers to the last questions above.] LH&RH converge “harmonically” in bar 17, both coming to rest on a bare 5<sup>th</sup> (F-C). This, too, could be considered as another example of the type of “buffer” sonority we encountered in bar 13, since, though it breaks free of the prevailing pentatonic scale, its bare 5ths continue to refer to the musical content of bars 16-17<sup>1</sup>, highlighted by the RH&LH playing the same notes. This process of “synchronization” began at the start of bar 17, where the hands shared the same two notes (A flat and E flat) but in slightly different “voicings”. The addition of a D natural in bars 17<sup>3</sup>-18<sup>2</sup> turns the bare 5<sup>th</sup> into a type of half-diminished 7<sup>th</sup> chord (D-F-(Ab)-C), introducing a different sound world from the previous bars. This “interruption” forms the basis of the material in bars 20-21, and is another example of a figure that first appears near the end of one section/passage only to feature prominently in the next. Howat says the following about this short passage: 2Bars 17-20 show Debussy dovetailing contrasted material across a transition so that the new material first arrives like an interruption, then returns more solidly to take over a few bars later.”

The “half-diminished 7ths” in bars 17<sup>3</sup> and 19<sup>1</sup> are perhaps like more little pebbles being dropped into the water. If so, the answering triplets in the second half of bars 18 and 19 could represent tiny ripples; both the dynamics and the melodic outline here are in keeping with this image. Harmonically, they begin like another half-diminished 7<sup>th</sup> chord (F-Ab-Cb-Eb) but the D flats turn them into closely voiced inverted dominant 9<sup>th</sup> chords (on D flat). (Note how Debussy creates momentum by “eliminating” a quaver beat before and after the repetition of the triplet figure in bar 19<sup>4</sup>). Bars 20-21 take up this triplet figure and extend it in ascending minor 3rds (“quasi cadenza”). This minor 3<sup>rd</sup> partitioning, however, suggests the use of the octatonic scale. Howat comments: “Reflets” has a bass line rising by minor 3rds from bar 20, over which the RH’s arpeggios effectively mark out a combination of half-diminished “Tristan” chords and major triads linked by octatonic scales.” (The “Tristan chord” is another name for the half-diminished 7<sup>th</sup>, the derivation of which will be explained in the notes on “Colloque sentimental”). This description, however, stops short of explaining exactly what happens in this passage – and which octatonic scales are used. In fact, bars 20-23 could be analysed as being based on just one octatonic scale, Collection II. The partitioning by minor 3rds in bars 20-21 is quintessentially octatonic, but not every note belongs to this Collection, the rogue “note” being the last of each of the RH’s five demisemiquavers on each quaver beat, which is a “chromatic” passing note that links the first note of each group of five demisemiquavers in the RH – see **Ex.7 (i)**, which reduces the passage onto one stave. [Interestingly, if these passing notes are taken together they make another (different) octatonic scale (Collection I), another example of Debussy’s “harmonic chemistry”, perhaps – see **Ex.7 (ii)**].

**Ex.7(i)**



"Chromatic" passing notes

**Ex.7(ii)**



Octatonic scale used in passage  
Collection II

Octatonic scale involving passing notes  
Collection I

The piano RH figuration becomes both more conjunct and also wide-ranging in bar 22. The harmony here begins on an F half-diminished 7<sup>th</sup> chord, while contrary motion through another

minor 3<sup>rd</sup> in the outermost voices – a further reference to the “reflections” of the piece’s title, perhaps – transforms the chord into a half-diminished 7<sup>th</sup> on A flat – see **Ex.8**.

**Ex.8**

half-diminished 7ths

[Bars 24-26]

[Bars 22-23] becomes F<sup>bb</sup>9

The image shows a musical staff with a treble clef and a key signature of two flats (B-flat and E-flat). It illustrates a harmonic transformation. In bars 22-23, a half-diminished 7th chord is shown. An arrow points from this chord to a new chord in bars 24-26, which is identified as an F double-flat 9 chord. The notation includes various accidentals and a double bar line between the two sections.

The second (improvisatory) half of bar 23 retains the final 4-note motif of the first half of the bar (Bb-Ab-Gb-Cb), the B flat being a chromatic passing note, and this leads directly into Howat’s **B** section (bar 24). Here is yet another example of Debussy’s “overlapping technique”, linking sections with similar musical material, since the RH figuration from bar 24→ continues that used in the previous bars. (The hemidemisemiquavers are now grouped into two sets of 13 notes, while the half-diminished 7<sup>th</sup> on A flat is now transformed, with the addition of an F double-flat, into a (first inversion) F double-flat9 chord).

- Discuss Debussy’s use of the piano and texture in bars 1-23.

## Bars 24-34 [B1]

In “La Mer” the motto (cyclic) theme (see **Ex.9 (i)**) undergoes various transformations and appears against a variety of harmonic backdrops. **Ex.9 (ii)** shows its first appearance in the last movement of “La Mer”. Its original statement in the first movement was harmonically ambiguous (in two parts only), while here, in the last movement, the motto theme itself is transformed into a whole-tone melody against a “static” whole-tone chord – B - D sharp - F natural – A. Howat’s **B** motif in bars 24-26 in “Reflets” has a similar melodic outline to the first part of the “La Mer” motto. [Like the “La Mer” version, “Reflets” Motif **B** appears in different guises throughout the piece, its rhythms, intervals, length and harmonic background subjected to various alterations. Also remember its relationship with Motif **A** – see Howat’s comment above.] Dotted notes are a feature in the “Reflets” version. The harmony is at first based on that of the previous bars. There are two slight differences, however: the first is a low pedal A flat, its pitch being at some distance from the remaining material; the second is the addition of an F flat in the music, which alters the previous half-diminished 7<sup>th</sup> chord in bar 22<sup>2</sup>, turning it into a dominant 9<sup>th</sup> on F double-flat. (Dominant 9ths in first inversion are another favourite sonority of Debussy). Motif **B**, however, ends on a slightly surprising E flat (bar 27), which is harmonised with an unambiguous dominant 9<sup>th</sup> chord (in D flat), the persistent C flats in the RH figuration becoming C naturals. The end of **Ex.8** shows the change in harmony from **A1** to **B1**.

**Ex.9(i)** “La Mer” - motto theme [first movement - bars 12-16]

The image shows a musical staff with a treble clef and a key signature of one sharp (F-sharp). It displays the motto theme from the first movement of La Mer. The notation includes triplets, dotted notes, and dynamic markings: *expressif pp sempre* and *più pp*. The piece ends with a double bar line and a 3/2 time signature.

**Ex.9(ii)** Animé et tumultueux "La Mer" - motto theme [last movement]



In bars 29<sup>2</sup>-30<sup>2</sup> the A flat dominant chord changes to the form found at the start of the piece – i.e., Gb/Ab, so omitting the C. Under this dominant chord Howat's **B** motif returns in an unambiguous diatonic form, its pitches now changed to accommodate the prevailing harmony. (Note the increased movement in the RH figuration in bars 24-30<sup>2</sup> - effectively 13→14→15→16 notes per half bar). This increased momentum (and harmonic stability) is cut short in bar 30<sup>3-4</sup> by a statement of motif "z2" (*mf* crescendo to *f*, so contrasting considerably with the dynamic level in the piece up to this point). As in bars 9-10, the harmony consists of what is essentially a series of parallel dominant 7<sup>th</sup>/9<sup>th</sup> chords that require some "harmonic adjustments" (on D flat and C) to comply with the shape of motif "z2".

- What exactly are the chords that underpin the D flat and second C of motif "z2"?

The pedal A flat adds dissonance here. "z2" appears in bar 31<sup>3</sup>, preceded by an arpeggiated version of the final chord in bar 30 in the RH figuration. Bars 32-33 repeat the process, but the chords beneath "z2" are eliminated, not only highlighting the motif itself, but also clearing the chromaticism of the previous bars. An incomplete statement of "z2" in augmented form in bar 34 (C–Db–Bb, over the A flat pedal) faintly recalls the Gb/Ab harmony left "suspended" in bar 30<sup>1-2</sup> by the chromatic interruption based on "z2", and the first return of Howat's **A** material returns in the tonic key in bar 35. (Note the *rit.* direction, again implying the imminent arrival of a "structural event").

## **Bars 35-49 [A2]**

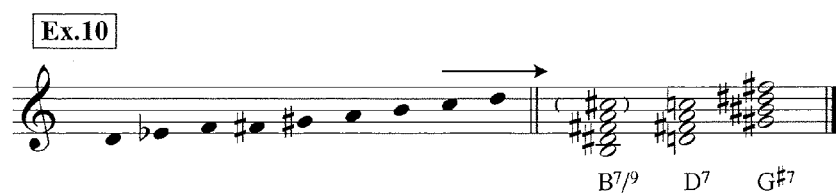
Bars 35-42 repeat bars 1-8, but now the RH chords are transformed into arpeggios, their rising and falling outline slightly changing the metrical/rhythmical placement of the original melodic line. Note the reinforcement of the dominant chord in bar 35<sup>1</sup> by delaying the D flat pedal until the second quaver beat (as had happened in bar 5).

Bars 43-47 continue with RH arpeggio figuration – it actually becomes more persistent since the previous rests on beats 1&3 are eliminated – though it no longer has any real melodic content, having become mere "harmonic filling". Instead, the bass takes over this responsibility, stating a new, partly syncopated, stepwise line based entirely on the whole-tone scale. It completes its ascending scale content within the first two bars, then repeats it an octave higher in bars 45-46. Another statement (bar 47) remains incomplete, interrupted as it is by a flurry of whole-tone arpeggio-like figuration between the two hands. Harmonically, bars 43-47 alternate half-diminished (octatonic?) and whole-tone chords (one each per bar), and the whole-tone figuration returns in bars 48-49, taking off on B, which, instead of continuing the previous bass "melody" now sustains that note, pedal-like, until bar 53.

## Bars 50-70 [B2]

Over continued whole-tone figuration, in bars 50-52, the RH, in the piano's high register, states Howat's **B** motif, its penultimate note changed to fit in with the prevailing whole-tone scale. Again, though, the final note (F sharp, bar 52) brings something of a melodic/harmonic surprise, with the F sharp forming part of a B9 chord. This initiates a passage of octatonic writing (bars 52-55, with the 9<sup>th</sup> of the B9 chord (C sharp) the only “foreign” note). Perhaps we can consider this chord as the “buffer” chord between the two different scales, since, though the B9 chord is something of a surprise, it retains elements from the previous bars – the pedal-like B and the A. B9 is followed by D7 (54) and G sharp7 (55) – again, note the typical partitioning into minor 3rds – G# - B - D. (See **Ex.10**)

**Ex.10**

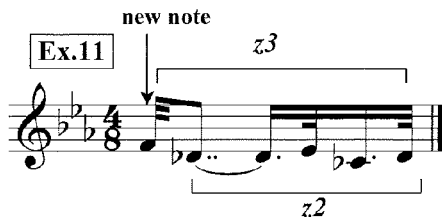


B<sup>7</sup>/<sub>9</sub>    D<sup>7</sup>    G<sup>#</sup>7

Motif **B** (now in 8ves) appears over the D7 and G sharp7 progression, its intervals dictated by the accompanying chords. The increased texture and *mf cresc. molto* direction (54-55) herald a statement of an E flat major chord in bar 56 – again an unexpected chord, and one that, in earlier music, would have typically functioned as a dominant of the dominant (V of V in D flat). (This is actually the case here, too, but the resolution of the chord does not occur immediately). A bar of ascending and descending arpeggios in both hands leads to the work's short-lived climactic passage (a *dim.* and *rit.* begin as early as bar 62). Over continued arpeggios, motif **B** appears in its most effusive form (still in 8ves).

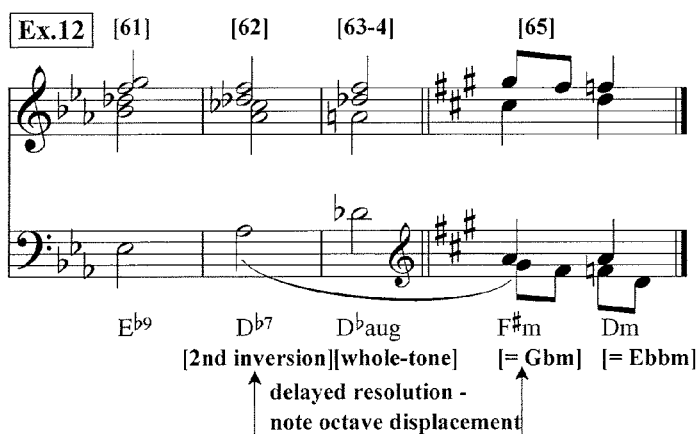
- Compare the statement of motif **B** in bars 57-59 with previous statements. Comment in particular on bar 58. Is this a new motif or is it based on material heard earlier in the work?

A dominant 7<sup>th</sup> is added to the E flat chord in bar 57, so heightening the effect of E flat being the dominant of the dominant, but the harmony becomes increasingly chromatic in bar 58, with octatonically-tinged diminished 7<sup>th</sup> chords on E and D, all over a dissonant pedal E flat. Thereafter, bars 59-64 consist of the following chords: E flat9 (59 and 61), whole-tone based figuration (60 and 63-64) and D flat7 (with A flat bass) (62). (The whole-tone scale figuration in these bars effects a smooth transition with the dominant 7<sup>th</sup>/9<sup>th</sup> chords on either side, since the choice of both the chords and the whole-tone scale is determined by the notes they have in common: four of E flat9's notes are part of this whole-tone scale, B flat being the only discrepancy; similarly, three of D flat7's notes are contained in the whole-tone scale, A flat being the “rogue” note. This similarity even extends to the F sharp minor chord in bar 65, since it shares it's A and C sharp with the preceding whole-tone scale). The arpeggio/scalic figuration is a backdrop to 1-bar melodic fragments, the first (59, 61) the “head motif” of Howat's **B** motif (used over the E flat9 chord), the second what appears to be a new motif characterised by dotted rhythms (beginning with a scotch snap) which is used over the other chords. This motif, however, is actually a variant of “z2” – “z3”; the dotted rhythms are new, and so is the addition of an extra note at the start. [See **Ex.11**] “z3” is repeated in bars 62-63, an 8ve higher and, of course, reharmonised, the progression resembling that in bars 51-52, with the chords reversed.



The choice of a D flat7 chord in bar 62 is interesting. It suggests resolution to G flat major/minor, "Reflets" subdominant, and, once again, we are treated to an example of Debussy's "delayed resolution", since the resolution of the D flat7 chord comes three bars later, written enharmonically as F sharp minor – see below and **Ex.12**. (The change of key signature (for four bars only) is purely to avoid the "correct" accidentals, which would have involved too many double flats. The A major(7) chord in bar 68 acts like a chord on the flattened 6<sup>th</sup> in D flat (Bbb–Db–Fb–Ab) and slips down (resolves) a semitone lower to A flat, the dominant, which supports the work's opening dominant 9<sup>th</sup> or Gb(Em7)/Ab harmony, minus the tonic pedal. It also prefigures the importance of the subdominant in the coda. The bass 5<sup>th</sup> motion heard in bars 2<sup>4</sup>-3 and 5 is now transposed from A flat – D flat to E flat – A flat. From the climactic *ff crescendo* in bars 57-61, the music quickly subsides in both dynamics and tempo, reaching *molto rit.* and *più p* directions in bar 64, the music consisting of only wispy, repeated whole-tone scalic figures. All this creates a sense of expectation, and in bar 65, *pp*, Howat's **B** motif returns, its fourth to sixth notes stated first in diminution (66<sup>1</sup>) then in augmentation (66<sup>3-4</sup>), its outline thickened by parallel triads. In fact, the harmony in bars 66-68 is completely triadic, though chromatic, with an octatonic feel in bars 66-68 (A major and C minor (a minor 3<sup>rd</sup> apart) both being part of Collection III). Also note the bass motion (E-A) in bars 66<sup>3-4</sup> and 68<sup>3-4</sup> (from, for instance, bar 5 of **A**), faintly heralding the imminent return of that section's material. Over the dominant chord in bars 69-70, Debussy states more fleeting reminders of the 3-note fragment from Motif **B**.

**Ex.12** [61] [62] [63-4] [65]



$E^b_9$     $D^b_7$     $D^b_{aug}$     $F^\#_m$     $D_m$   
 [2nd inversion][whole-tone]   [= Gbm]   [= Ebbm]  
 delayed resolution - note octave displacement

Howat writes:

"After the main climax, Debussy's efforts seem to be concentrated on stretching the remainder of the piece out, delaying the expected return to the tonic key as long as possible, and making it as gradual as possible. The home tonality returns audibly enough at bar 69, with the return of the five flats and a dominant-ninth chord; but the expected tonic chord in bar 73 has the ground pulled from under it by an echo of the descending run that had dominated bars 67-70. Not until bar 77 is the tonic triad held steady, and even then it is immediately garnished with added sixths, sevenths and ninths. Effectively bar 77 is the piece's final tonic resolution, since the coda's deliberate plagal meanderings are merely decoration and confirmation of this, not a new tonal departure."

## **Bars 69-94 [A3-B3-A4 (Coda)]**

Howat considers bars 69-94 as comprising three sections – A-B-A[Coda] – probably influenced in part by his preoccupation with the dimensions of the piece being connected to the Fibonacci series (see below). Other readings of these final bars are possible. As mentioned earlier, Kerman wrote that in a number of Debussy’s works in an outwardly simple ternary form (ABA), the final A section is “not a “real” return of A but only of selected elements standing in for A”. Such a final A section often includes elements of the B section, “Nuages” from Debussy’s “Three Nocturnes” being a good example. Bars 69/71-94 in “Reflets” could, therefore, be considered as one final A section of the rondo structure, which includes reference to fragments of B, with a similar function to the second A section in ternary form. (Another alternative would be A plus a coda from bar 81).

- Other than harmony, compare bars 71-78 with bars 1-8. Describe and explain any “new” motivic material.

In bar 79 “z3” is tagged onto the end of the semiquaver triplet figure of Motif **B**, suggesting, perhaps, an alternative explanation for the derivation of “z3” – as a sequential extension of **B**’s interval of a 3<sup>rd</sup> (see, for example, bars 25<sup>3</sup>-26). This repeated motif is highlighted both by its repeated monophonic statement and the “Rit.” direction.

Bars 81-94 certainly have the feeling of a coda. Melodically (motivically) they are restricted to Motif **A** and a fragment of “y” (in the form of a descending perfect 4<sup>th</sup> in augmentation and in triplets), while harmonically, as Howat mentions, the bars are strongly plagal (ii/IV), with a distinctly pentatonic content in bars 83 and 87-92, where the repetitions of “y” add mild dissonance to the underlying subdominant and tonic chords.

Bars 78<sup>3</sup>-80 allude to Motif **B**’s first five notes plus a repeated statement of “z3” (the latter monophonic) (similar, then, to the melodic material in bars 59-63). The C flats suggest a dominant 7<sup>th</sup> on D flat (V7 of IV/iv) as well as hinting at the whole-tone scale. An extra major 3<sup>rd</sup> is added to the sequence in bars 79-80 extending it into bar 81, and the final major 3<sup>rd</sup> is sustained to form the basis of an initially ambiguous Bbb-Db dyad (doubled in three separate octaves) that supports the first statement of Motif **A**, this, too, with a further 8ve doubling. This chord is perhaps best considered an incomplete subdominant/supertonic chord from D flat minor (i.e., use of mixed mode) – (Gb)-Bbb-Db-Eb (Gbm6) or Eb-(Gb)-Bbb-Db (Ebm7<sup>(b5)</sup>) – Debussy’s favourite half-diminished 7<sup>th</sup> chord). [Remember that, in harmony of the common practice period, ii, either as a minor or diminished chord, is considered a substitute for IV/iv – i.e., it functions as a subdominant chord.] This means that the A flat and F in Motif **A** are now dissonant with the supporting chord while E flat is the “chord note”. The Bbb-Db in bar 81 is an aural link to both the F sharp minor and A major chords in bars 65-68. The Gb6 chord in bars 83-84 is another subdominant chord, this time without the modal mixture from D flat minor. (See **Ex.13**) After further repetitions in bars 85-87, the harmony changes slightly in bars 88-90, though retaining the subdominant function. The increased dissonance in bars 88, 90 and 91-92 is the result of (black key) pentatonic additions to the subdominant and tonic chords, these dissonances only resolving on the final D flat major chord in bar 93. Note the high B flat falling by step to A flat rather than falling a 4<sup>th</sup>. The pentatonic harmony in these bars is reminiscent of that in bar 16. Even the bass participates in the motivic interplay. **Ex.14** shows its persistent reference to Motif **A** (in augmentation), at first partial (first two notes only) then complete in bars 89-92. The transposition of the motif to G flat in bar 87 means it can descend to the piece’s tonic rather than dominant as in previous statements.

# Debussy - "Reflets dans L'eau"

**Ex.13** [Bars 79-80] [Bars 81-87]

G<sup>b</sup>m<sup>6</sup> G<sup>b</sup>6

**Ex.14** [Bars 81-92]

Note "pivot" function between two different statements

- Briefly describe the use of dynamics throughout the piece. Do they relate in any way to the piece's structure?
- Below is the formal outline of "Reflets" as given in a paper by Keith Waters. Compare this with the version by Howat given above. Do you find one more convincing than the other? Do you hear the form of the movement in a different way?

A1 (1-8) B1 (9-34) A2 (35-42) C (43-70) A3 (71-80) Coda (81-end)

## TONAL OUTLINE

Below is a tonal outline of "Reflets dans l'eau". This shows that each statement of **A** begins firmly in the tonic key. **B**, however, apart from the very brief allusion in bar 78, always begins ambiguously. In **B1** and **B2** it eventually settles on the dominant in preparation for the subsequent return of **A**. It also alludes to the subdominant in **B2**, and manages to prepare for it again in **B3**.

Section	Tonality
<b>A1 [1]</b>	<ul style="list-style-type: none"> <li>D flat major but includes:</li> <li>brief chromaticism (9-13)</li> <li>octatonicism (14),</li> <li>pentatonicism (16-17<sup>2</sup>)</li> <li>and further octatonicism (20-22).</li> </ul>
<b>B1 [24]</b>	<ul style="list-style-type: none"> <li>Begins tonally ambiguously by extending the final harmony of Section A1 but over dominant pedal →</li> <li>dominant 9<sup>th</sup> in D flat (27-30<sup>2</sup>);</li> <li>pedal persists with chromatic (possibly octatonic) traces in bars 30<sup>3</sup>-33<sup>2</sup> →</li> <li>dominant 9<sup>th</sup> again briefly suggested in bars 33<sup>3</sup>-34.</li> </ul>
<b>A2 [35]</b>	<ul style="list-style-type: none"> <li>D flat major till bar 42;</li> <li>half-diminished 7<sup>th</sup> chord (octatonic?) and whole-tone elements alternate till bar 49 →</li> </ul>
<b>B2 [50]</b>	<ul style="list-style-type: none"> <li>Continues whole-tone harmony from previous section →</li> <li>octatonic (52-55) →</li> <li>E flat major (56) (= II or V of V);</li> <li>resolution to V delayed by whole-tone elements and presence of strong subdominant component in bars 65-68 (with hint of octatonicism) →</li> <li>V<sup>(9)</sup> (bar 69)</li> </ul>
<b>A3/B3/ A4[Coda] [71→]</b>	<ul style="list-style-type: none"> <li>D flat major - note how tonic is delayed;</li> <li>coda returns to subdominant flavour of bars 65-68.</li> </ul>

## Howat's theories on Debussy and the Fibonacci series

Roy Howat is not the first to discover what appears to be the use of the Golden Section in musical composition. Other analysts have claimed to have found evidence of its use in works of composers from Bach and Mozart to Bartok, for instance, while its use in art has long been acknowledged.

The Golden Section (GS) is the way of dividing a fixed length in two parts in such a way that the ratio of the shorter portion to the longer portion equals the ratio of the longer portion to the entire length. This value approximates to 0.618034. Howat divides a work by bars, beats or even smaller durations, and then looks for proportional relationships based on important musical events such as dynamic climaxes, return of thematic ideas or important tonal events. In many works, such as "Reflets", these formal divisions appear to conform to the GS as expressed through the Fibonacci series (1, 1, 2, 3, 5, 8, 13, 21, 34 .....). "Reflets" consists of 94 bars, which, when multiplied by

0.618, can be divided into a 58:36 ratio. The point of loudest dynamic in the piece (its climax) reaches *ff* in bar 57, followed by a crescendo to the beginning of bar 58. These overall proportions based on the numbers 36, 58 and 94 conform to the Lucas summation series (a series similar to the Fibonacci series but starting in a slightly different way and yielding a different set of numbers - 1, 3, 4, 7, 11, 18, 29, 47, 76 .....). An example of the use of the Fibonacci series in “Reflets” is in the points of “diatonic definition” in the key sequences (I-I-II-V7-I), with each point marking a GS (usually to the nearest quaver) en route to the next one: 34:21 bars, then 21:13 and finally 13:8. Likewise, the piece’s first large-scale departure from the tonic, after 16 bars, forms a GS en route to the next one after bar 42 (16:26 bars = 8:13); the latter in turn marks the point of GS between the start of the piece and the final return to diatonic stability at bar 68 (42:26 bars = 21:13).

Howat also describes many other Fibonacci series relationships in formal divisions, individual phrases and melodic motifs. The numbers 55, 34 and 21 are articulated through the larger form, with Debussy returning to A material in bar 34 and modulating to E flat in bar 55. On a much smaller scale, the opening material of the piece lasts for 8 quavers, reaching its melodic peak on the 5<sup>th</sup> quaver. The 3-note motif (**A**) in these bars consists of a descending minor 3<sup>rd</sup> and major 2<sup>nd</sup> – intervals made up of 3 and 2 semitones respectively. (It must be mentioned that there is no evidence that Debussy purposely used these theories in his compositions). Howat also claims that “The hollow wave off Kanagawa”, the famous print by the Japanese artist Hokusai, which appeared, at Debussy’s request, on the cover of the first edition of the score of “La Mer”, also displays GS proportions. (Howat’s theories are explained in great detail in his book “Debussy in proportion” – a musical analysis”).

### The octatonic scale - a brief note

The octatonic scale consists of eight steps of alternating semitones and tones (or vice versa). Despite traces of octatonic writing having been identified in the music of Liszt (1811-86) (and even, amongst others, Bach and Schubert!), octatonicism is initially most closely associated with the Russian composer Rimsky-Korsakov (1844-1908). In his stage works in particular, Rimsky tended to use the octatonic scale for magical or supernatural elements, while the human world was characterized by a more diatonic or folk-like style. Stravinsky, Rimsky’s most famous student, followed his example in both *The Firebird* and *Petrushka*.

Composers have been drawn to the octatonic scale (especially the semitone-tone ordering) because of the wide range of musical possibilities it affords - from tonal to bitonal to dissonant, almost atonal, harmonic colourings. **Exs.15-18** give some idea of these possibilities. As in tonal music, octatonic writing can use “chromatic” decoration in the form of appoggiaturas, passing notes etc., as in **Ex.15** (from Rimsky’s famous *Scheherazade*). This can make octatonic passages more difficult to identify and analyse, particularly when, as was often Rimsky’s practice, one form of the scale (semitone-tone ordering) is used for the harmonies while the other (tone-semitone ordering on the same note) is used for the melodies – enabling the use of all 12 notes of the chromatic scale within an octatonic framework. Unlike major and minor scales, the octatonic scale is symmetrical, meaning that its interval pattern is regular. Just as a whole-tone scale can only be transposed once (C to Db, for example), transposing an octatonic scale more than twice will result in the same set of notes, though starting on a different pitch. The octatonic scale is the second of Messiaen’s (1908-92) so-called *modes of limited transposition* – see **Ex.18**. As such, the scale is often partitioned (grouped) into harmonies separated by minor 3rds or tritones (either vertically or horizontally). **Exs. 15, 16, 18 and 19** all demonstrate this. Music based on the octatonic scale integrates well with a tonal idiom, since it contains both major

and minor chords (sometimes with the same root), as well as dominant 7ths, added 6ths etc. Indeed, in terms of harmony, the characteristic octatonic sound is formed by combining triads (or dominant 7ths) either a tritone or minor 3rd apart – as in the famous “Petrushka chord”, which combines two major triads a tritone apart (C and F#). The octatonic scale is also used in modern jazz, where it is known as the diminished scale – see **Ex.19**.

William Mathias seems to have been drawn to the octatonic scale, possibly because a number of its constituent elements, such as the variable minor/major 3rd and diminished 5th were already features of his own musical style. **Exs.20 & 21** are taken from Mathias’ Flute Concerto (1992). It has become the practice to refer to the various forms of the octatonic scale by the three “Collections” designated by Peter van den Toorn in his book on the music of Stravinsky, and it is this form of nomenclature that has been used in these notes – see **Ex.22**.

The octatonic scale was also used by French composers such as Debussy, Ravel and Poulenc, sometimes only briefly. In the final bars of his *La désinvolture et la discrétion* from *Les Soirées de Nazelles*, Poulenc, for comic effect, briefly interrupts a mostly diatonic passage with a 2-bar octatonic fragment. Note the typical minor 3<sup>rd</sup> partitioning of the scale (E flat → F sharp → A → C), as well as the rhythmic dislocation and contrasting pitch content with the surrounding music. Also note the pedal direction, which blurs the whole of the “chromatic” 2-bar phrase. All notes belong to Collection II. See **Ex.23**.

Ex.15 - Scheherazade - Rimsky Korsakov

The musical score is written for piano (P) and string quartet (Violin I, Violin II, Viola, and Cello/Double Bass). The key signature is one sharp (F#), and the time signature is 4/4. The score is divided into four systems, each containing a piano part and a string quartet part. The piano part features a melodic line with various ornaments, including grace notes and trills, and is often accompanied by a sustained harmonic background. The string quartet part provides a harmonic and rhythmic foundation, with the violins and violas often playing in unison or octaves, and the cellos and double basses providing a lower harmonic support. The score includes various musical notations such as slurs, ties, and dynamic markings, indicating a complex and expressive piece of music.

Harmonic reduction of Ex.1 showing typical partitioning of the octatonic scale into minor 3rds

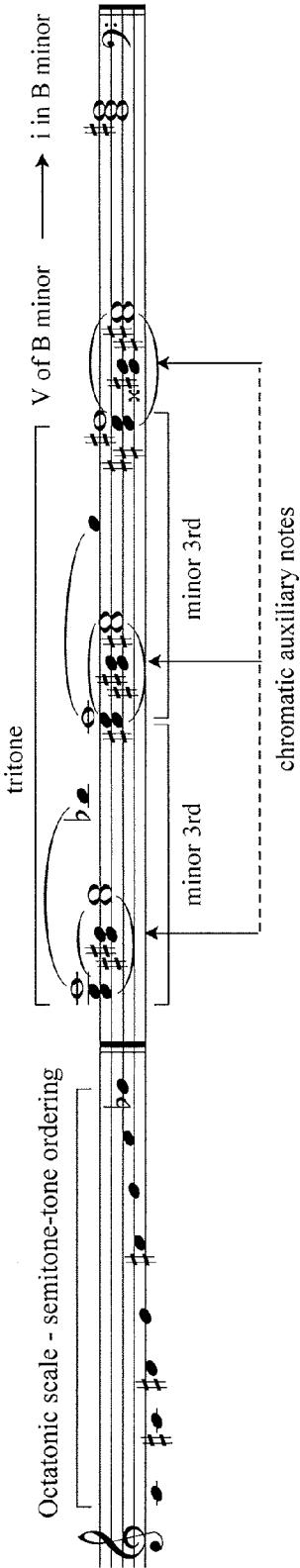
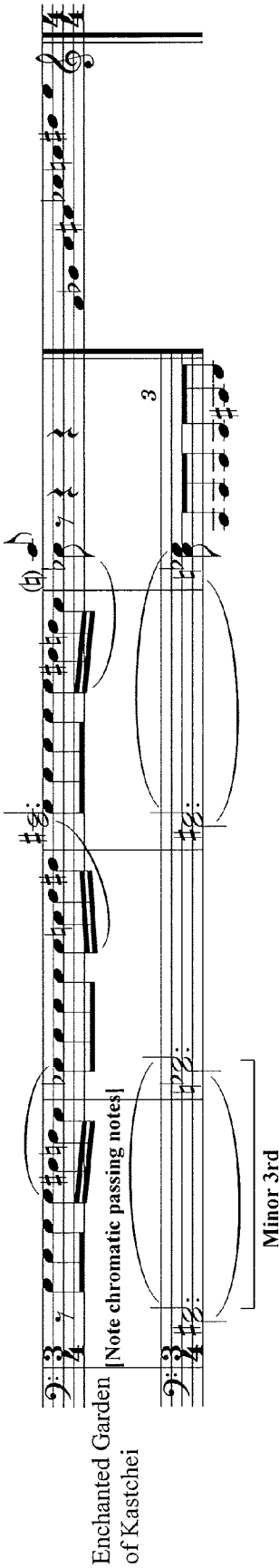


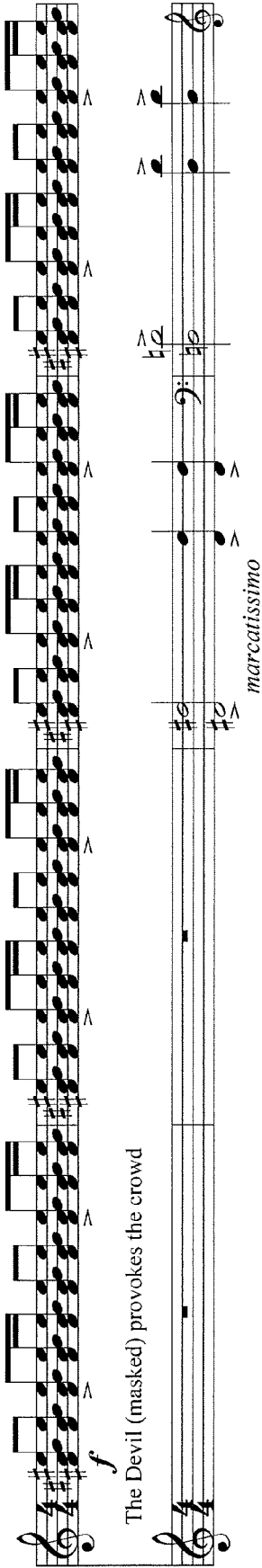
Diagram illustrating the harmonic reduction of the octatonic scale into minor 3rds. The scale is shown in two staves: a treble clef staff and a bass clef staff. The notes are grouped into pairs of minor 3rds, labeled "minor 3rd". A bracket labeled "tritone" spans the first two pairs of minor 3rds. A bracket labeled "V of B minor" spans the last two pairs of minor 3rds, with an arrow pointing to "i in B minor". A dashed line labeled "chromatic auxiliary notes" indicates the chromatic movement between the two staves.

Ex.16 - The Firebird - Stravinsky



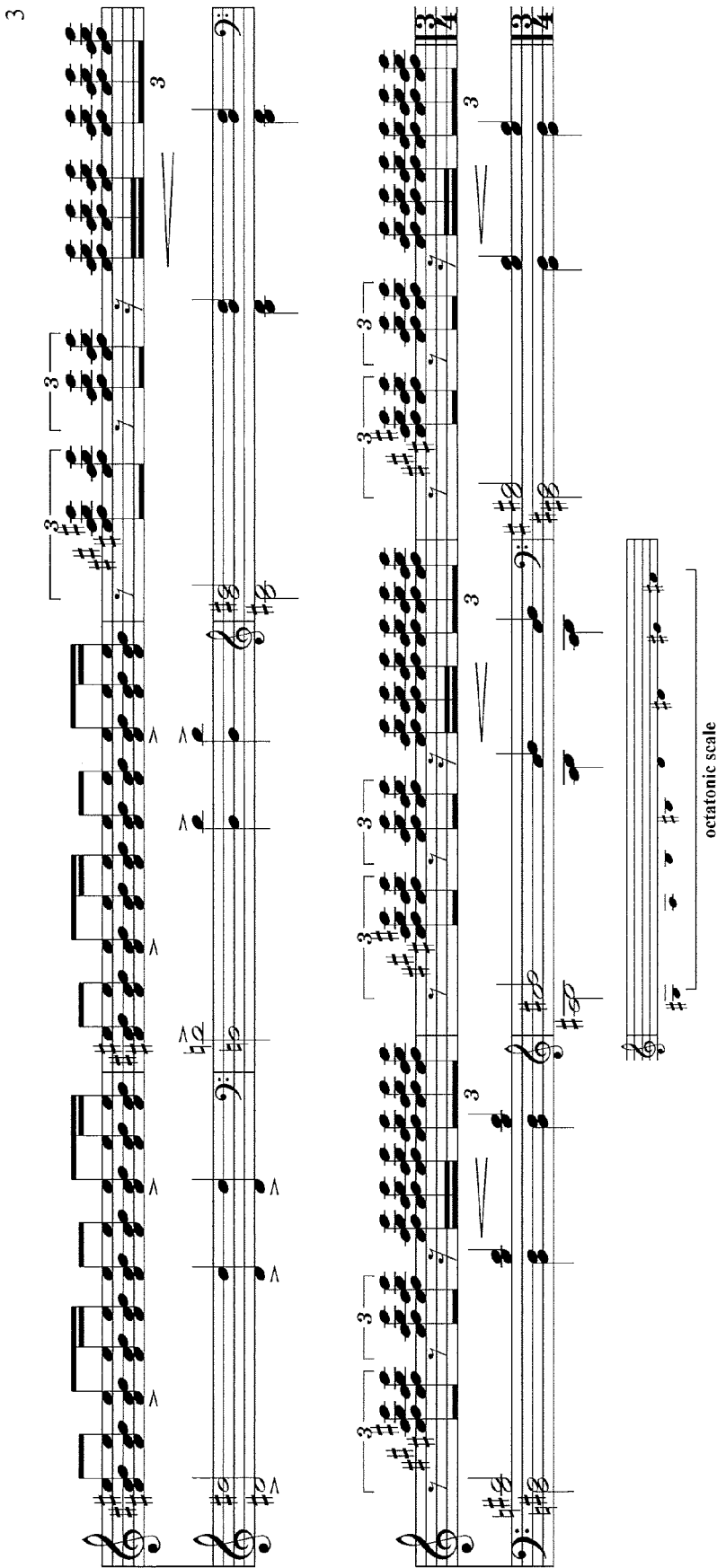
Excerpt from "The Firebird" by Stravinsky, titled "Enchanted Garden of Kastchei". The music is in 3/4 time. It features a melodic line in the treble clef and a bass line in the bass clef. The bass line includes a triplet of eighth notes. A bracket labeled "Minor 3rd" indicates a specific interval in the bass line. A bracket labeled "Note chromatic passing notes" indicates a chromatic movement in the bass line.

Ex.17 - Petrushka - Stravinsky



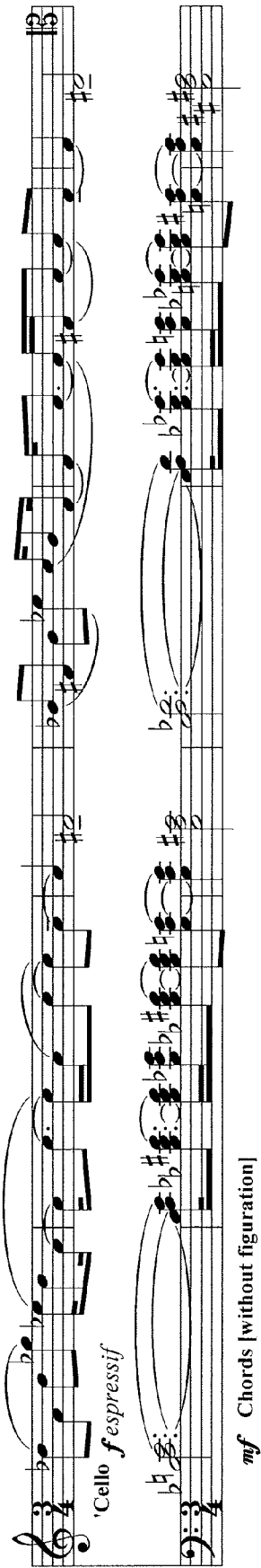
Excerpt from "Petrushka" by Stravinsky, titled "The Devil (masked) provokes the crowd". The music is in 4/4 time. It features a complex rhythmic pattern in the treble clef and a bass line in the bass clef. The treble clef staff includes a forte dynamic marking (*f*). The bass line includes a *marcatissimo* marking. A bracket labeled "Minor 3rd" indicates a specific interval in the bass line.

3



octatonic scale

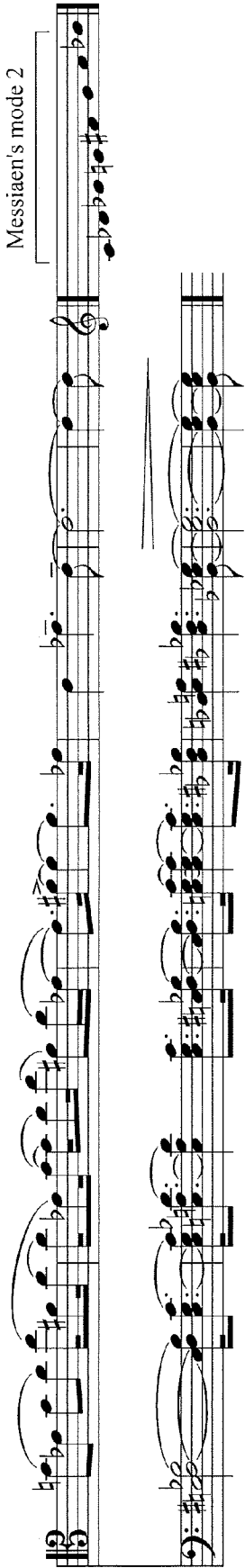
Ex.18 - Quatuor pour la fin du temps - Messiaen



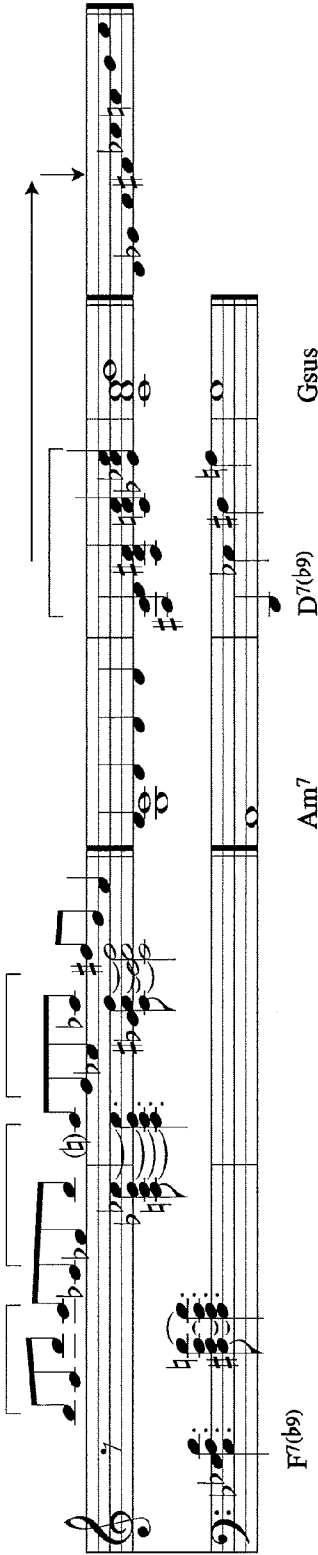
*Cello f espressif*

*mf* Chords [without figuration]

Messiaen's mode 2



Ex.19 - Typical use of diminished scale in jazz harmony



F7(b9)      Am7      D7(b9)      Gsus

Ex.20 - Flute Concerto [II] - Mathias

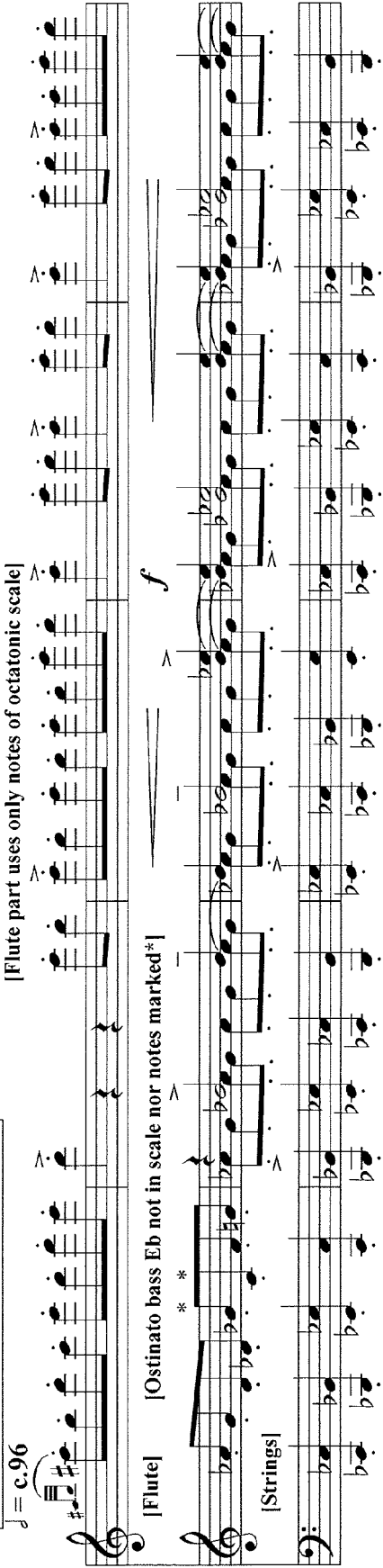
$\text{♩} = \text{c.96}$

[Flute]      [Ostinato bass Eb not in scale nor notes marked\*]

[Strings]

[Flute part uses only notes of octatonic scale]

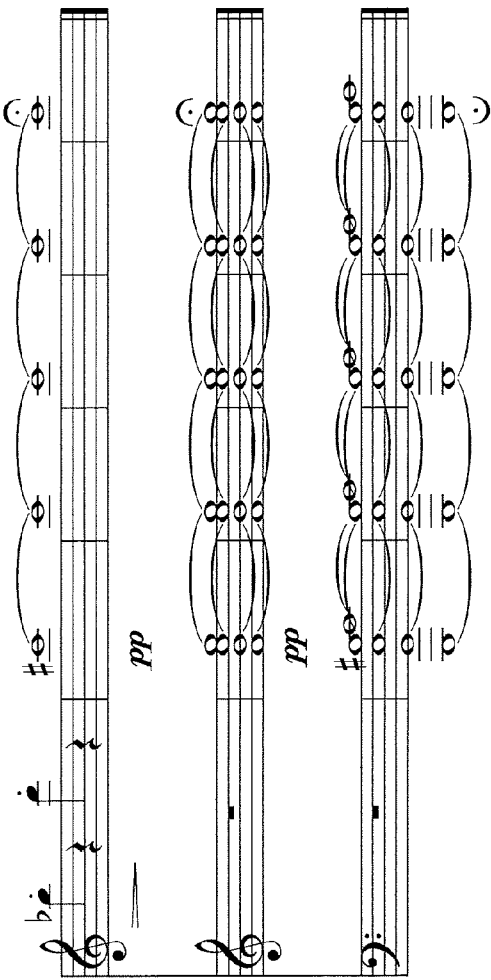
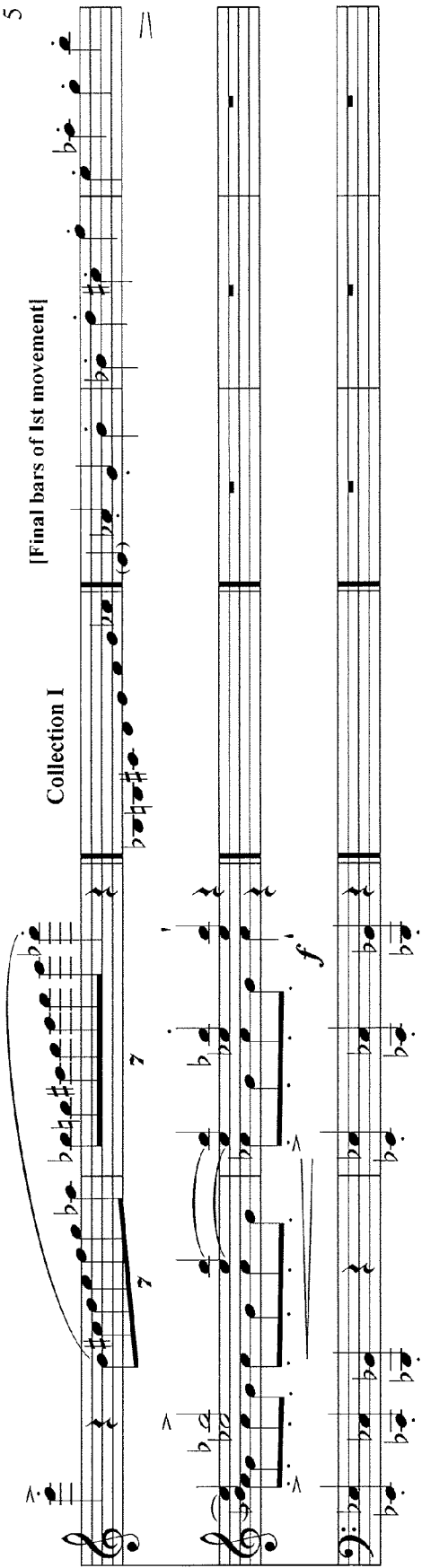
*f*



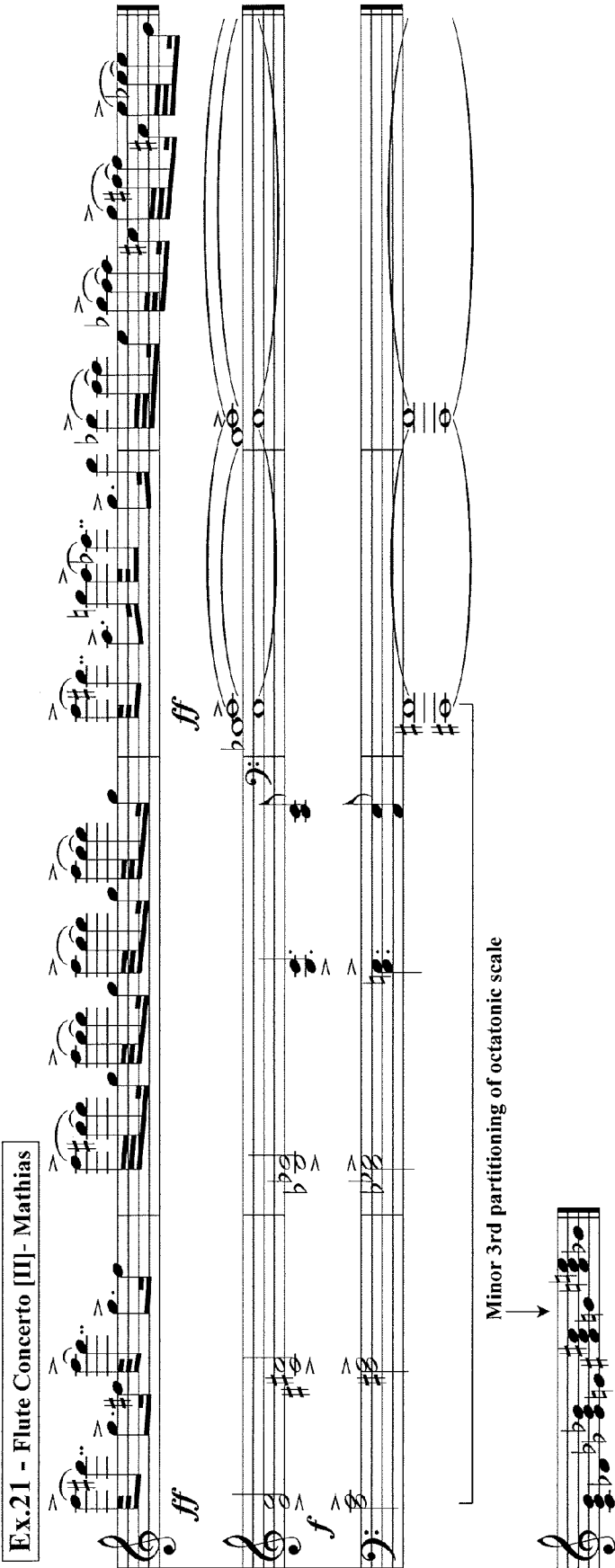
5

[Final bars of 1st movement]

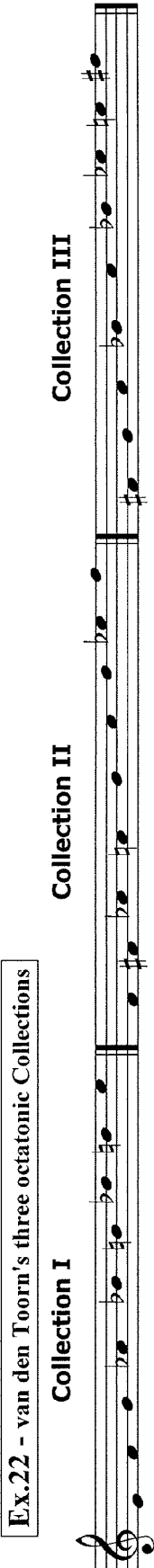
Collection I



Ex.21 - Flute Concerto [III]- Mathias



Ex.22 - van den Toorn's three octatonic Collections



Ex.23 - Les Soirees de Nazelles - Poulenc

Presto

Bar 45 *p*

sans ralentir

octatonic

The musical score is written for piano in 2/2 time, key of D major. It begins with a 'Presto' tempo marking and a piano (*p*) dynamic. The score is marked 'sans ralentir' (without slowing down). A bracket labeled 'octatonic' points to a specific melodic line. The score includes various musical notations such as notes, rests, and accidentals.