The Implication of Harmonic Relations in the Architectural Framework of "Scheherazade" (Masques, op. 34) by Karol Szymanowsky

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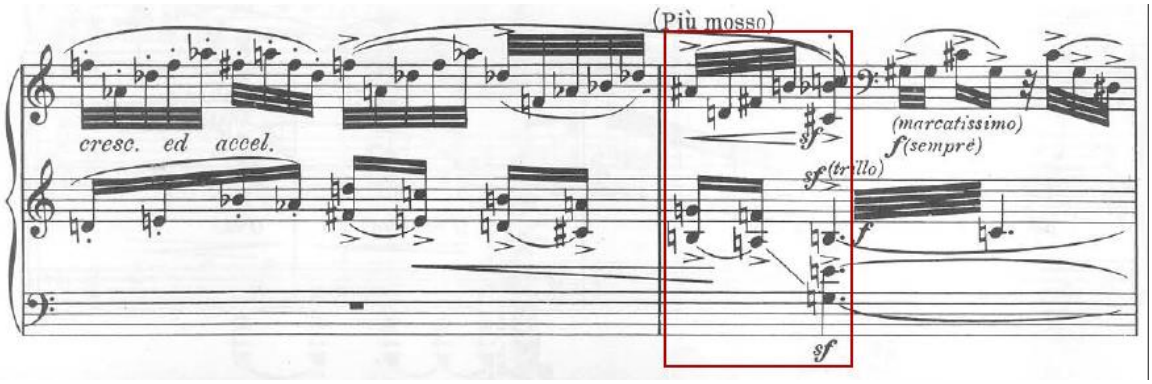
[i.1] The Masques Op.34 tryptic is one of Karol Szymanowski's greatest piano works, written between 1915 and 1916 after another two major cycles: *Métopes* Op.29 for piano solo, and *Myths* Op.30 for piano and violin. The piece "Scheherazade", about ten minutes long and placed at the beginning of the cycle, was in fact written last. It directly refers to the Persian mythology of The Tales of the Arabian Nights, which relate the tale of Scheherazade. Night after night she continued telling her stories to the sultan until managing to put an end to the massacre of virgins he was killing after making them his wives, persuaded of the treacherousness of the feminine soul. Szymanowski does not accomplish a strict musical illustration of the legend but he translates its essence. This work is all about bewitchment: by the power of the imaginary, with each new tale Scheherazade takes on a new appearance in the eyes of the sultan; in order to save her own life she reinvents relentlessly, draped in the veil of the oneiric. Desiring to illustrate these aspects, Szymanowski conceives the work as a succession of multiple moments which at first sight seem antinomical. Like a personality which refers to a unique and individual being beyond its multiple facets and its changing aspect, the true nature of this work can be fully understood only after having revealed the unifying principle which binds together all these different musical moments. Just as, in the case of a sculpture, in order to understand the technicality it is essential to know exactly which are the characteristics and the limits of the raw material, it is the harmonic structure and its implications in the formal design that will make the object of this study. In "Scheherazade", the sections are marked by well-defined metric indications and each of these sections is organically articulated around one or two harmonic polar centres. There is a great risk in apprehending the work as a kaleidoscope of disparate elements or senseless states. The aim of this study, which discloses the structure of the musical discourse and its underlying unifying principle, becomes important not only in the theoretical field but also for the elaboration of an informed and constructed interpretation of the work.

[1.1] The first reading of "Scheherazade", supported by an analytical listening, renders clear the recurrence of a motif of characteristic form which seems to define itself as a structural element, punctuating certain sections of the musical discourse or expressing a transitional moment in its development. It appears six times throughout the work, at regular intervals. As each occurrence represents the ending of a gradual dynamic progression, it shows a point of expressive climax. This motif consists of diatonic aggregates at the left hand and of a chromatic melisma at the right hand and it is organised in textural layers. This becomes quite evident when the *martellato* bass in the instrument's low register establishes the stability of the ensemble and inscribes it harmonically in an organizing focal point.



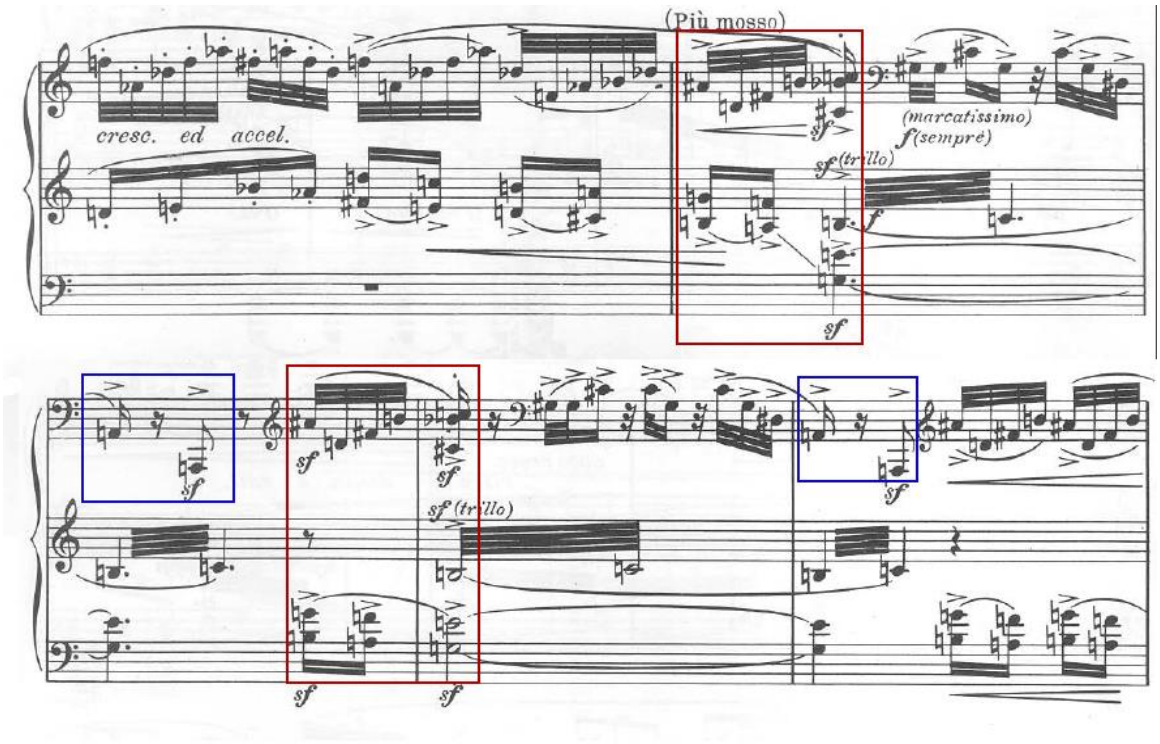
Example 1. Characteristic motif, 1st occurrence, measure 34, page 4 [1]

[1.2] We can see that a harmonic dimension intervenes quite rapidly within an apparently melodic figure. The right hand obeys the voice leading rules of classical harmony; that is coherent movements of the voices, at close intervals, inside a chord progression. So, the sixth chord D–F#–B formed by demi-semi quavers of which A# is considered as an appoggiatura for B, moves to the next chord in a movement of D to C#, of B to C, and of F# to Bb. Yet, it is this concluding chord, which we will call *Alpha chord* from now on, which interests us and which will represent the starting point of our demonstration. As the writing principles of classical harmony indicate (principles which have modelled the sound perception for centuries and which Szymanowski, in his compositional aesthetics, does not mean to question), a chord only truly establishes itself and its expressive meaning by the relationship to the following chord. By the means of

[1] The page numbering in this article corresponds to the following edition of the score: K.Szymanowski, *Masques–Trois Morceaux de piano op.34*, Universal Edition U.E.5858

remembrance and assimilation, the classical ear thus unifies the composite substances belonging to each of the aggregates and transmutes them into a coherent directional flow.

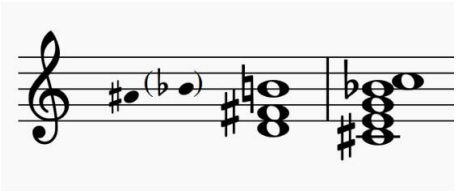
[1.3] Initially, when the motif first appears at page 4, the sound of the *Alpha chord* seems to be that of a dominant 9th on C, with its 5th placed at the bass and the root at the top. Yet, the harmonic structure of the chord fully asserts itself only when the lowest textural layer appears. The latter becomes, not only by its range but also by its repetition, the fundamental on which lays the chord's architecture.



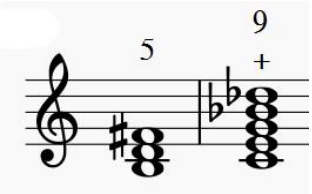
Example 2. Characteristic motif, first occurrence, measure 33-37, page 4-5

From this moment on, our chord takes the flavour of a dominant 9th on **A**, whereas the preceding melodic and harmonic aggregate D–F#–B takes on the traits of a passing chord invested with a strong directionality, all the more striking through its multiple reiterations. Moreover, we have to emphasise here the mastery and the subtlety of Szymanowski's writing. The intensity of the dissonance C–C# present in the dominant chord is neutralised thanks to the prior preparatory dissonant effect of A#–B. Although the A#, a stressed dissonance, is a non-chord tone within the harmonic complex in which it appears, it is already part of the following dominant 9th chord (by means of enharmonic equivalent—Bb). We find ourselves, in a way, quite close to the device used by Wagner in the famous

Tristan progression, where the appoggiatura of the 5th of the dominant chord loses its attraction potential in relation to the preceding chord.

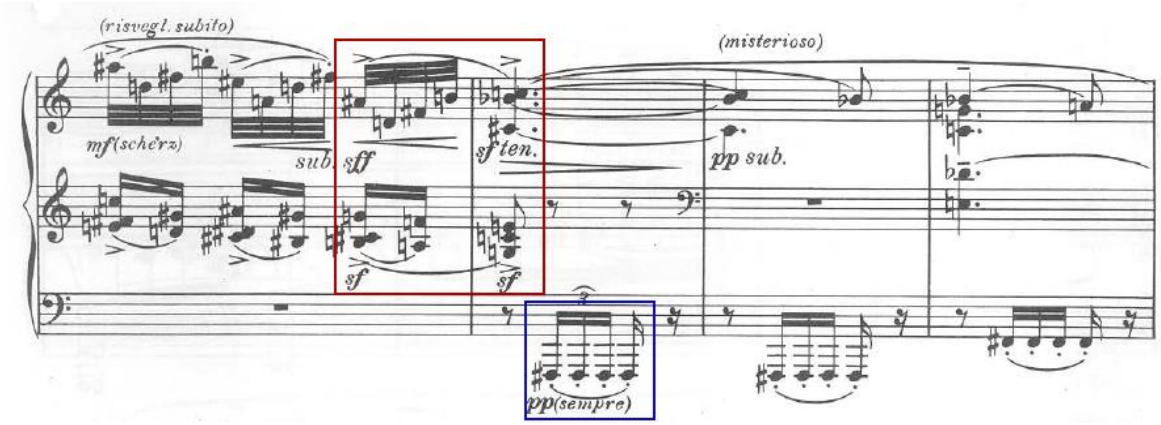


Example 3. Characteristic motif, 1st occurrence, harmonic reduction



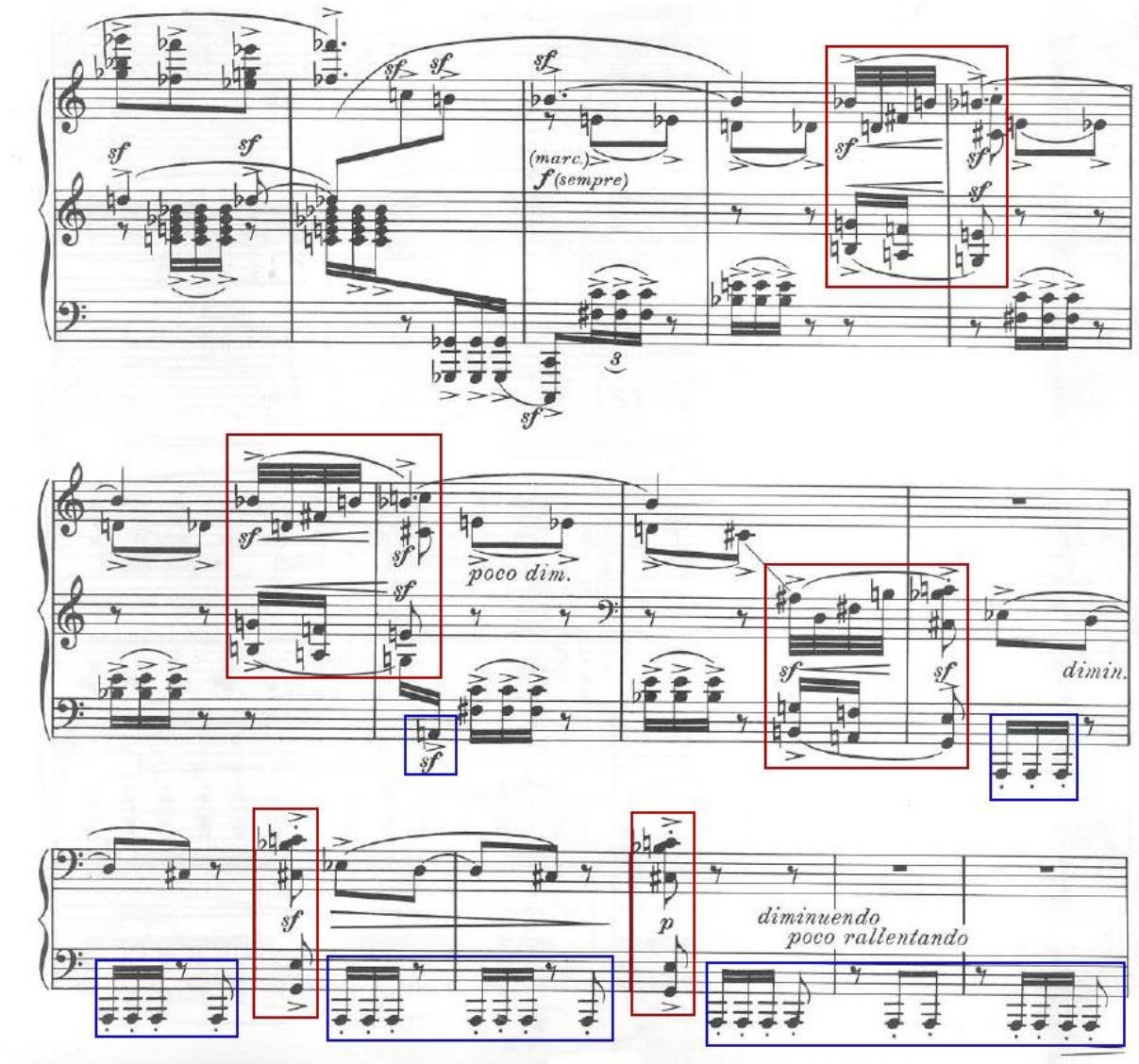
Example 3a. Chords of characteristic motif in root position

[1.4] Considering these conclusions, let us now discuss the different occurrences of the motif throughout the piece and map out the harmonic implications which underlie the *Alpha chord* that we perceive as a dominant 9th. At its second occurrence, page 8, the central harmonic pole stated by the bass moves a third away and transforms the signification of the chord's constituent notes.



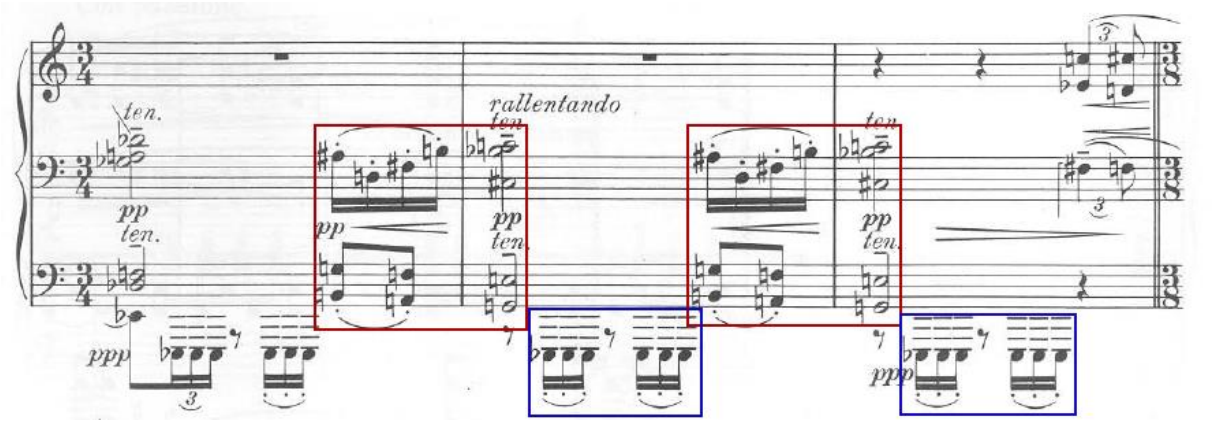
Example 4. Characteristic motif, second occurrence, measure 86-89, page 8

At the heart of this new harmonic space centred on **F#**, the G is perceived as a minor 9th, the E as a 7th, the C# as the 5th, and the Bb—enharmonically A#—as the leading-note.



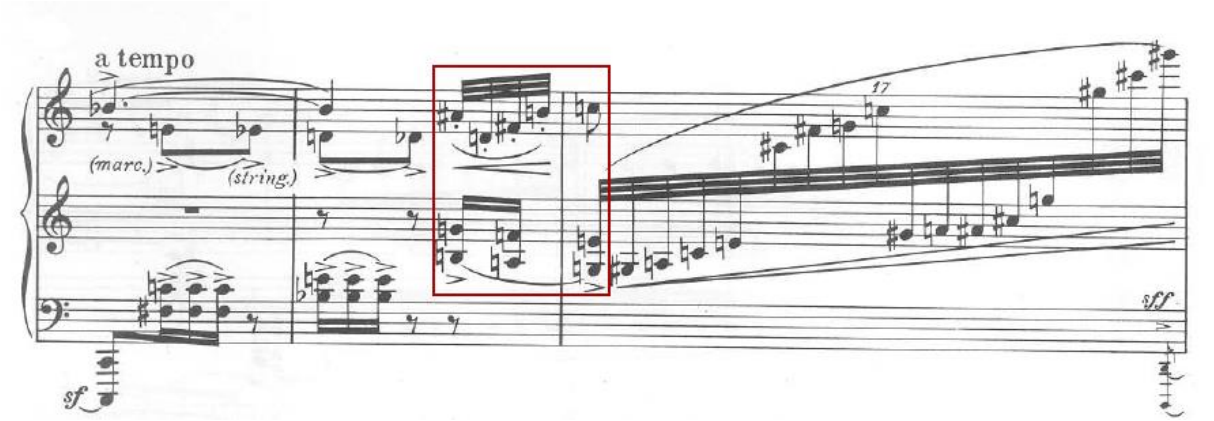
Example 5. Characteristic motif, third occurrence, measure 127-141, page 10

At its third occurrence, page 10, the superposed tritons which appear shortly before the *Con passione* and the repetition of the Gb-C leap in the bass briefly disturb the assimilation of the *Alpha chord* within the harmonic space based on F# or on C (in each case, dominant 9th with lowered 5th). Yet, it is the **A** which stands out as the fundamental note, like in the first occurrence. It goes on, solitary and repeated, even after the dissolution of the aggregate.



Example 6. Characteristic motif, fourth occurrence, measure 168-170, page 12

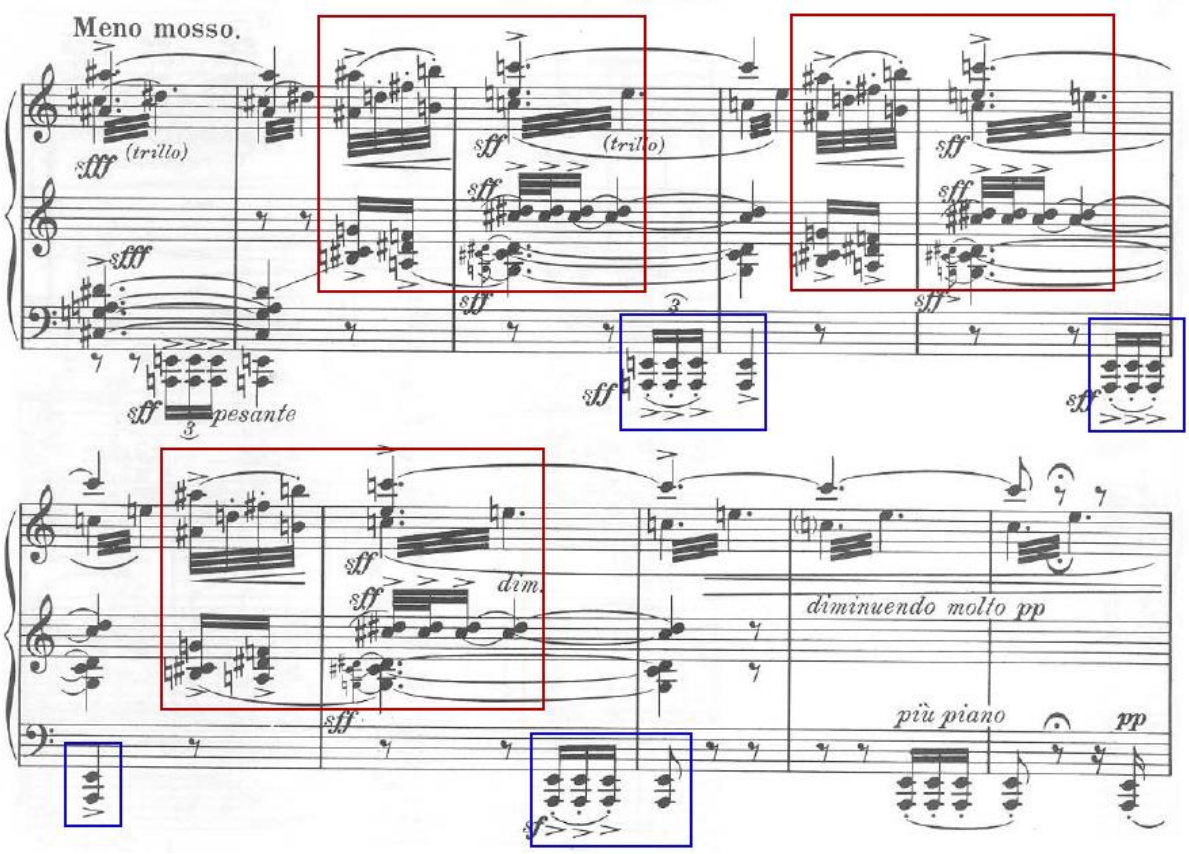
The fourth occurrence takes place on page 12. Again, the fundamental note of the chord moves a third, generating a new musical implication of the constituent notes. The harmonic space now based on **Eb** transforms the C# (harmonically Db*)* into a 7th, the Bb into a 5th and the G into a leading-note.



Example 7. Characteristic motif, fifth occurrence, measure 252-254, page 16

The fifth occurrence, page 16, passes almost unnoticed into the great density of the musical flow. The appearance of the motif, after an expressive culmination already seen before (third occurrence, page 10), is this time extremely brief. The chord, deprived of any dissonance, is given in its 6/4 position and for a moment it sounds like a second inversion of C major. But it is quickly engulfed by a brilliant ascending passage. The role of this sudden outburst of demi-semi quavers is difficult to figure out at a first glance. But, if we consider the D octave in the bass as the end point of this passage, then it becomes possible

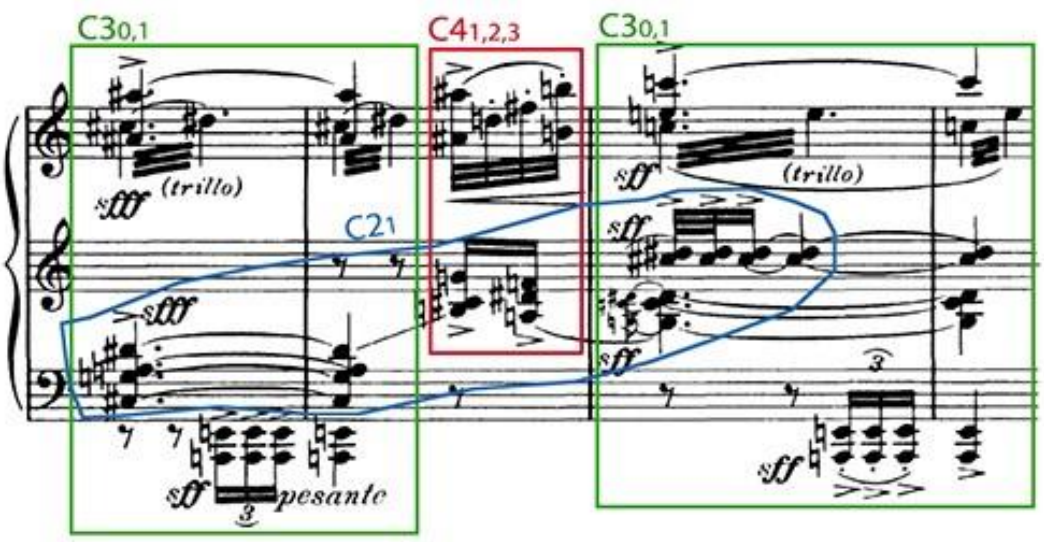
to perceive, to a certain extent, the constituent notes of a dominant chord on A (**A**–C#–E–G–Bb/A#). This could allow us to re-evaluate the significance of the *Alpha chord* and to place it, yet again, into a dominant 9th complex. The G#, apart from being a passing note (between G and A), anticipates in the last three demi-semi quavers the whole tone structure which is established next at *Poco sostenuto* and creates a fifth C#–G# which, as we shall see further on, will be of great importance for the architectural construction of the piece.



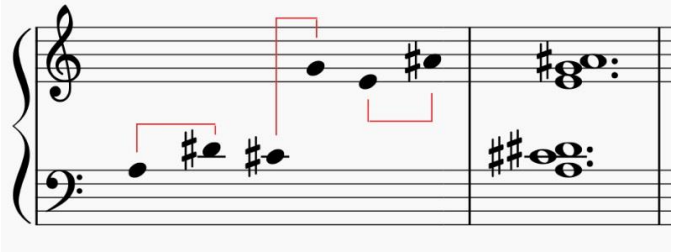
Example 8. Characteristic motif, sixth occurrence, measure 275-284, page 17

Finally, the last and most complex occurrence, page 17, by the independence of the textural layering and its structured distribution on the keyboard, creates the illusion of a simultaneous coexistence of several harmonic worlds. The dissonance C–C# establishes itself by its harshness and becomes a multiparametric factor. Indeed, taken separately, the upper and lower parts of the structure sound like an A minor chord, whereas the middle part, by inversion of the C#, renders the third unstable. We could generalise and by taking into account only the upper part we could hear a progression towards C major, which the appearance of D# contradicts. However, this type of theoretical reasoning quickly attains its limits when confronted to the listening experience. It is around the pole **A**, affirmed at

the bass by the fifth A–E, that the collection is structured. Shortly before the occurrence of the motif Szymanowski displays an altered chord similar in structure to a dominant 9th chord. Based on A, this chord, is a superposition of three tritones: A–D#, C#–G, E–A#. So, it has the singularity of showing the 5th E along with its descending alteration D#. We find here the interpenetration of several organisational systems of the musical discourse: octatonicism, acoustic scale, whole tone scale.



Example 9. Characteristic motif, sixth occurrence, measure 275-278, page 17



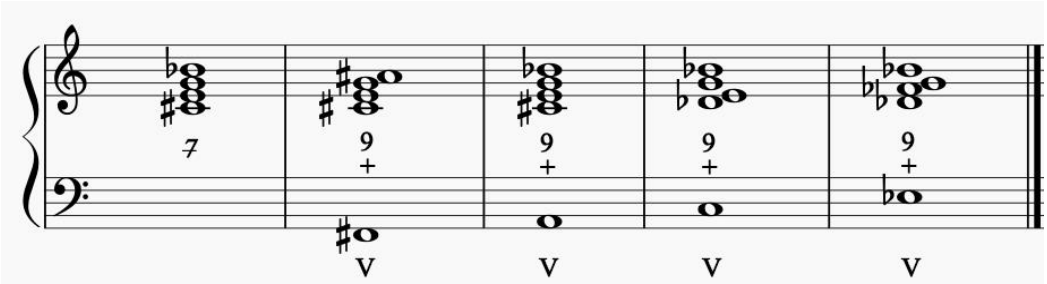
Example 10. Organising chord of the sixth occurrence of the characteristic motif

It is the aggregate shown above that personifies the *Alpha chord* of our motif. The C is perceived as an embroidery of the A# and its vocation is to return to it, following the principle of dissonance and resolution. However, it remains motionless, undecided, as uncertain as Scheherazade's destiny which once hung by the fertility of her imagination.

[1.5] This analysis of the five different occurrences of the motif leads us to the conclusion that the *Alpha chord* is fundamentally made of three piled up minor thirds (C#–E–G–Bb). Their harmonic role changes when a new layer is being added in the bass. The

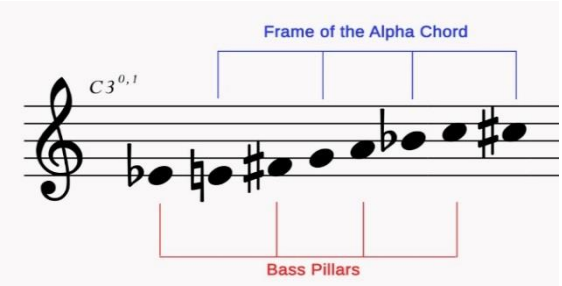
new harmonic axis is determined by the positioning of this new layer: on F#, A, [C], or Eb.[2]

And so the symbolism of the mask becomes obvious. Whilst the aggregate carries in its essence and through its occurrences a permanently perceptible dominant flavour, its expressive potential changes with the harmonic space. A naturally instable piling of minor thirds becomes structured and is anchored to a pole of attraction when a fundamental note is determined in the bass and a perfect fifth is generated.



Example 11. The Alpha chord, and his four different harmonic implications

[2.1] The onward movement of the bass all through the occurrences of the motif is unquestionably remarkable. Its course shows the accomplishment of a full cycle of minor thirds (F#–A–C–Eb) which forms a $C3^{0,1}$ octatonic scale[3] when joined to the frame of the *Alpha chord*.

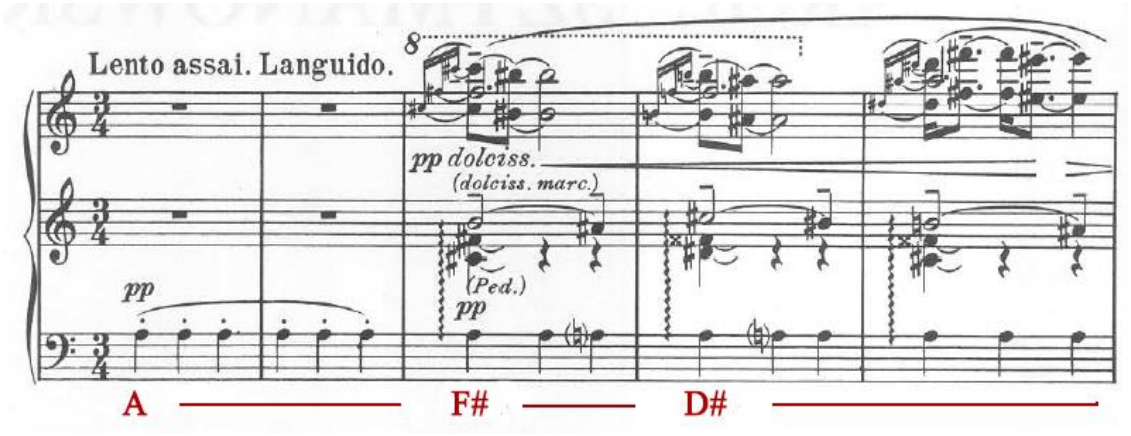


Example 12. Obtained $C3^{0,1}$ scale with the Alpha chord and his four different fundamentals

[2] The C is deliberately placed between square brackets because it only shines rather than really assert itself as a pillar (cf. above specifications on first and fifth occurrences, pages 4 and 16 of the score. Moreover in the harmonic structuration generated by the bass notes F#, A and Eb, the C present in the *Alpha chord* is dissonant, either as an appoggiatura or as an alteration of the 5th.

[3] The notation of interval cycles given here follows the notation of George Perle—cf. *The Operas of Alban Berg*. *Vol. 2: Lulu*, Berkeley–Los Angeles, University of California Press, 1985, p. 199.

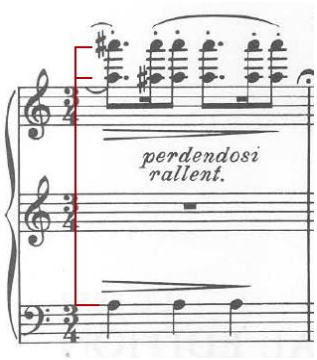
[2.2] In our above harmonic analysis we have shown that of all the notes of the cycle of minor thirds the fundamental note C only mirrored rather than really asserted itself. Now, when we proceed to the harmonic listing of the first measures of the work we find that the repeated note A is immediately followed by a sound complex which represents—once the passing notes and appoggiaturas are put aside—an F# minor chord in its first inversion. An altered dominant chord on D# follows. So, within the space of four measures Szymanowski reveals the structural harmonic axis of our motif by a series of minor thirds which deliberately leaves out the C.



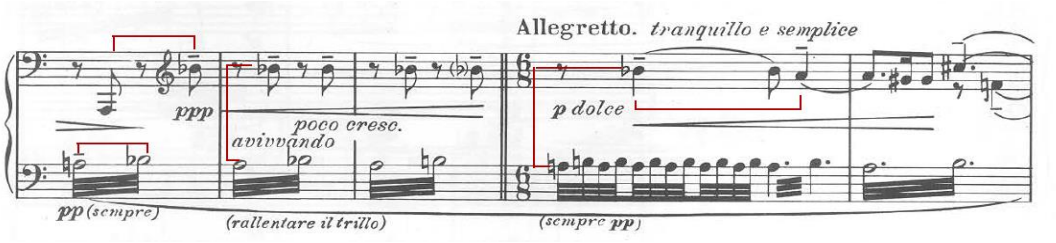
Example 13. Three first pillars of section Languido, measure 1-5, page 2

[2.3] On the other hand, given the octatonic scale formed by the notes of the *Alpha chord* and the movement of the bass notes of this same chord, the characteristic semitone shifting present all through the work[4] finds a form of theoretical explication: the semitone relationship generated by the superposition of two groups of minor thirds is the base of the octatonic structure.

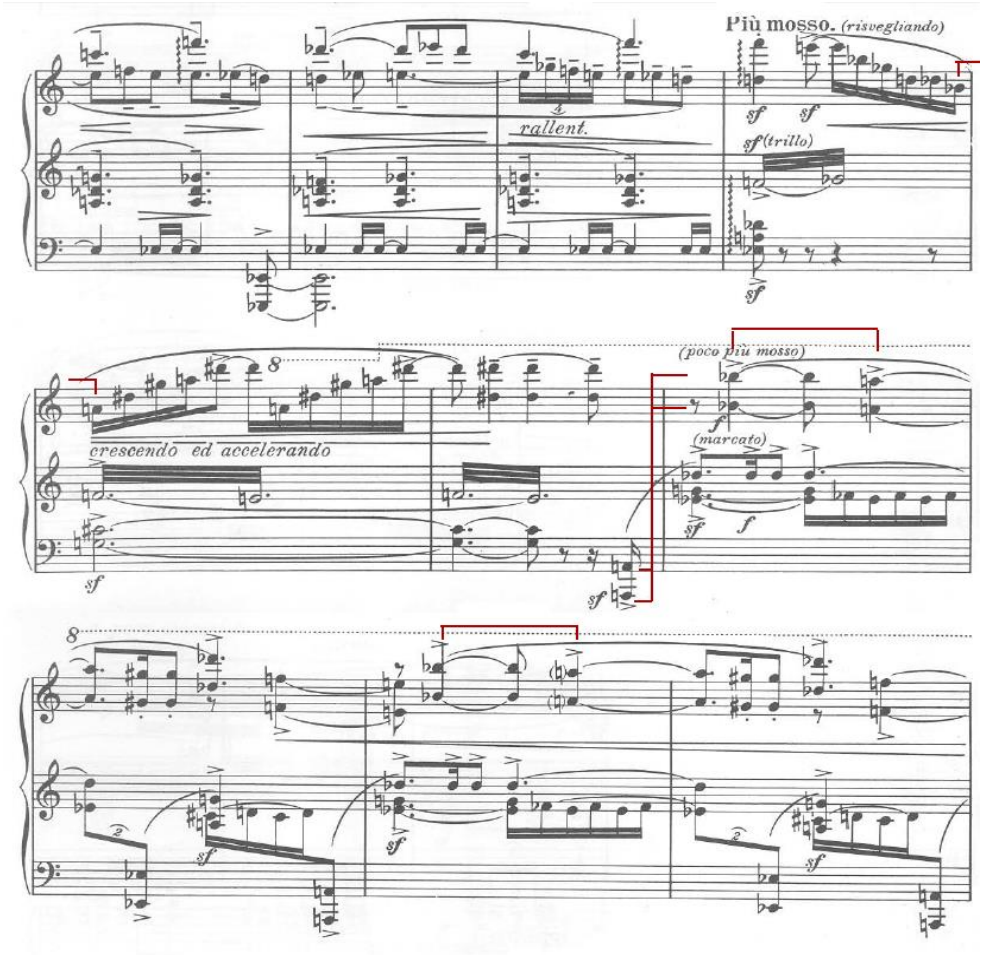
[4] We find the semitone shifting A–Bb *(Lento assai* page 1, *Allegretto* page 5, *Piu Mosso* page 6–7, *Andantino* page 11, *Andantino* page 18, *Tempo I* page 18*)* and its transposition D–Eb (*Poco avvivando* page 3, *Poco Meno* page 11, *Ancora piu vivo* page 13).



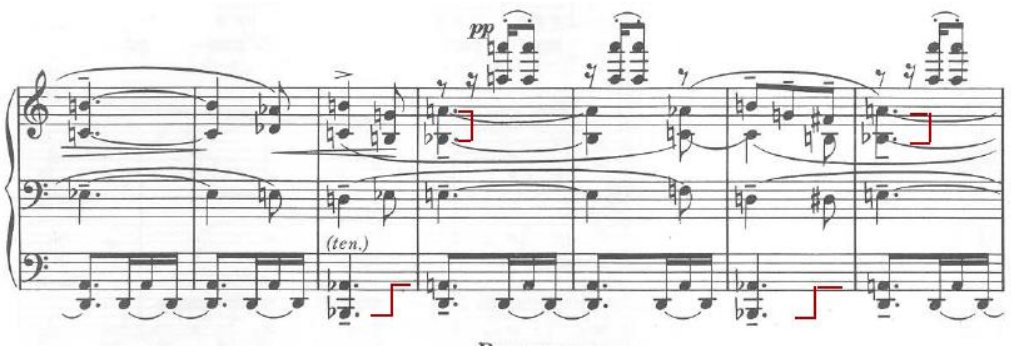
Languido, measure 11, page 2



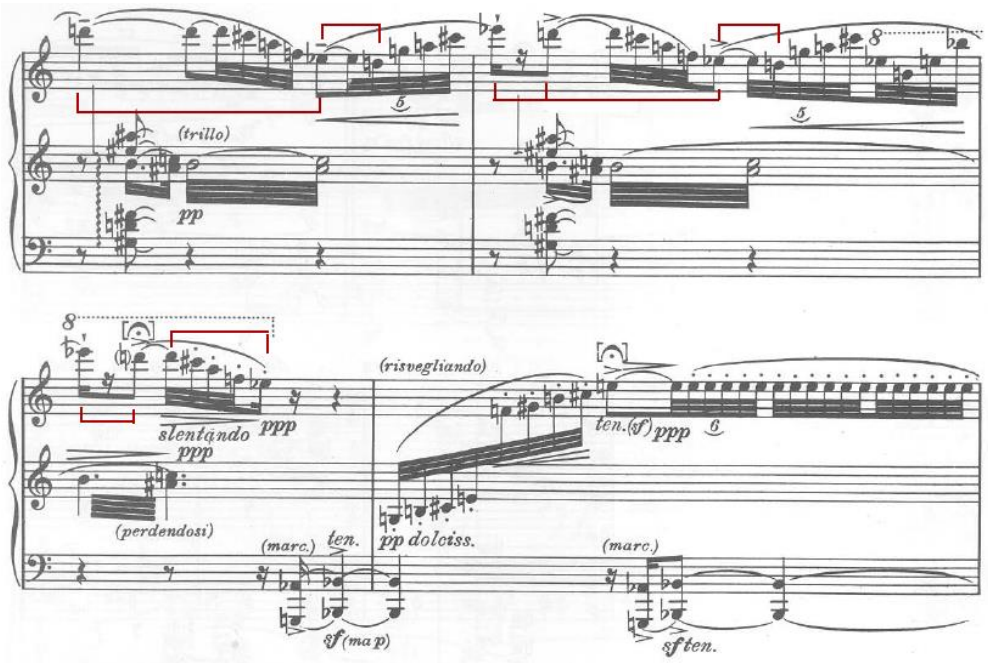
Allegretto, measure 41-45, page 5



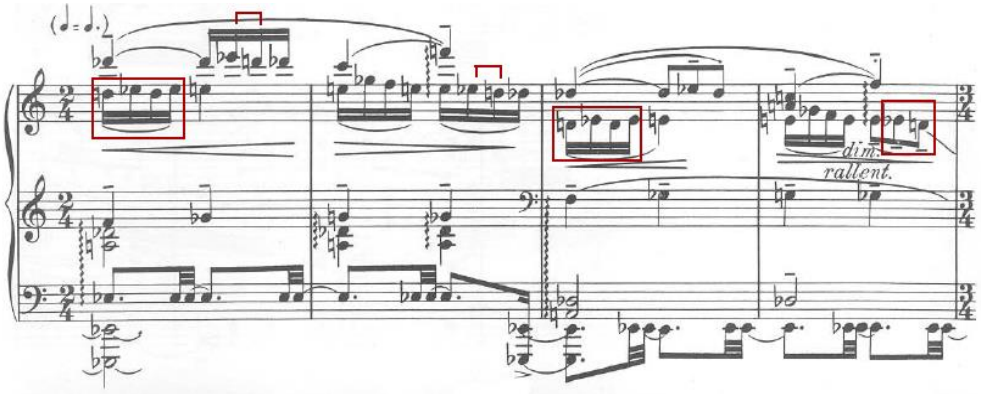
Piu mosso, measure 58-67, page 6-7



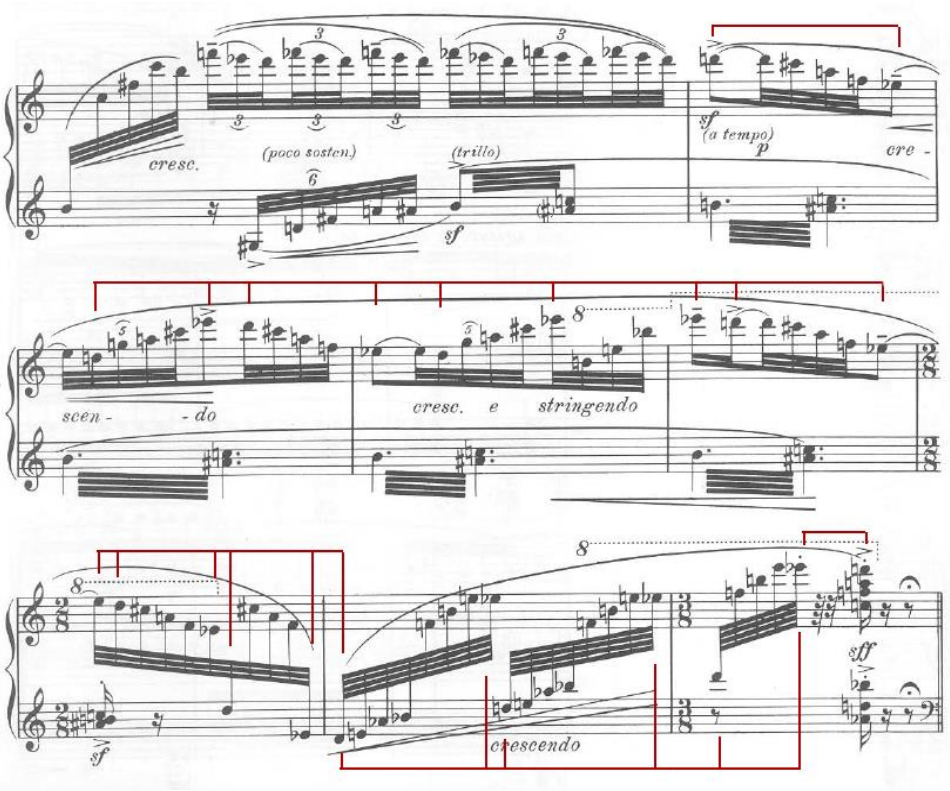
Andantino, measure 150-156, page 11



Poco avvivando, measure 14-17, page 3



Poco meno, measure 164-167, page 11



Vivace assai, measure 197-204, page 13

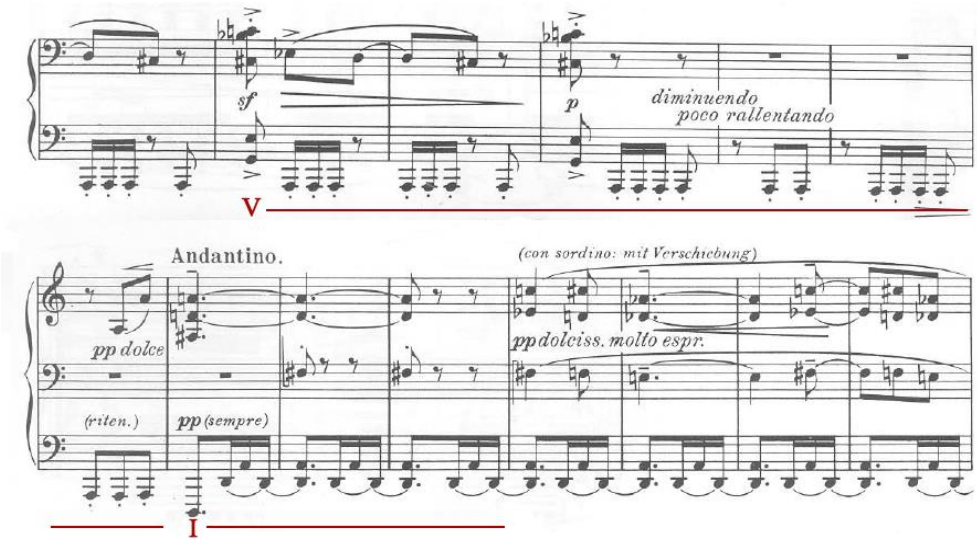
Example 14. Different occurrences of the oscillation A-Bb and D-Eb

[2.4] If the notes A–Bb and Eb are part of the $C3^{0,1}$ scale, the D on the other hand is a non-chord tone. The remarkable distinctive feature of the octatonic scale—formed with six minor thirds or 2+2 tritones—is that it can equally generate major and minor triads, thus creating perfect fifth relationships. The coexistence of the perfect fifth and the tritones is produced naturally within the minor dominant 9th chord. In our case we can accept the D as being the result of a transposition of the perfect fifth Eb–Bb (present in the $C3^{0,1}$ scale), when the Bb goes down to A.

[2.5] All of this is quite theoretical, so let us see how the D really dominates the musical discourse. At the exact middle of the piece[5] we have a clear cadential procedure of tension/relief where the third occurrence of the *Alpha chord*, sounding like a dominant chord on A, is resolved by a movement of fifth in the bass onto a D major chord. After the

[5] "Scheherazade" has a total length of 312 measures and the *Andantino* begins at measure 143. So, we can clearly speak of a central axis.

authentic cadence, three short measures give the D a chance to assert its new position as a harmonic pole.



Example 15. Perfect cadence in D major, at the exact middle of the piece, measure 136-149, page 10-11

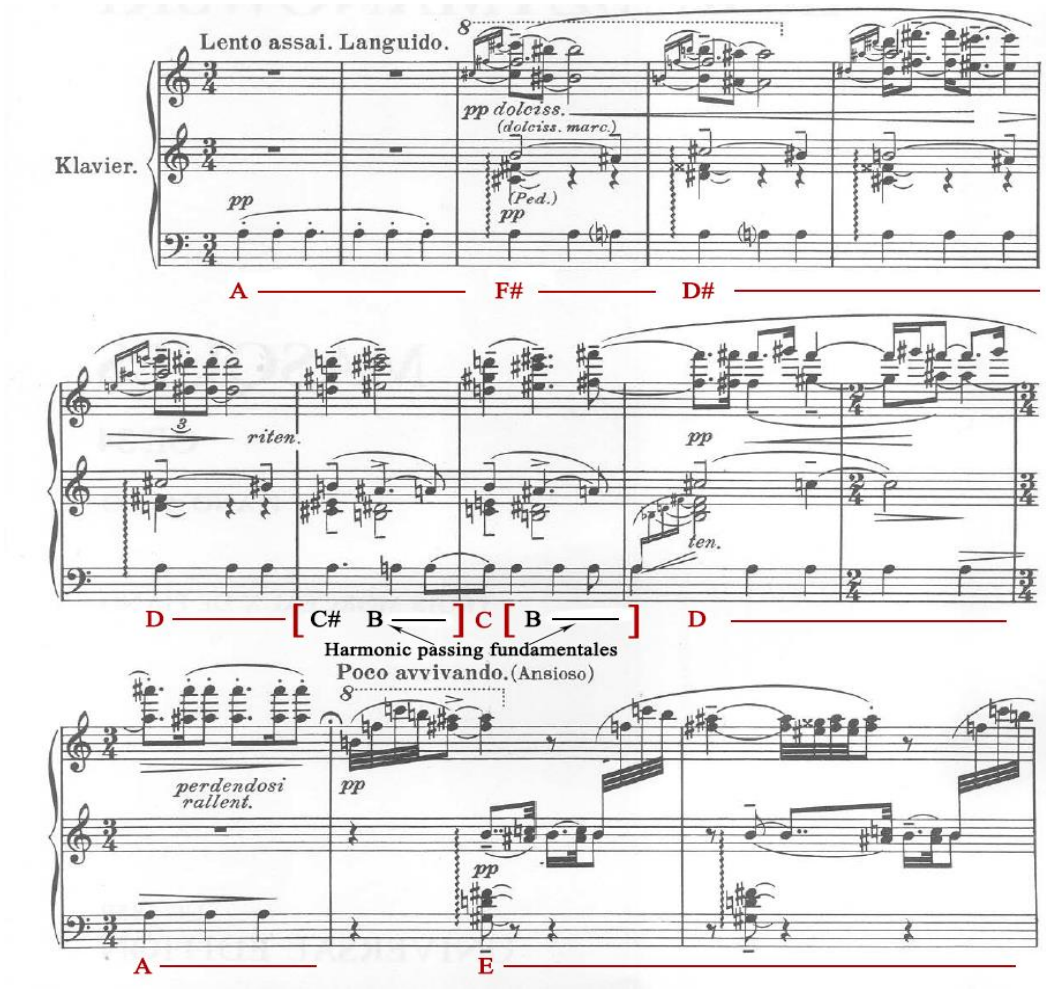
Nevertheless, the sensation of rest is brief because the beginning of the phrase immediately transforms the chord by adding two more minor thirds (C–Eb), endowing it with the sound of a dominant. Szymanowski very subtly negotiates the transition to the *Andantino*: whilst using the notes of the $C3^{0,1}$ scale he breaks the natural instability of the octatonic scale by resorting to its biological properties—the possibility to generate perfect fifths. By adding the non-chord tone D to the scale[6], the composer seems to move to another cycle, the scale $C3^{0,2}$. Still, the situation is complex because the notes C#/Db, E, and Bb seem to evoke the persistence of a cycle of minor thirds which could at the same time be part of either $C3^{1,2}$ or $C3^{0,1}$. We shall come back to this point further on.

[2.6] The D, which in the *Andantino* becomes the fundamental note, echoes the construction of the *Alpha chord* of our motif: a piling of minor thirds which becomes a directional aggregate when an additional note becomes the fundamental. At this precise moment, the piling of thirds generated by the course of the *Alpha chord*'s fundamentals

[6] When it occurs, the D does not burst out, as Szymanowski prepares it carefully in the measures preceding the *Andantino*. Eight measures before, the Eb which until now was, like the D, a passing note between E and C#, suddenly acquires a determinant role. Not only it creates a fifth relationship Eb–Bb with the chord but it also conflicts with the bass note A (by a tritone relationship). The following D, even if it is only a passing note towards C#, induces into the consciousness of the listener the fact that the fifth Eb–Bb resolves on D–A (passing through Eb–A).

(F#–A–C–Eb) becomes a significant aggregate itself with the appearance of the D which now determines it as a minor dominant 9th chord. We shall presently name this obtained aggregate *generative chord*.

[3.1] Let us now proceed to a harmonic methodology meant to enlighten our demonstration. The minor dominant 9th chord is characterised by a strong directionality, given to the two tritones by the perfect fifth. On the other hand, when we raise the Eb[7] to E, the resulting major dominant 9th chord has a more open sound and a more neutral expressiveness[8].



Example 16. The unfolding of the fundamentals, measure 1-13, page 2

[7] We chose as an example the chord D–F#–A–C–Eb, obtained in the precedent analytical process.

[8] Besides the following theoretical demonstration, we can equally justify this heightening of the minor 9th to the major 9th by the musical experience of the work's opening page: through the fundamentals of the harmonic unfolding, Szymanowski presents in the Languido section the notes forming a minor 9th chord on D (D-F#-A-C-D#/Eb); but the first chord of the following Poco avvivando section, based on E, allows us to reevaluate the previous five notes collection, by including the E as potential heightening of the Eb (D-F#-A-C-D#/Eb).

This new chord obtained shows a highly symmetrical architecture: around the A are disposed two minor thirds then two major thirds; the two extremities form two perfect fifths which balance the structure of the aggregate. The cycle of minor thirds F#–A–D is a common element between the two chords and so a constant. We chose to make this the starting point of an interval chart where the denominator is the most precise unit: the semitone.

D		**F#**	**A**	**C**	**E**
	4	**3**	**3**	**4**	

Example 17. Interval chart: Column 1

By preserving the layout of the core and by removing a semitone at each extremity, the D fundamental disappears, leaving room for a complete minor third cycle.

Eb		**F#**	**A**	**C**	**Eb**
	3	**3**	**3**	**3**	

Example 18. Interval chart: Column 2

If we continue to narrow the cycle we again obtain the chord which was our starting point in its inversion E–F#–A–C–D. Finally, the last possibility shows us an aggregate characterised by the two fifths it generates, a semitone apart:

F		**F#**	**A**	**C**	**Db**
	1	**3**	**3**	**1**	

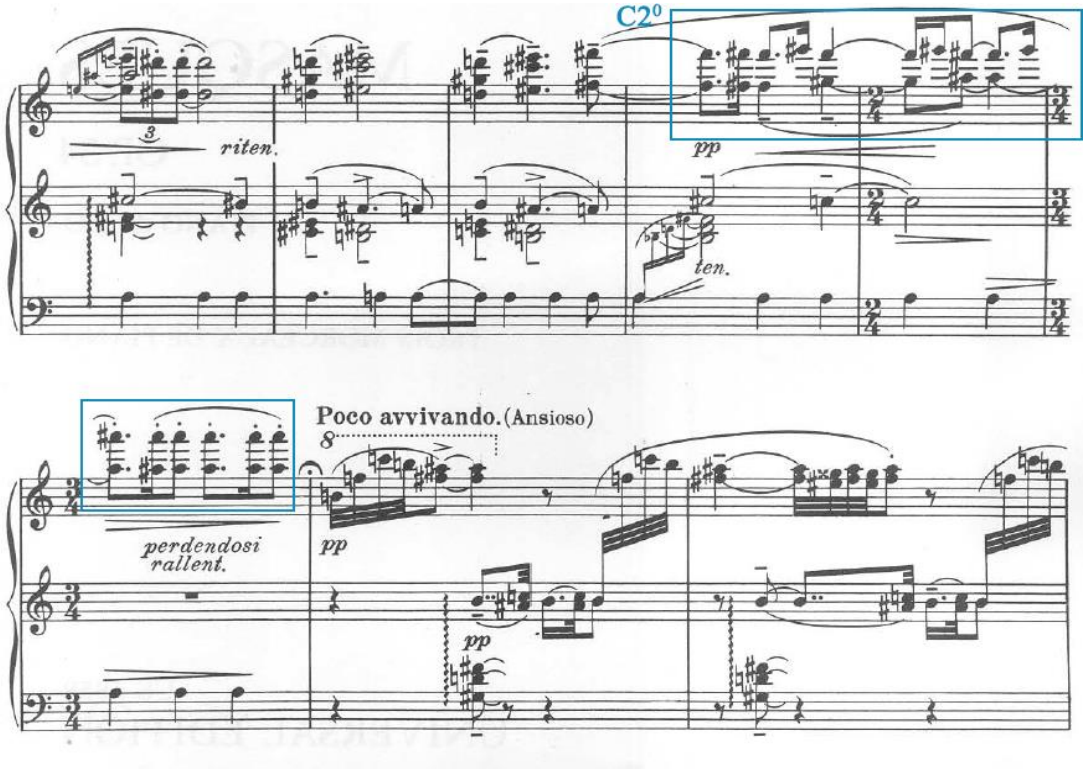
Example 19. Interval chart: Column 3

Now, if we chose to modify the core, we can turn it into a succession of whole tones which shows the two possible alterations of the 5th (G#–Bb). The centre A moves to G# illustrating the exact middle of the octave D-D:

D		**F#**	**G#**	**Bb**	**D**
	4	**2**	**2**	**4**	

Example 20. Interval chart: Column 1a

[3.2] "Scheherazade" gives us from the beginning (the introduction *Lento assai Languido*) the example of a coexistence—within a dominant chord—of the 5th with its two alterations. The first section of the work ends (measures 9–11) on a feeling of uncertainty, of harmonic floating, resulting from the use of a whole tone structuration.



Example 21. Whole-tone segment, Languido, measure 6-13, page 2

As we have seen in *Column 1a* (**Example 20**) of our interval chart, this type of structure is naturally present in the dominant 7th or 9th chords where two alterations of the 5th are simultaneously employed (here the segment of $C2^0$: F#–G#–A#–C–D). Within this segment we note the subtle enharmonic difference between A# and Bb: whether part of a melodic segment (F#–G#–A#) or of a piling of major thirds (Bb-D-F#). The aggregate attains its definitive harmonic meaning only when the C# appoggiatura resolves on C: the ostinato A in the bass sounds like the 5th of an altered dominant 7th chord on D.

[3.3] Inside a chord, the simultaneity of the 5th and its alterations leads us to a re-evaluation of *Column 1a* of our chart (**Example 20**), where the A is absent. Through an amplification of the natural symmetry of the dominant 9th chord it becomes possible to

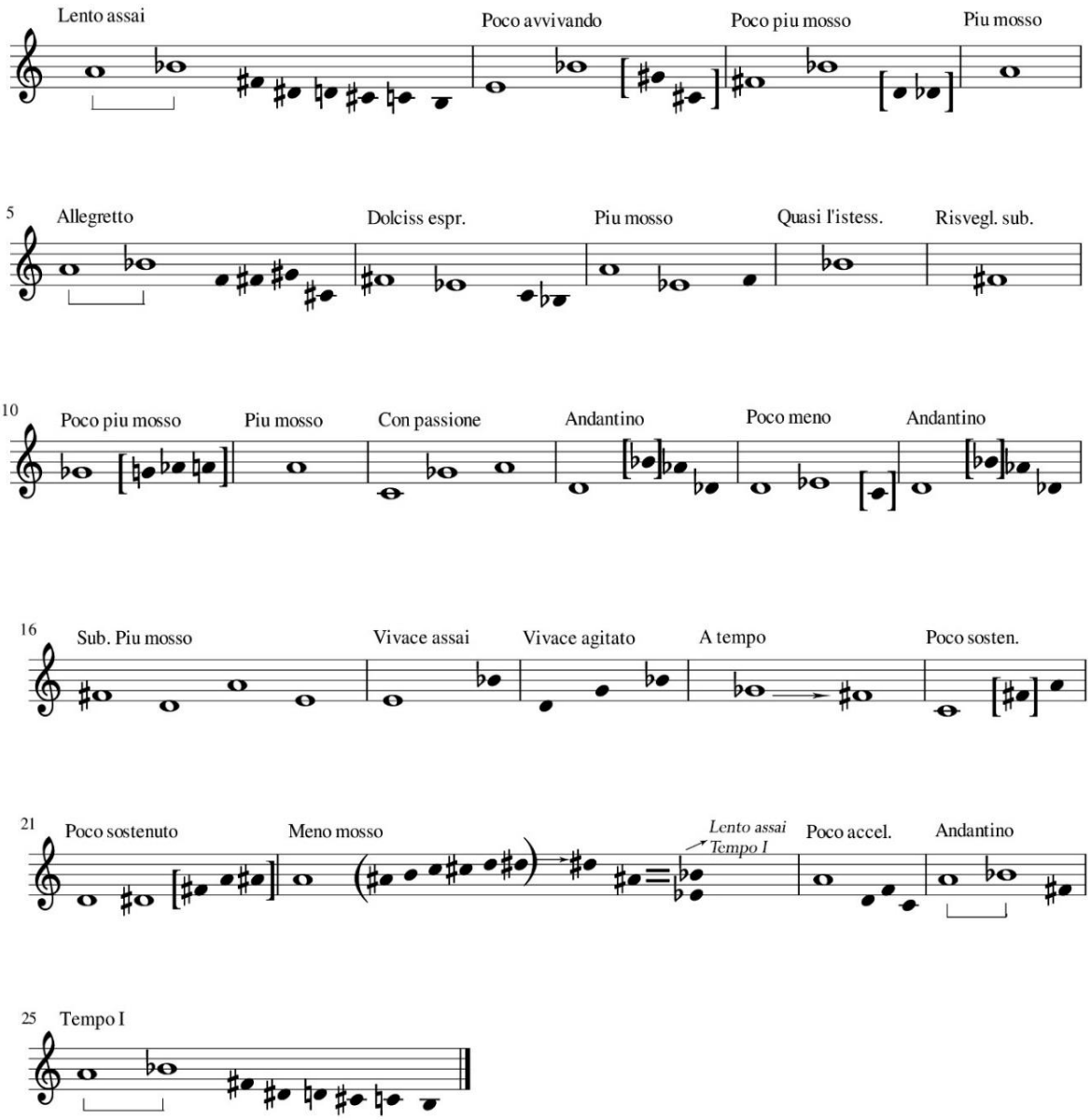
obtain the two alterations of the 5th by adding two major thirds to the extremities, thus getting the following interval layout:

Bb		**D**		**F#**		**A**		**C**		**E**		**G#**
	4		**4**		**3**		**3**		**4**		**4**	

Example 22. Interval chart: Column 4

[3.4] The chord we just obtained is extremely rich in organisational systems. It can generate a complete whole tone cycle due to the two augmented fifth chords it contains (Bb–D–F#, C–E–G#); the alterations *G#* and Bb allow a multiplication of the primary tritone F#–C, challenging the stability of the fifths D–A–E by new divisions of the octave in its exact middle: D–G#–D, E–Bb–E; the central cycle of minor thirds F#–A–C is completed by the mere lowering of the 9th (Eb), thus producing, along with the above cited tritones, a shift towards the octatonic universe; finally, when disposed in pitch classes, the obtained chord is similar to an acoustic scale with a lowered 6th (Bb) which brings it close to Scriabin's approach in conceiving the *Prometheus chord*.

[4.1] In the light of these discoveries which show, in "Scheherazade", the importance of the axes of harmonic structuring in what seems to be the establishment of a formal gesture, I have decided to proceed to a topographical plan of the prominent organisational notes in the different sections of the piece.



Example 23. Topographical plan [9]

At a first glance we note the importance of a selection of notes which, by their recurrence and in order to confirm the visual hypothesis, urge us to number them by frequency of occurrence in the table below[10]:

[9] The notes between square brackets indicate "passing" fundamentals which by their brief occurrence place themselves within a second architectural layer, not less important but less striking

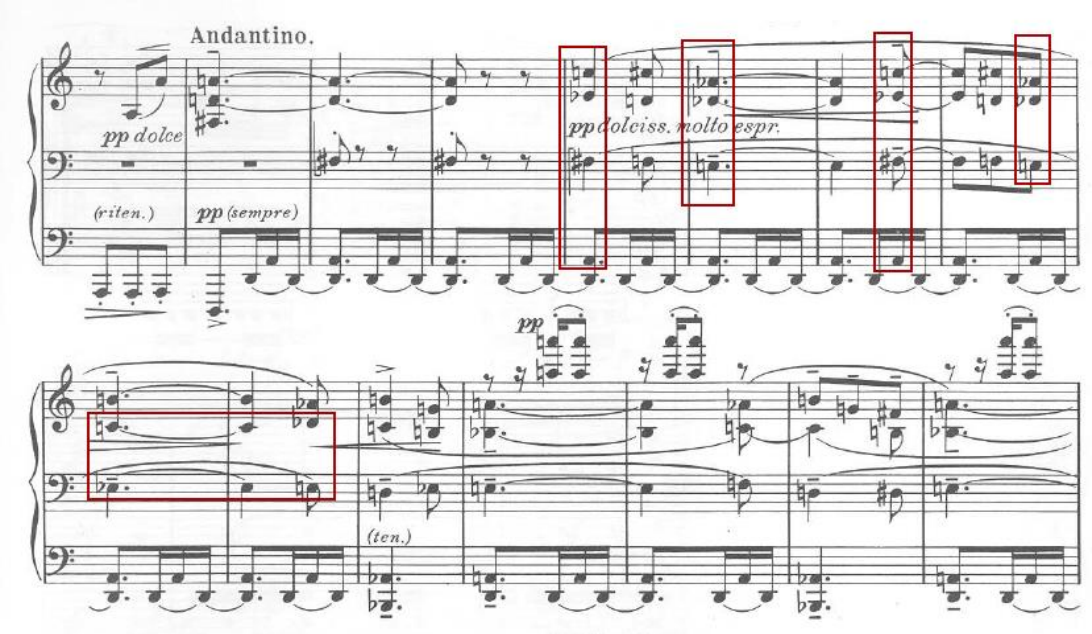
[10] We voluntarily omit in the counting the notes between square brackets.

N°	Note
12	A
10	Bb
10	F#/Gb
9	D
6	C
6	D#/Eb
4	C#/Db
3	G#/Ab
3	E
3	F

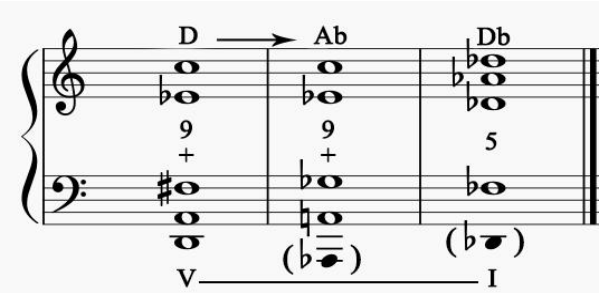
Example 24. Numbering table

[4.2] The topographical plan seems to inform us that the entire work is structured mainly around harmonic milestones whose fundamentals are issued from the dominant 9th chord with alterations of the 5th (D–F#–G#–A–Bb–C–Eb–E). We have seen the importance of this aggregate through its manifestation in different formal layers (isolated occurrence, motivic organisation), but presently we can conclude that it moves within sections as well as within the large scale form of the entire work.

[4.3] The role of the Db, a non-chord tone, must be considered with the greatest attention. It is most remarkable in the *Andantino*, page 11. Inside a sound complex initiated by the cadential gesture A–D and the D major triad in the first measure of the section, the Db seeks to determine itself as a pole of attraction. Using the malleability of the dominant 9th chord on D, at measure 4 it transforms itself through an enharmonic procedure into the dominant of Db with missing fundamental: D–F#–A–C–Eb becomes (Ab)–C–Eb–Gb–A.



Example 25.

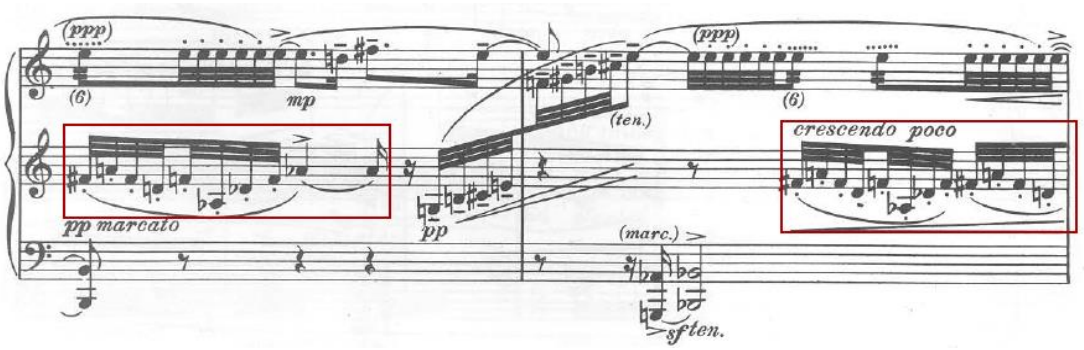


Example 26.

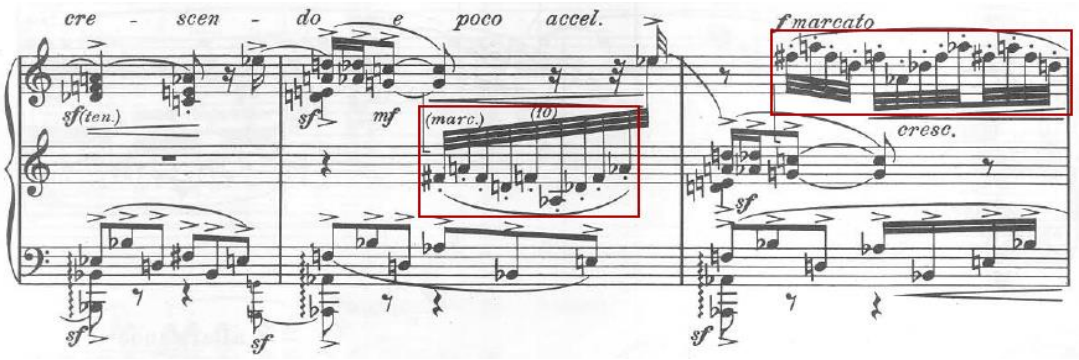
At this point, the tritone relationship between the D in the bass and the Ab suggested by the chord on the upper staffs has a double potentiality: it tends to resolve either upwards (in which case it would return to D–A) or downwards (leading to Db–Ab). While none of these two musical spheres—situated a semitone apart—become predominant, we witness the annulment of all attractive forces or directional phenomena. This produces a great instability and an impression of harmonic uncertainty. However, a broader view of the whole *Andantino* section requires the reassessment of the coexistence of the two triads: D major and Db minor (whose 3rd—*E*—is introduced in measure 5 through a subtle chromaticism). Already in the fourth measure of the second system the D becomes a main

pillar and sounds like an outcome, urging us to consider the whole Db chord as an inferior neighbour tone.

[4.4] Right from the *Poco avvivando* on page 3, and then at *Poco piu mosso* on page 4, we note the presence of a very similar type of neighbour tone.



Example 27. Neighbour tone D major / Db major, measure 18-19, page 3

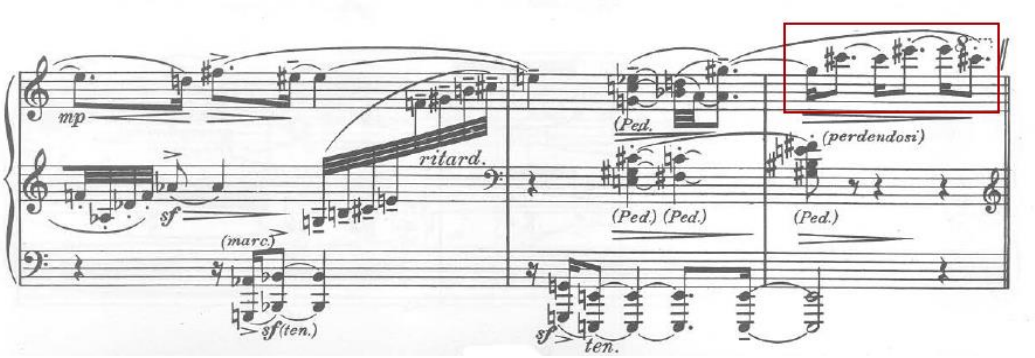


Example 28. Neighbour tone D major / Db major, measure 30-32, page 4

During these passages, the Db stands out as the fundamental of a Db major chord. The harmonic universe becomes even more complex with the interpenetration of elements: if it is clear that on page 4 the neighbour tone occurs on a dominant 7th chord on Bb, in order to understand its occurrence on page 3 we must consider the *Poco avvivando* in its entirety. The first five measures of the section evolve around an altered dominant chord on E (E–G#–A#–B–D–F/F#). Yet, the tritone leap of the fundamental and the enharmonic equivalent will produce for the ear a new altered dominant chord on Bb (Bb–D–E–F–Ab). Within this musical space, the two chords D–Db form a neighbour tone which becomes the essential connection between these two universes through its tritone D–Ab, common tones

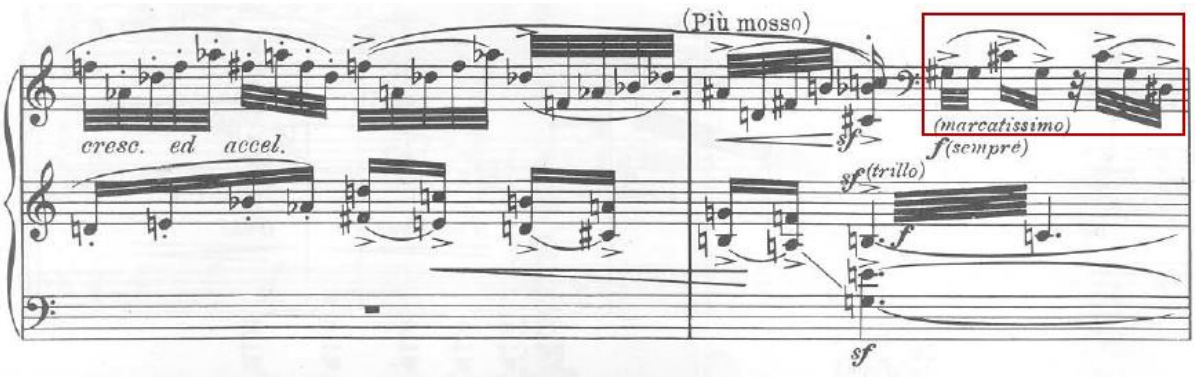
to the two dominant chords (the 7th and the leading note). And so, in the universe of Bb the F# is an appoggiatura for F, whilst in the universe of E, in light of the above (c.f. first measures of the section, predominance of F# as major 9th of the chord), the F sounds as an inferior neighbour note of F#. The position of the Bb in the bass and of the E on the higher staff keep the musical discourse in a blur, with neither of the two dominant function aggregates prevailing.

[4.5] The fifth Db–Ab, formed by the chord invested with a neighbour tone function, is stated at the end of the section—page 3, *Allargando*—through a cadential gesture (G#–C#).



Example 29. Cadential gesture G#-C#, measure 20-22, page 3

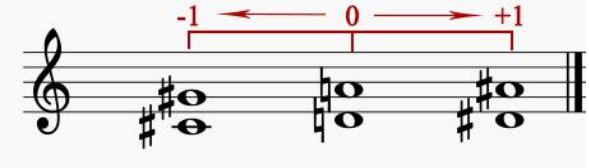
We also find it in the first occurrence of the motif, end of page 4 at *Piu mosso*, where it is extended with a supplementary fifth (C#–G#–D#).



Example 30. Measure 33-34, page 4

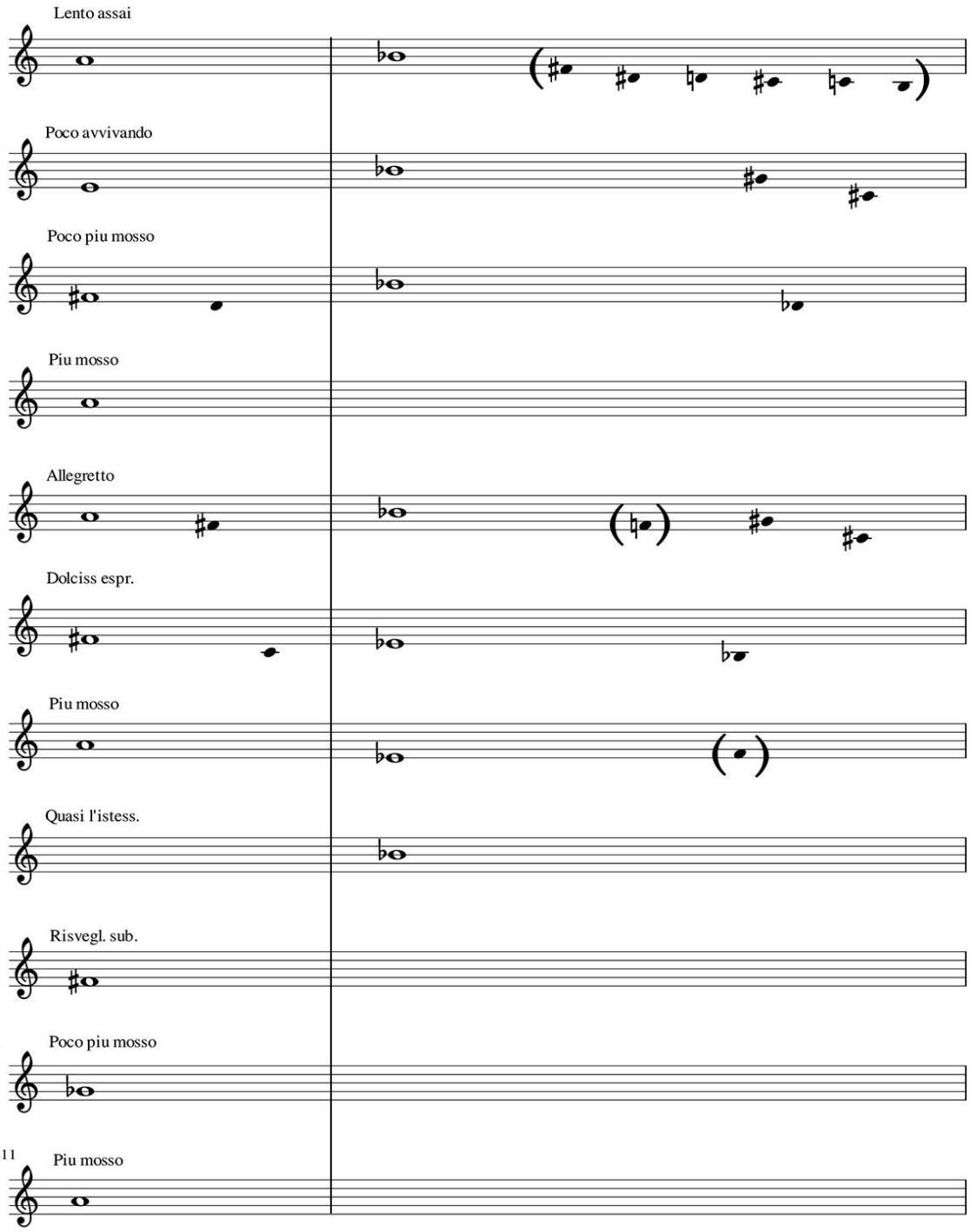
When taking into consideration only the higher staff we see that the A# which initiates the motif forms with the D# the continuation of the cycle. Moreover, disposed in pitch

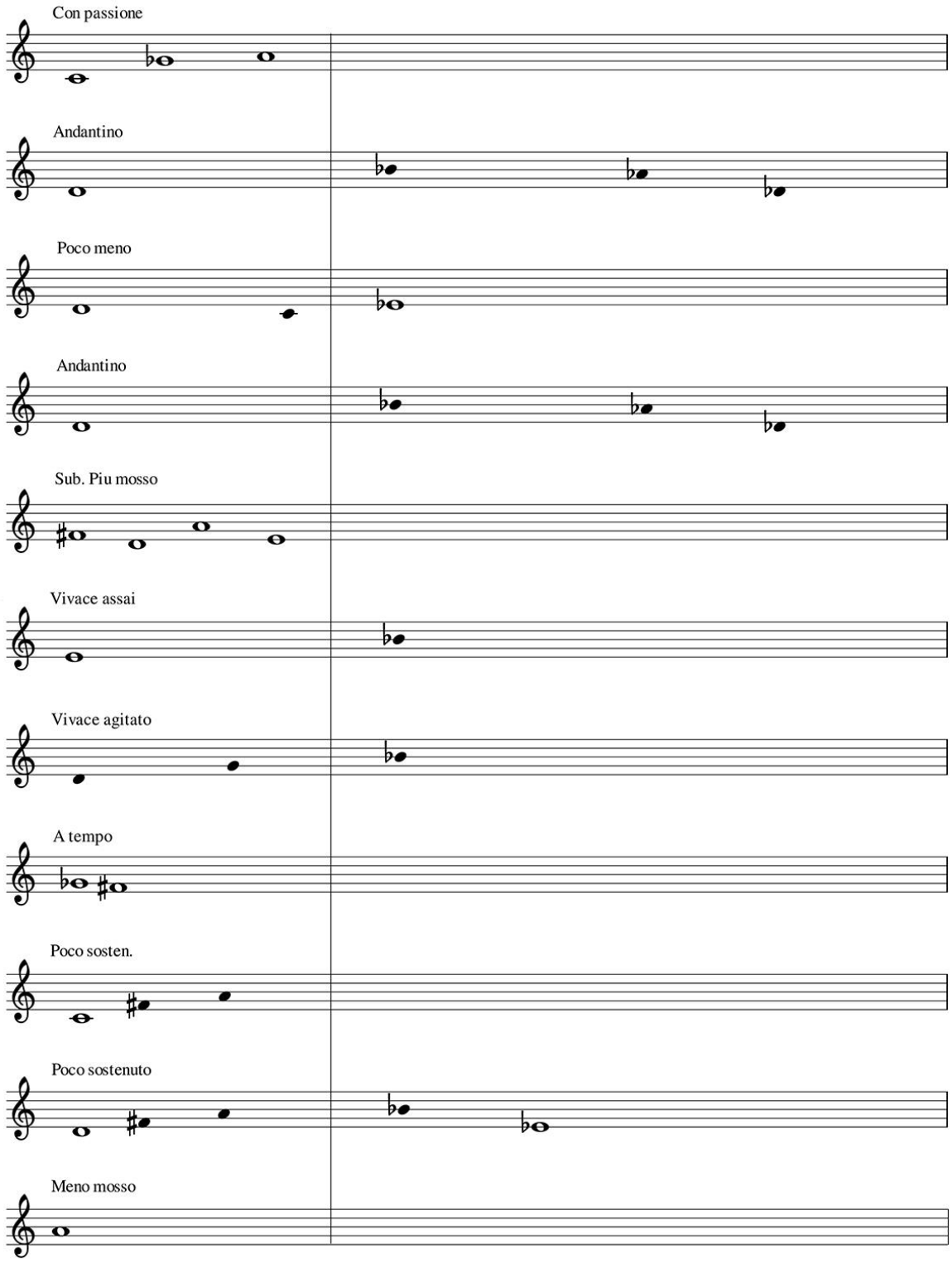
classes, the motif shows a succession of semitones which produces a perfect fifth when the D# appears (A#–B–C–C#–D–D#). The particularity of this cycle of fifths consists in the fact that it is entirely inscribed in the altered minor dominant 9th chord - that organises the structural pillars of the work—which has both alterations of the 5th (G#–A#) and the minor 9th (D#). This cycle of fifths is on its own an entirely organised space, having its own relationships of attraction (Ab–Db in particular and we shall see further that it generates other ones). If we present the cycle as two fifths a whole tone apart, the link with the numbering table (**Example 24**) becomes evident: on the founding fifth D–A, the base of the *generative chord*, are centred two fifths a semitone apart, both issued of upward and downward alterations of the main fifth (G#–C#, A#–D#).

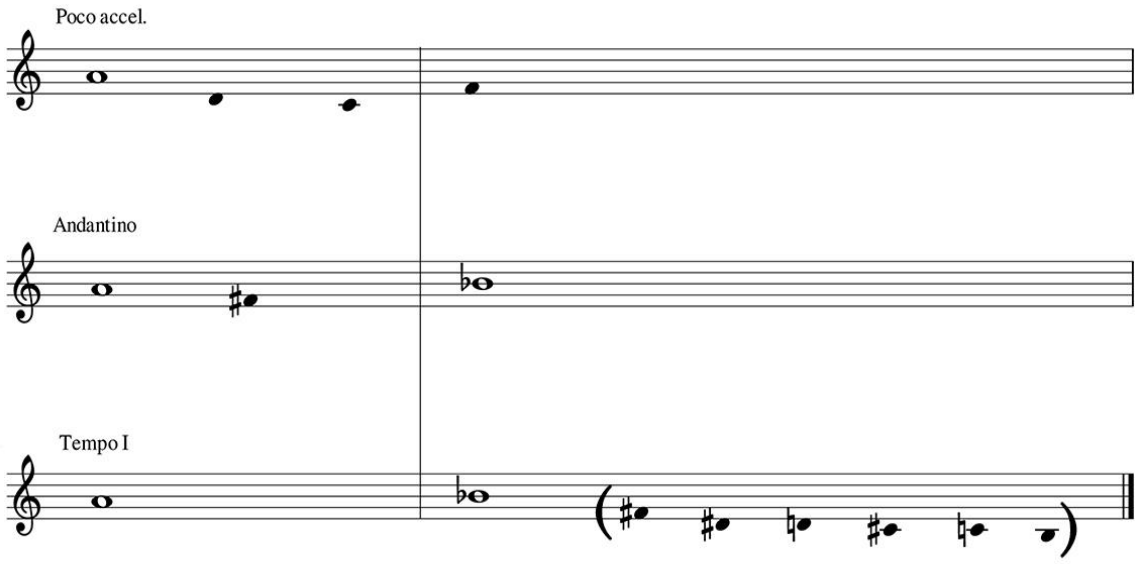


Example 31.

[5.1] In the light of all this, we shall presently arrange the topographical plan (**Example 23**) of the work in a different way. Each section will now be separated into two columns, one based on the cycle of fifths D–A–E that creates the dominant 9th chord, the other showing the alterations of the 5th of this chord and the intervals of fifth they generate in their turn: G#–C#, Bb–Eb.


Lento assai
Poco avvivando
Poco piu mosso
Piu mosso
Allegretto
Dolciss espr.
Piu mosso
Quasi l'istess.
Risvegl. sub.
Poco piu mosso
11
Piu mosso


Con passione
Andantino
Poco meno
Andantino
Sub. Piu mosso
Vivace assai
Vivace agitato
A tempo
Poco sosten.
Poco sostenuto
Meno mosso



Example 32. Topographical plan n°2

[5.2] If, as we noted at paragraph [4.5], the Eb can become the minor 9th of the dominant chord, the C# on the other hand cannot be regarded as an appoggiatura for the C, the chord's 7th; such a view would be inappropriate in this case. However, a reorganisation of Column n°4 of our interval chart (**Example 22**) allows us to present all the nine notes in a coherent and symmetrical scheme:

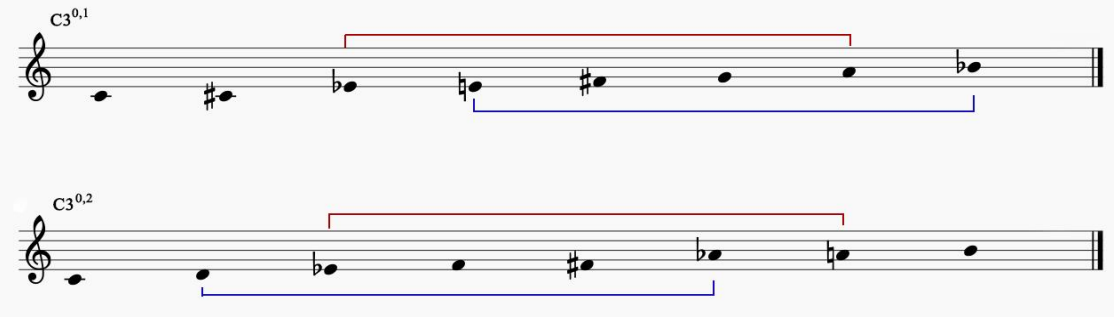
Eb		**Bb**		**D**		**F#**		**A**		**C**		**E**		**G#**		**C#**
	7		**4**		**4**		**3**		**3**		**4**		**4**		**7**	

Example 33. Interval chart: Column 4a

[5.3] Laying out the topographical plan into two columns (**Example 32**) can make clear the tritone swinging between the fundamental notes of the two columns: at *Poco Avvivando* pages 2–3 E–Bb, at *Piu mosso* pages 6–7 A–Eb, at *Vivace Assai* page 13 E–Bb, and less so in the *Andantino* pages 11–12 D–Ab. Considered from the angle of the *generative chord*, the relationships E–Bb and D–Ab arise directly from the alterations of the 5th A, whereas the relationship A–Eb originates in the use of the minor 9th.[11] These six

[11] We are not forgetting the relationship C–F#, present at *Con passione* page 10 and at *Poco sostenuto* pages 15–16, which constitutes the base of the architecture of the *generative chord*.

notes can be seen as a sequence of three tritones a semitone apart (Ab–D, A–Eb, Bb–E); in this way we can more easily realise how the tritone A–Eb, in this display, is brought to fulfil the role of central pillar. Indeed, when we regard these tritones as octatonic segments we see that the interval A–Eb belongs to the scale $C3^{0,1}$ as much as to $C3^{0,2}$.

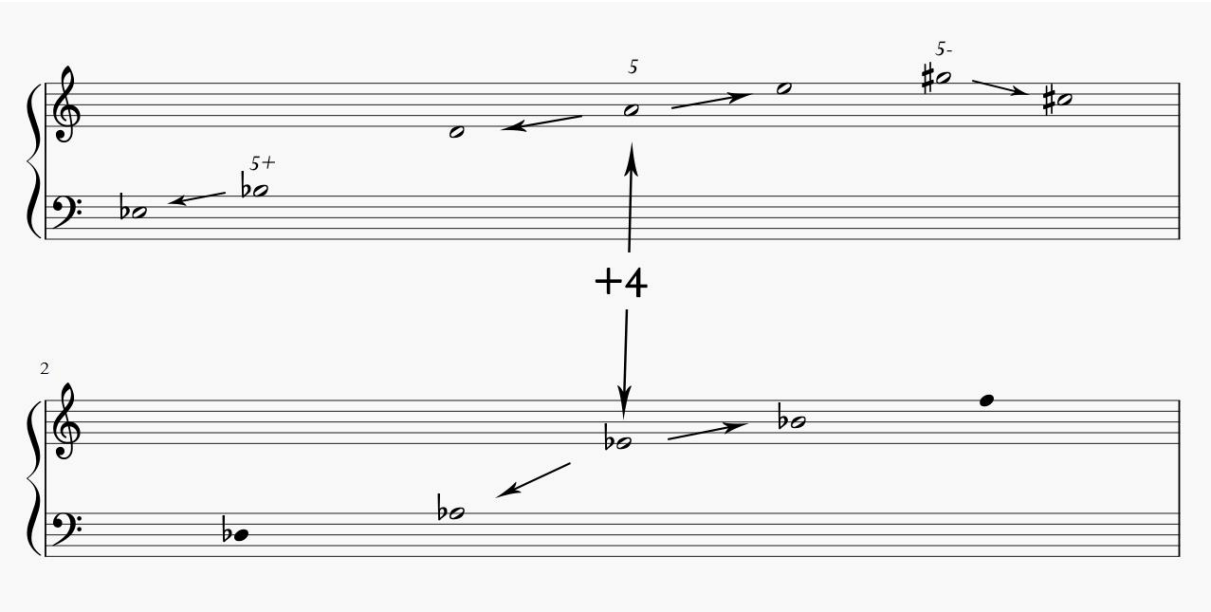


Example 34.

This echoes the point raised at paragraph [2.5]. We inquired upon the multiparameter quality of the harmonic and interval structure of the *Andantino* page 11, where the discourse, beyond an illusory sensation of bitonality created by the coexistence of D and Db, constantly overflies the three octatonic transpositions without any of them being able to organise the musical flow. And so, our analysis of the work's macrocosm—of the fundamentals around which the sections are organised—not only reveals the complex relationships between the constituent intervals of the *generative chord* (intervals which are also generated by structural modifications of this chord) but it further shows that the *Andantino*, the exact middle of the work, resumes in itself the whole uncertainty, the systematic non-determination on which the whole piece is built.

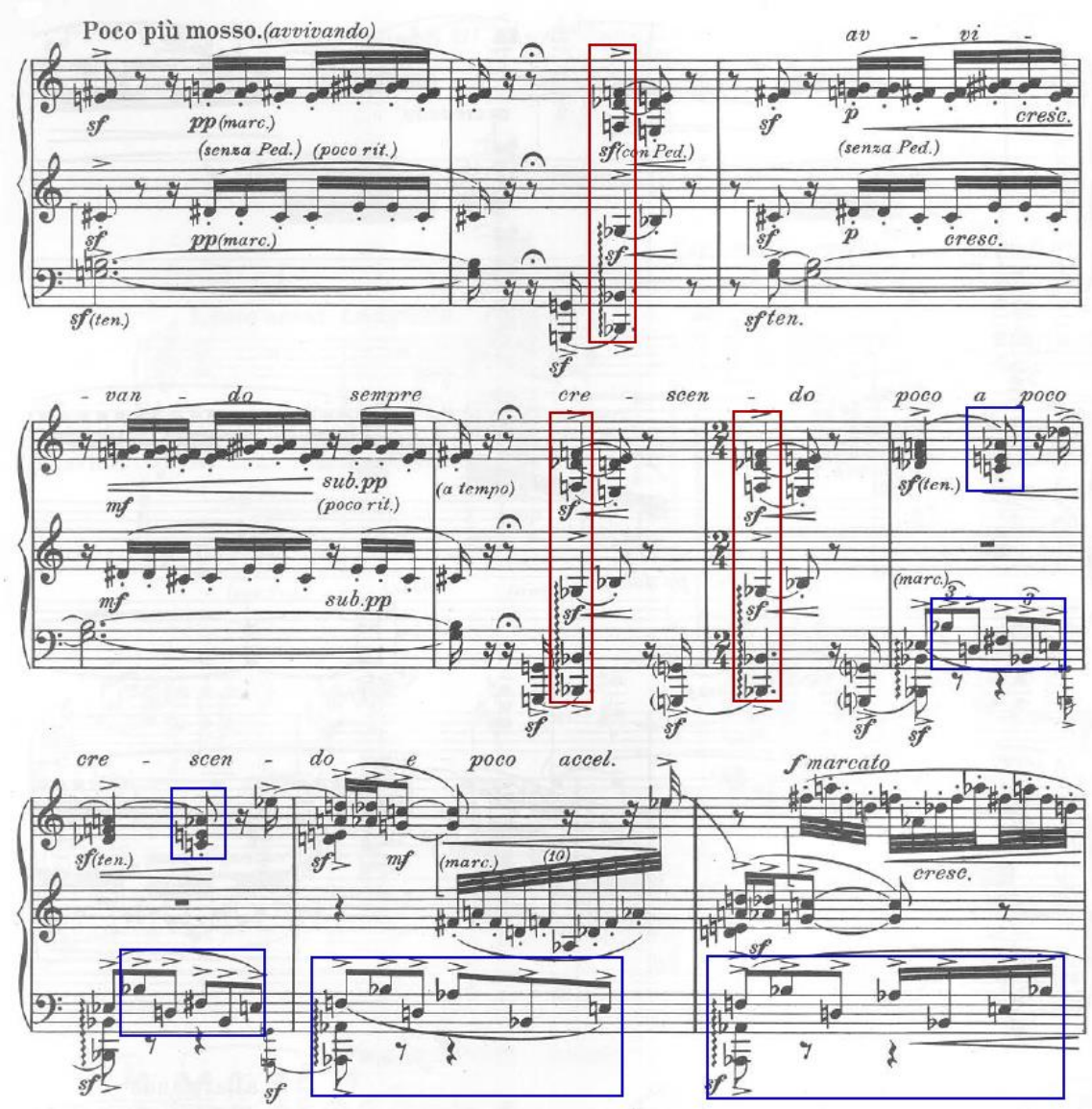
[5.4] On the other hand, the display of the three tritones a semitone apart reveals the interval A–Eb as the exact middle of these six notes arranged as a circle of fifths. The possibility of generating perfect fifths, coherent within an octatonic system, allows us to obtain two segments a tritone apart: D–A–E and Ab–Eb–Bb. These two segments are linked: the first segment embodies the foundations of the *generative chord* in its original state, particularly symmetrical—in other words faithful to Column 1 of the Interval chart (**Example 17**)— whereas the second is founded on the three possible alterations of this chord: the minor 9th (Eb), the lowered 5th (Ab), and the raised 5th (Bb). The two alterations of the 5th can at their turn form a perfect fifth, in a coherent movement of their initial

trajectory: downwards for the lower alteration Ab–Db and upwards for the upper alteration Bb–F.



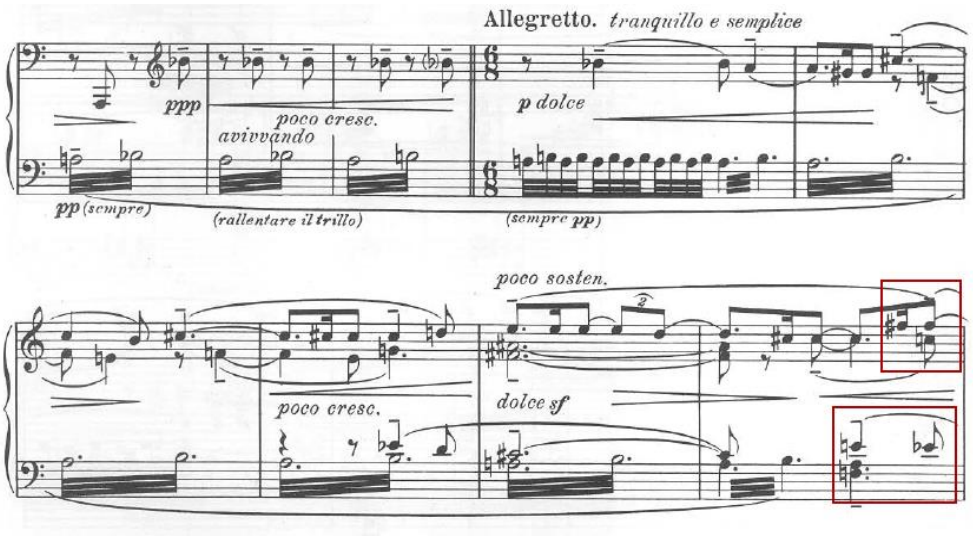
Example 35. The second cycle of fifths a tritone apart, obtained by alteration of the 5th of the generative chord's framework

The interval Ab–Db shines in the *Allargando* page 3 and in the *Piu mosso* pages 4–5. It becomes active and alters the musical discourse—as described above—in the *Andantino* pages 11–12. The interval *Bb-F* emerges in the *Poco piu mosso* page 4: at first in a Bb minor chord which in the second and third system is transformed into an altered dominant 9th chord (Bb–D–E–F–F#–Ab–C).



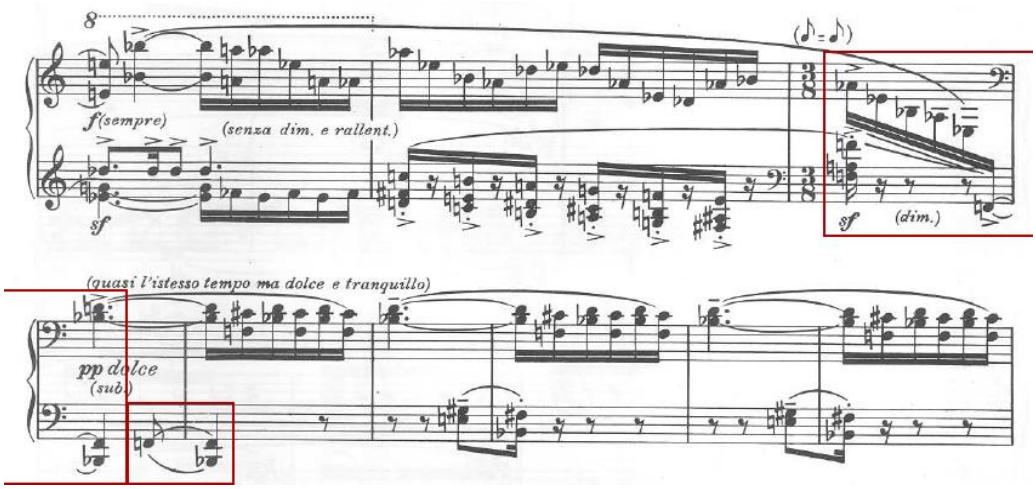
Example 36. Poco piu mosso, measure 23-32, page 4

This chord is echoed in the next section, *Allegretto* page 5, by a fleeting fundamental on F which acquires a dominant 9th flavour (last measure of the page).



Example 37. Allegretto, measure 41-49, page 5

But it is really at *Quasi l'istesso tempo* page 7 that the interval is asserted with authority in a cadential gesture of dominant-tonic F–Bb.



Example 38. Quasi l'istesso tempo, measure 68-76, page 7

The fact emerging out of all this is that the segment of fifths Ab–Db, Bb–F is the most actively involved inside the only two unities of the piece which begin by a classical act of tension/relief, and which afterwards settles on quintal stability axis in the bass (*Quasi l'istesso tempo*: Bb–F, *Andantino:* D–A), thus conveying an impression of stillness.

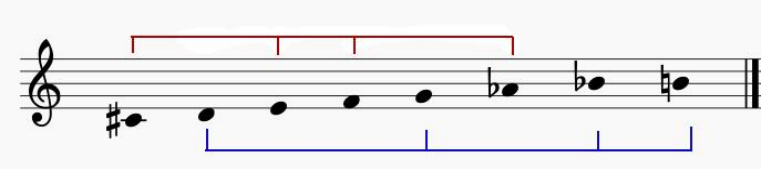
[5.5] Let us now continue our interval chart by an extension of Column 3 (c.f. **Example 19.**), doubly symmetrical in its centre A, firstly due to the display of the two minor thirds

constituent of the *generative chord* (F#–A–C) and secondly through the display of the two major thirds resulting from the stretching of the extremities by a semitone (F–A–C#). We decide to keep the central axis of minor thirds as the reference interval-layout and we choose to transpose it on each of its three notes, maintaining the semitone spacing at the extremities:

F		**F#**		**A**		**C**		**Db**
	1		**3**		**3**		**1**	
Ab		**A**		**C**		**Eb**		**E**
	1		**3**		**3**		**1**	
B		**C**		**Eb**		**F#**		**G**
	1		**3**		**3**		**1**	
D		**Eb**		**F#**		**A**		**Bb**
	1		**3**		**3**		**1**	

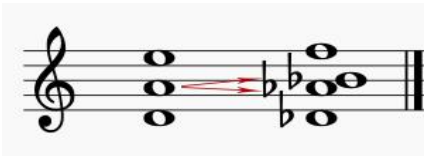
Example 39. Interval chart: Column 3a

[5.6] We are witnessing the display of the 12 musical notes through the three cycles of thirds (C–Eb–F#–A, Db–E–G–Bb, D–F–G#–B) which, by their possible octatonic implication, refer directly to the events of the *Andantino* page 11–12, described at paragraphs [2.5] and [5.3]. We can equally see that the semitone movement at each extremity of the central cycle produces four major thirds: Db–F, E–Ab, G–B, and Bb–D. These thirds can equally form two major/minor triads a tritone appart, thus forming the octatonic scale C3[1,2]: Db–F/E–Ab, G–B/Bb–D.



Example 40. Octatonic scale C3[1,2]

Now, if from this collection of notes we put aside those naturally involved in the generating dominant 9th chord (D and E), we notice the reappearance of our circle of fifths segment: Db–Ab–Bb–F. Let us note that the Eb, the middle of the cycle, is absent because it is part of the central group of minor thirds; there again it shows its double potential: it can either be the minor 9th of the *generative chord*, connected to the A by the tritone relationship A–Eb, or it can be the link which symmetrically separates the two alterations of the 5th of this Ab–Eb–Bb chord. As such, the circle of fifths segment Db–Ab–Bb–F could be obtained by an opposite distancing of the two primary 5ths of the dominant 9th chord: D–A ⟶ Db–Ab, A–E ⟶ Bb–F.

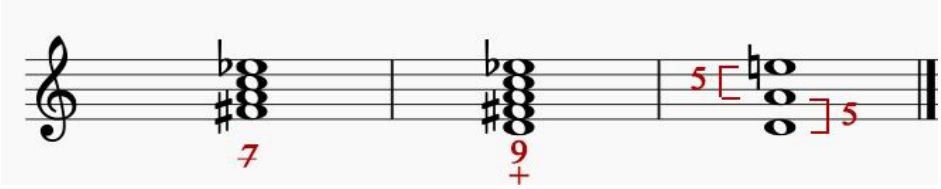


Example 41. Distancing of the two primary 5ths of the generative chord

Finally, we have to mention that in the collection of notes we obtained the G and the B don't have a musical implication and do not have a determinant role throughout the work. Szymanowski carefully avoids establishing any of the sections on G or B, as if wanting to avoid at all cost the slightest hint of a cadential gesture from the generating dominant 9th chord on D towards G or the resolution of the non-altered tritone F#–C towards G–B.

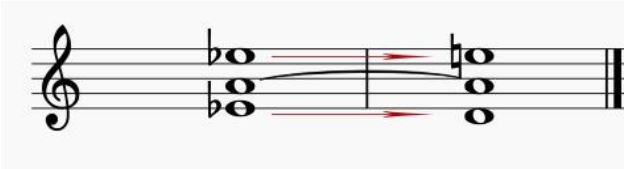
[c.1] This analytical view enlightens us upon what seems to be the founding element of the entire organisation of the musical discourse. The topographical plan of the harmonic fundamentals which organise the sections outlines a *generative chord* founded in the main pillars. This chord also exists on a smaller scale, embodied in the localised aggregate or even in a melodic succession of intervals. This chord is essentially founded on a cycle of

minor thirds issued from the fundamentals of the *Alpha chord*. When an additional major third appears at the base of the cycle, the aggregate becomes a minor dominant 9th chord which, in order to form a perfect symmetry, requires only the heightening of the top note of the cycle: to F#–A–C–Eb we add a D and we heighten the Eb to E. By doing so we add to the structural principle of minor thirds a new structural principle formed by two perfect fifths.



Example 42.

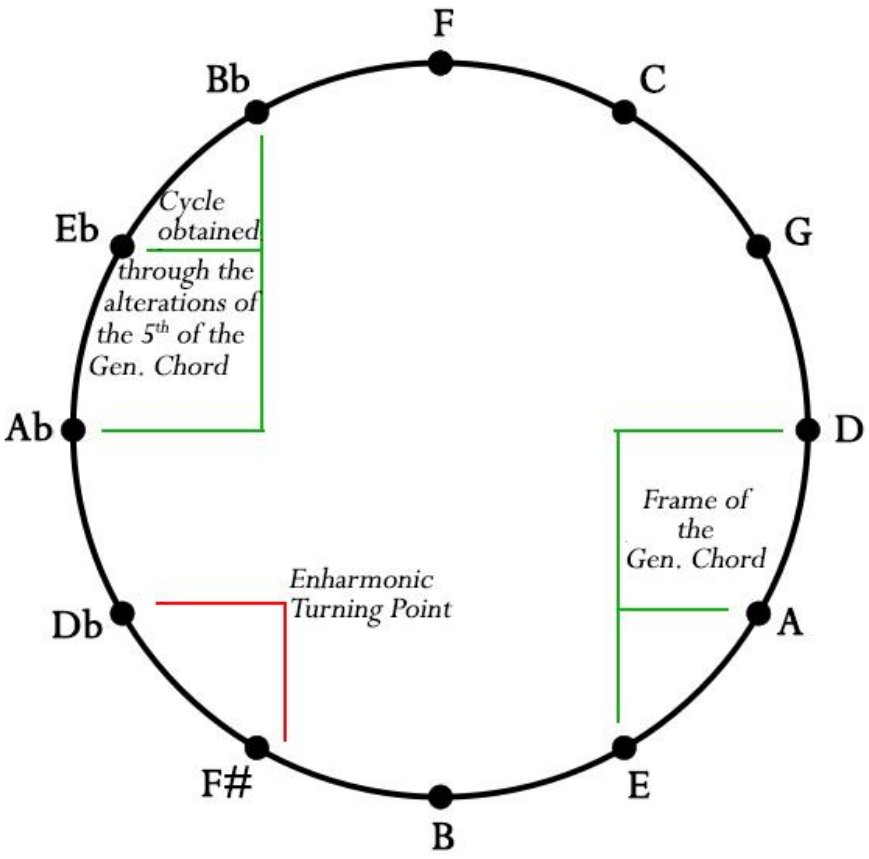
It is, in a certain manner, a new way of defining the principle governing the division of the octave: the fifth as middle of the octave, determined as such by the harmonic scale, becomes inadequate in the chromatic 12 note scale; the tritone justifies a symmetrical division of the octave within the chromatic scale (6+6 semitones), but by proceeding to a distancing by a semitone of the two extremities of the octave we can re-establish the structuring value of the circle of fifths. The capacity of creating structural major 9th or even dominant 9th chords is a resultant of the new obtained virtual octave of 14 semitones.



Example 43.

This new octave formed of two fifths is naturally false and so unstable in essence, as demonstrated by the whole circle of fifths and the famous Pythagorean comma. In order to avoid the wolf fifth we must correct the error by using the enharmonic equivalent at a certain intersection of the cycle. This is what Szymanowski does, using the two possible alterations for the first 5th of the *generative chord*: Ab–[A]–Bb. These two alterations generate at their turn two perfect fifths, coherent in their direction with the new alterative movement: Ab–Db and Bb–F. When the A, midpoint between the two fifths D–A/A–E, is

doubly altered, it splits from its own centre into two semitones and also pushes outwards the two extremities of the cycle (D ⟶ Db, E ⟶ F). The new obtained circle of fifths segment founded on flats (Db–Ab–[Eb]–Bb–F) is the enharmonic turning point which neutralises the original instability of the complete cycle. And so, the necessary enharmonic transition occurs at the moment when the Db appears and the fifth F#–Db concentrates all the falseness.



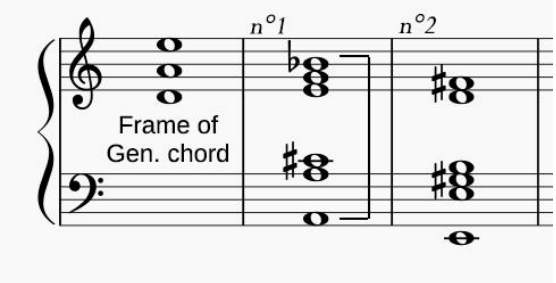
Example 44. Circle of fifths

[c.2] The topographical plan of the organising fundamentals (**Examples 23 and 32**) clearly shows that the various structuring elements of the discourse (whole tone scale, octatonic scale, acoustic scale) are always disposed on the bases of the *generative chord*. This chord moves around through the different architectural layers of the piece, in a constant back and forth movement between the macrocosm and the microcosm, between the external appearance and the inner meaning in such an imbricated way that it is impossible to state whether the essence generates a formal gesture or if it is the form that

determines the essence. The extremely malleable *generative chord* hosts different systems, separately or simultaneously:

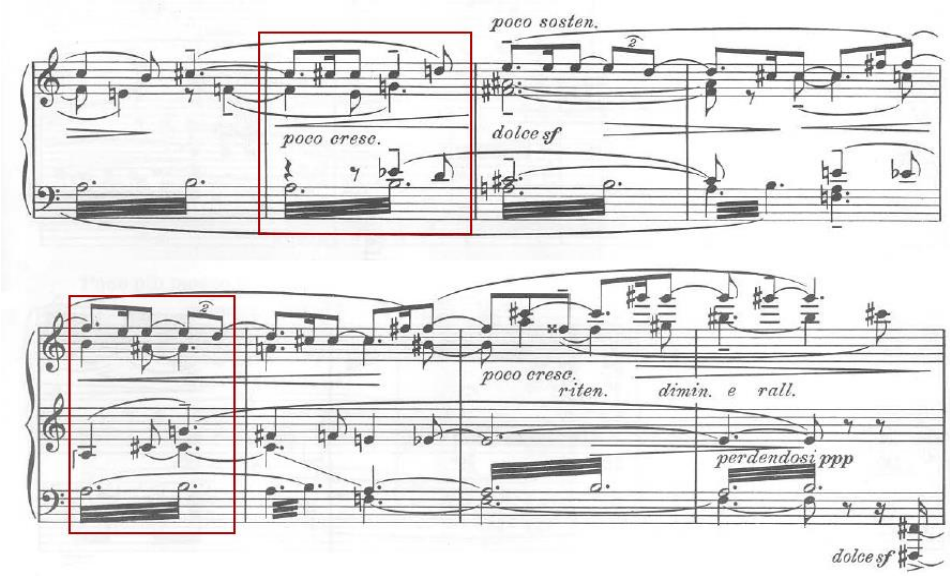
1) the octatonic scale via the cycle F#–A–C–Eb and the cycle segment issued from the alteration of the 5th Ab–D
2) the whole tone scale when both the alterations are given simultaneously D–E–F#–Ab–Bb–C
3) an acoustic scale flavour when the downward alteration of the 5th coexists with the perfect 5th D–E–F#–G#–A.

[c.3] Before concluding this article I find it essential to bring up a final point of capital importance. When we connect analytical activity and hearing experience, a question inevitably arises upon the real sound implications of the structuring systems. When listening to this work do we have the feeling that it is organized around a dominant 9th *generative chord*? In view of the reprise of the *Languido* and *Allegretto* sections at the end of the work, how do we perceive the composer's will to erase the notion of beginning and end through the outline of a cyclic form? And which are the gravitational sound axes of these two sections? The *generative chord*, as described at paragraph [2.5], reveals itself at the exact middle of the piece, in the *Andantino* pages 11–12, introduced by a V-I type cadential gesture: *A-D*, at the end of page 10. Even if the *generative chord* is present throughout the entire work, in different inversions or adorned with multiple alterations which by the means of the enharmonic equivalent anchor its directionality in various harmonic universes, this chord will never again be given in its root position. However, it represents a model of harmonic construction which will unfurl on fundamentals representing its own constituent notes and its alterations. We shall call these harmonic constructions *derivative chords:*

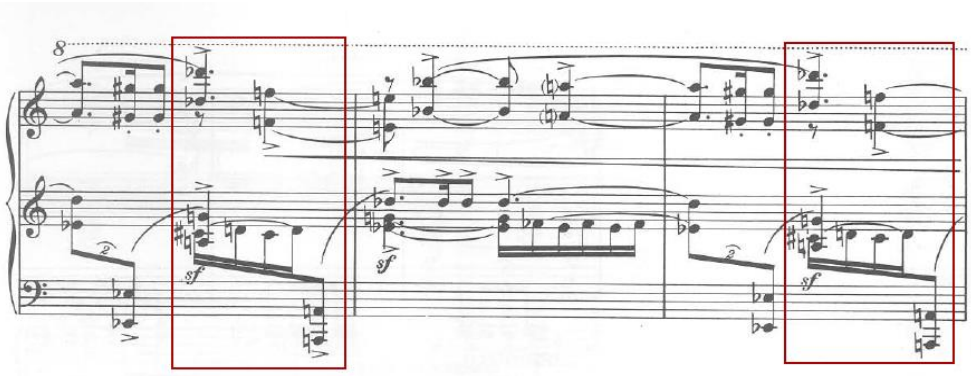


Example 45. Derivatives chords displayed on the framework of the generative chord

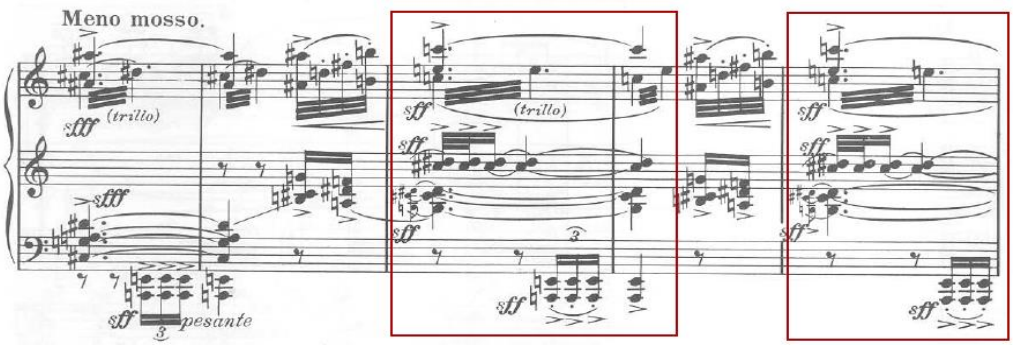
Out of these *derivative chords*, the dominant 9th aggregate founded on A asserts itself the most. Moreover, it is placed in notable moments in the piece: in the *Allegretto* page 5 and its reprise page 18, in the *Piu mosso* page 6, in the *Meno mosso* page 17, and to a certain extent in the *Piu mosso* page 9.



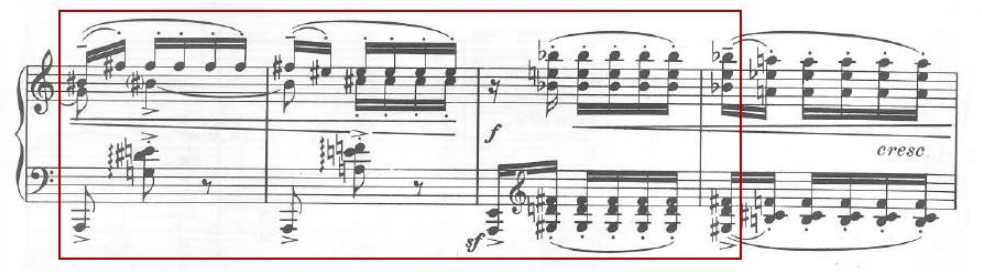
Allegretto, measure 46-53, page 5-6



Piu mosso, measure 65-67, page 7



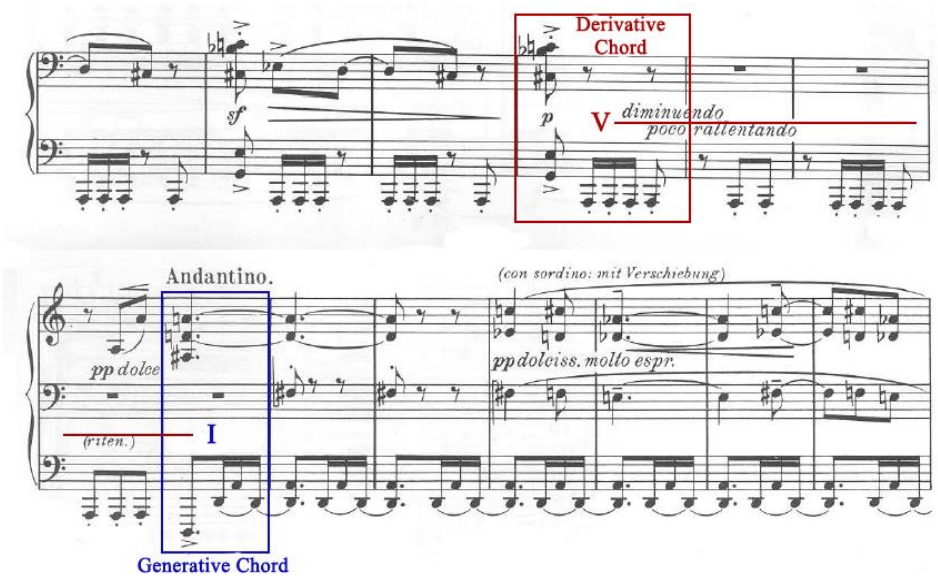
Meno mosso, measure 275-279, page 17



Piu mosso, measure 115-118, page 9

Example 46.

This chord conditions four times the harmonic axis of the *Alpha chord* (pages 5, 10, 16, and 17). Its two extremity notes produce the characteristic oscillation A–Bb (c.f. [2.3]) which can be heard from the first section. This oscillation moves around all through the development section and ends the piece by fading into the infinity of the resonance. So, the transition with the *Andantino* at pages 10–11 is of crucial importance in the formal design: it is at this precise moment that the composer gives the *generative chord* in its root position and the principal *derivative chord* together.



Example 47. Perfect cadence A-D, displaying Derivative Chord and Generative Chord, measure 136-149, page 10-11

The relation of fifth between the two chords calls to mind a *perfect cadence* procedure. Yet, at the scale of the entire piece (across which the principal *derivative chord* is the focal

point of attraction) the relationship D–A changes into a 4th and therefore into a plagal relationship. The *Piu mosso* section (page 6), founded on A and the downward alteration of the 5th (Eb), refers to the *Poco avvivando* section at the very beginning of the piece (page 2), which at its turn refers to the *Vivace assai* section (page 13).

These last two sections are organised on E and its tritone Bb, downward alteration of the 5th. Therefore, we see that from the introduction of "Scheherazade" the bass pedal A (*Lento assai*) moves onto an E, absent fundamental of the dominant 9th chord (*Poco avvivando:* [E]–G#–B–D–F#). The circle of fifths segment displayed by the *generative chord* plus the two principal *derivative chords* form the 14 semitone octave created by the 9th chord (D–A–E). Finally, the notes representing the downward alteration of the 5th of these three chords form the segment of the second cycle described in Example 15 at paragraph [5.4]: Ab–Eb–Bb. This segment increases, as we have seen (Db–Ab–Eb–Bb–F), through two leaps of a fifth at each of its extremities.

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