MACKEY'S WORLD: AN ANALYSIS OF "TROUBADOUR SONGS" AND "THREE MOMENTS" FOR LARGE CHAMBER ENSEMBLE

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The first component of this dissertation provides an analysis of Steven Mackey's *Troubadour Songs* (1992), a work for electric guitar and string quartet. My primary aim is to provide the first, substantive theoretical analysis of one of his important works. *Troubadour Songs* is a good example of Mackey's compositional style – rich with complexity and nuance, yet playful and exploratory. My analysis focuses on three areas of the work: formal structure and motivic development; pitch, tuning, and harmony; and the role of dichotomies in the piece. The latter discusses how dichotomies define many elements in *Troubadour Songs*, including rhythm, instrumentation, and the interaction of art and popular music. In addition, I propose that the entire structure of the work can be seen through the lens of a dual relationship, from the smallest, fundamental motive to the large-scale structure of the piece.

The composition component of this dissertation is an original work entitled *Three Moments*. It is written for 11 instruments, and deals with gradual motivic growth and variation. Compositional materials are restricted by instrumental families, and the interaction between them helps to define the piece's development. In addition, *Three Moments* explores the balance between complexity and simplicity throughout the three sections of the piece.

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PREFACE

I am extremely grateful for all of the help and assistance given to me throughout the duration of this project. I would like to thank Eric Moe, Mathew Rosenblum, and Robert Fallon for their help and support in helping me to shape this dissertation into its present form. I would like to especially thank Amy Williams for all the hard work and thought she has put into the entire process. Her clarifying notes and insightful comments were invaluable from the beginning to the end of this endeavor. All of these people have helped me immeasurably.

I am also greatly indebted to Steven Mackey for his support and help during the early stages of my research. His assistance and guidance was humbling and inspiring.

Lastly, I would like to thank my family. My parents' loving motivation was a constant presence during the writing process. In particular, I would like to thank my wife, Eden, and my children, Cadence and Finnegan. I could not have done this without their love, support, and belief.

INTRODUCTION

Steven Mackey (b. 1956) is an American composer whose new art music, particularly since the late 1980s, is influenced by the world of popular music in both overt and subtle ways. As a pianist and composer myself, I play an active part in these communities, and the juxtaposition, interaction, subversion, and celebration of each music's language and distinctive character is something I strive to articulate in my own music.

While critics and sometimes Mackey himself describe his music as "wacky" and "humorous"[1], I believe his music demonstrates considerable organization and thought, and many scholars agree.[2] Mackey's musical career began as an electric guitarist in various rock bands in his home state of California. For the past two decades, however, he has been a prolific composer for a variety of ensemble forces, including full orchestra with and without soloists, string quartet, percussion ensemble, vocal groups, and chamber groups of various sizes. Several of his pieces include electric guitar, combined with more traditional ensembles. Despite his works being widely performed both nationally and internationally, there are few theoretical analyses of his

[1] Boosey & Hawkes, "Steven Mackey – Tuck and Roll," Last modified 2000. http://www.boosey.com/cr/music/Steven-Mackey-Tuck-and-Roll/15148

[2] John Kersey, "*Mackey: Tuck and Roll; Lost and Found; Eating Greens* by Steven Mackey; New World Symphony; Michael Tilson Thomas; *Rouse: Concert de Gaudi. Tan Dun: Concerto for Guitar and Orchestra (Yi)* by Sharon Isbin; Rouse; Tan Dun; Gulbenkian Orchestra; Muhai Tang," *Tempo*, New Series, No. 221, (Jul., 2002): pp. 58-59.

music; at the time of writing this dissertation, there are only one Master's thesis[3] and two dissertations that briefly discuss his music.[4] These do not provide in-depth analysis. Given this lack of research, my primary aim is to provide the first, substantive analysis of a work of Steven Mackey's music. I feel that Steven Mackey's ability to articulate and express a clear compositional voice contrasting modern musical styles within a coherent, effective work makes him a compelling artist worthy of further study, and the absence of sufficient inquiry into his work leaves a void in the field needing to be addressed.

I have chosen to analyze the piece *Troubadour Songs*, for electric guitar and string quartet, for several reasons. First, *Troubadour Songs* reflects Mackey's ability to overtly and subtly represent characteristics of both new art music and popular music. For example, Mackey presents instantly recognizable electric guitar techniques such as pitch bends accompanied by tremolo ("whammy") bar effects, or distorted, plucked harmonics reminiscent of heavy metal guitar practice. He counters these with subtle references to popular music's practice of establishing repetitive "grooves" or "riffs" which often subtly appear underneath a passage of contrasting material. Also, I believe this piece offers an interesting perspective on the idea of narrative in music – recreating the experience of storytelling – a key characteristic to his style that he often references in his program notes.[5] Mackey says that *Troubadour Songs* is "inspired by the rhythms and rhetoric of storytelling," yet "more like listening to a story in a foreign

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[3] Paul Ellis, *The Creative and Technical Differences in Composing an Electric Guitar Concerto and Classical Guitar Concerto*, M.M. thesis, California State University, 2010.

[4] Anthony Wardzinski, *The Integration of Cultures within the Modern American String Quartet*, Ph.D diss., University of California Los Angeles, 2010; and Charles Lawrence Gran, *Remembering the Future: Orchestra Engagements with Popular Music*, Ph.D. diss., University of California Los Angeles, 2004.

[5] "Groundswell, Tuck and Roll, and See Ya Thursday," Steven Mackey, last updated 2011, http://stevenmackey.com/composer.

language where the content is inferred by how the story is being told."[6] It is not his aim to convey a particular extra-musical narrative, but to apply the inflection and nuance of a verbal narrative to music.[7] Lastly, I feel that *Troubadour Songs* is an excellent example of Mackey's compositional voice; it has that "wacky" character with a sense of humor and improvisatory exploration. Upon closer examination, however, it becomes clear that this is a complex, refined, and nuanced work.

My analytical approach focuses on the elements that clearly characterize *Troubadour Songs.* First, I will delve into the formal structure of the piece by identifying the central motives[8] and how they are established and developed. I will also look closely into tuning systems and pitch content, and how these elements function. I will explore the dichotomies that dominate many facets of *Troubadour Songs*. This includes genre references, sound worlds, overall formal and motivic structure, pitch, instrumentation, and rhythm. Finally, I will discuss the relationship between popular and art music in *Troubadour Songs.*

This approach will show that, while sounding somewhat improvisational, *Troubadour Songs* can be understood as an exploration and organic growth of a small, simple compositional unit. The main motive reflects the formal concept of a continually reinforced dualistic relationship. The scheme of established content being developed into something new, or being paired with something contrasting, can be seen throughout all components of the piece. I contend that Mackey's compositional style is highly structured and organized, despite its quirky

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[6] Steven Mackey, Liner notes from *String Theory*, Steven Mackey and the Brentano String Quartet, Albany Records, B0000A4G4U, 2003, Compact Disc.

[7] To clarify, I am not going to apply narrative theory to *Troubadour Songs*. A fuller explication of this concept is beyond the scope of this paper.

[8] I define motive in this analysis as a short musical idea being the smallest subdivision of a compositional material that still maintains its identity as an idea. Some of the materials which I label as a motive in this analysis are slightly larger figures than what might be labeled a motive in other contexts, but they are included in this way due to their functionality in the piece.

character. This dissertation will shed light on Mackey's compositional world, and show his ability to compose organic and well-structured music while maintaining a humorous and improvisational sound.

1.0 FORMAL STRUCTURE AND MOTIVIC DEVELOPMENT

The most basic formal design of *Troubadour Songs* is in three parts: the introduction of material, a developmental section that grows out of that material, and a return to the original material. This relationship of duality permeates multiple levels in the piece, including not only the overarching formal structure, but also the most fundamental motivic material. I describe the three main sections of the piece as exposition (mm. 1-117), development (mm. 118-299), and recapitulation (mm. 300-end), to borrow terms from traditional sonata form. Sonata form, however, implies a certain design of phrase structure and large-scale harmonic movement that is not relevant to *Troubadour Songs*. That said, I feel that these terms can be justifiably appropriated upon closer examination of the function of the piece's large-scale structure. The divisions between these formal sections are more or less clearly defined.

While *Troubadour Songs* is rich with motivic variety and variation, there is one basic unit that is the foundation upon which the entire piece is based. This basic unit, which I label X (see Figure 1, p. 8), defines the piece's narrative, with help from supplementary motives A, B, C, T1, and T2. Each has its own clear identity, differing from the others in characteristics such as rhythm, pitch, range, and instrumentation. All of these motives are introduced in the exposition of *Troubadour Songs* and serve as the basic compositional materials for the remaining sections. The first chapter of the dissertation will focus on motivic materials and their development throughout the piece.

After a brief introduction, X is presented and repeatedly alternated with contrasting material over the entire exposition, setting up the general template for the piece: X is relevant and influential throughout *Troubadour Songs*, but the piece goes through periods of escape from it, before returning after varying durations of time. Moreover, there are many times when X and other materials overlap. X is featured clearly in mm. 7-25, 38-46, and 68-92. In between these passages are the early moments of movement away from the primary material. At m. 118, when contrasting material concludes, and the listener expects a return to X that does not occur, the development section of the piece begins.

The development section itself can be broken down into three distinct sections, from mm. 118-192, 193-266, and 267-299. Each section expands, in an exploratory manner, the different compositional materials introduced in the exposition of *Troubadour Songs*. The passages without X, as well as where X is present but very much secondary to other events, are much longer in this section of the piece than in the exposition and recapitulation. The last section of the development culminates in what I refer to as the (anti)-climax,' mm. 294-299, where the character of the piece is most contrasting to the rest of the work. After the most active and high-energy music in the piece, the (anti)-climax is absent of rhythmic activity and intense motivic, harmonic, and contrapuntal acrobatics. Immediately following the grand pause after this passage, short transitional material leads the recapitulation, much as the short introduction of the piece the exposition.

The recapitulation returns the X motive to its primary form for the first time in over 220 measures. The original contrasting material returns as well, at times being transposed to new pitch centers – an analogue to traditional sonata form. In addition, however, it develops other compositional material – specifically, the quasi-serial melody introduced in mm. 154-161,

motive C – and ends with an mm. 305-344 and 345-end.

While the form of *Troubadour Songs* is easily described in large-scale sections, labeling smaller units of material is more problematic. The way Mackey develops his material often defies traditional phrase structure and makes identifying various small and medium-sized "chunks" of material difficult to describe. It is important, therefore, to define some key terminology that I will be using in my analysis. Increasing in size from small units to larger units of measure groupings, I will use the terms phrase, passage, and section. Phrase will be used to describe a unit of no more than a few measures. Passage is distinguished from phrase in both being longer, but also in the shared content of the unit. Passages are usually between seven and fifteen measures, and can often be defined by contextual elements such as ostinatos or grooves (more on this distinction later), or groupings of measures defined by thick textures of complex interaction of many motivic elements at once. Lastly, sections are the largest grouping of measures that I will describe, of which there are only three in the piece.

1.1 THE X MOTIVE

The primary compositional material in *Troubadour Songs*, motive X, is presented in its original form exclusively by the electric guitar. X first appears in measure 7:

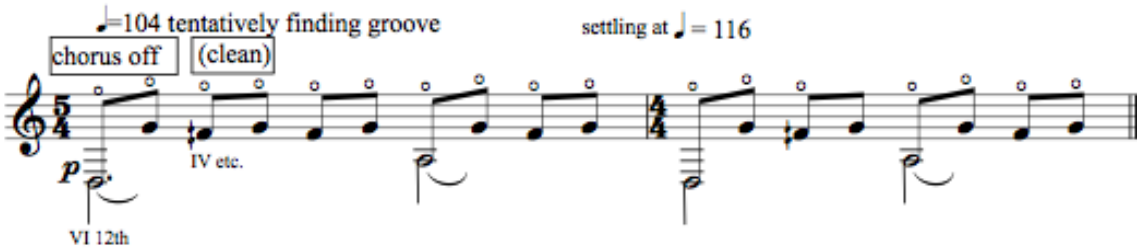

Figure 1. mm. 7-8, electric guitar[9]

Motive X has several functions in the piece: first, it defines the opening, and consequently plays an important role in passages of recapitulation; second, it serves as the basic structure for much of the accompanimental material upon which new motives and musical events take place; and third, changes that occur to X delineate sections and bring about the narrative trajectory of the piece.

The most defining element of X is the oscillation between a pitch and its quarter-tone neighbor. In the opening section of *Troubadour Songs*, these repetitive oscillations are presented and interrupted by the guitar in gradual increments. Subtle flourishes that occur in the midst of long repetitions of the motive slowly lengthen in duration, breaking down the motive's simple recurrences. In mm. 7-25, we are introduced to the three types of development to the X motive via the electric guitar. The most straightforward is the addition of an outlying pitch; in this case, B in the upper octave replaces one of the upper neighbor tones:

[9] Here, X is presented entirely in harmonics, but in the next few measures, the harmonics only continue with the longer-duration pitches and not with the quarter-tone oscillating eighth-notes. This is the case with subsequent recapitulations as well.

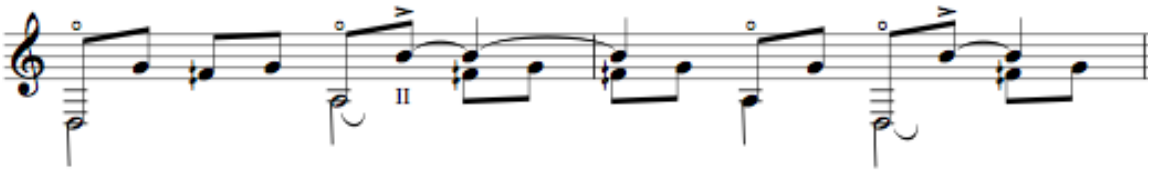

Figure 2. mm. 10-11, electric guitar

This affects the motive in two ways: providing variation to the repetitive, neighbor-tone oscillation, and also changing the overarching harmony from that of an ambiguous D-triad, to that of an ambiguous B-minor 7th triad. As I will discuss in the second chapter, both of these harmonies, as well as the related relationship of a minor third, are important elements in other sections of the piece.

The second change to X occurs in mm. 13-14 and, in an expanded form, in mm. 17-18:

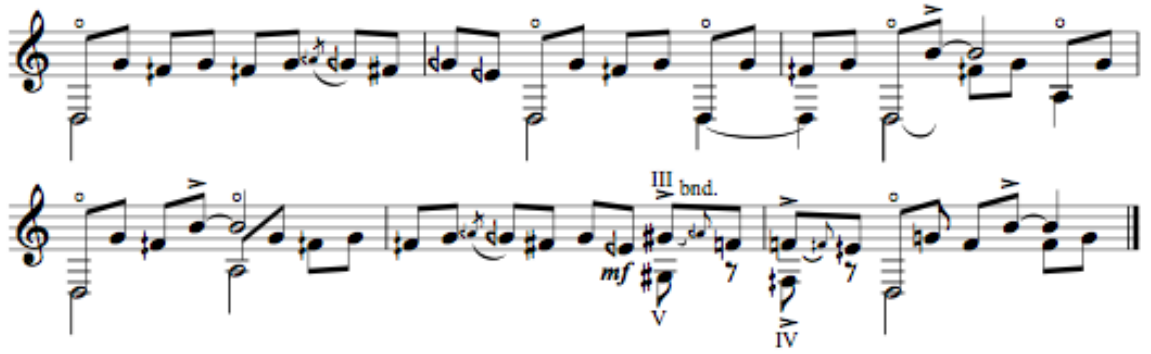

Figure 3. mm. 13-18, electric guitar

Grace notes and quarter-tones play increasingly disrupt the oscillating neighbor tones. It is important to note that these pitches do not appear as new elements of X, but rather provide a contrast to the repeating pitch content in the motive. These variations grow in duration, and dynamics, eventually taking over and bringing the X pattern to a close, which in turn brings about the conclusion of the passage. The gradual increase in interruptive content to established

musical material is one of Mackey's primary tools for formal divisions in *Troubadour Songs*.

In the exposition, mm. 7-24, motive X is resilient to change. The X motive is not transformed or manipulated, but battles against gradually expanding variation events. This is reinforced by the fact that the exposition resembles rondo form, where X constantly returns in its original form after passages of contrasting material. Ultimately, it is unclear whether X is going to eventually change or retain its structure in the piece. Mackey exploits this expectation throughout *Troubadour Songs*, both reaffirming the motive's resilience (m. 68, 82, and 305), and also unexpectedly breaking it down into new material.

The breakdown of X first occurs at mm. 38-53, leading us to the second contrasting section. The guitar begins the motive again, yet this time the interruptions from the guitar come sooner, starting after only 5 beats. In addition, the string quartet begins to become more active with new material. By m. 46, the X motive is overwhelmed by the interruptions, resulting in a breakdown of its structure. The oscillation component and interruptive gestures remain, but the pitch range of the former is increased (mm. 46-53). This, as well as more complex rhythm and pitch variations, are the primary ways in which Mackey develops the X motive. The following figures highlight the forms X takes in the rest of the piece:

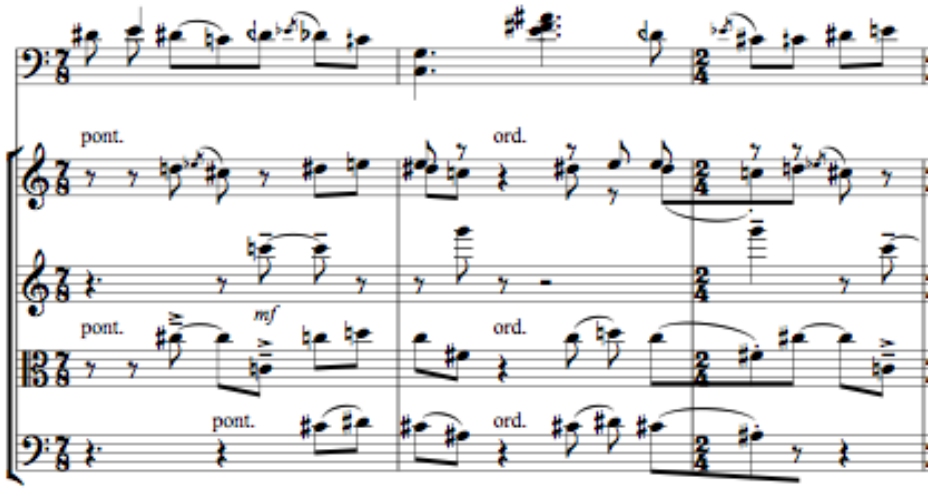

Figure 4. mm. 167-169, full ensemble

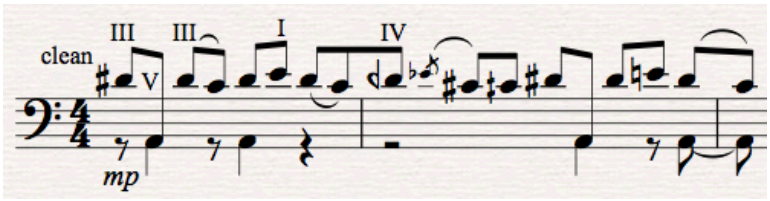

Figure 5. mm. 173-174, electric guitar

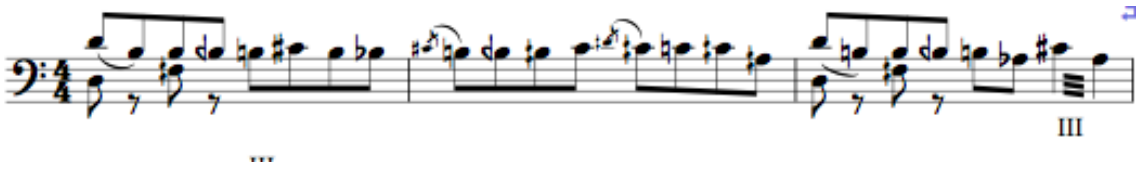

Figure 6. mm. 200-202, electric guitar

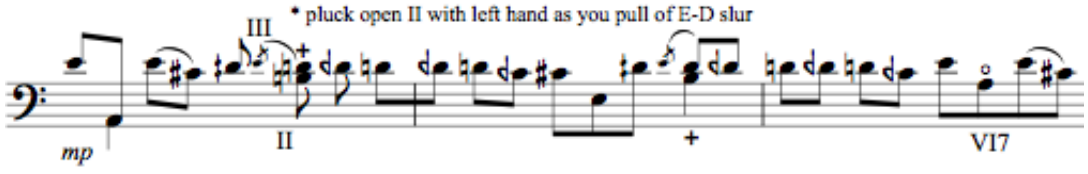

Figure 7. mm. 237-239, electric guitar

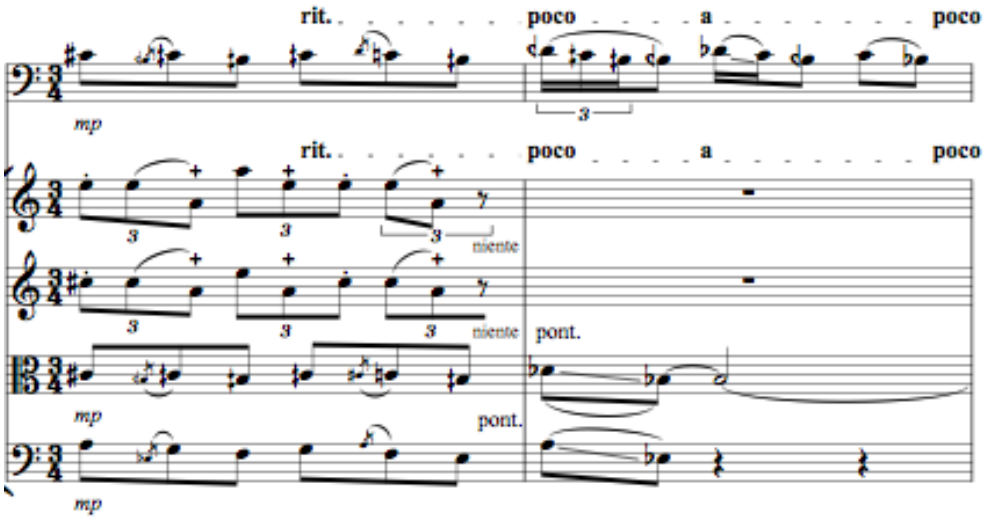

Figure 8. mm. 261-262, full ensemble

Mackey explores the melodic possibilities of his primary motive in many ways. In the first example, Mackey varies meter, expands melodic contour, and uses abrupt rhythmic and melodic accents. In Figures 5, 6, and 7, the longer-duration accompanimental pitches return, but in a less cyclic manner. In the last example, Figure 8, Mackey creates a sequence with a downward trajectory while expanding the motive's range. This moment is critical to the form of the piece because it is the first time that multiple instruments express the X motive concurrently. This leads to the final passage of the development section, which I call the (anti)-climax (more on this later). This last example showcases Mackey's tendency for important motivic events to control formal divisions in the piece.

The last variation to the X motive (Figure 8) contrasts with the others in its developmental trajectory. This variation, as well as motive C (to be discussed later), is unusual because it has a very peripheral role in the first two sections of the piece, only to become central towards the end:

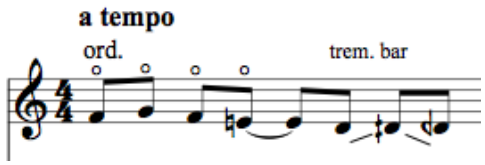

Figure 9. m. 65, electric guitar

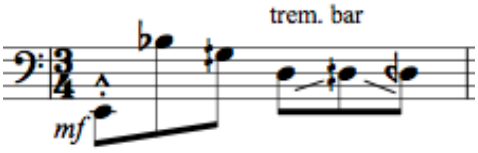

Figure 10. m. 154, electric guitar

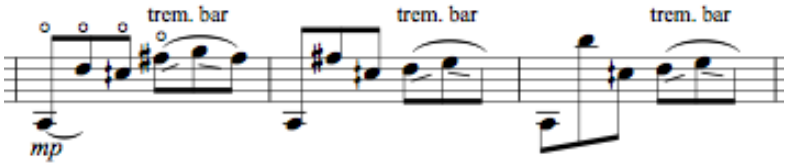

Figure 11. mm. 346-348, electric guitar

These three examples show how Mackey develops the original X into a more complex variation. While the first two examples are ostinatos that repeat for three and seven measures respectively, the last has subtle variations in each iteration – these dominate the final fifty measures of the piece.

All of the previous examples illustrate Mackey's strategies for developing his primary motivic material. X appears in its original form only in the opening and closing sections of the piece – not the development. In the exposition, the motive seems impervious to change, yet in the development, Mackey uses pitch inversion, pitch and rhythmic augmentation/diminution,

octave displacement, and rhythmic diminution/augmentation to deconstruct and expand it. Significant changes in the X motive result in major formal events.

1.1.1 X as Accompaniment

New melodies and accompanimental figures are derived from the basic structure of the X motive. The first example of this is the unsynchronized microtonal pitch oscillations in the string quartet in mm. 8-23. A variation on the X motive also defines both the electric guitar and the first violin's music in mm. 26-32. Here, the oscillations occur between E and a quarter-tone lower neighbor-tone, thereby inverting the neighbor-tone relationship. In addition, Mackey increases the density of the pitch oscillations by adding a second note to each pitch – E and F# oscillate with D# and E:

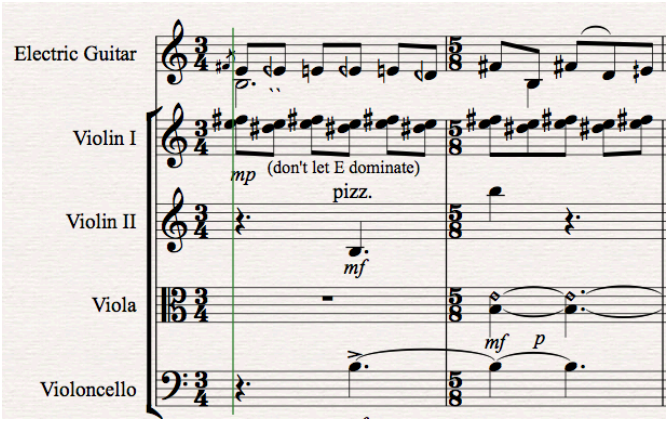

Figure 12. mm. 26-27, full ensemble

This particular variation of X appears as an accompanimental figure many times throughout the piece, including mm. 48-53, 86-91, 93-103, 324-326, and 330-333.

Another accompanimental variation includes raucous, agitated oscillating pitch bends:

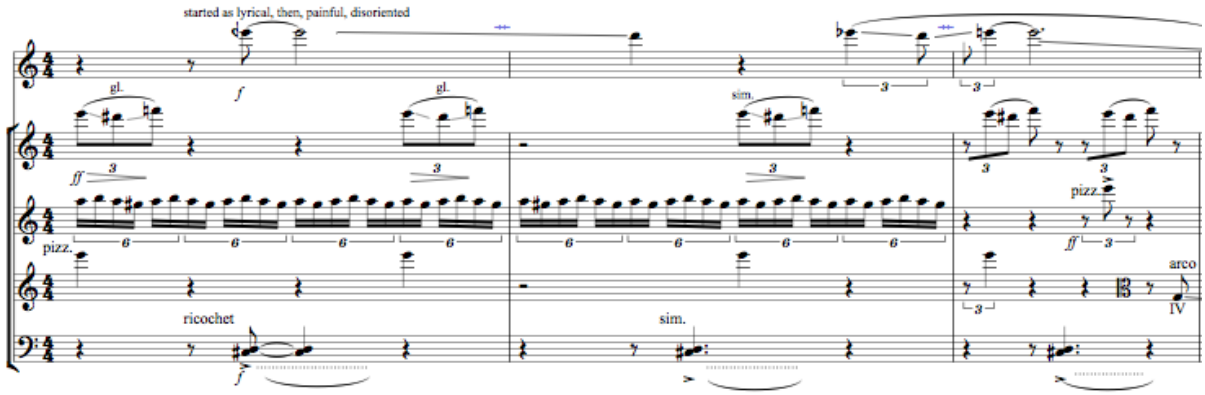

Figure 13. mm. 130-132, full ensemble

Here, Mackey varies the rhythmic duration of the pitch oscillation in several ways: augmentation in the guitar, diminution in the first violin and viola, and transformation into a harmonic event in the cello. Each of these figures resemble Mackey's melodic X variations in passages starting at m. 65, 154, and 346.

These two passages illustrate how Mackey utilizes basic elements of his primary compositional motive to create accompanimental figures throughout the piece. The simple neighbor-tone relationship is explored in many ways in *Troubadour Songs*, connecting much of the piece's material is generated by one simple compositional idea.

1.1.2 Motive X2

Motive X has an important particular variant which I label X2. While this variant appears only a few times in the piece, it plays a defining role in the piece's development, most often appearing before an important formal division. Like the original X motive, X2 is introduced by the guitar:

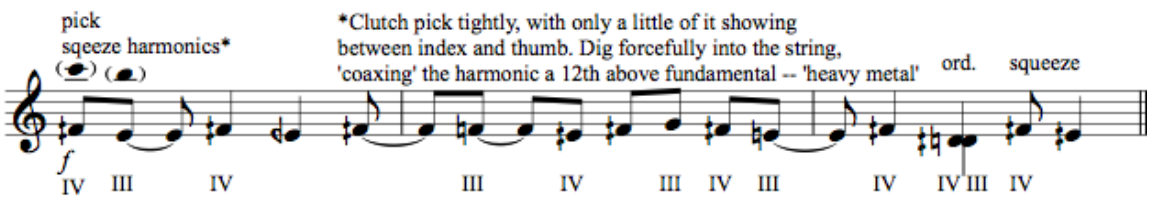

Figure 14. 54-56, electric guitar

Although the oscillation pattern of the X motive is retained, its rhythm is now syncopated, with the oscillations now occurring on every upbeat. The pitch range is also expanded. These same compositional techniques define X2 when it appears again at m. 61 without the 'squeezed' harmonics. This time, Mackey uses oblique harmonic motion and further expands the pitch range. This X2 brings about the close of the passage, overpowering the ensemble and leading to the first rondo-like reappearance of the principle X motive at m. 68.

X2 appears in the string quartet for the first time at m. 118:

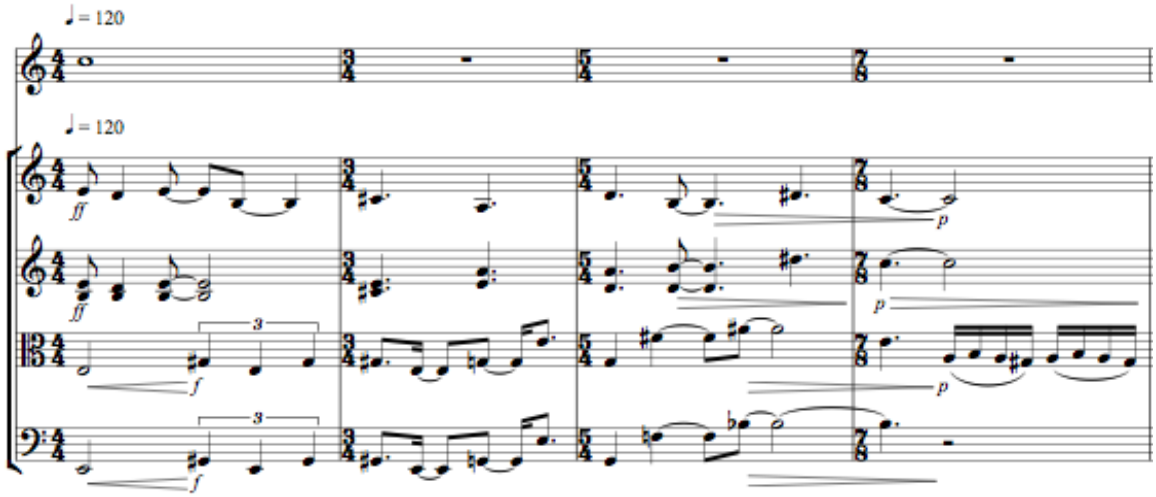

Figure 15. mm. 118-121, full ensemble

This passage precedes a rhythmic and harmonic swell that leads to the development section of the piece. This formal division is subtle, but I interpret it this way for several reasons. First, it

is the first time the string quartet is unaccompanied by the guitar for an extended period (eleven measures). Second, its harmonic clarity, outlining dominant 7th harmonies on E and A, provides a stark contrast, and thus, a fresh start after the chaotic passage from mm. 106-117. Third, motive X will not appear again in its original form until the recapitulation.

The next two occurrences of X2 also precede impending, large-scale harmonic events or shifts (see Figure 16). The first, at m. 161, leads to the first fully-exposed major triad in the piece at measure 165. The second, at m. 233, precedes the extended A major section from mm. 237-260. These will be discussed further in the next chapter, but the function of X2 is clear – to initiate a formal division in the piece.

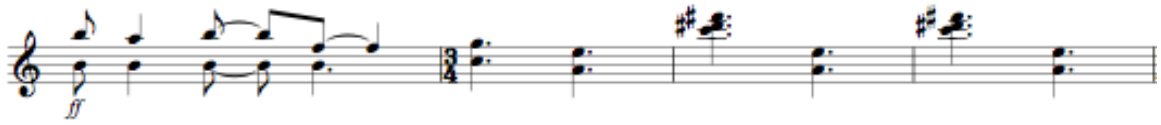

Figure 16. mm. 161-164, electric guitar

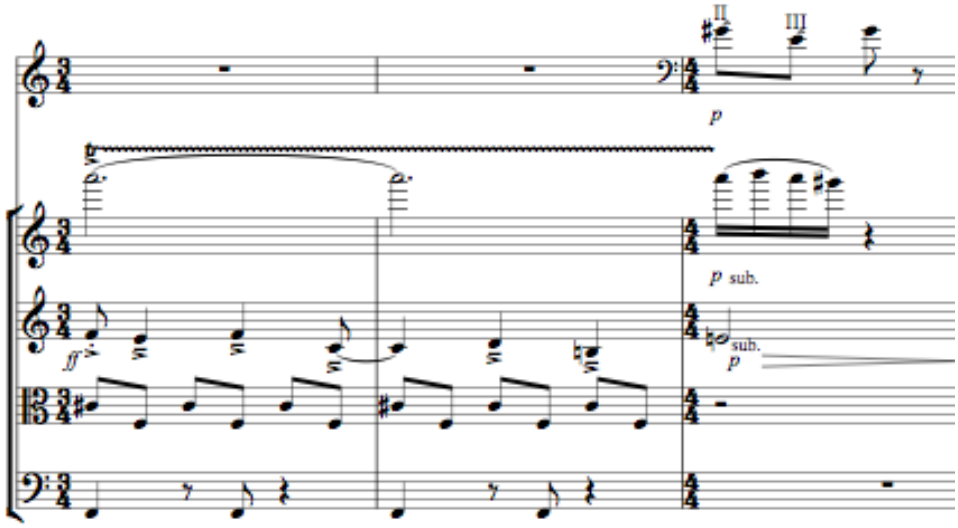

Figure 17. mm. 233-235, full ensemble

1.2 MOTIVE A

The first secondary motive, and the one that goes through the most development, first appears in m.34:

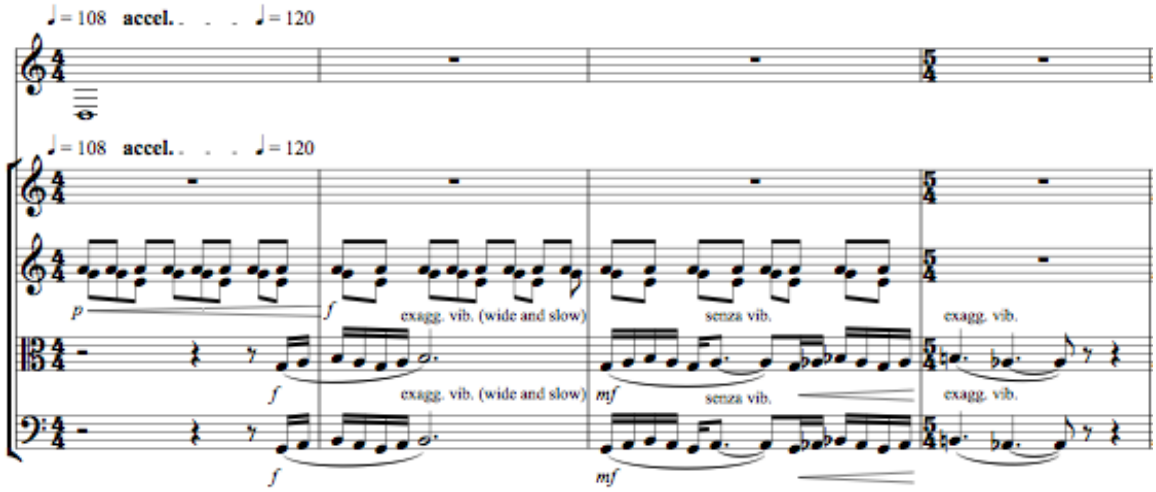

Figure 18. mm. 34-37, full ensemble

Motive A consists of a series of undulating scalar 16th notes over the range of a third (both [024] and [013] iterations are motivically relevant) and ends on a note of longer duration. The pause after the 16th notes varies both in pitch and rhythmic placement, adding subtle variety to the iterations of the motive.

Motive A contrasts X in several ways: instrumentation, tuning, pitch level, and function. A only appears in its original form in the string quartet and is exclusively in 12-note equal-tempered tuning. Mackey almost entirely avoids presenting motive A in the C4 octave, where X appears most commonly, and for accompanimental purposes, Motive A never appears in its original form.

Motive A serves several purposes, and, similar to motive X, it is used both melodically and accompanimentally. In its melodic form, it functions as an aggressor, bringing about formal changes by dictating the development of other motives with its agitated, transitory rhythmic character. Contrastingly, as an accompaniment, Motive A's variations serve as a passive, consistent pattern layer upon which other musical events can be built.

1.2.1 Motive A as Melody

The introduction of motive A in m. 34 is strong and confident, appearing without guitar, and in the lowest register – so far not explored in the piece. Rapidly, over the course of the next 20 measures, A is expanded:

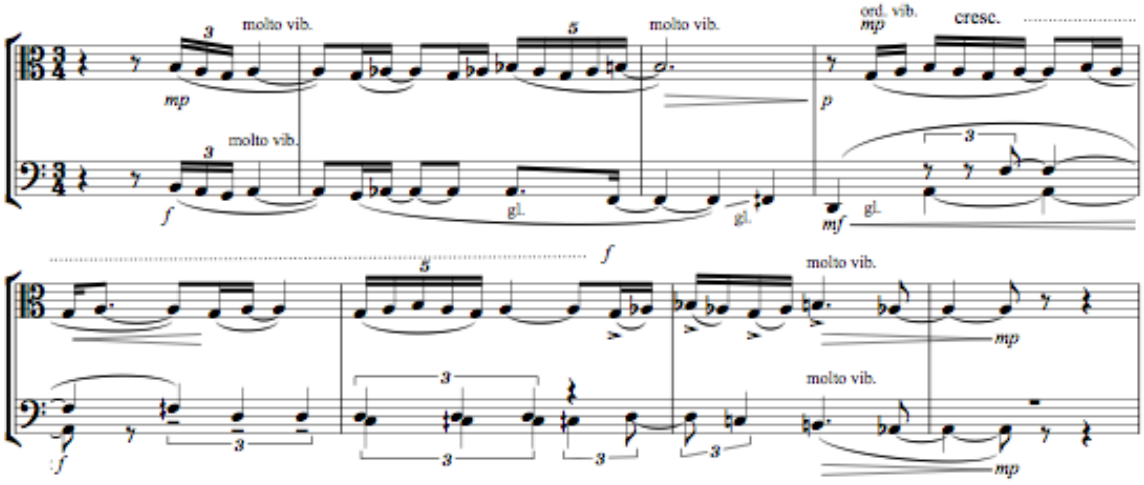

Figure 19. mm. 38-45, viola and cello

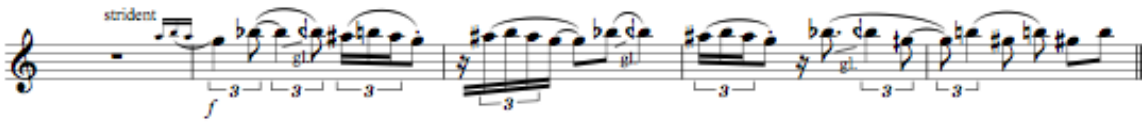

Figure 20. mm. 48-52, first violin

In Figure 19, Mackey changes the motive's metric placement, rhythm, and duration. After the first beat of m. 39, the octave doubling between the viola and cello abruptly stops, but A continues in the viola, varying in rhythm and metric placement. Frequent changes to where the long-duration notes occur in the up-and-down scalar pattern provides Mackey with much opportunity for motivic variation.

In Figure 20, Mackey transfers motive A into the upper register of the first violin. At this point in the piece, the X motive pattern in the guitar has started to break down for the first time, and the A motive is changed significantly as well: starting on the second pitch in the cycle for the first time (mm. 34-36 started with the first, and m. 38 with the third), compressing the scalar contour into shorter rhythmic durations, and further exploring the outlined minor and major intervals outlined in A's original form through leaps and short glissandi. Thus, over the course of mm. 34-53, motive A undergoes many changes, gradually forcing the ensemble out of its ordered and controlled structure in mm. 34-36 and into the frenetic material that defines the following passage.

As we begin to move into the development section of *Troubadour Songs*, A starts to take on an accompanimental role. This is gradual, however, as it remains melodic in character for considerable time during this process. In mm. 95-111, motive A has simplified in the first violin, but it still functions as a melody over the steady harmonic pulse provided by the rest of the ensemble:

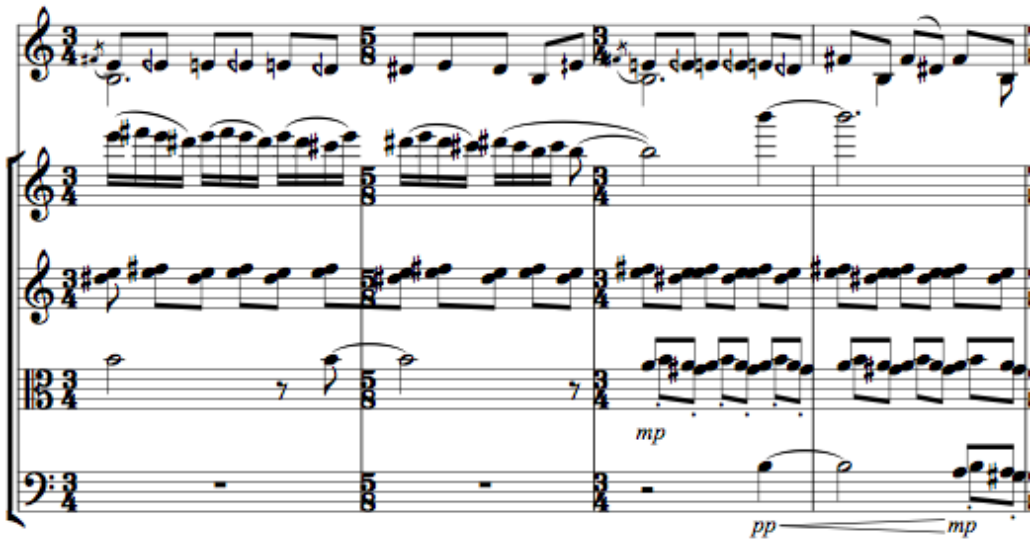

Figure 21. mm. 95-98, full ensemble

Here, Mackey restrains the range of the oscillating, scalar pattern to just an upper and lower neighbor, while placing the longer, sustained tones at the end of a steady stream of consistent 16th note cycles. This motive variation provides a rhythmically active melodic figure to highlight the harmonic shifts that occur over the next seventeen measures. During this passage, this A motive variation occurs four more times, each time decreasing the number of 16^{th}-note cycles before the long notes. Moreover, the pitches of the long notes [B,Bb,C#] match those outlined in the cello at the opening of the piece, and encompass the [013] set from the second half of A.

The A motive then becomes an accompanimental figure for the remainder of the piece, except for a few instances: mm. 197-201 contain the only occurrence of the original A motive in the development, and mm. 332-336 (the recapitulation) includes a return of two major variations. In the final passage of the piece, the cello features motive A in the extreme high register of the instrument, with short glissandi outlining major and minor thirds. Overall, the original form of

the A motive appears almost exclusively in the exposition, and each subsequent appearance is a variation with varying levels of deconstruction of the original form. It is important to note that the original A motive does not appear in the final section of *Troubadour Songs*. The function of motive A is to contrast with motive X, both in character and kinds of transformation, and to provide the basis of much of the accompanimental figures in the piece. This latter element will be discussed further below.

1.2.2 Motive A as Accompaniment

As *Troubadour Songs* progresses, motive A deconstructs from a complex melody to a simple one, and then to accompanimental material. The first time the A motive appears as accompaniment is at the beginning of the development section of the piece, played by the viola:

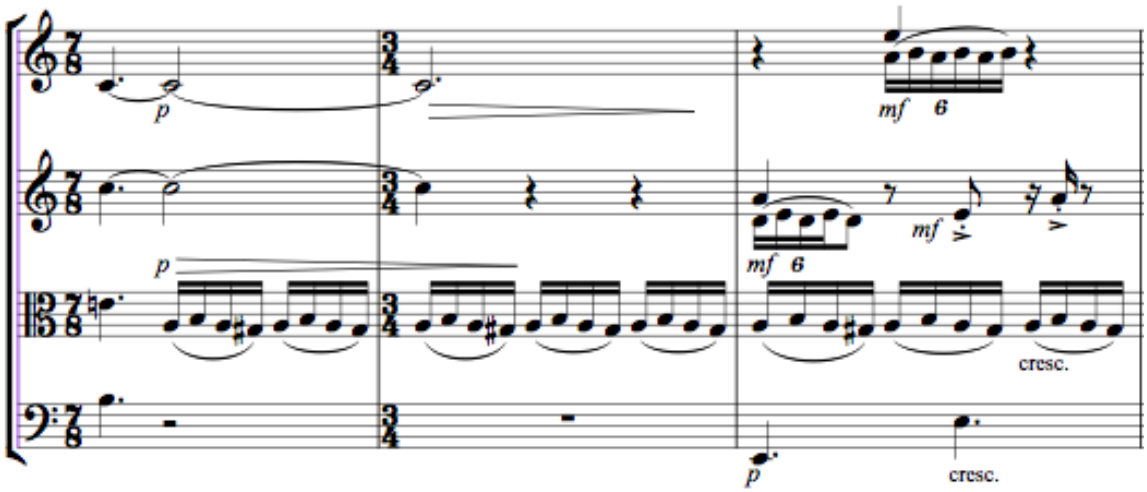

Figure 22. mm. 121-123, string quartet

Unlike with the A motive melodic variations, there are no pauses for notes of longer duration, nor do the cycles move by step to create a melodic contour. Rather, they stay on the

same pitches for an extended period of time while other musical events build around them. In the example above, the A material lays the foundation for the ensemble to build to a new passage.

This A motive variation is utilized throughout the developmental section of *Troubadour Songs* (mm. 141-160, 162-166, 226-229, and 235-239). As the piece approaches the (anti)-climax of the development, the accompanimental figure fades into the aforementioned A-major static harmonic passage.

1.3 MOTIVE B

Motive B appears in each instrument in the ensemble at least once, and is less developed than the other motives. What truly sets B apart, though, is its rhythmic content, and its imaginative playing indication to the performer:

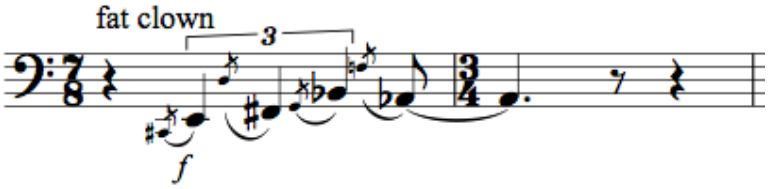

Figure 23. mm. 47-48, cello

Characterized by quarter-note triplets outlining a non-linear series of whole steps, each accompanied by a grace note (a minor or major third relation to its accompanying pitch – a holdover from motive A), motive B does not have its own arc of development. It does appear in all three main sections of *Troubadour Songs*, and is always audible because of the triplet quarter notes, uniquely its own. The most common variation is a change in contour (see below). In

addition, as the piece develops, it repeats, as well as being doubled in two or three instruments. Functionally speaking, motive B always appears in the middle of a section, never starting or ending one, and therefore, it does not have any strong influence on the formal development of the piece. Below are examples of B that highlight its developmental changes.

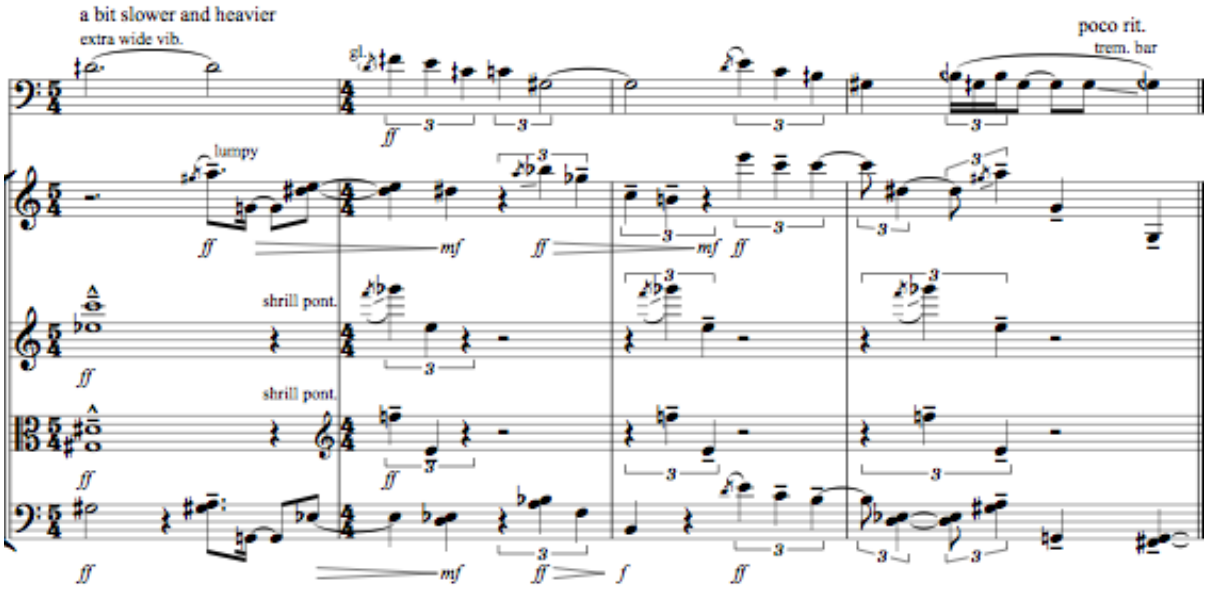

Figure 24. mm. 112-116, full ensemble

In this first example, B is expanded to include more pitches (this time beyond the whole-tone scale), its original contour is changed to an entirely downward trend, and each pitch is no longer accompanied by a grace note. This appearance of the motive is simplified in mm. 210-214 also.

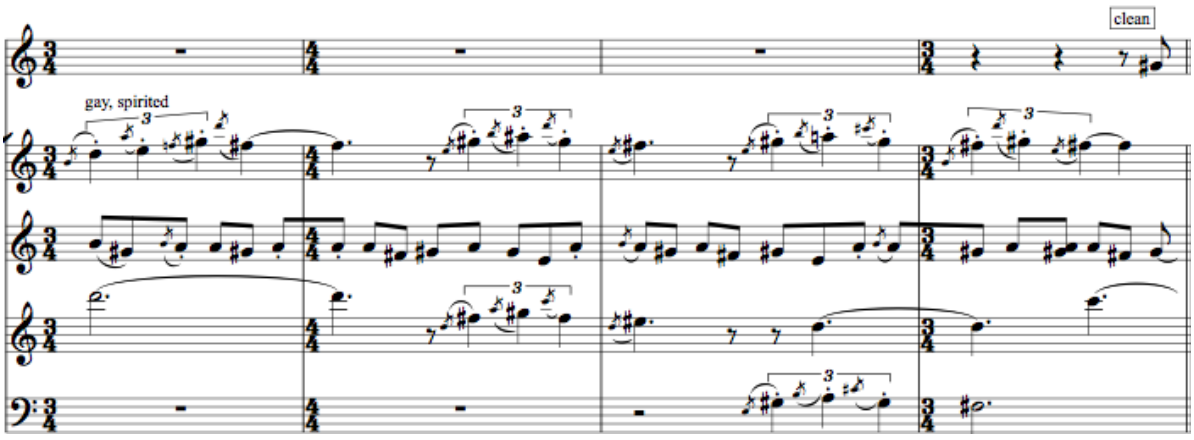

Figure 25. mm. 222-225, full ensemble

In this example, B reverts to its original contour, but is doubled in various pairs. This B variation occurs in mm. 334-336 in a condensed form in the recapitulation of the piece.

1.4 MOTIVE C

In contrast to all the motives in the piece, motive C is the one that most closely resembles a theme. While the other motives are mainly short and repetitive, C is linear, consisting of sustained notes that create a longer melodic phrase. Motive C only appears a few times in the piece and is most prevalent in the recapitulation section (similar to the last X motive variation). It is not just repeated, but is extended melodically. A unique characteristic of motive C is that it only appears in the string quartet, and is always in harmonized pairs or trios.

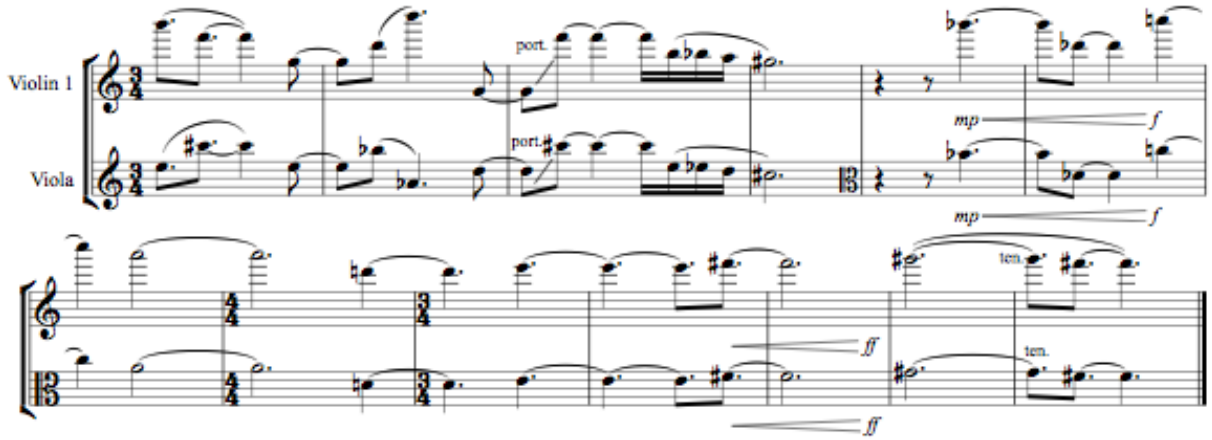

Figure 26. mm. 154-166, violin 1 and viola

The above passage is the first appearance in the piece and, along with the X2 motive discussed previously, it leads to an important harmonic arrival point: E major in m. 165. This passage and a truncated form in mm. 230-233 are the only two appearances of this material in the first two sections of the piece.

After the X motive begins the recapitulation in m. 305, motive C takes a central role with much melodic expansion and variation that floats over several abbreviated returns of opening, X-dominated passages of the piece. This can be seen in Figure 31. Thus, Mackey provides a new, contrasting variation of a briefly-encountered, earlier motive. The phrase lengths of this C expansion and variation remain roughly the same as its first appearance, around four measures long, with Mackey articulating the guitar "interruptions" in X in between C phrases.

As the recapitulation continues, C fades away, only to return in the first violin and viola in a new pointillistic form, with harmonics and shorter note durations:

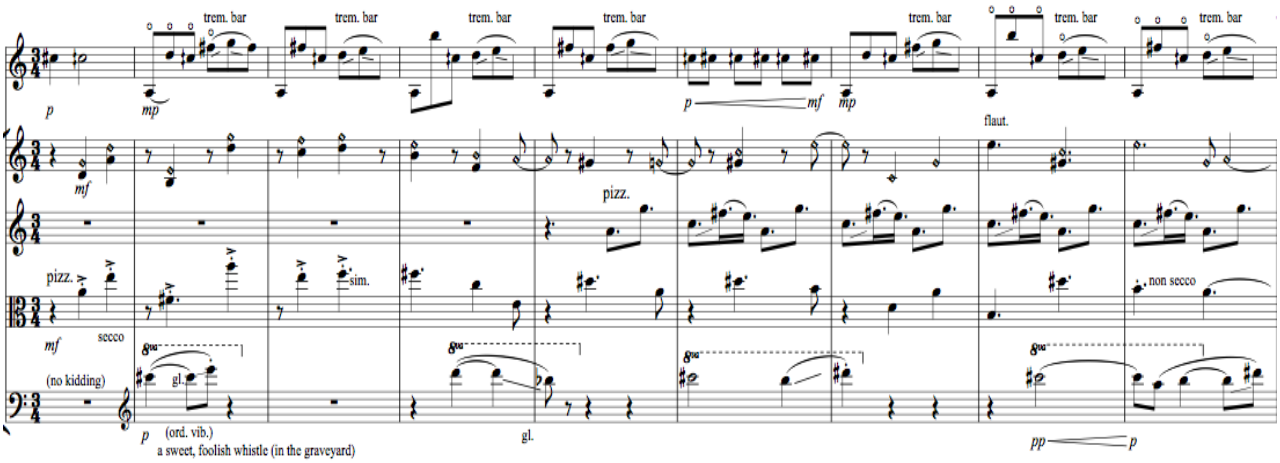

Figure 27. mm. 345-353, full ensemble

Motive C does not develop fully until the recapitulation. In contrast to the trajectory of other motives in the piece, it starts in a short, simple form, and develops into its fullest iteration in the recapitulation.

1.5 TRANSITIONAL MOTIVES: T1 AND T2

In addition to the aforementioned motives that undergo significant change throughout the piece, Mackey makes use of two shorter, simpler motives that occur prominently at the transition of sections.

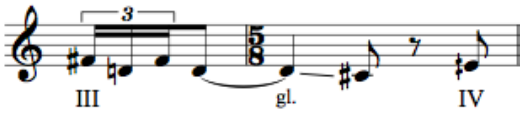

Figure 28. mm. 32-33, T1

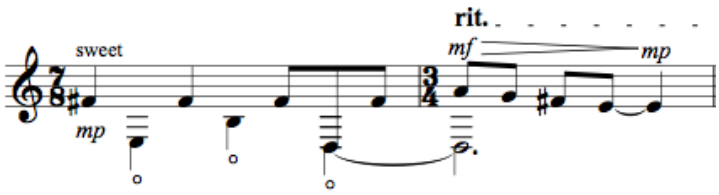

Figure 29. mm. 32-33, T2

Motive T1 comes at the end of the first passage of *Troubadour Songs*, where motive X is first introduced. It functions as the conclusive gesture after the build-up of interruptive material within motive X discussed earlier. T2 first appears only six measures later. Both motives emphasize triadic harmony, the first more contextually (completing the ambiguous D triad into a major triad with the addition of the F#) and the second overtly (outlining a D major triad in arpeggiated form) – this element will be discussed later.

After its first appearance in m. 25, T1 appears four more times in the piece, always functioning as a punctuation for the conclusion of a passage. In mm. 115-117, Mackey expands the motive while retaining its purpose. During these passages of more intense opposing materials, T must battle more to overpower the quartet's more complicated material.

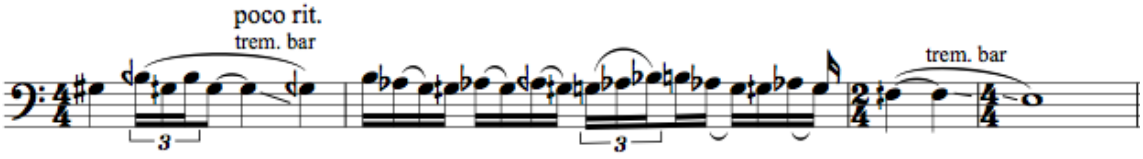

Figure 30. mm. 115-117, electric guitar

In contrast to how Mackey expands the A motive, with scalar, 16th note runs progressing into leaps covering the same interval, Mackey develops the T1 motive in the opposite way: filling in the pre-determined leap with a sixteenth-note, scalar run. This expanded form takes on

the character of a rock-influenced electric guitar solo. This, and other popular music references will be discussed in detail later. Overall, each time T1 appears, it concludes a passage, retaining its functional identity as established earlier in the piece.

In contrast to T1's more frequent occurrences, T2 only appears twice in the piece. That said, it has the same function as T1, a transitional tool for connecting sections. After its initial appearance in the exposition to close the second passage, it plays a more prominent role in the development section. It is here, in mm. 189-195, where Mackey develops the motive in the entire ensemble, expanding it melodically while referencing its opening role of introducing motive A:

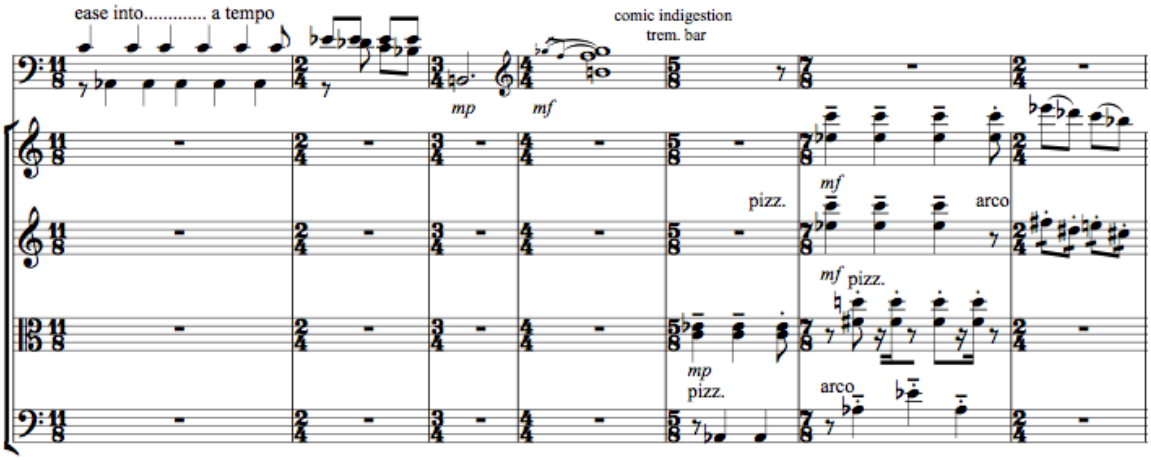

Figure 31. mm. 189-195, full ensemble

While T1 concludes sections with varying levels of intensity, here Mackey uses T2 to begin a section. In this passage, Mackey uses musical humor and orchestrational variations to expand the motive and create a new melodic context of the material. In doing so, Mackey has again polarized the way he develops both the most and least developed motivic materials – just as X and A contrast in their development, so do T1 and T2.

1.6 CONCLUSIONS

Steven Mackey has created an entire piece around one very basic motivic idea. The microtonal oscillation that defines the X motive appears constantly throughout the piece, functioning as both melody and accompaniment, and sections contrasting with it help to define the piece's development. In addition, the manipulation and variation of several other motives play an active role in defining how the piece progresses. These compositional materials are distinct from each other not only in structural ways, but also in functional ways, having varying levels of influence in *Troubadour Songs*' formal design. As one motive gets gradually more complex with variation (e.g., motive X), another gets gradually simpler (e.g., motive A). While these trajectories take place, the motives function at varying levels of prominence. For example, while X returns in its original form at the start of the recapitulation, it functions as accompaniment to the expanded C.

Mackey defines the three major formal sections differently with regards to the amount of appearances and variations of each motive. Moreover, the development section has significantly more fleeting instances of motives, often with several appearing at the same time as others (mm. 189-235 is a good illustration of this). Figures 32 and 33 provide a visual representation of the motivic form of the piece.[10]

[10] The key for Figures 32 and 33 is as follows: a capital letter signifies a motive in its original form; a lower case, italicized letter signifies a variation of a motive; bold typeface signifies the top level of prominence, a strike-through letter signifies a middle level of prominence, and an outlined letter signifies a low level of prominence. The levels of prominence are defined by the motives' function at a particular time: whether it is the main melodic content, the countermelodic or secondary level content, or the accompanimental content, respectively. These are clarified by such elements as dynamics, instrumentation, rhythm, and repetition. As shown, these significations can be combined, e.g., the electric guitar in m. 47 has a capital X with strike-through. This would signify that the X motive is appearing in the guitar in original form, at a middle level of prominence in the texture.

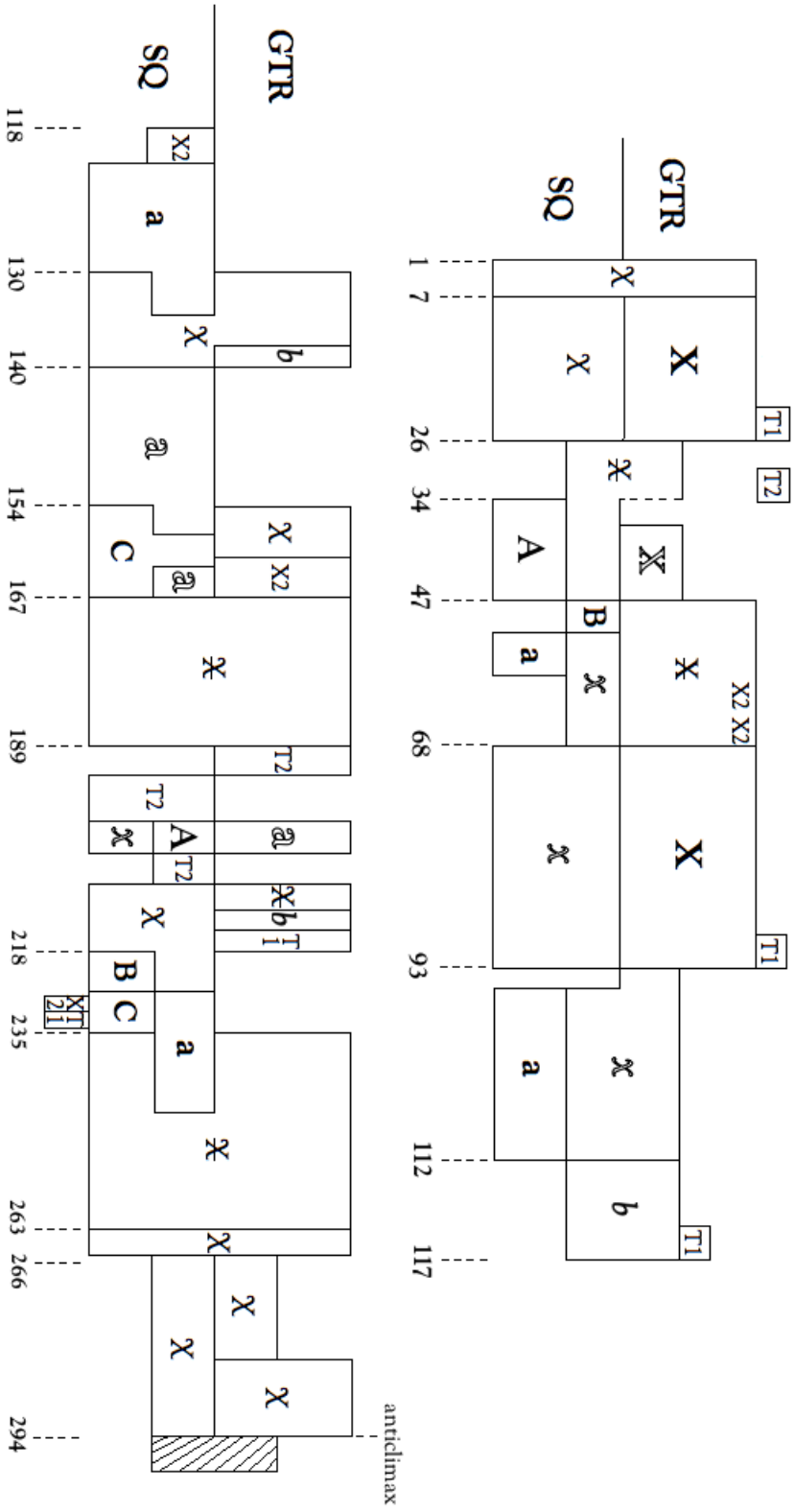

Figure 32. Motivic form of *Troubadour Songs'* exposition and development

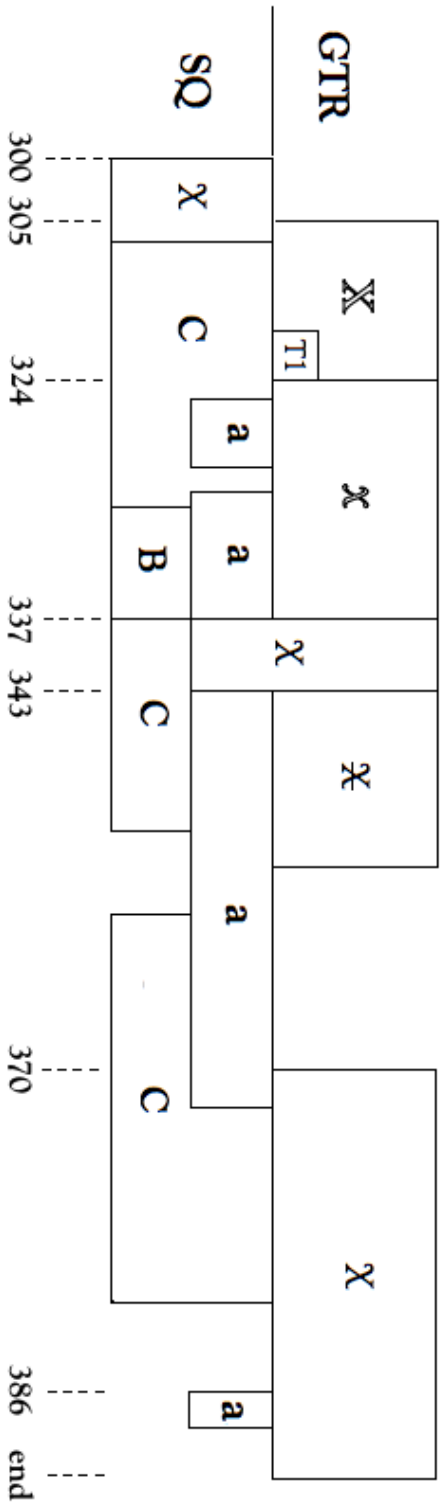

Figure 33. Motivic form of *Troubadour Songs*' recapitulation

X is present almost constantly throughout *Troubadour Songs* while other motives are not. In addition, it only appears in its original form in the exposition and recapitulation. It appears often in the development, but in many various developed forms and functions more in the background. A's trajectory from a complex central role to simple background role can be seen in the chart. Motive B is sporadic in its appearances, and motive C has a small role in the piece's first two formal sections, but comes into prominence in the recapitulation. The two transitional motives start out as clear and successful punctuation to passages, but as they develop, they eventually struggle to influence the whole ensemble at once; instead, they bring certain instruments' material to a close as others continue on (compare their appearances preceding m. 25, 33, and 92 with m. 222, 237, and 323).

Mackey's process for developing motivic material takes many forms in the piece and varies from motive to motive. His most common techniques include rhythm and pitch modifications such as diminution and augmentation, range expansion, and changes in orchestration. In addition, Mackey uses similar materials as both melodic and accompanimental content at various points in the piece.

In connecting back to Mackey's desire to explore the process of both telling and listening to a story, I feel that a more literary-based lens can be applied to *Troubadour Songs* to see a narrative focusing on a central character or protagonist, X, on a journey. In the exposition, X interacts with various contrasting elements and characters, while trying to retain its initial identity. More aggressive obstacles confront X, however, and its appearance and original form are changed by what happens around it in the development. In the recapitulation, X returns to its original form but things have changed around it. It is in a new place, perhaps having arrived to a

new location as it remembers its journey and the other characters and obstacles it has met along the way. The story ends by fading away, contemplatively, with a quirky and exploratory conclusion.

In this way Mackey successfully establishes the storyteller narrative he referenced in the program notes. "It is more like listening to a story in a foreign language where the content is inferred by how the story is being told."[11] As a listener, we hear a story being told and can follow along despite a language barrier.

[11] "Steve Mackey - Composer," accessed July, 18, 2013, http://www.stevenmackey.com/composer.

2.0 PITCH, TUNING, AND HARMONY

In *Troubadour Songs*, Steven Mackey carefully orchestrates the interaction of microtonal and equal-tempered tunings throughout the piece. The relationship between the two tuning systems helps to inform how the piece develops. At certain times, both microtonal and equal-tempered music appear concurrently, and, at other times, passages of one tuning alternate with those of the other. This creates tension as the piece progresses, and Mackey toys with the listener's expectations by manipulating this relationship. This pitch-world dichotomy is heightened further based on the instrumentation functioning with these tuning systems at any one time, with both the electric guitar and the string quartet having passages in both systems. While each system is not exclusive to the art and popular music genres, I feel that their treatment and negotiation in the piece reflects Mackey's straddling of both art and popular music worlds. In this chapter, I will discuss how these tuning systems, as well as pitch content and harmony, function in *Troubadour Songs*.

2.1 TUNING SYSTEM AND MICROTONES

The non-equal-tempered music in *Troubadour Songs* consists of quarter-tones as well as specific or non-specific pitch bends and glissandi. The unusual instrumentation is inherently capable of realizing microtonal music. In addition, Mackey makes two changes to the common

tuning system of the guitar: string VI (low E) is tuned down a whole step to D2 and string IV is raised slightly more than a minor third, from D3 to an F3-quarter sharp. Thus, the overall tuning of the guitar is:

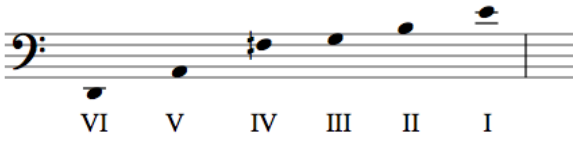

Figure 34. Electric guitar tuning

The tuning simplifies the guitarist's realization of the original X motive, with its constant pitch oscillation between G and F-quarter sharp. It also makes possible other quick figures in the guitar that move between 12-note equal-tempered and microtonal pitches. There are two triadic formations outlined in the guitar's open strings: an ambiguous D minor-major triad and an E minor triad. These triadic chords and other harmonies are important in the development of the piece and will be discussed later in the chapter.

The guitar's open IV string, as well as all the fingered quarter tones throughout *Troubadour Songs* (in both the guitar and the string quartet), are not meant to be exactly halfway between the semi-tone. Rather, Mackey indicates in his performance notes: "…the correct placement of these…quarter tones [is]…closer to the lower neighboring semitone (ie. flatter than a true quarter tone)."[12] Mackey says he included this stipulation after having performed the piece several times:

> "[I] realiz[ed] that it sounded 'better' … if the quarter tones were a little bit low… it is a very, very subtle difference from a precise, true quarter tone and it is entirely intuitive …

[12] Mackey, Steven. *Troubadour Songs.* New York: Boosey and Hawkes: 1992.

the 'right wrong notes.'"[13]

While the tuning system includes these modified quarter tones as its smallest incremental pitch value, I believe that Mackey's incorporation of these new pitches is not solely to achieve a particular harmonic sonority. It is imperative to understanding the connection between this element of *Troubadour Songs* and the influence of the speech-like inflection of the human voice – the storyteller – the central, non-musical influence to the piece.

2.1.1 Microtonality and Vocal Quality

In his program notes, Mackey admits that microtones play an important part in his musical re-imagining of storytelling.[14] It is the subtle changes in inflection of human speech that the opening electric guitar figure emulates:

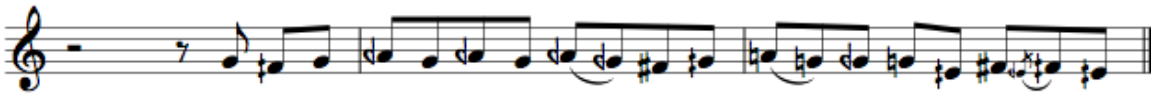

Figure 35. mm. 1-3, electric guitar

The close pitches within a small range evoke the quality of a spoken voice, and the inviting, exploratory mood of the opening suggests a storyteller beginning a story. Mackey confirms this hypothesis: "*Troubadour Songs* was inspired by the rhythms and rhetoric of storytelling, such as the opening request to suspend disbelief ('Once upon a time . . .')."[15]

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[13] Steven Mackey, e-mail message to author, 7/18/13.
[14] "Steve Mackey - Composer," accessed July, 18, 2013, http://www.stevenmackey.com/composer.
[15] "Steve Mackey - Composer," accessed July, 18, 2013, http://www.stevenmackey.com/composer.

2.1.2 Reference of Popular Music Microtonality

The influence of popular art on Mackey's microtonal compositional choices in *Troubadour Songs* goes beyond the interpretation of vocal inflection to include musical influences from popular music. These include both the appropriation of playing techniques and the imitation of stylistic musical sounds.

Mackey frequently calls for the guitarist to bend the strings from their normal pitch with the musician's finger or a tremolo bar, also known as a "whammy bar."[16] Both of these techniques are highly unusual in traditional classical guitar performance. Finger bends are common techniques used by guitarists in popular music genres like blues and rock and roll.

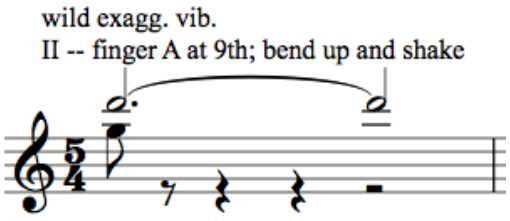

Figure 36. m. 60, electric guitar

In this example, Mackey leaves the precise finger pitch bend amount to the discretion of the performer. Thus, the actual pitches played will vary from performance to performance.

[16] A finger bend is when the guitarist plays a note, and then bends the string in a manner perpendicular to the string direction in order to alter its pitch. A tremolo bar attaches to the bridge of the guitar, and can be used to temporarily adjust the length of the strings by altering the bridge position to modify pitch. In this way, a note might be played at a certain pitch level, but then quickly glissando to another.

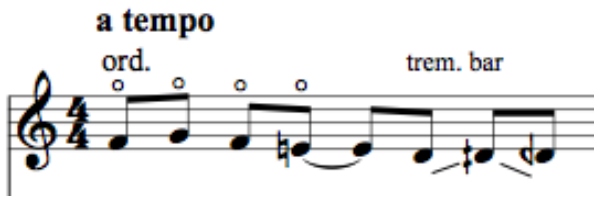

Figure 37. m. 65, electric guitar

By contrast, in this variation of the X motive, Mackey gives the exact target pitches for which he wants the 'bends' to reach. In this way, the gesture or motive can be recreated exactly, in either the guitar or the string quartet. In the case of the latter, using glissandi, the figure is recreated several times (e.g., mm. 154-159 in the cello and mm. 300-304 in the first violin and viola).

While neither the finger bend nor the tremolo bar techniques are applied literally to the string quartet music in *Troubadour Songs*, Mackey does recreate their sonorities several times. These events are always specific pitch bends, with a desired target note provided. One example is the viola in mm. 132-139, where it recreates a common guitar technique in rock and roll made famous by artists such as Jimi Hendrix and Eddy van Halen. The effect is commonly referred to as a dive-bomb, because of its distinct sound, and is usually performed with a distortion effect and a whammy bar. The viola, however, in absence of these tools, recreates the sound with the combination of glissando, sul ponticello, and scratch tone:

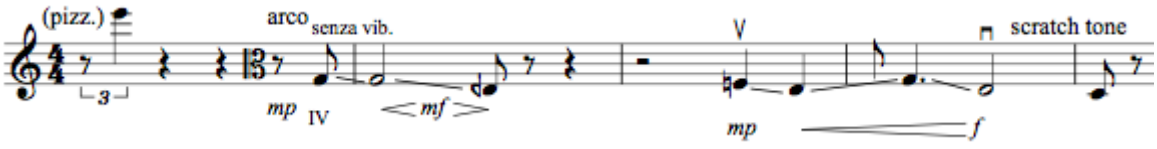

Figure 38. mm. 132-136, viola

These are some examples of musical appropriation in the piece. There are more examples

of both overt and subtle references to popular music in *Troubadour Songs*, and these will be discussed further in the third chapter.

2.1.3 12-Note Equal Temperament and Microtonality

As shown in previous chapters, motivic development has an important role in the development of *Troubadour Songs*' structure. In addition to these, Mackey uses pitch-content to help define form, using both the interaction between two tuning systems, as well as shifts in and arrivals of major harmonic events. Before exploring the role of harmony in the piece, however, I will focus on the microtonal and 12-note equal-tempered (ET12) tuning systems. When they are utilized informs the structure of the piece, including the pacing of sections and the transitions between them. In the chart below, I have outlined the short, identifiable passages in the piece within the large-scale formal divisions to illustrate this aspect of the piece.

Table 1. ET12 Versus Microtonality in *Troubadour Songs*

MEASURE	SECTION	EVENT	Guitar	SQ
1 - 6	INTRO		MT	ET
7 - 25	EXPOSITION	˜D major	MT	MT
26 - 33			MT	ET
34 - 37		Transition		ET
38 - 53			MT	MT
54 - 59			MT	ET
60 - 67			MT	MT
68 - 74			MT	MT
75 - 81		Transition		ET
82 - 92			MT	MT
93 - 117		Ab-major arrival	MT	ET
118 - 130	DEVELOPMENT	Transition		ET
130 - 140			MT	MT
141 - 153			ET	ET
154 - 160			MT	MT
161 - 166		E-major arrival	ET	ET
167 - 188			MT	ET
189 - 204		Ab-major arrival	ET	ET
205 - 217			MT	ET
218 - 236			ET	ET
237 - 252		A-major arrival	MT	ET
253 - 260			ET	ET
262 - 266			MT	MT
267 - 284			MT	MT/ET
285 - 293	INTRO		MT	ET
294 - 299		E- major; Anti-climax		ET
300 - 304				MT
305 - 323	RECAPITULATION		MT	ET
324 - 336			MT	ET/MT
337 - 339			ET	ET
340 - 344			MT	ET
345 - 360			MT	ET
361 - 369			ET	ET
370 - end		˜D major	MT	ET

It is immediately apparent when looking at this chart is how frequently Mackey changes the tuning system. With two tuning systems and two main instrumental groups, Mackey has

several combinations from which to choose. The chart shows that there is a difference in the frequency and amount of shifting between the two sound systems within the three main formal divisions of the piece. Overall, the passages that are strictly equal-tempered stand out in contrast; this is immediately apparent when listening to the piece.

In the exposition, the guitar remains microtonal throughout while the frequent shifting, which defines future sections of the piece, occurs in the string quartet. This dichotomy helps to create an unsettled mood in the opening, with both the guitar and string quartet frequently changing in pitch-content, and often not agreeing on which tuning system to use. In contrast to the majority of the exposition, there are two passages where the string quartet plays without the guitar. Both of these passages are strictly equal-tempered, and, as such, lead the listener to feel a sense of comfort or zeroing in on the pitch scale.

In the development section, the guitar and string quartet work, almost exclusively, in a more complimentary manner throughout. Mackey alternates every other passage of microtonal music (or a combination of both) with material of 12-note equal temperament in the entire ensemble. This alternation happens six times, leading up to the final section of the development and the equal-tempered (anti)-climax. The constantly alternating pitch worlds prevents an understanding of which tuning system will be the ultimate moment of "arrival." When the climactic passage arrives in mm. 294-299, it is understated, lacking in rhythmic intensity, and dominated by triadic harmony (this will be discussed further below). In this way, Mackey has built up listeners' expectations with constant shifting of pitch-content and tuning system alternations, only to arrive a serene, meditative, (anti)-climax in ET12.

In the recapitulation, unlike in the previous two sections, there is an almost omnipresent dichotomy between the microtonality of the guitar and the ET12 of the string quartet. Since the C

motive is greatly expanded in this section in the strings, it is this equal-tempered melodic content that accounts for the large portion of this tuning in the string quartet. There are two brief moments where both instrumental groups join in equal-tempered music: mm. 337-339 and 361-369. This pattern of mixed tuning alternating with 12-note equal temperament recalls the exposition of the piece, again strengthening the feeling of return at the end of the piece.

Overall, the placement and manipulation of tuning systems is of central importance in understanding how pitch worlds affect the listening experience of *Troubadour Songs*. Mackey successfully uses the interaction between them to help define the formal structure of the piece. The oscillation between the two tunings systems, especially in the development, reflects the dichotomy at the heart of the piece, wherein motive X, an equal tempered note alternates with a microtonal one.

2.2 HARMONIC DEVELOPMENT

Although *Troubadour Songs* is not functionally tonal, triadic harmonies do play an important role in the piece. The dualistic relationship that is relevant on many levels of the piece is reflected here as well, in how triadic harmony emerges from tonally opaque, non-triadic contexts. Clear triads contrast with the dense pitch and motivically complex passages that appear between them.

2.2.1 Blue Notes and Microtonal Effects

In modern practice, the blue note generally refers to a note added to a diatonic scale that departs from the common harmony associated with that scale. A blue note is a simplification of a complex pitch variation, and as Jeffrey Dean clarifies: "blue notes are best thought of as variations within a single flexible pitch area… rather than as substitute notes…"[17] Mackey's modified quarter tones, which remain constant throughout the piece (except for when the whammy bar is employed), are the "ambiguous" triads that utilize blue note thirds. One example of this is the first, vertical triad, in m. 112:

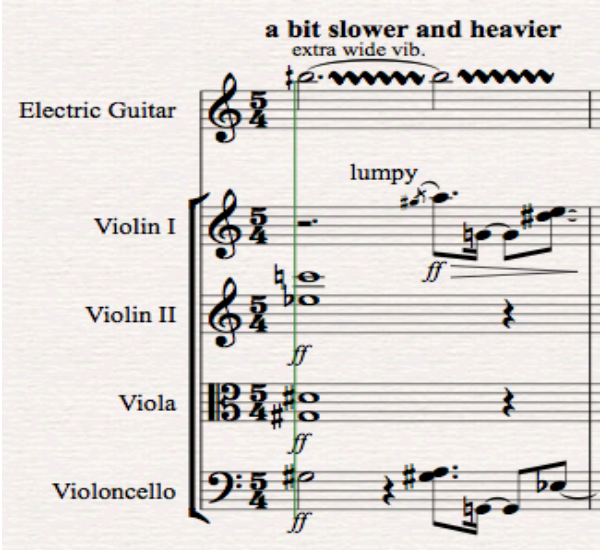

Figure 39. m. 112, full ensemble

The Ab major harmony is strongly defined by the string quartet, while the electric guitar hovers between the quarter-sharp fourth and fifth scale degrees. Mackey makes considerable use of this blue note third throughout the piece. The ambiguous D triad that defines the X motive and

[17] Jeffrey Dean, "Blue Note," *The Oxford Companion to Music*, ed. Deane Root. <http://www.oxfordmusiconline.com> (Accessed 2 December 2013).

several of its variations are good examples.

One of the fascinating things about microtones in *Troubadour Songs* is how their effect on the listener changes depending on the context in which they are placed. Through the use of combinations of equal-tempered pitches and microtonal pitch variations, Mackey is able to create textures of deep, dense complexity as well as clear, diatonic harmony with subtle inflections. The examples below illustrate this.

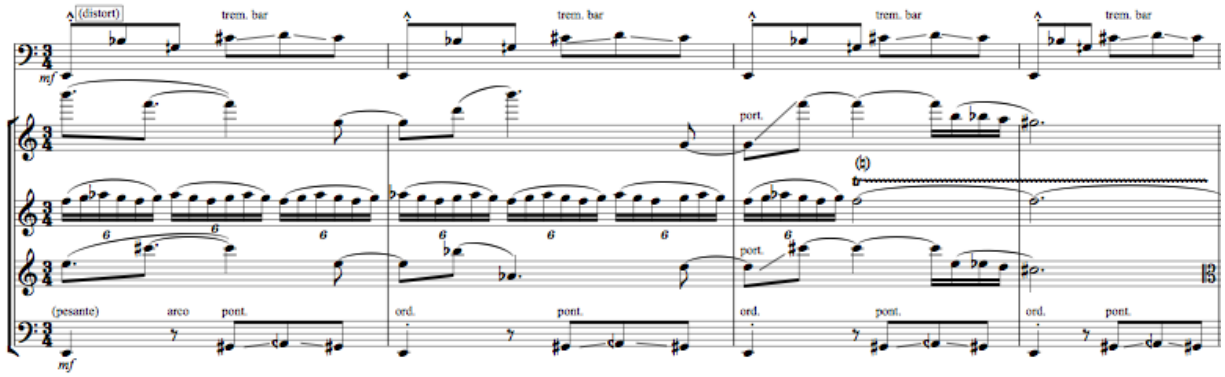

Figure 40. mm. 154-157, full ensemble

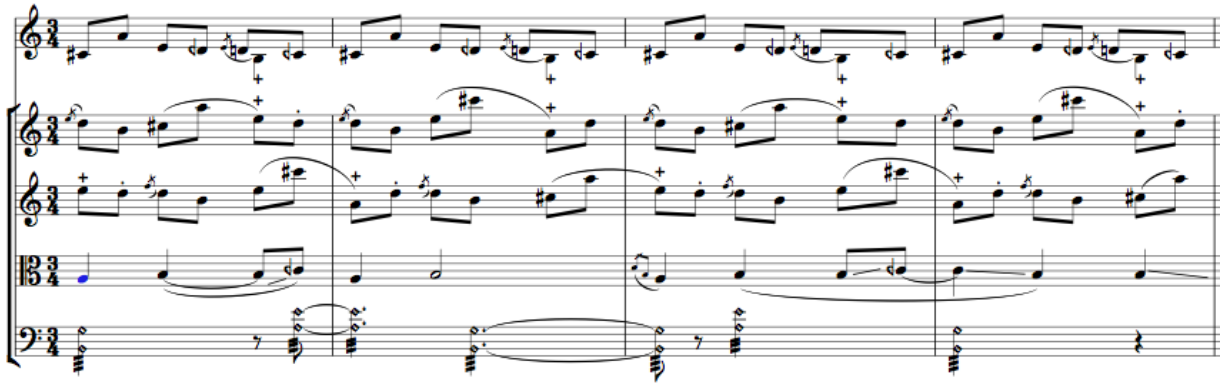

Figure 41. mm. 249-252, full ensemble

The first example is the dense material from which emerges the first, clear E major triad

in the piece (more on this later). The second example comes in the long, A-major restful passage in the development section. Note how both examples contain a combination of equal-tempered material and microtonal pitches and glissandi. While appearing similar visually, however, the two examples sound drastically different; the former is unsettled and ambiguous, and the second stable and clear. Therefore, depending on the surrounding context, the effect of the blue notes and microtonal material changes.

2.3 HARMONIC FORM

As described before, the overall form of *Troubadour Songs* is divided into three main sections that are defined by motivic content and development, pitch, and tuning systems. Also contributing to formal structure are large-scale harmonic shifts that include the contrast of complex, polyphonic passages with simple, triadic harmonies. These triads are either major or ambiguous (blue notes). In addition, there are several harmonic arrivals in passages better described as "pitch-centered." These passages are harmonically static, but not triadic. While formal divisions previously identified through motives or tuning systems are supported by these harmonic events, a closer look at *Troubadour Songs*' harmonic form also shows us a novel way of defining structure.

Although triadic harmony is not functional in the traditional sense, there is cohesive structure in how harmonic events occur throughout the piece. Looking at the background level of the harmony, these details begin to emerge.

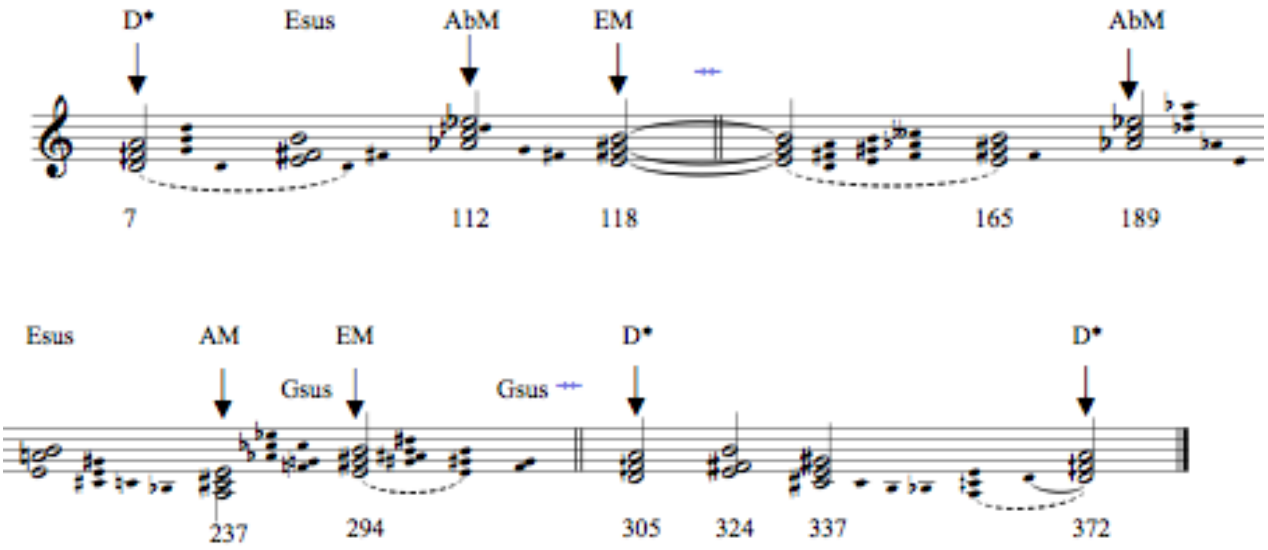

Figure 42. Harmonic form, background level

The exposition has previously been shown to consist of a series of passages alternating between the X motive with other motives that are developed throughout the remainder of the piece. After the introduction, the first triadic harmony is presented in m. 7 with the X motive, a D ambiguous triad. This, as well as arrivals on Ab major and ultimately E major, are the harmonic pillars of this first section of the piece. These are the main harmonic arrival points that occur in the rest of the piece. The Ab major triad that occurs in m. 112 is the first time a triadic harmony is presented using the full ensemble. The bending D quarter sharp in the guitar exhibits the microtone as a subtle pitch inflection on a triadic harmony, rather than as an expansion into a new pitch world (as previously mentioned in section 2.2.1). As the pitch bends, it hovers around the 5th of the Ab major chord, lending bluesy nuance to the harmony. From here, the harmony shifts quickly downward to E major, which marks the start of the development.

The development section of *Troubadour Songs* has many triadic harmonies at play, including all of those that appear in the exposition except the ambiguous D triad. The harmonic motion is much quicker in this section, in comparison to the exposition and recapitulation. The

largest harmonic prolongation is from mm.237-260, where a long, settled passage is dominated by an A major sonority. The transition away from this material in m. 261 is sudden and unexpected:

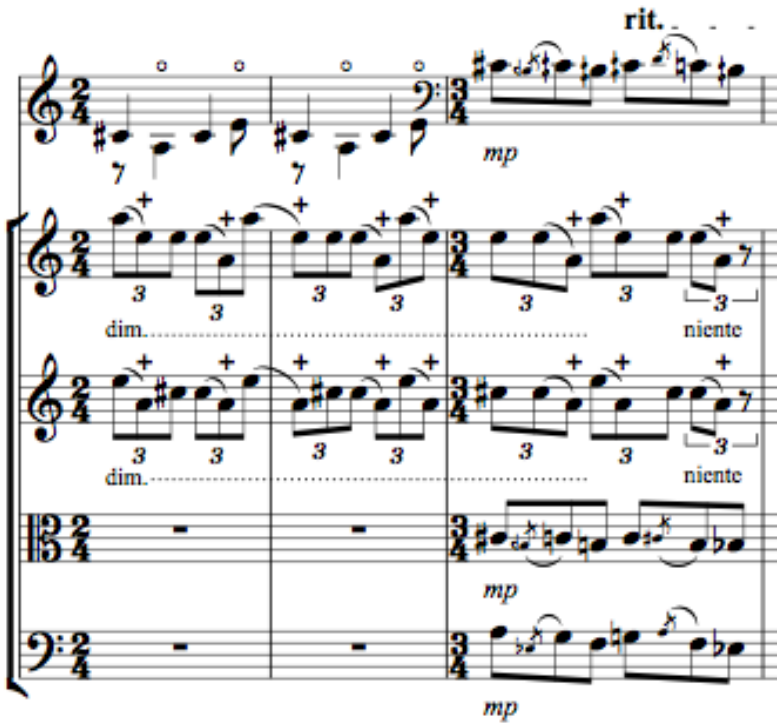

Figure 43. mm. 259-261, full ensemble

This abrupt change suggests an unfulfilled dominant relation to the D ambiguous harmony that is central to the piece. But, instead of returning to the original harmony, there is a sudden shift with the return of X, which for the first time is presented in three instruments at the same time. This develops into a brief return to the piece's introductory material, before a suspended harmony around a G dominant sonority, similar to the transitional material near the beginning of the development (mm. 121-129), leads us into the (anti)-climax of the work in E major. Figure 44 shows the voice leading in this passage:

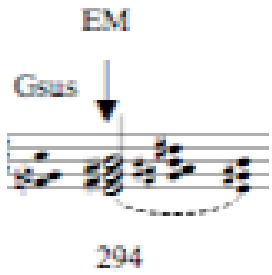

Figure 44. Voice leading at (anti)-climax

Thus, the E major harmony that initiates the development section returns to conclude the passage, and ultimately serves as the foundation for the subdued, rhythmically inactive climax of the work. This moment marks the end of the development section, and it is interesting to note that the high energy music from the development section does not return.

The recapitulation returns to the beginning harmonies of the piece, but they are somewhat clouded due to the expansion of the highly chromatic C motive. The harmonic shifts in the development section, specifically mm. 226-237, return in compressed form from mm. 337-342. Lastly, the return of the D ambiguous harmony dominates to the end of the piece.

While the ambiguous D chord and E, A, and Ab the major triads are all central to the work, it is the first two harmonies that act as the central pillars of *Troubadour Songs*. The ambiguous D triad dominates the exposition and recapitulation, and the E major triad defines the development. Together, they are responsible for the background layer of harmonic function at play in the piece.

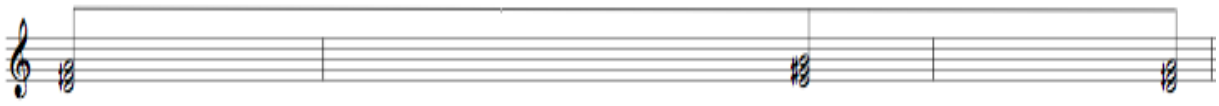

Figure 45. Harmonic form, fundamental background layer

The resemblance to the X motive, the central compositional material in the piece, is clear. An established event precedes a contrasting section, ultimately returning to the initial material. More specifically, the upper neighbor relationship of the ambiguous D and E major triads reflect the neighbor note relationship in the X motive. Interestingly, the ambiguous harmony is central and the major harmony provides the contrast.

D triads are almost exclusively ambiguous in the piece; there are moments of implied or brief D major or minor harmonies (e.g., mm. 32-34), but these events are inconsequential when compared to the weight given to the ambiguous form of the triad. It is interesting that the trajectory of harmonic development in *Troubadour Songs* moves from vague and non-equal-tempered to a clear major sonority, and then back again. Mackey grounds the harmony in the piece in a defined microtonal language, to create a listening experience "like listening to a story in a foreign language."[18]

[18] Steven Mackey, Liner notes from *String Theory*, Steven Mackey and the Brentano String Quartet, Albany Records, B0000A4G4U, 2003, Compact Disc.

3.0 DUALITIES OF *TROUBADOUR SONGS*

At the core of *Troubadour Songs* are the many different iterations of a dual relationship, most commonly where an established event occurs, is escaped from or contrasted with, and returns. Formally, this is shown with the exposition, development, and recapitulation. The X motive illustrates this on the smallest of levels with the repetitive microtonal pitch oscillations. Harmonically, the D ambiguous harmony defines the exposition and recapitulation; this contrasts with the central E major harmony in the development. The two tuning systems of 12-note equal temperament and microtonality further illustrate the idea of dichotomy in *Troubadour Songs*. In this chapter, I will look at other dualities at play in the piece.

3.1 AURAL DICHOTOMY

During all the formal, motivic, and harmonic shifts in the piece, the listener is constantly exposed to opposing passages of 'settled' and 'unsettled' music. This could also be described using the more traditional terminology of tension and release. The first three passages illustrate this well. An obscure, unsettled introduction and first passage, which are defined by microtonality and glissandi (mm. 1-25), contrast with an open, settled section of clear harmony (mm. 26-37) – a release from the tension preceding it. Then, after introducing a new motive (A), Mackey brings us back into an environment of uncertainty for the next passage (mm. 37-92).

These “settled” and “unsettled” qualities are defined by melodic context, harmonic content and motion, frequency of color and textural shifts, and layers of activity. The beginning of the development illustrates the elements defining these two characteristics. After the X2 motive, mm. 118-129 consist of a crescendo of E major suspended harmony expanding in range. While the rhythmic activity is high, the harmony and texture is static. Moreover, all of the functioning layers are working together to create a unified sound. These characteristics combine to create a “settled” sound, with a trajectory of building harmonic tension. The passage immediately following (mm. 130-140), however, is defined by many independent layers with unclear harmony and direction. The electric guitar and viola trade gradually more corrupted glissandi X variations, while the rest of the ensemble aggressively punctuate in an inconsistent manner. These combine to create a palpably “unsettled” sound. The second half of m. 140 starts the next “settled” passage (mm. 141-153), where the music become more constant (despite still carrying over the cello motive from the previous “unsettled” passage), in a series of stepwise harmonic shifts from D major (#11), to E major (#11), to F diminished (mm. 145-153). The regularity of these shifts, combined with complementary motivic content in rhythm and contour throughout the ensemble, create another passage of “settled” music.

The following figure illustrates these passages throughout the piece:

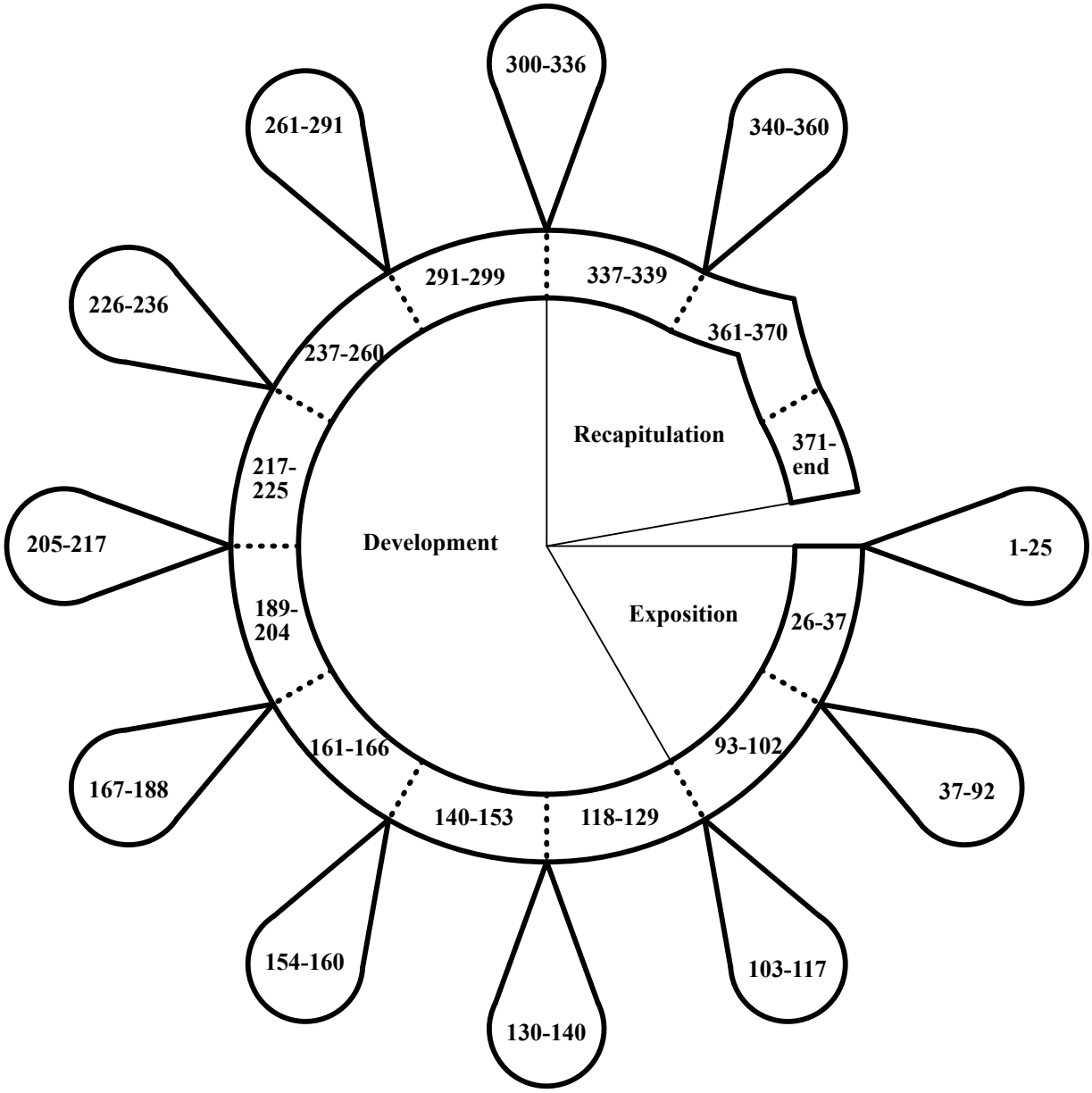

Figure 46. Alternating sections of balance in *Troubadour Songs*

The inner ring represents the "settled" passages. Conversely, the tear-shaped petals, so to speak, signify the unclear, "unsettled" passages. The passage from m. 361 to the end of the piece has a subtle change in format, whereupon the final, conclusive passage begins partially at first, then conclusively in m. 371. The transition to the final, "settled" passage begins with the

oscillating 5th eighth-notes in the guitar, signaling the conclusive return to the ambiguous D harmony as motive A and C variations continue in the string quartet from the previous "unsettled" passage. At m. 371, the full ensemble has reached the conclusive "settled" passage as shown by the harmonic and rhythmic stability**.** For this reason, I have split that section in two, with a subtle shift in the circular form suggesting a middle-ground between the "unsettled" and the "settled."

3.2 INSTRUMENTAL DICHOTOMY

The instrumentation of *Troubadour Songs* immediately calls into question the hierarchical relationship of the instruments. Combining the most defining instrument of rock and roll with arguably the most classical of art music ensembles, Mackey has already set up a contrasting relationship before the piece begins. Mackey addresses this in his performance notes, saying:

> "The level of guitar amplification should be adjusted within the following guidelines: The guitar should always be heard when present but never overpower the quartet. This is chamber music not a concerto."[19]

His goal is to create a unified ensemble with equal roles. Regardless of hierarchy, however, contrast is established between the five instruments. Mackey defines his motivic content through instrumentation. Motive X, in its original form, appears exclusively in the guitar. Motives A and C appear exclusively in the string quartet. It is important to note that original motivic content never appears in a string instrument in a solo capacity. That is to say, the string

[19] Mackey, Steven. *Troubadour Songs.* New York: Boosey and Hawkes: 1992.

quartet functions as a single unit like the electric guitar. Despite Mackey's performance instructions suggesting equality amongst all the instruments, there is a dichotomy between the guitar and the string quartet.

3.3 RHYTHMIC DICHOTOMY

Rhythm plays a vital role in *Troubadour Songs*. Much of the playful character and imaginative development in the piece comes as a result of Mackey's creative rhythmic language. As the aural and instrumental dichotomies interact throughout *Troubadour Songs*, there are contrasting rhythmic worlds as well: pulsed and free. In addition, Mackey creates hybrid passages of pulsed and free music at the same time, as well as two contrasting pulsed materials laid atop one another. The counterpoint of rhythmic divisions throughout the piece helps to create an exploratory quality.

Figure 47 is an example of strictly pulsed music. The accompaniment and melody have a strictly regular pulse propelling the music forward. Even when the guitar accompaniment adds ornamentation to its material, in m. 102, the precise 8^{th} note pulse remains.

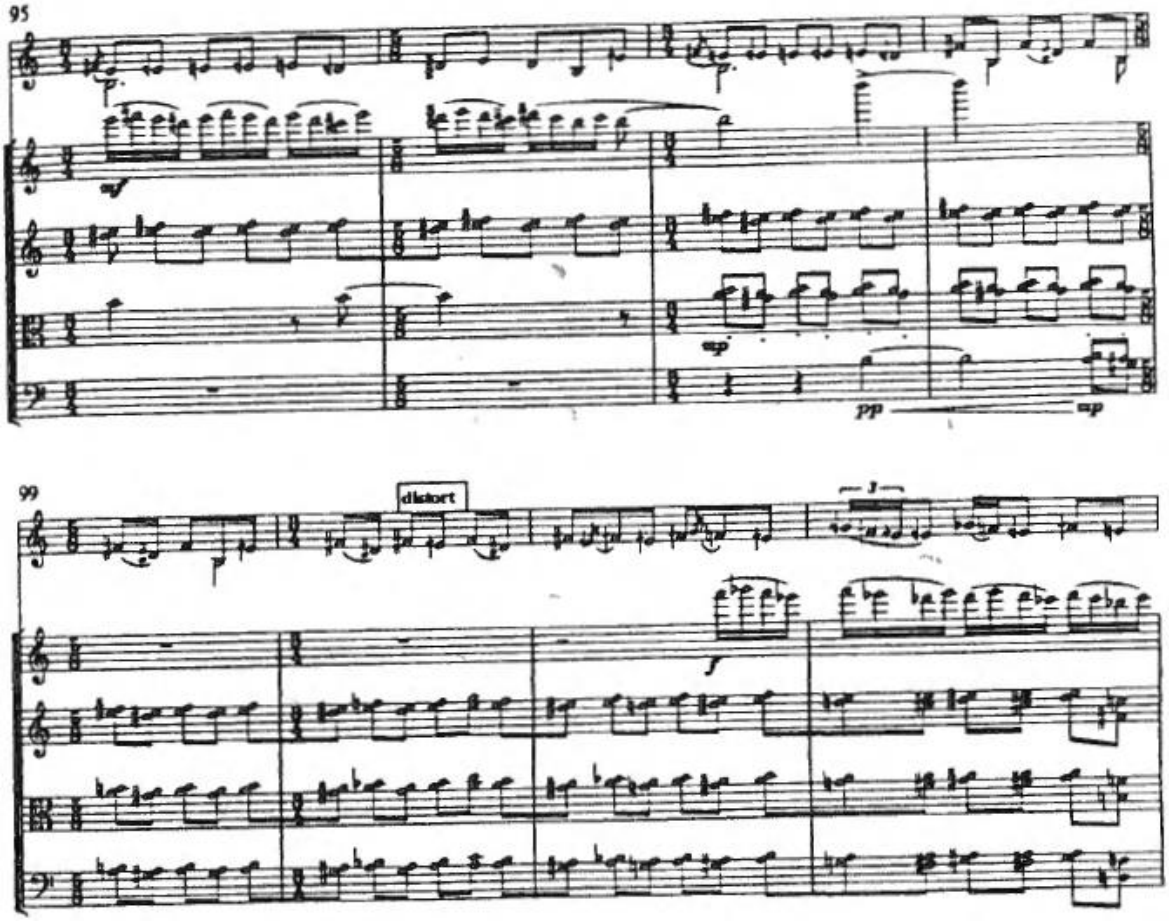

Figure 47. mm. 95-102, full ensemble

In contrast, Figure 48 illustrates a passage of non-pulsed music. This is the passage immediately preceding the (anti)-climax, where the harmonic and rhythmic activity is the most static in the piece.

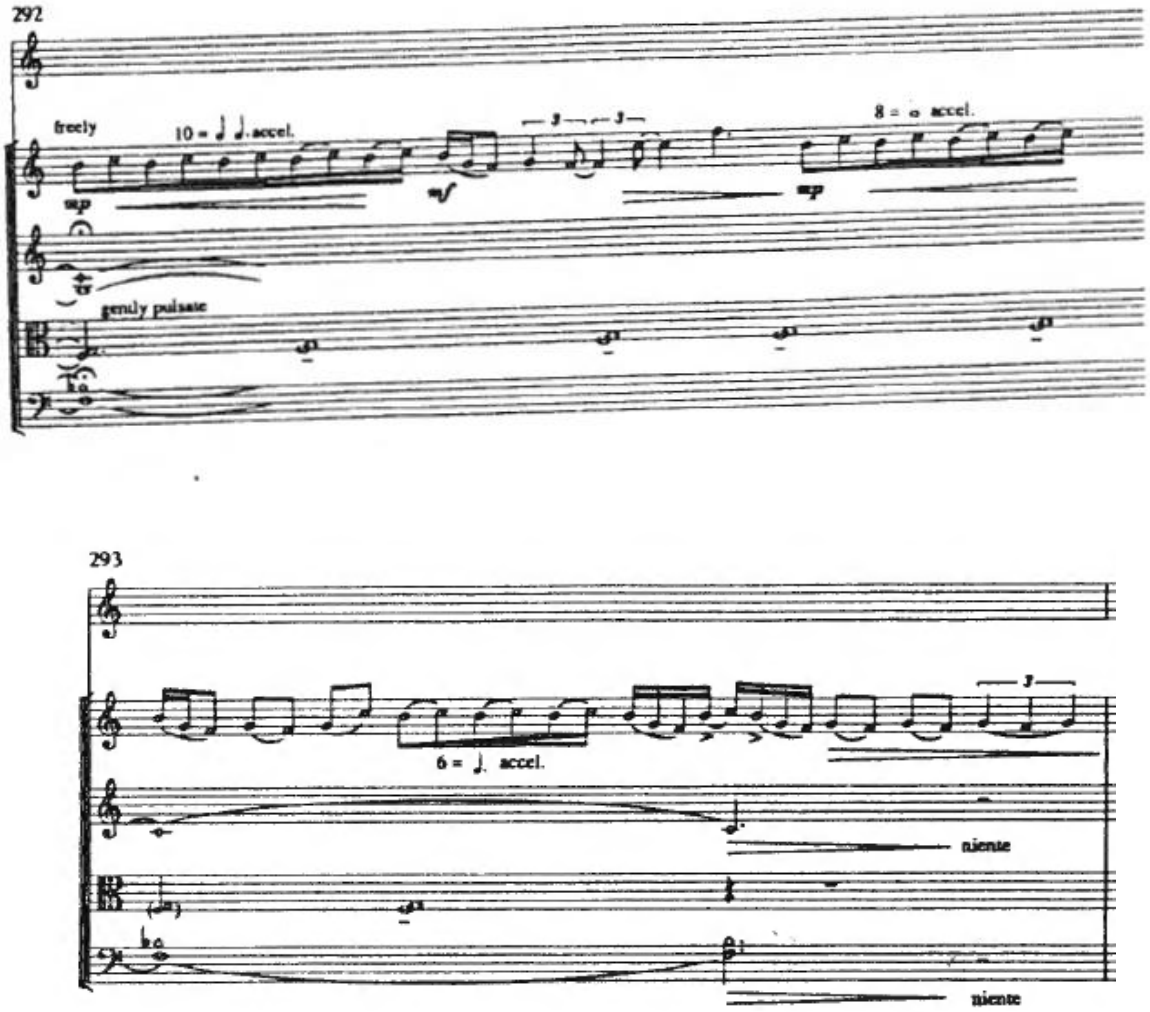

Figure 48. mm. 292-293, full ensemble

Passages like those in Figures 47 and 48 show the polar extremes of rhythmic strictness and freedom in *Troubadour Songs*. While these define the dichotomy of rhythm in the piece, it is the hybrid passages of the two where Mackey challenges the listener, and indeed the performers.

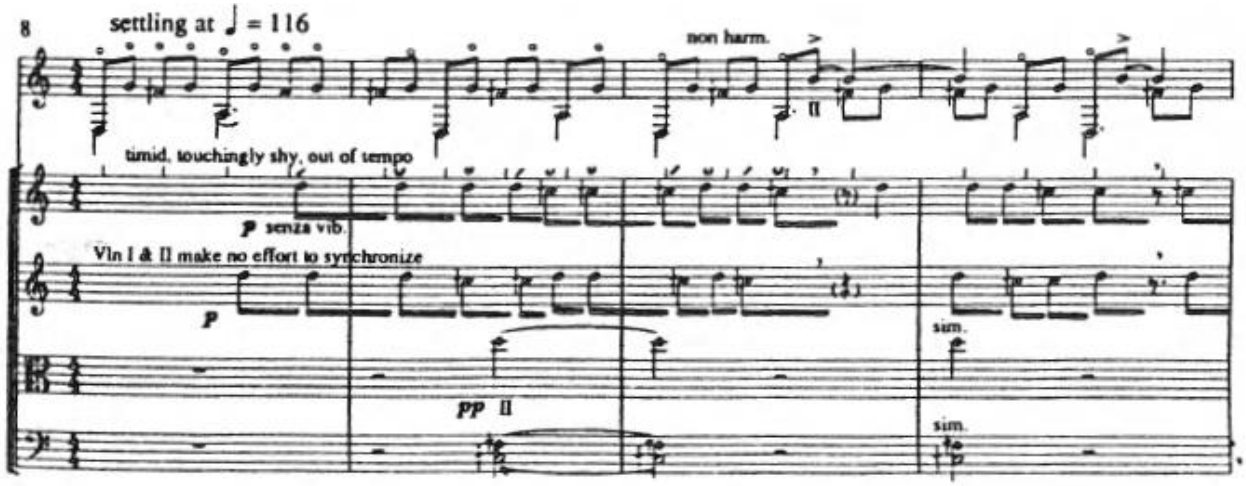

Figure 49. mm. 8-11, full ensemble

Figure 49 shows the first occurrence of layering non-pulsed over pulsed music. A non-synchronized motive X melodic variation in the two violins appears over the steady original X motive in the electric guitar. The effect on the listener is somewhat disconcerting, especially considering this rhythmic overlapping occurs in the early moments of the piece. This rhythmic character lasts throughout the first passage of the piece, mm. 7-24.

Not all examples of Mackey's layering differently-pulsed music are as substantial as this. Often, they are more subtle, and less defining of an entire passage.

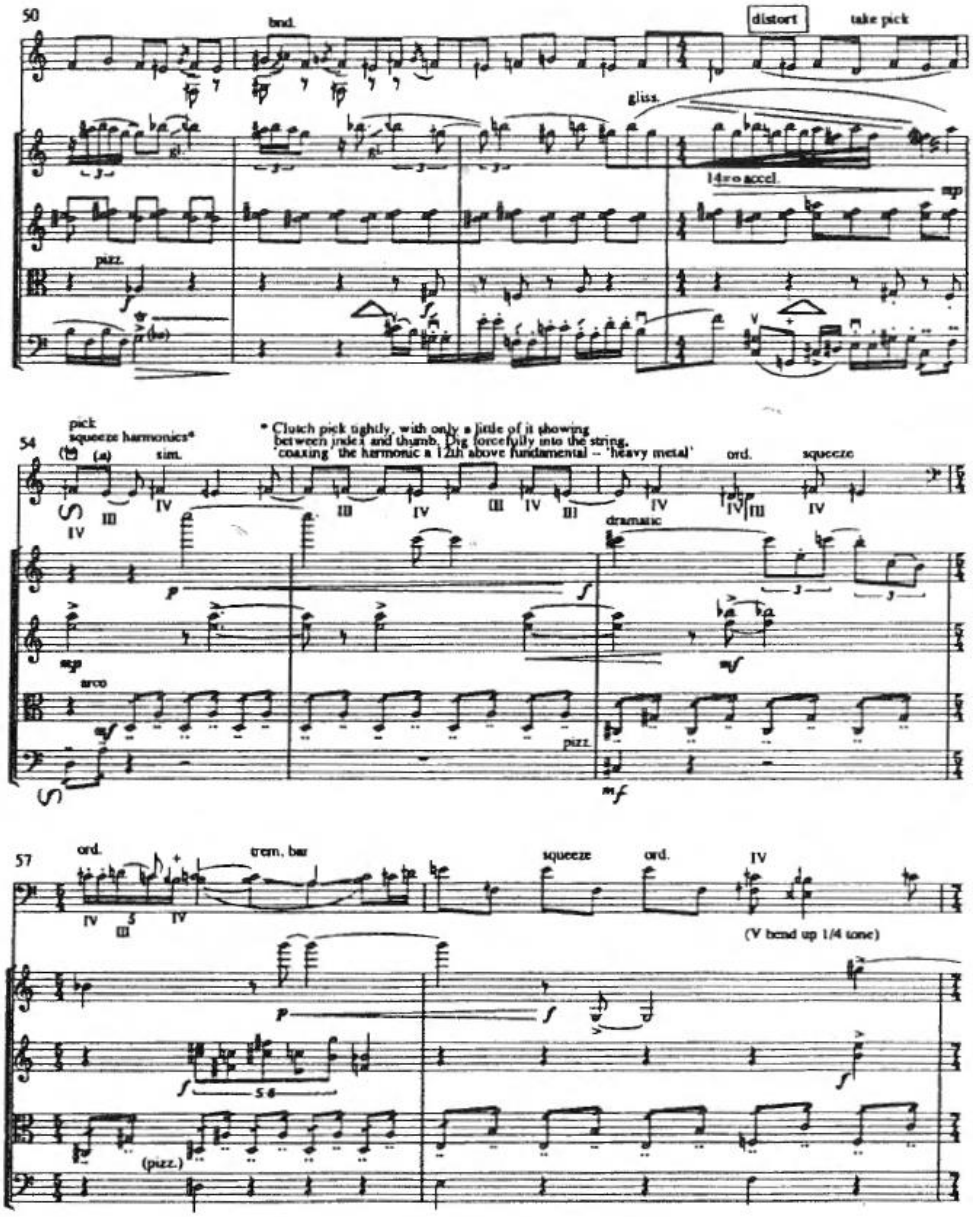

Figure 50. mm. 50-58, full ensemble

Figure 50 illustrates a passage in the exposition where Mackey layers pulsed and rhythmically flexible music on a smaller scale. Through a combination of irregular subdivisions (m. 57, guitar and violin 2) and non-metered figures (m. 53, violin 1), Mackey complements the more regular rhythmic figures in the rest of the ensemble to vary the overall active rhythmic language.

Sudden changes in the presence or absence of pulse is one way in which Mackey defines transitional boundaries in the piece. In Figure 51, the sudden transition from pulsed music to non-pulsed music in m. 130 signifies entrance into the development section of the piece.

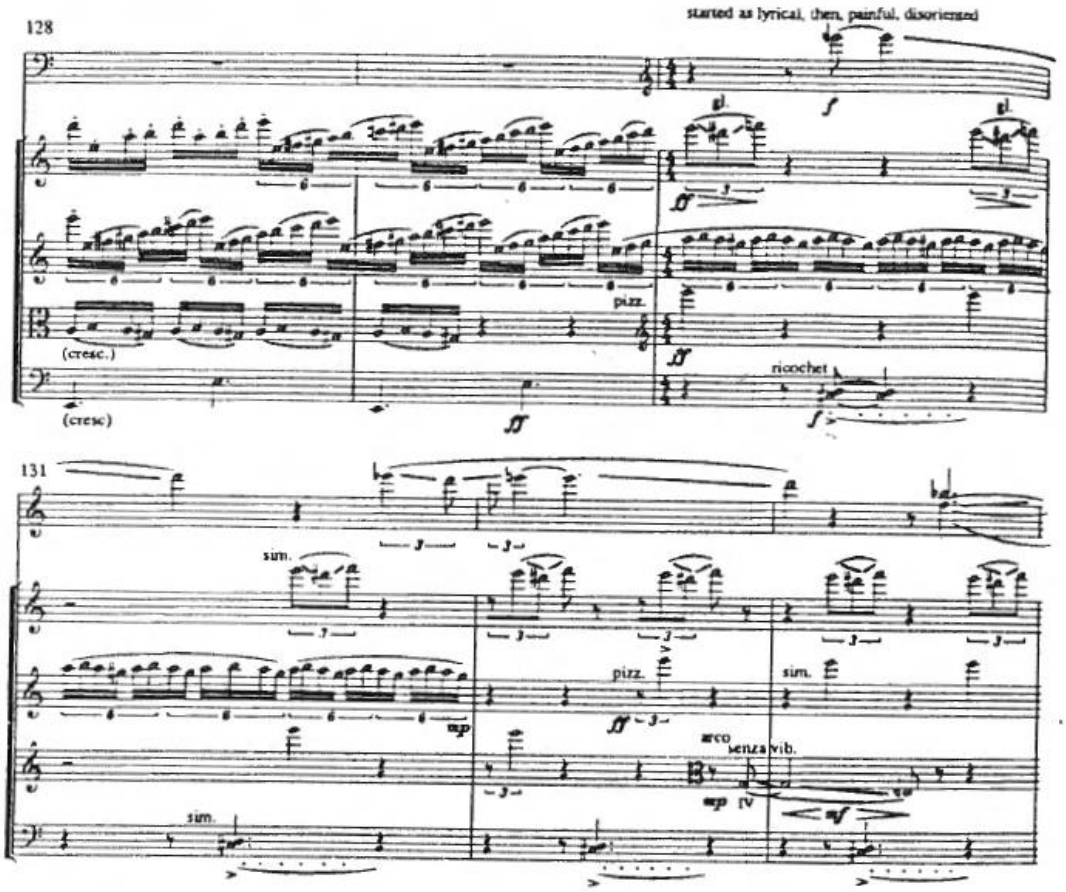

Figure 51. mm. 128-133, full ensemble

After the intense build-up of rhythmic activity and range expansion in the string quartet, a meter change and disruption to the driving pulse shifts into a passage of irregular, accented attacks and the aforementioned "dive-bomb" effects in the guitar and viola.

The dichotomy of pulsed and freely rhythmic music is another example of dual relationships in the *Troubadour Songs*. In addition, Mackey's defining of compositional

materials through rhythmic means also illustrates some of the popular music references in the piece. The following section will elaborate on this further.

3.4 POPULAR MUSIC INFLUENCE

Troubadour Songs contains several overt references to popular music styles, like the inclusion of the electric guitar, the quoting of vernacular stylistic elements (e.g., the "dive-bomb" effect imitated in the viola – see Figure 38), and literal references in the performance indications. On a more subtle level, popular music influence can be heard in some of the specific musical figures, especially the ostinato rhythmic figures or "grooves."

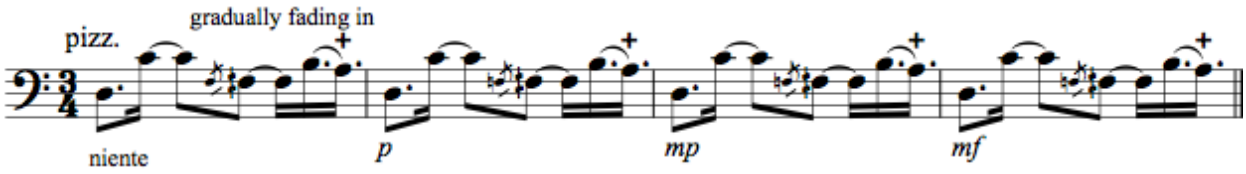

Figure 52. mm. 70-73, cello

I define the above figure as a groove because of the harmony (outlining a D7 chord) and the present blue note third. Perhaps most importantly, it *sounds* like a popular music reference, distinguishable from the surrounding non-popular contextual material. The short glissandi bending the minor 3rd of the chord up to the blue note resembles a figure one might hear from a bass instrument in a popular music genre. The metric modulation that the figure provides highlights the character of it as well. This groove also appears in the recapitulation transposed up a 5th.

Another example of a groove occurs in the cello towards the end of the exposition:

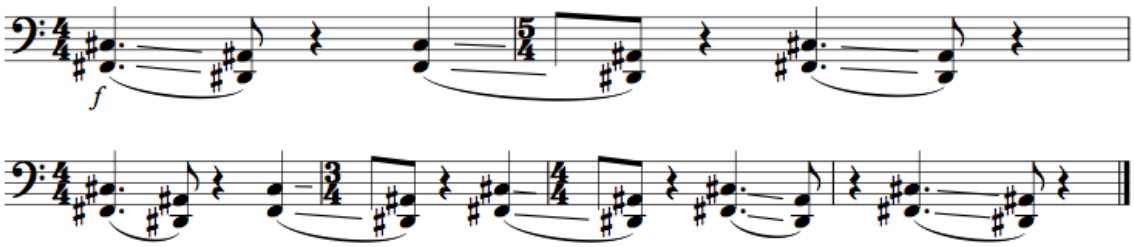

Figure 53. mm. 106-111, cello

The cello establishes this groove in triplet meter underneath shifting time signatures as the rest of ensemble frenetically builds the vertical Ab major arrival in m. 112. While not utilizing blue notes, the aggressive nature of the glissandi combined with the stacked 5^{ths} are both similar to 'power chords' in heavy metal popular music, where a stack of 5ths is used to define a tonal center despite the absence of a third scale degree. It recalls Mackey's performance indication from m. 55, 'heavy metal,'[20] describing the desired sonority for the guitar's squeezed harmonics. While this second groove is presented at a much louder dynamic level, it is actually less discernable because of the scalar, melodic variation of motive A in the first violin and the percussive, aggressive power chords and pitch bends in the electric guitar. In this way, it contrasts with the first groove, where the rhythmic modulation and character set it apart.

Repetition is central to the establishment of grooves in popular music genres like rock and roll and hip-hop. It is used to draw attention and foster memorization in listeners. In *Troubadour Songs*, Mackey sets up grooves and lets them percolate for extended periods of time (nine repetitions in the case of the material in Figure 51 and eight repetitions in Figure 52). He

[20] Steven Mackey, *Troubadour Songs*, (New York: Boosey and Hawkes: 1992).

utilizes them in a similar way in his art music as they are used in popular music. When the groove in Figure 51 returns in the recapitulation (mm. 349-354), the combination of the cyclic repetition that occurred earlier in mm. 70-78 with its second appearance, despite its large chronological separation, triggers the listener's memory.

The overt references to popular music in *Troubadour Songs* raise the question of how Mackey references the two genres in the piece. While the electric guitar music is just as complex, if not moreso than the music for the string quartet, the association of the instrument as a symbol of rebellion and freedom (during the advent of rock and roll) cannot be ignored. With the shifting of motives between the two instrumental sets and the appropriation/imitation of one another's playing techniques, Mackey is attempting to synthesize the two genres. Yet, it is interesting that the definitive motive of the piece, X, is only presented in its original form in the electric guitar. This strengthens the instrument, and the popular music it represents, as the dominant force in the piece (despite Mackey's 'chamber music' equality referenced above). In contrast, however, the electric guitar has no part to play in the (anti)-climax of the work, one of the defining moments of the piece's form. The dichotomy of genre is at play on many levels in *Troubadour Songs*, and remains one of the primary characteristics of Mackey's compositional style.

OVERALL CONCLUSIONS

The title, *Troubadour Songs*, articulates succinctly many of the defining elements of the piece. The troubadour tradition combined both high and low art, performance, music composition, storytelling and poetry. Troubadours sang and played instruments, oftentimes fretted string instruments like a lute or guitar depending on the region or era. The most obvious change between *Troubadour Songs* and troubadour songs is the absence of lyrical content in the former. Mackey wanted the piece to sound like a story being told in a language the listener didn't speak. The content within must be inferred by the way it is presented, not by any familiar context or syntax.

A common thread throughout the piece is the concept of distortion. The term is well-known as an audio manipulative effect on the electric guitar, being one of the distinctive sounds of the rock and roll genre. In *Troubadour Songs*, Mackey calls for a distortion pedal in the performance notes, and it is employed often in more aggressive passages of the piece. More generally, however, distortion of other elements is prevalent throughout the piece, including that of rhythm, harmony, motive, melody, and meter. As a concept of the alteration of original form, these musical characteristics are formed and broken down repeatedly. For example, the yielding of pulsed music to that of non-pulsed, the harmonic triads, whether major, minor, or ambiguous, transforming into non-triadic harmonies, or equal-tempered music breaking down into microtonal passages. The establishment of one paradigm with regards to a characteristic rhythm

or harmony and its subsequent distortion is a key way Mackey manipulates his material in the piece.

Despite the complexity of motivic development, numerous dichotomies, and structural organization, *Troubadour Songs* ultimately retains the free-spirited character for which Steven Mackey has become known these last few decades. *Troubadour* Songs is rich with gradual and nuanced variations in fundamental materials, frequent textural shifts, complex motivic variation, and rhythmic and dynamic juxtaposition of contrast. In the end, *Troubadour Songs* is a highly organized work generated by a single, carefully-developed compositional idea, yet ultimately it comes across as free-flowing and playful.

This basic compositional structure is expressed most fundamentally in the X motive, which serves as the basis for most of the material in work. It contributes melodic variations and accompanimental figures to the large-scale formal structure and represents the overarching dichotomy of popular and art music sound worlds. Dichotomy is presented also in tuning systems and how they are employed, as well as harmonic content (triadic/diatonic vs. non-pitch centered). While dualities define several elements of *Troubadour Songs*, all of the examples can be connected back to X, the single driving motive in the piece. The oscillation of the F quarter sharp to the G and back is the most microscopic illustration. In contrast, the formal structure – exposition, development, recapitulation – references the idea on the largest level. In using this fundamental compositional material to inform all elements and levels of the piece's construction, Mackey has created a compelling work that is both highly organized and organic.

Mackey shows that he is a calculating and sophisticated composer in how he manipulates and develops his material, or does not. For example, while motive X grows, expands, and germinates into varying melodic and accompanimental materials throughout the piece, motive A

does not. Its development takes a contrasting path as its most complex iteration appears first and, over time, it gradually simplifies into simple, accompanimental material almost exclusively. These and other motives are consciously varied and developed uniquely, creating identifiable roles and functions throughout the work for all compositional materials.

Mackey has a distinct voice that successfully straddles both the popular and art music worlds. While many modern composers strive for this quality in their music, Mackey's voice is unusual in its ability to both subtly and overtly explore varying styles successfully. Moreover, Mackey is conscious of the historical forebears whose shoulders he stands on:

> "I want music to be very human… It's not that I'm on a mission to make music more accessible with vernacular music. I just think that's how music should go, and my models are Mozart and Stravinsky."[21]

Like these titans of art music, his body of work is rich with variety. I hope that this first detailed study of Steven Mackey's music is one of many to come, and that it will inspire future scholars to look more closely at his ever-growing body of work.

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[21] "Steven Mackey Fits No Label In His Music," last modified March 11, 2009, http://www.nytimes.com/2013/04/07/nyregion/steven-mackey-fits-no-label-in-his-music.html?_r=2&

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Three Moments

for large chamber ensemble

Alec Summers

Instrumentation:

Flute
Clarinet in Bb
Horn in F
Trumpet in Bb
Trombone
Percussion (bass drum, tom toms, snare, anvil, suspended cymbal)
Piano
Violin
Viola
Violoncello
Contrabass

Program Note:
Three Moments is a single-movement large chamber work for 11 musicians that explores the concepts of space and time referring to experiencing three different personal memories.

The piece consists of gradual motivic growth and variation. At the beginning, the ensemble is broken up into "families" (e.g., brass, woodwinds, strings) that work as a unit, each with distinctive and unique motives. As the piece progresses, the motives develop and the "families" begin to break apart, creating each instruments' individual identity separate from their previous group. Concurrently, the motives, having been distinctive and unique to instrumental group, will begin to clash aggressively with each other, ultimately leading to a collapse of the system. What's left is the most simple of group sonoroties – unison.

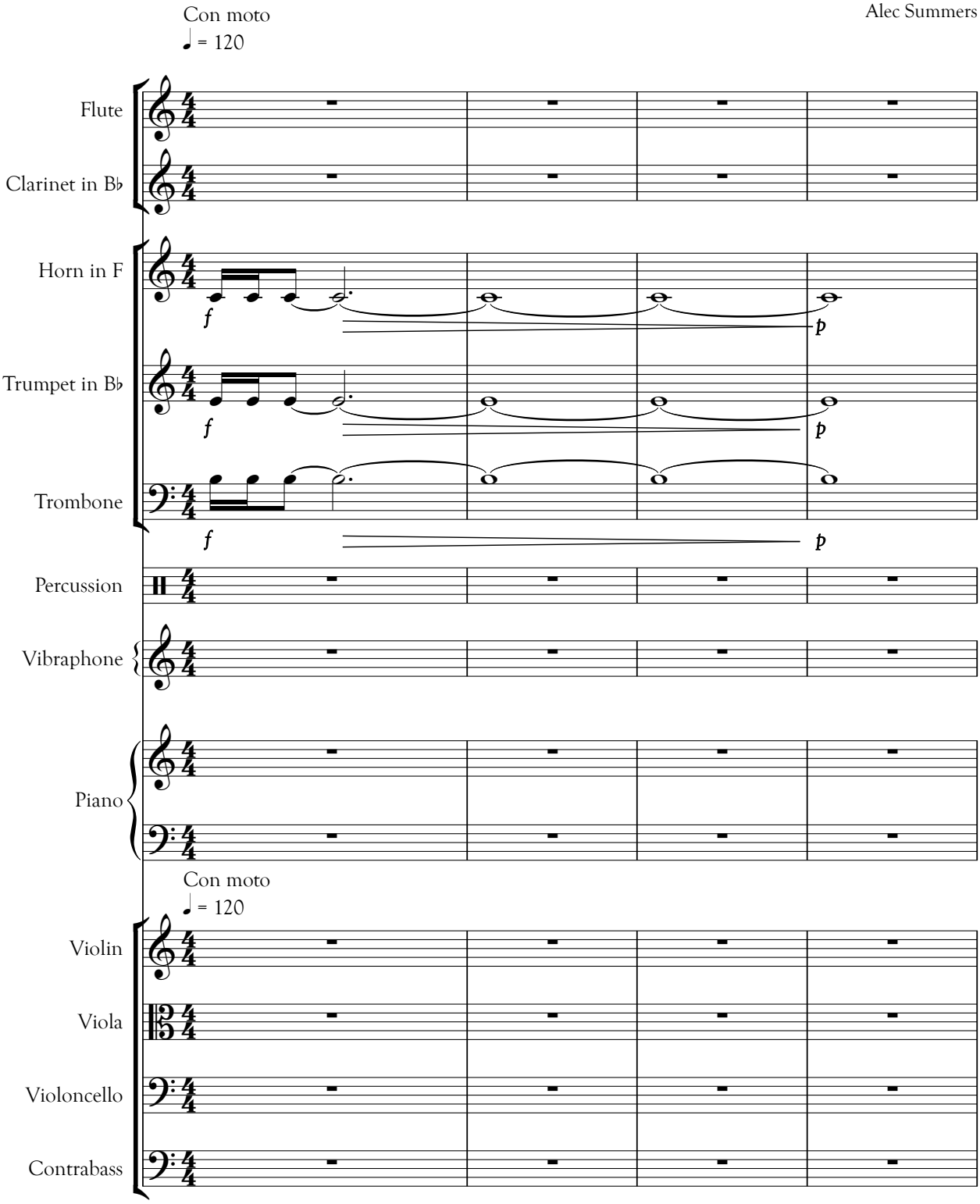
-Alec Summers

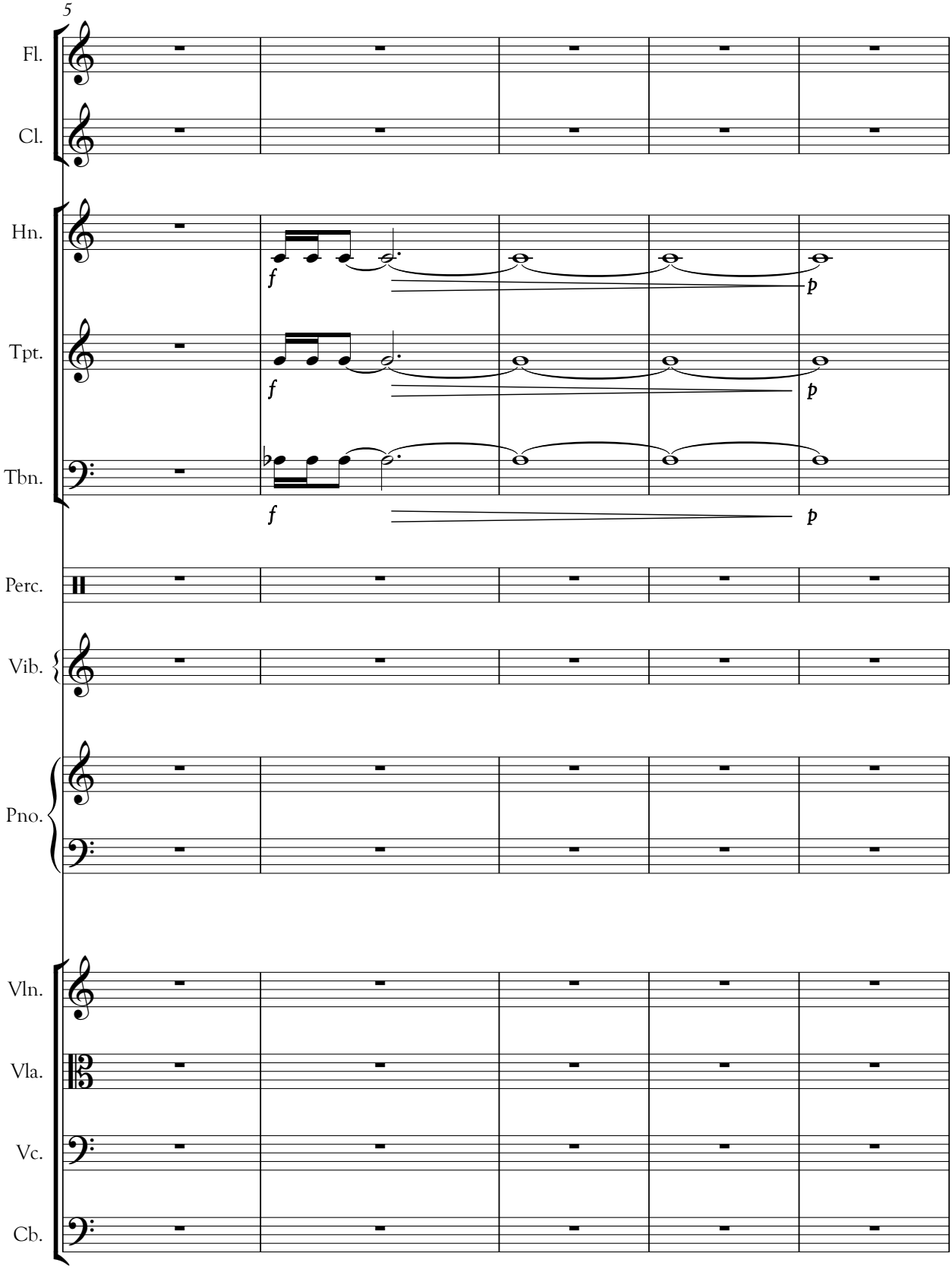
Duration: c. 10 minutes.

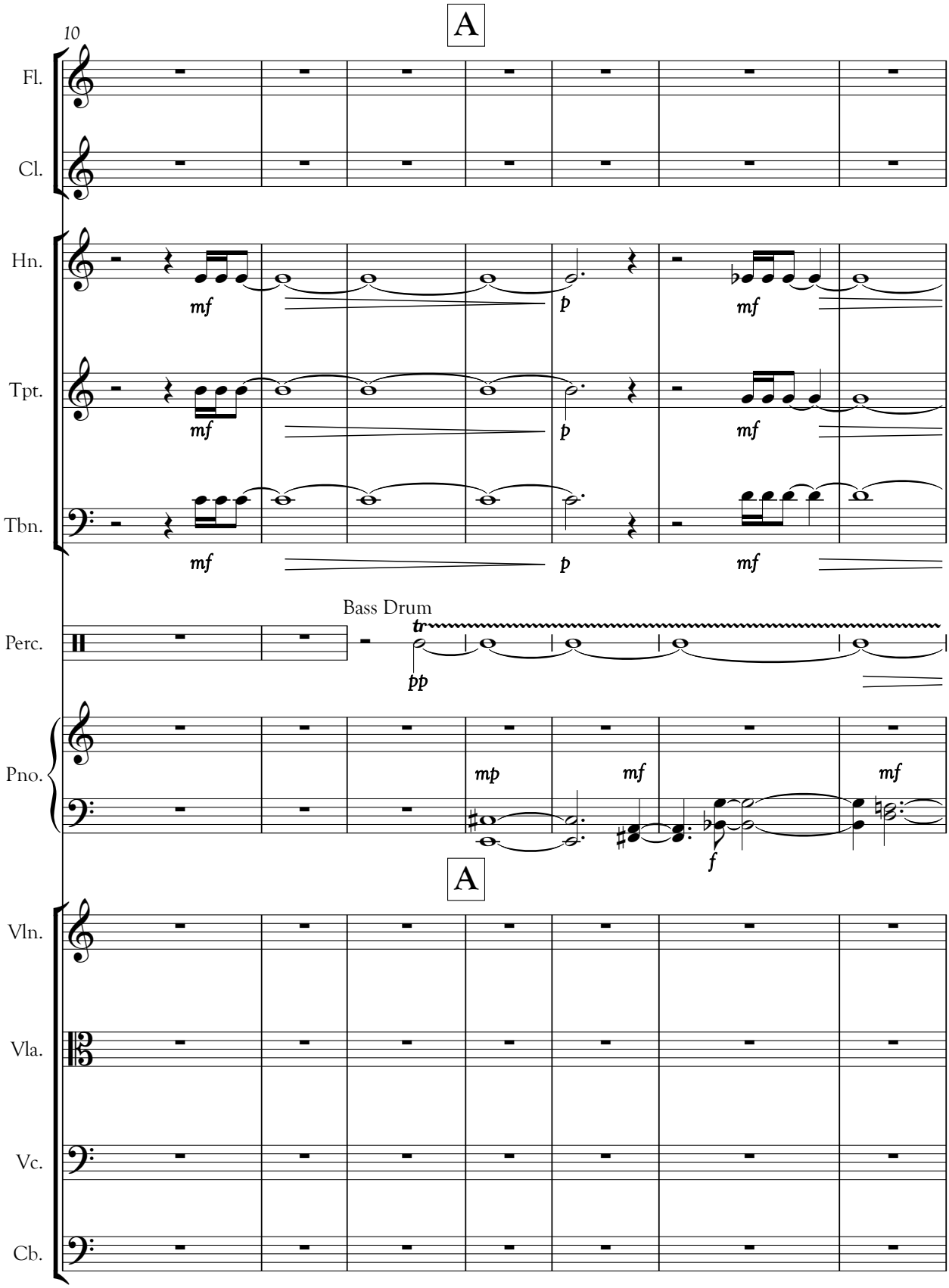
Score is at sounding pitch except for the contrabass, which sounds one octave lower.

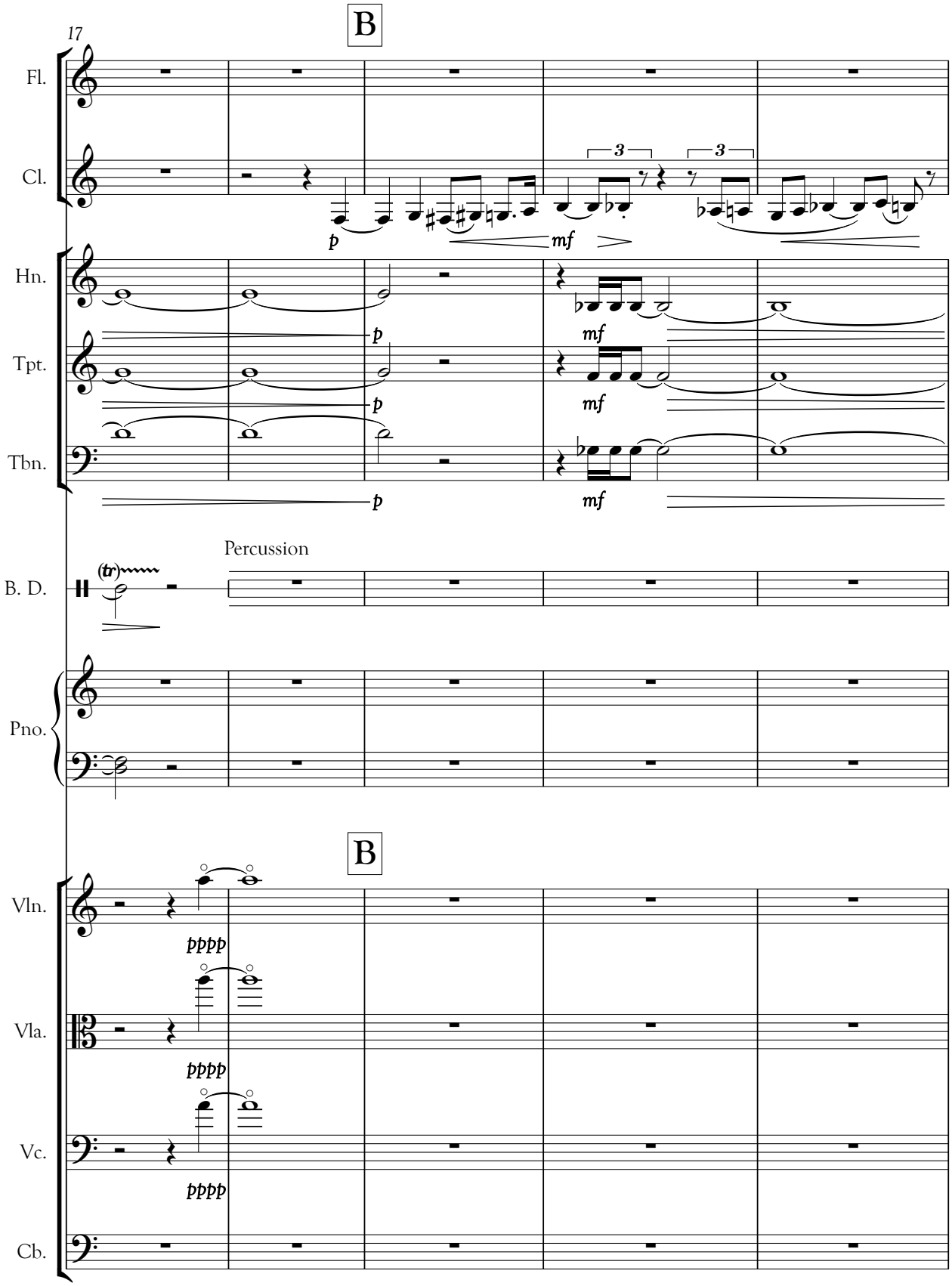
Three Moments

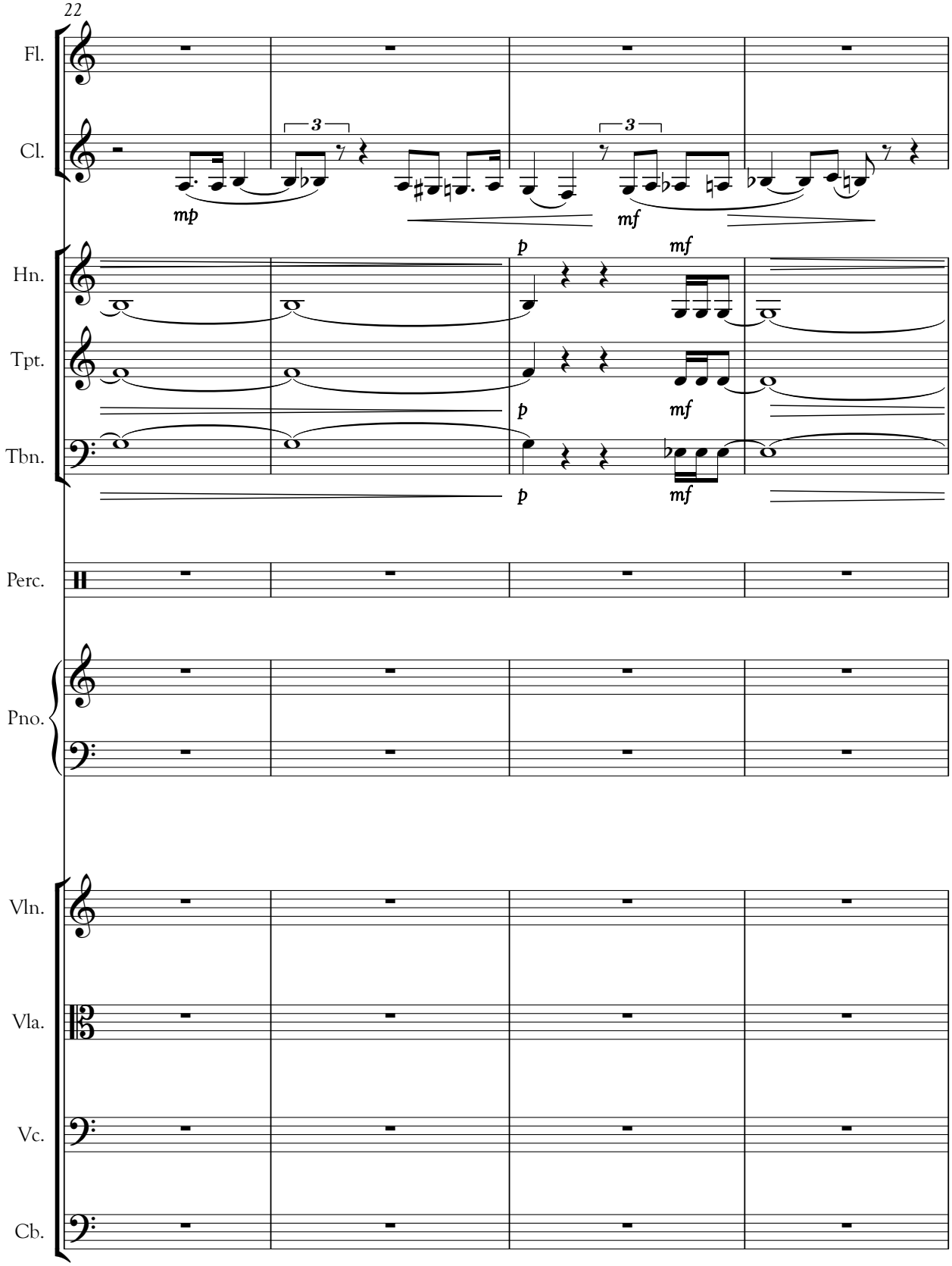
Alec Summers

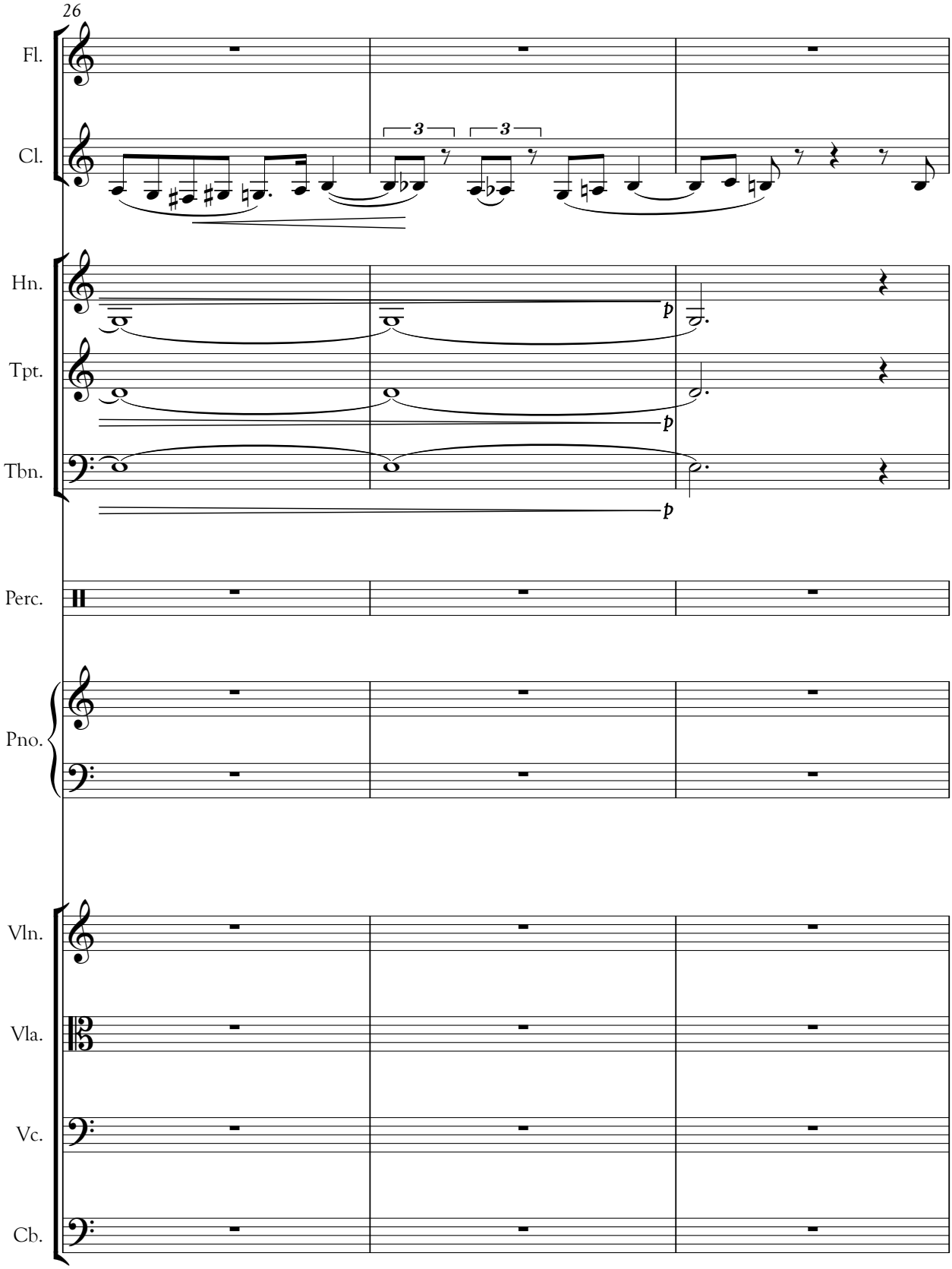


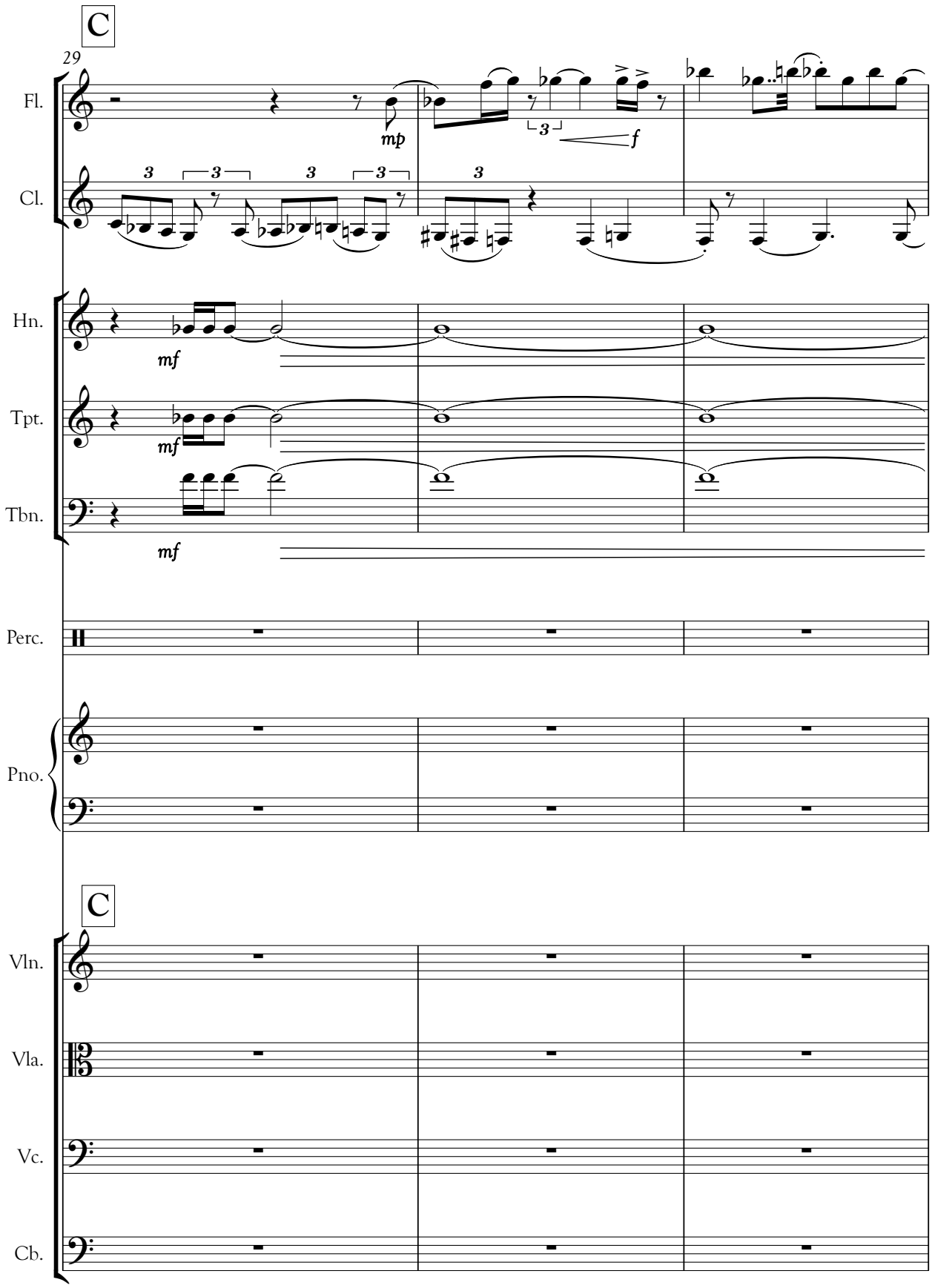

5
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Vib.
Pno.
Vln.
Vla.
Vc.
Cb.
f
p

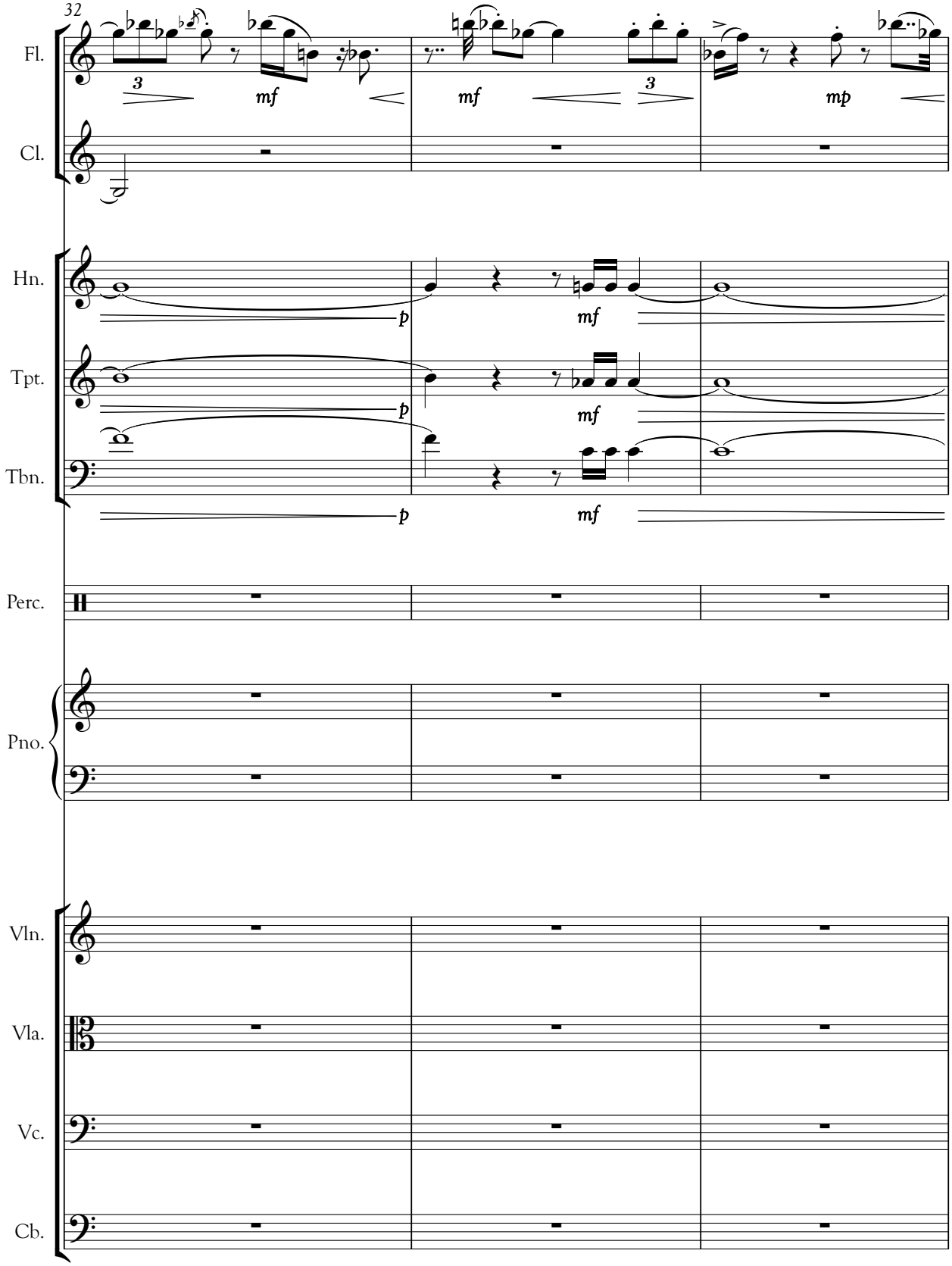

A
10
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Bass Drum
Pno.
A
Vln.
Vla.
Vc.
Cb.
mf
p
mf
pp
mp
f

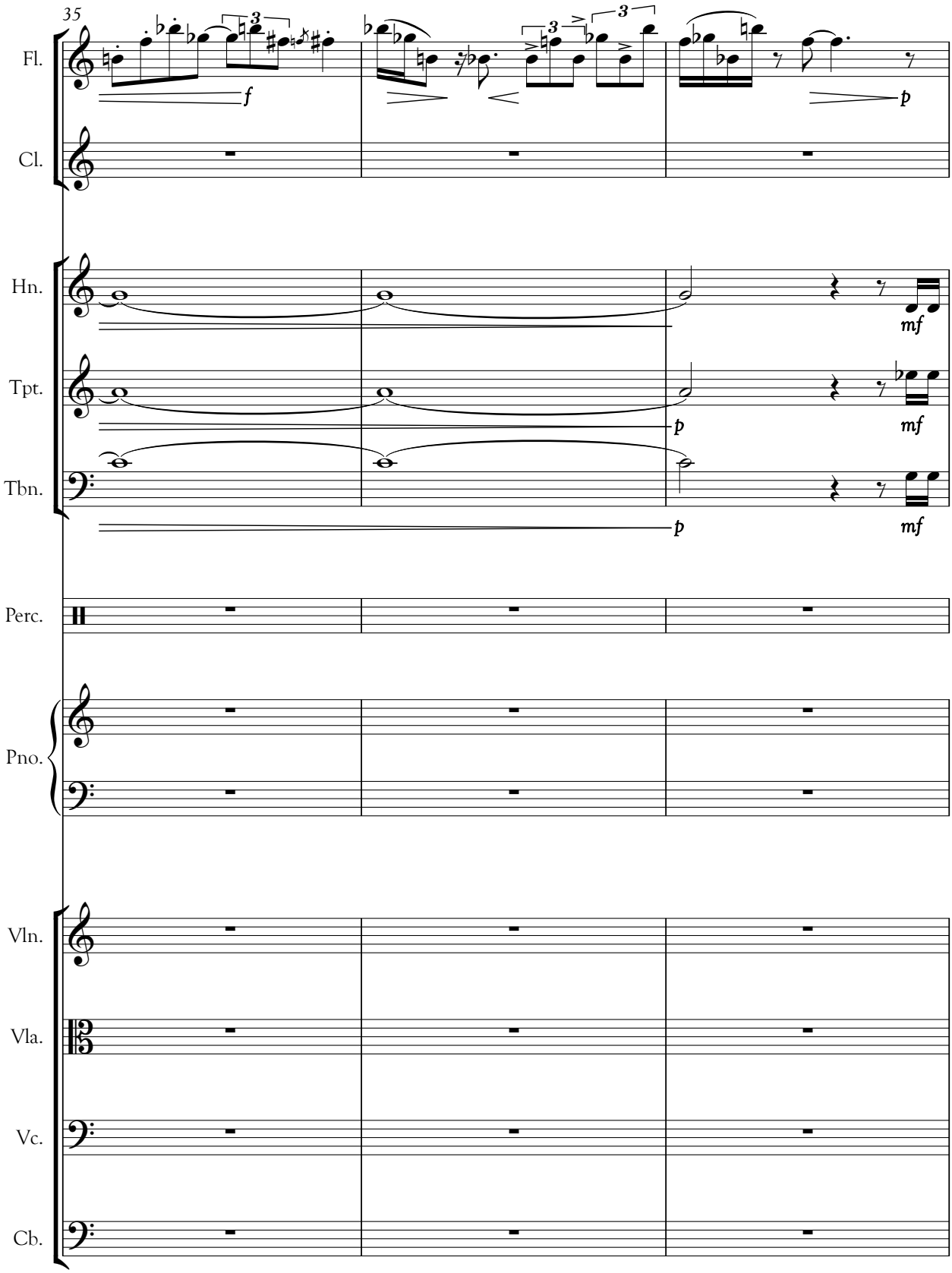

B
17
Fl.
Cl.
3
3
p
mf
Hn.
Tpt.
Tbn.
p
mf
Percussion
B. D.
(tr)
Pno.
B
Vln.
pppp
Vla.
pppp
Vc.
pppp
Cb.

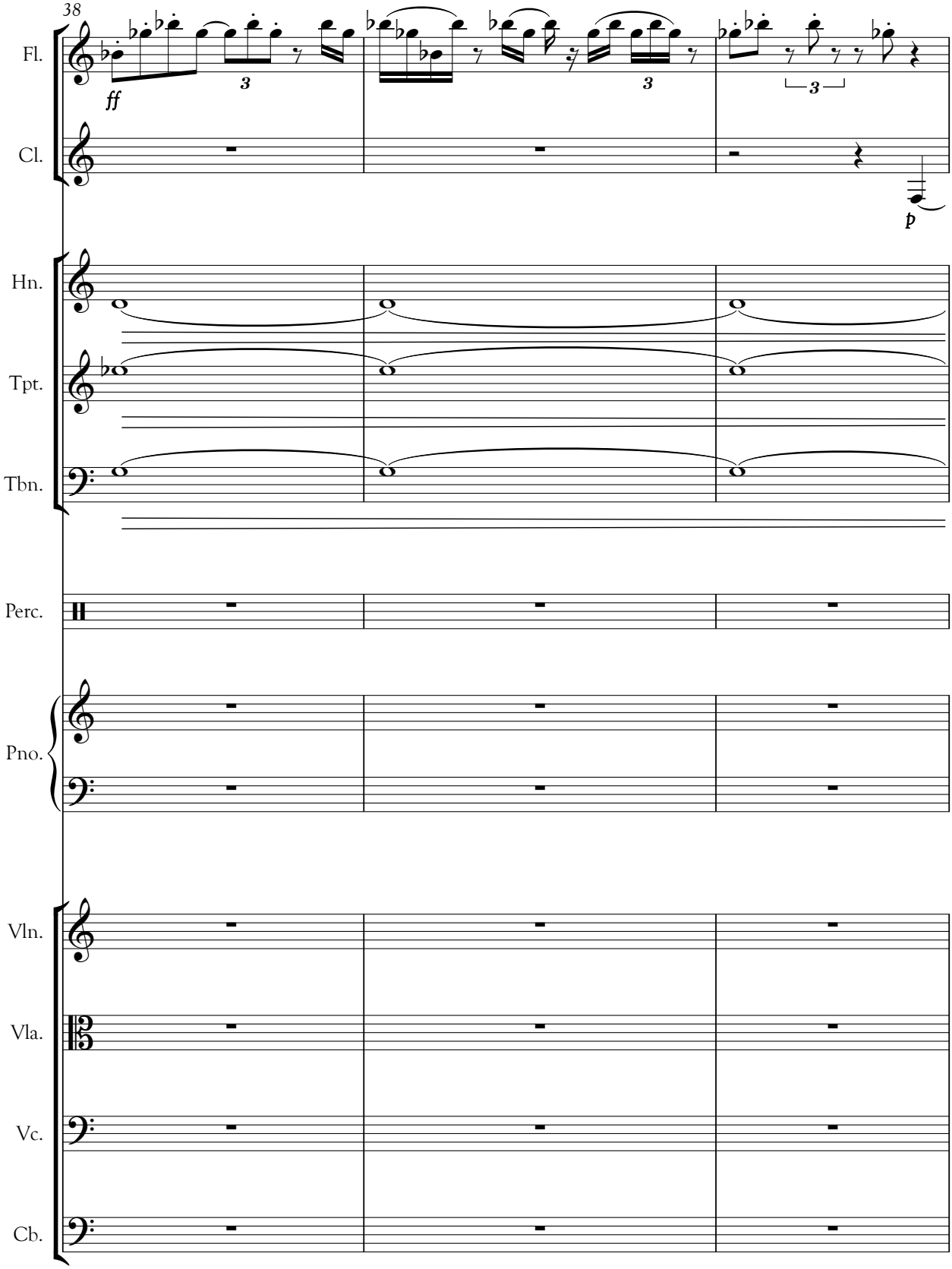

22
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mp
mf
p
mf
p
mf
p
mf

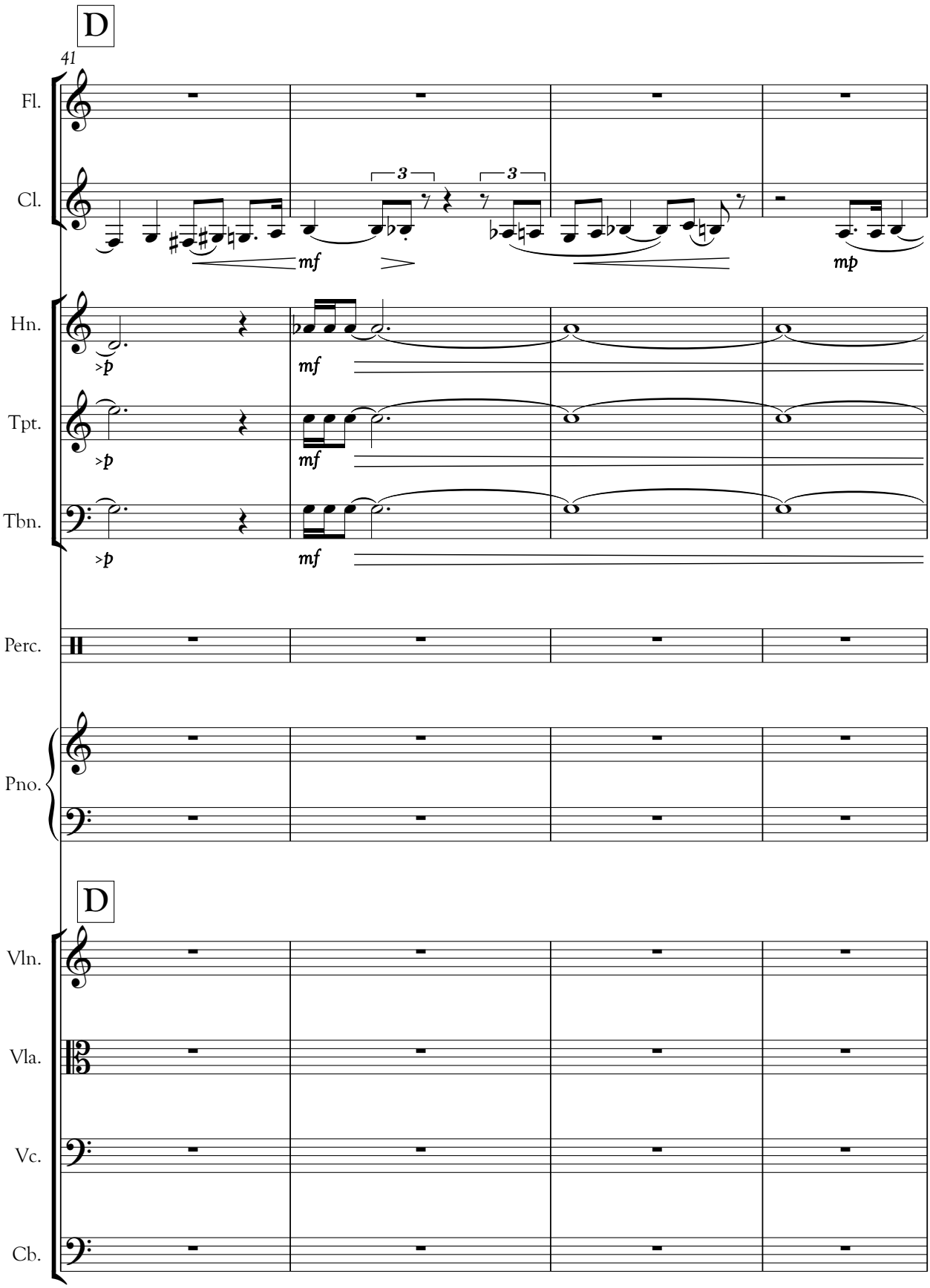

26
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
3
3
p
p
p

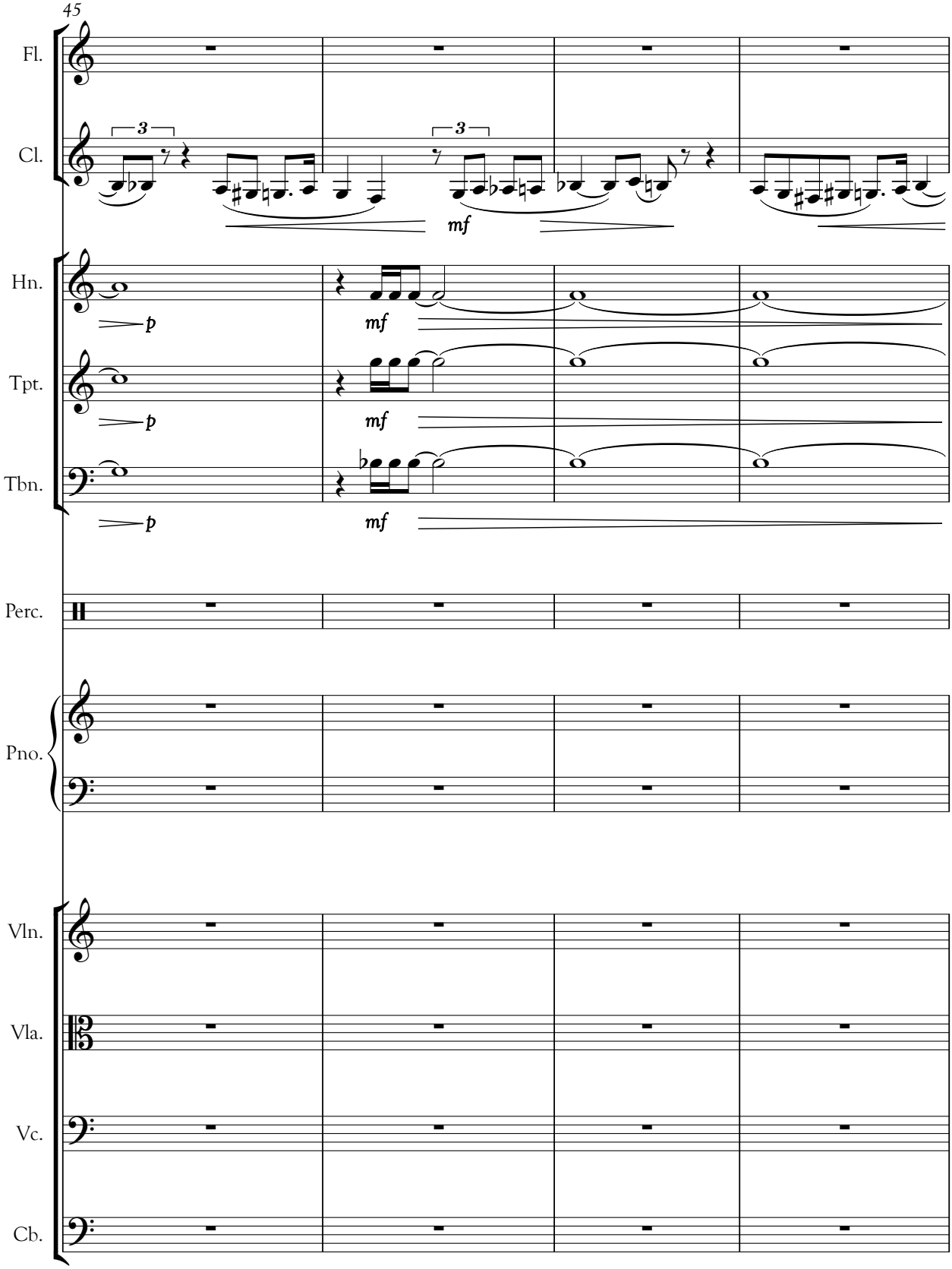

C
29
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
C
Vln.
Vla.
Vc.
Cb.
mp
f
mf
mf
mf

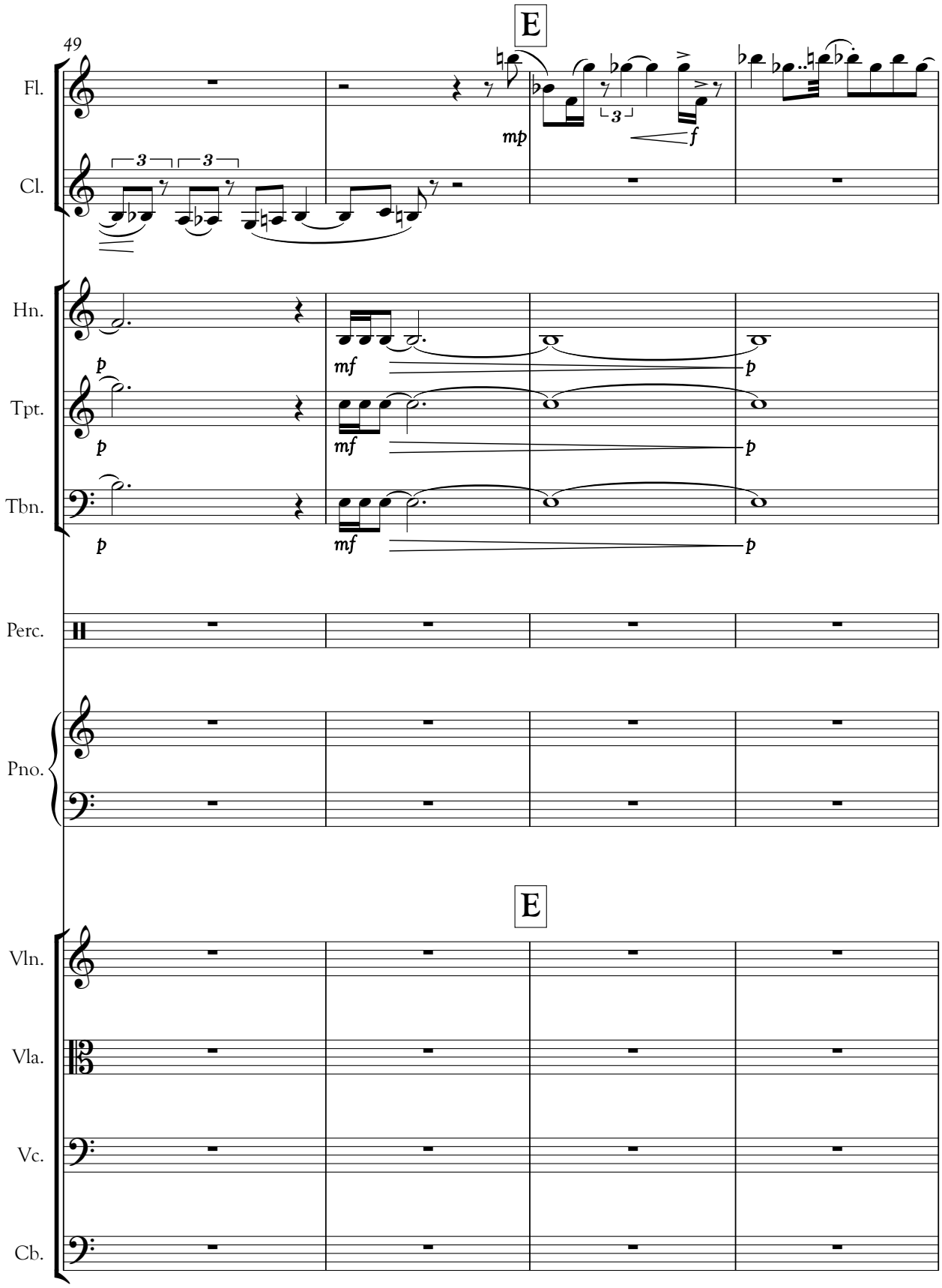

32
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
mf
mp
p
mf
p
mf
p
mf

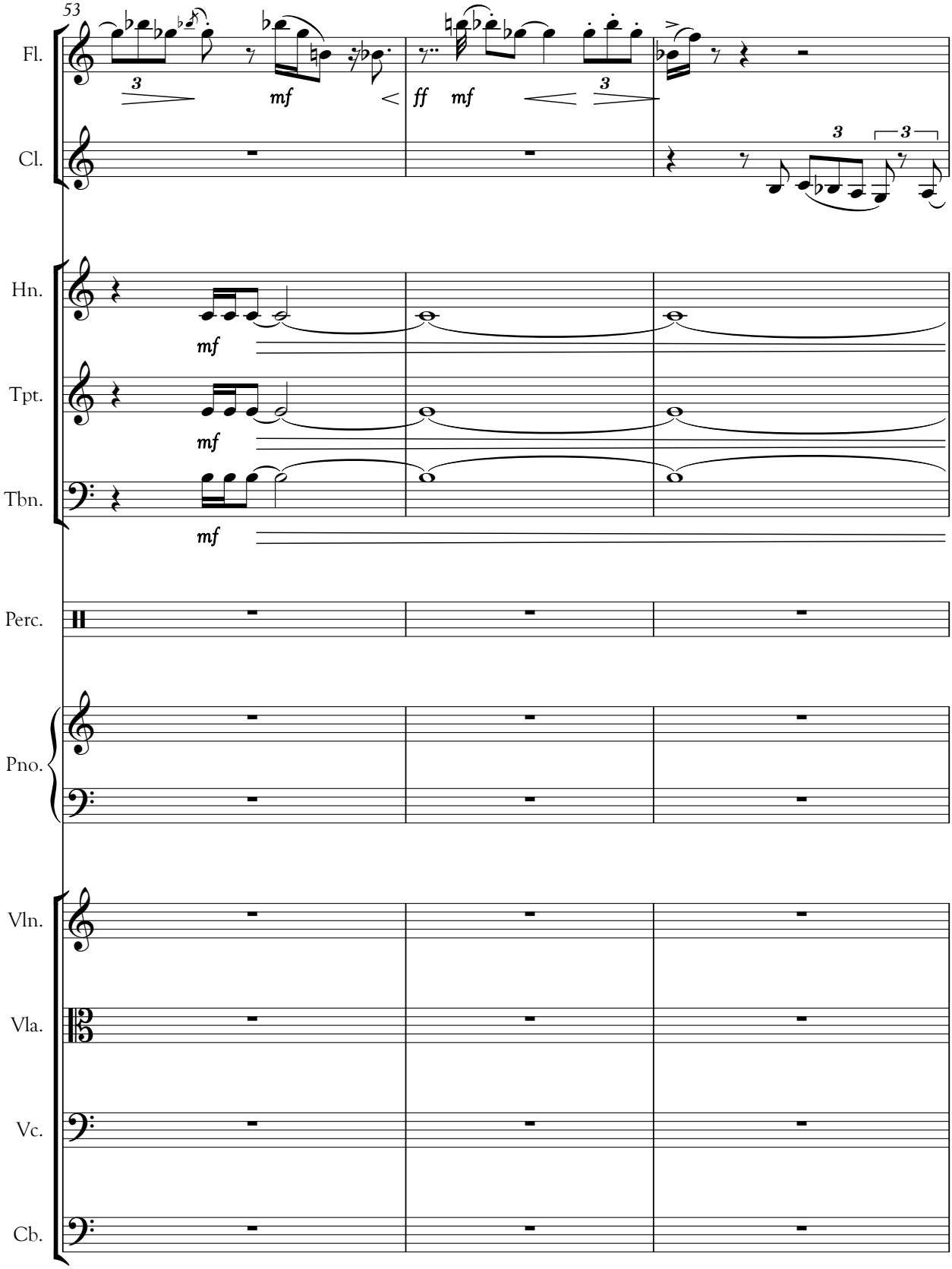

35
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
f
p
mf

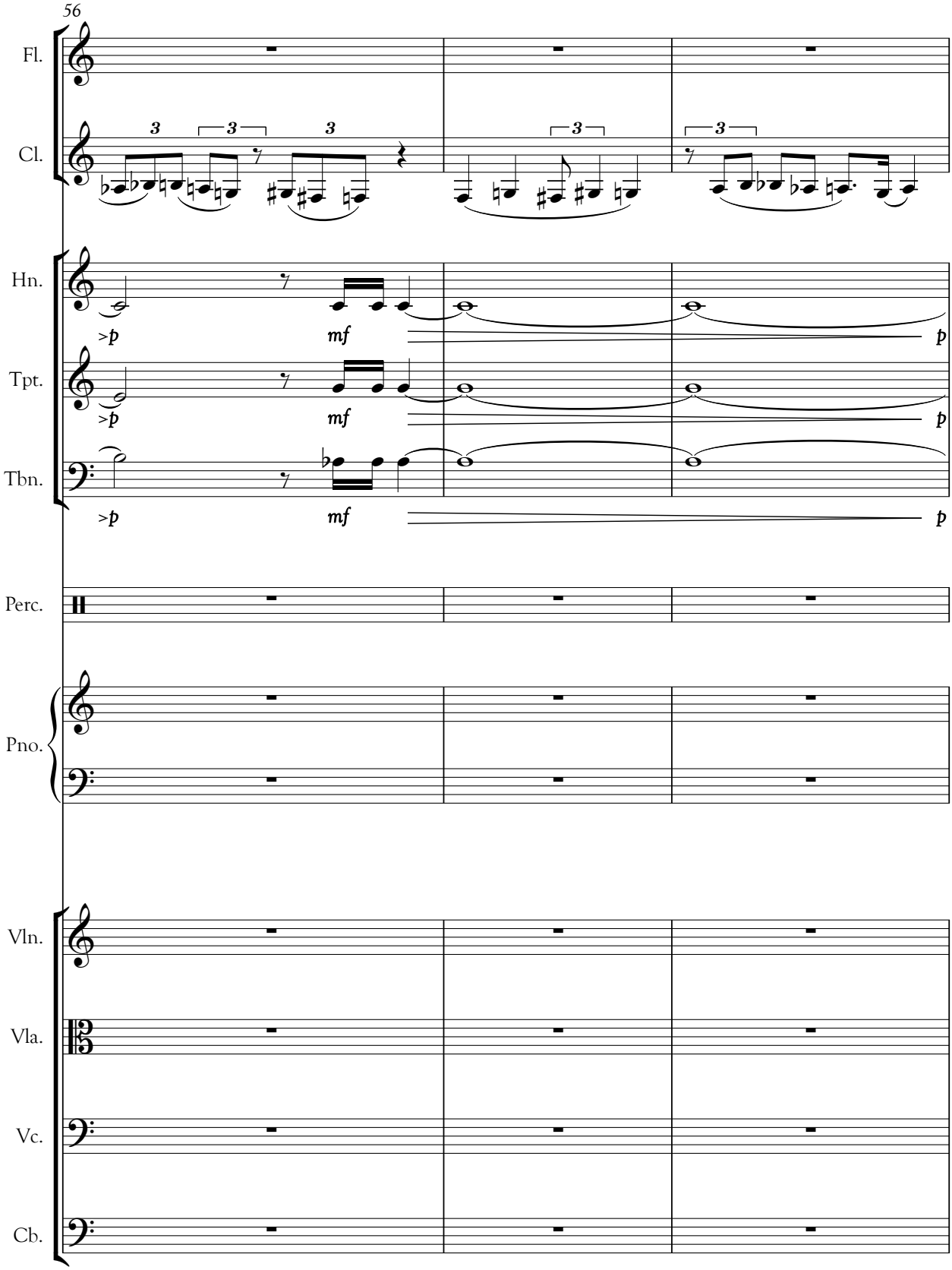

38
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
ff
p

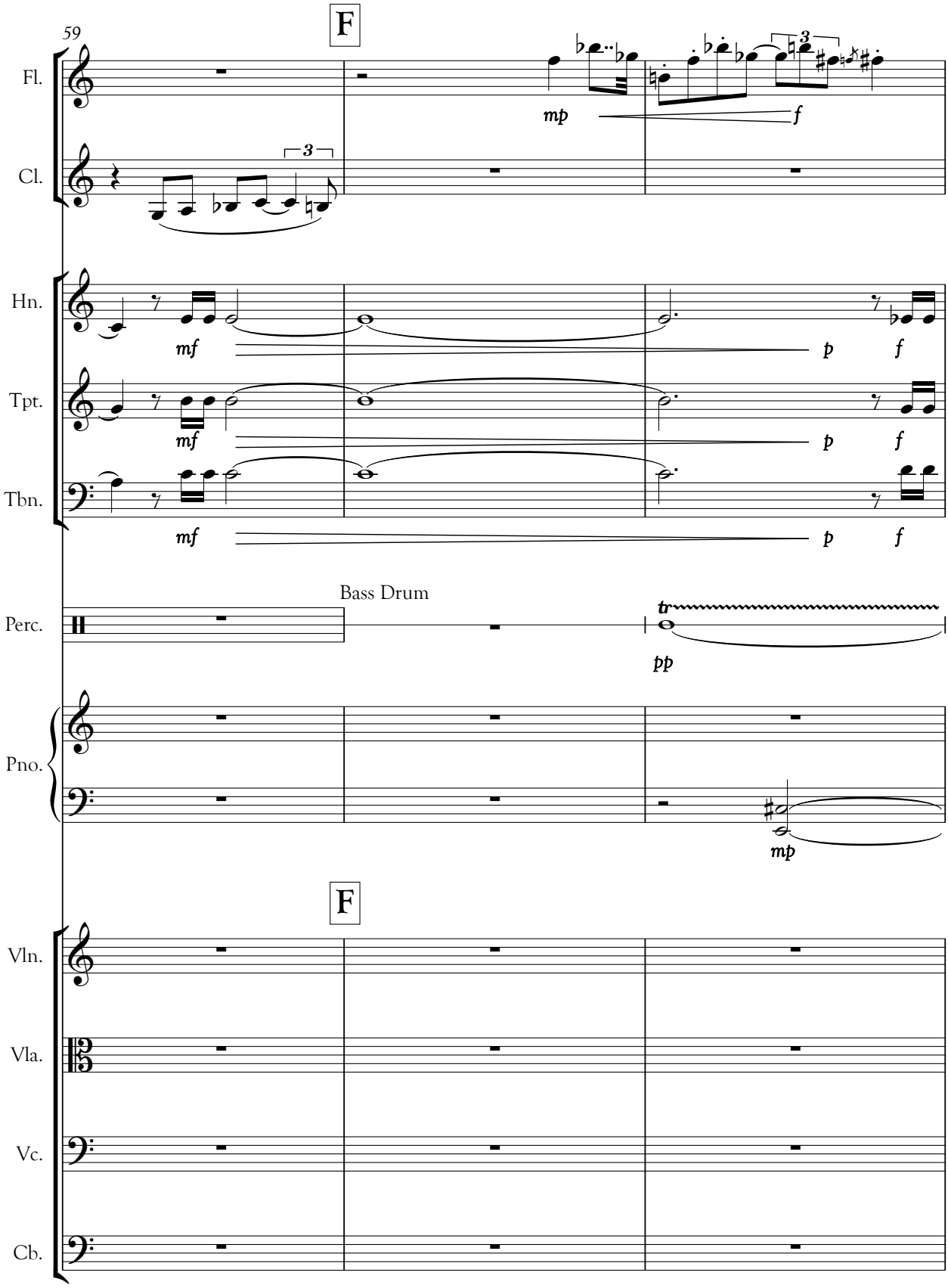

D
41
Fl.
Cl.
3
3
mf
mp
Hn.
>p
mf
Tpt.
>p
mf
Tbn.
>p
mf
Perc.
Pno.
D
Vln.
Vla.
Vc.
Cb.

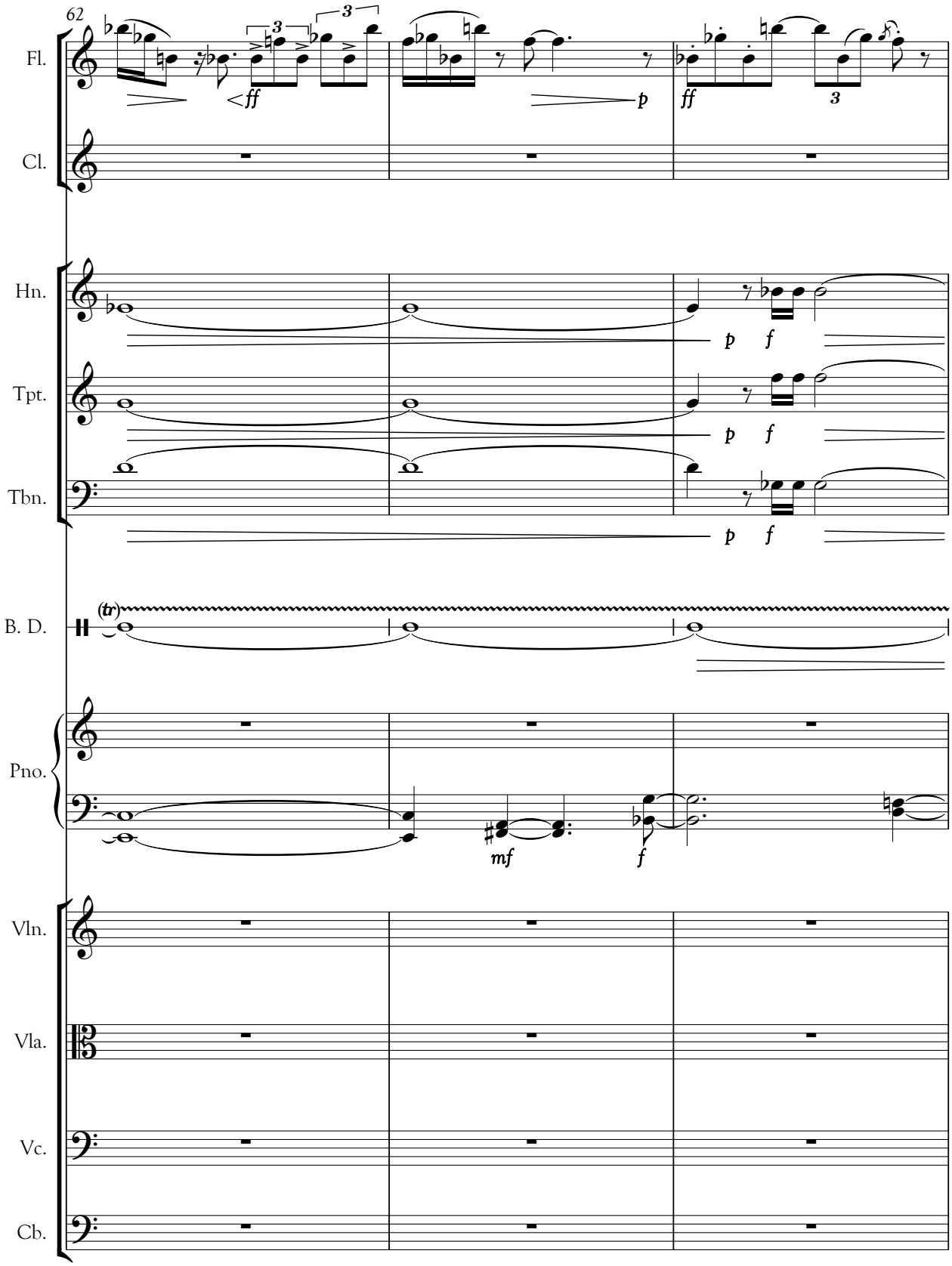

45
Fl.
Cl.
3
3
mf
Hn.
p
mf
Tpt.
p
mf
Tbn.
p
mf
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.

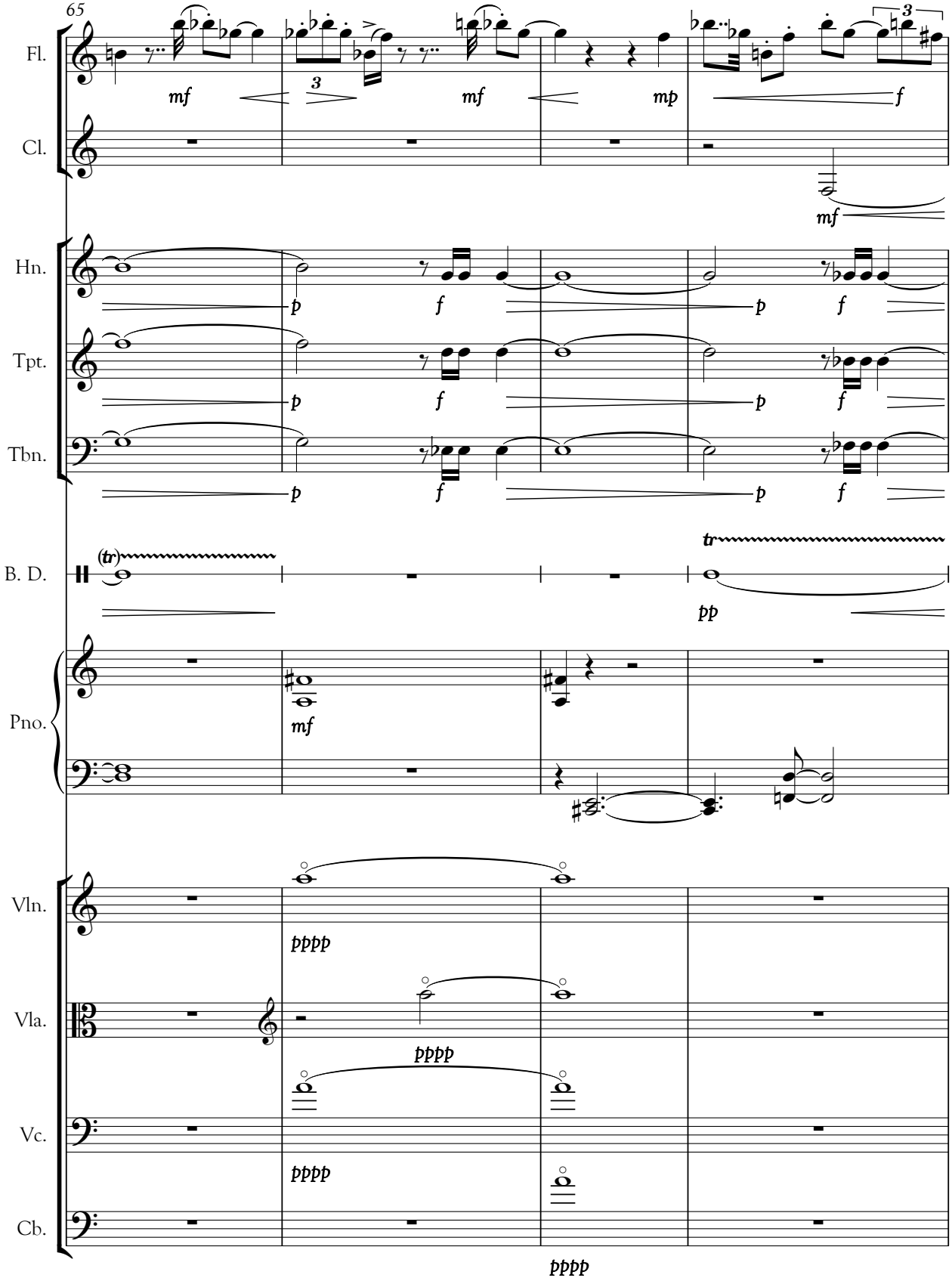

49
E
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
E
Vln.
Vla.
Vc.
Cb.
mp
f
mf
p

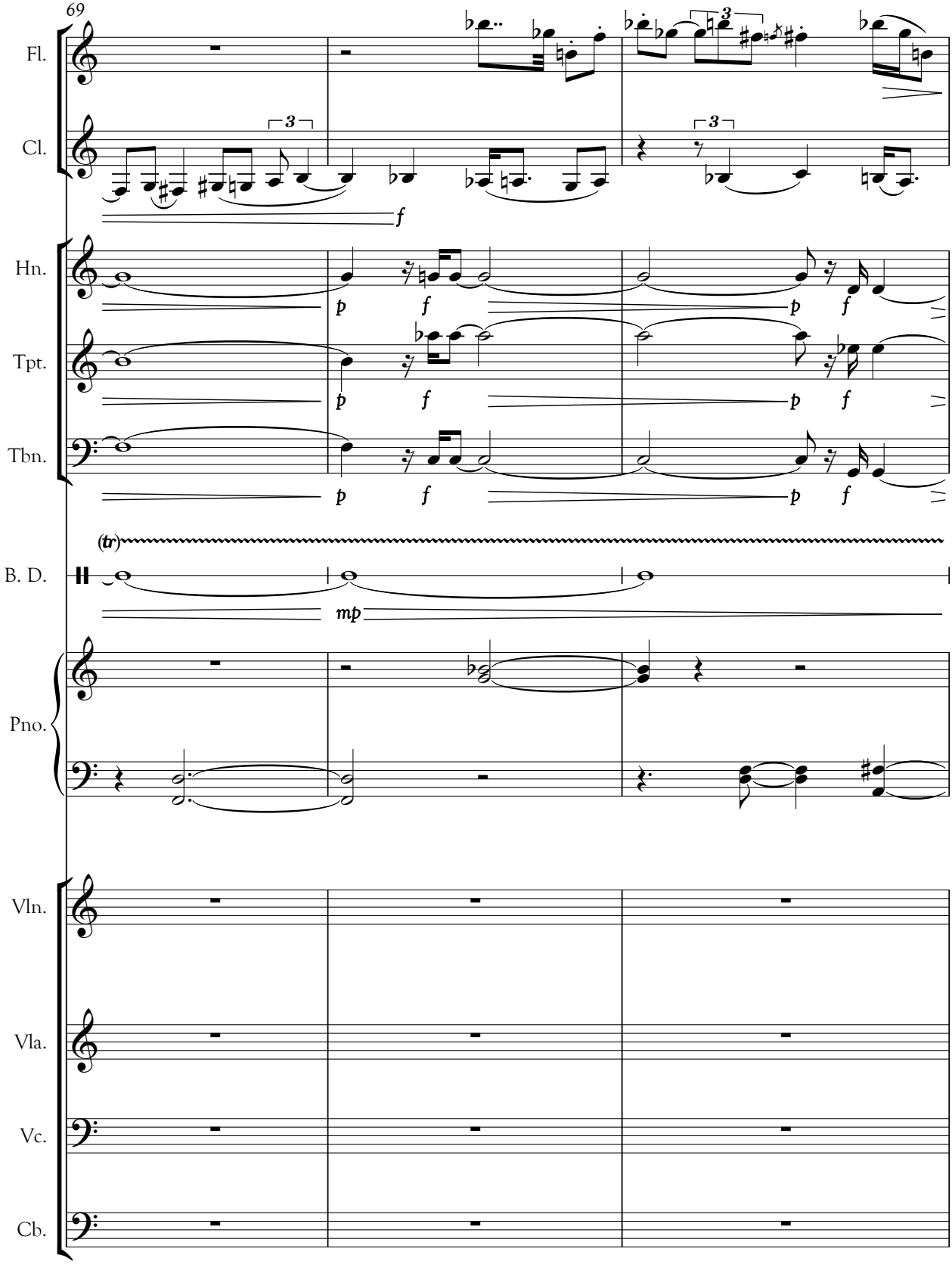

53
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
ff
3

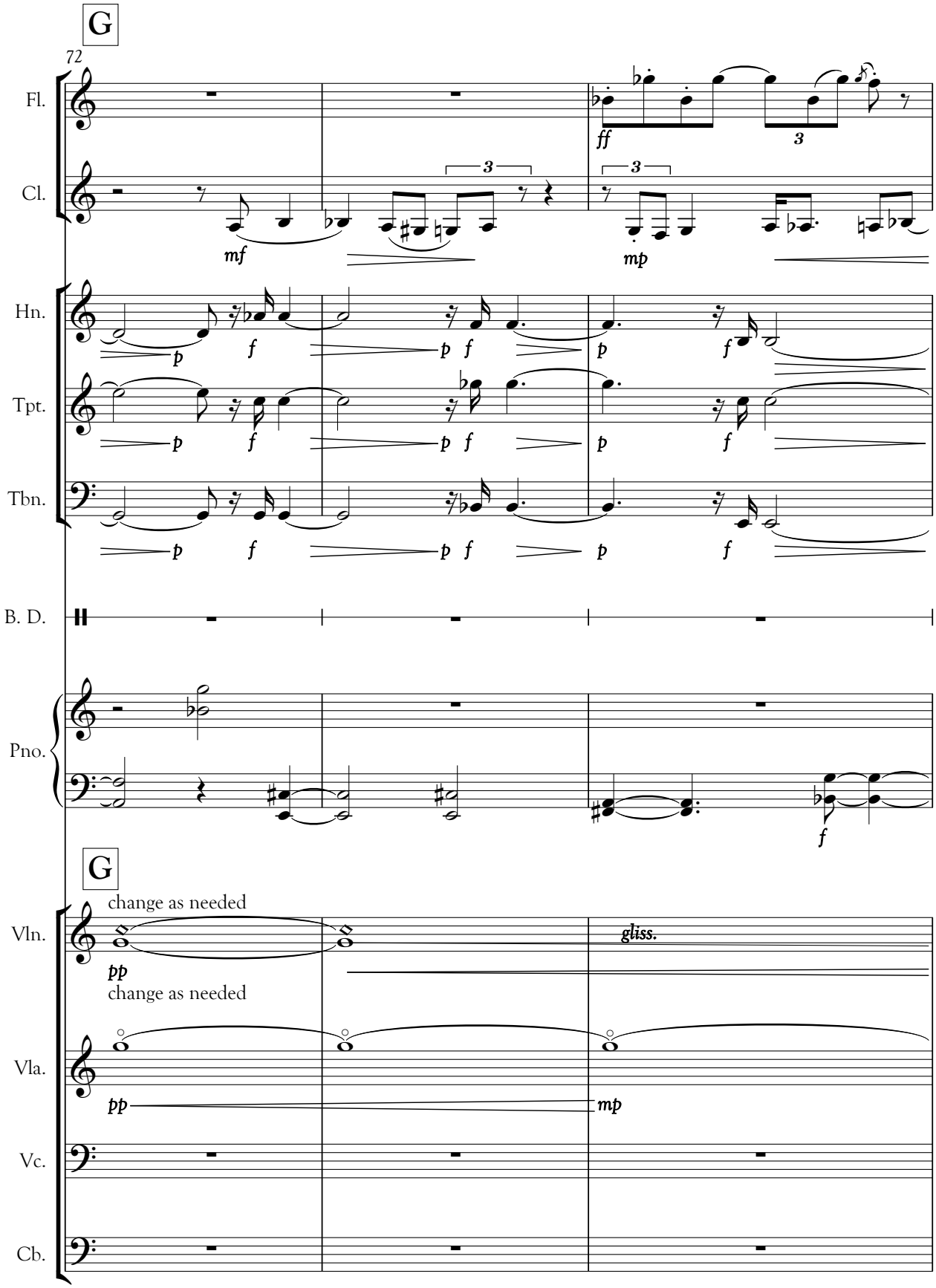

56
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
>p
mf
p

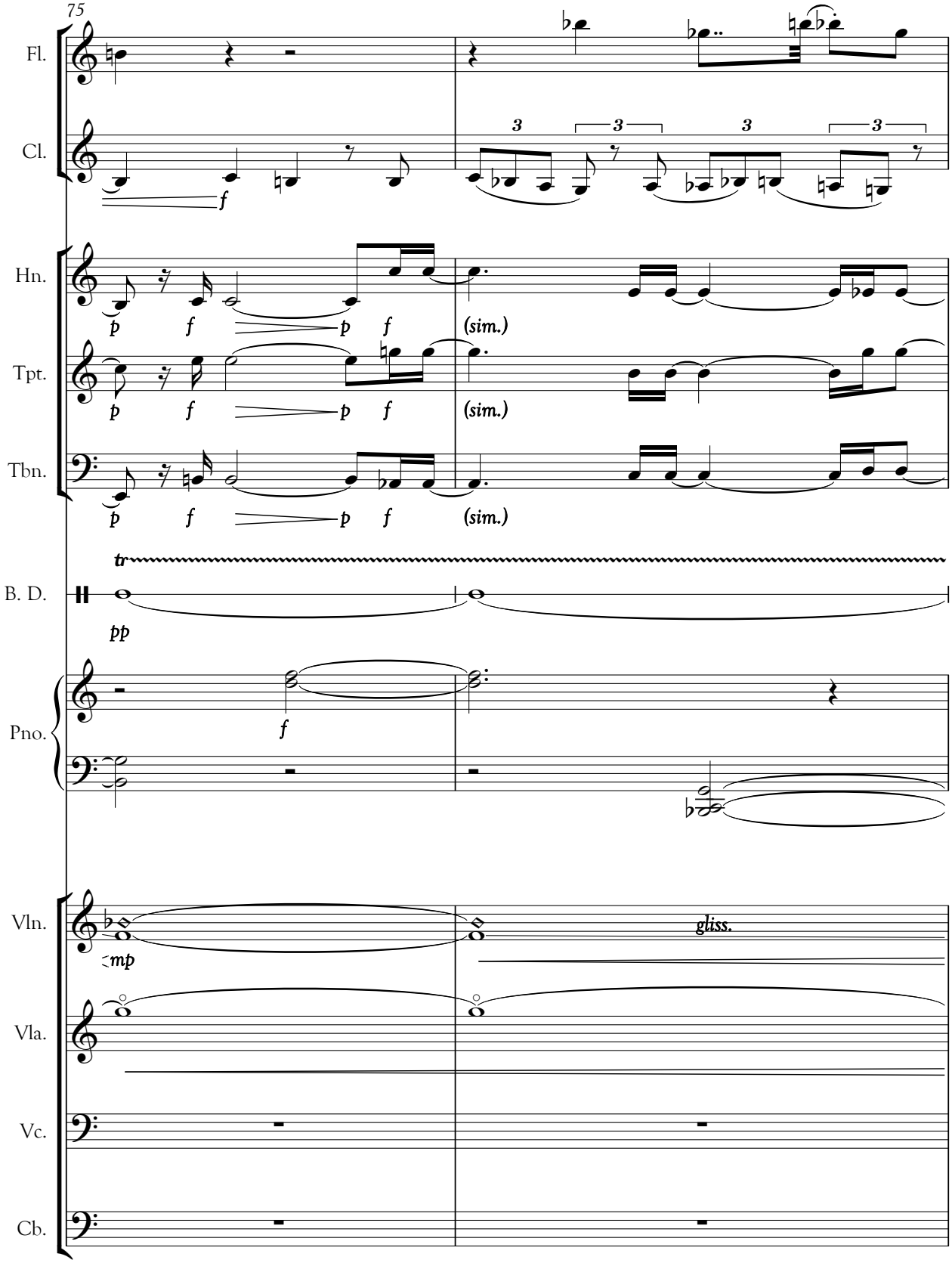

59
F
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Bass Drum
Pno.
F
Vln.
Vla.
Vc.
Cb.
mp
f
mf
p
f
mf
p
f
mf
p
f
tr
pp
mp

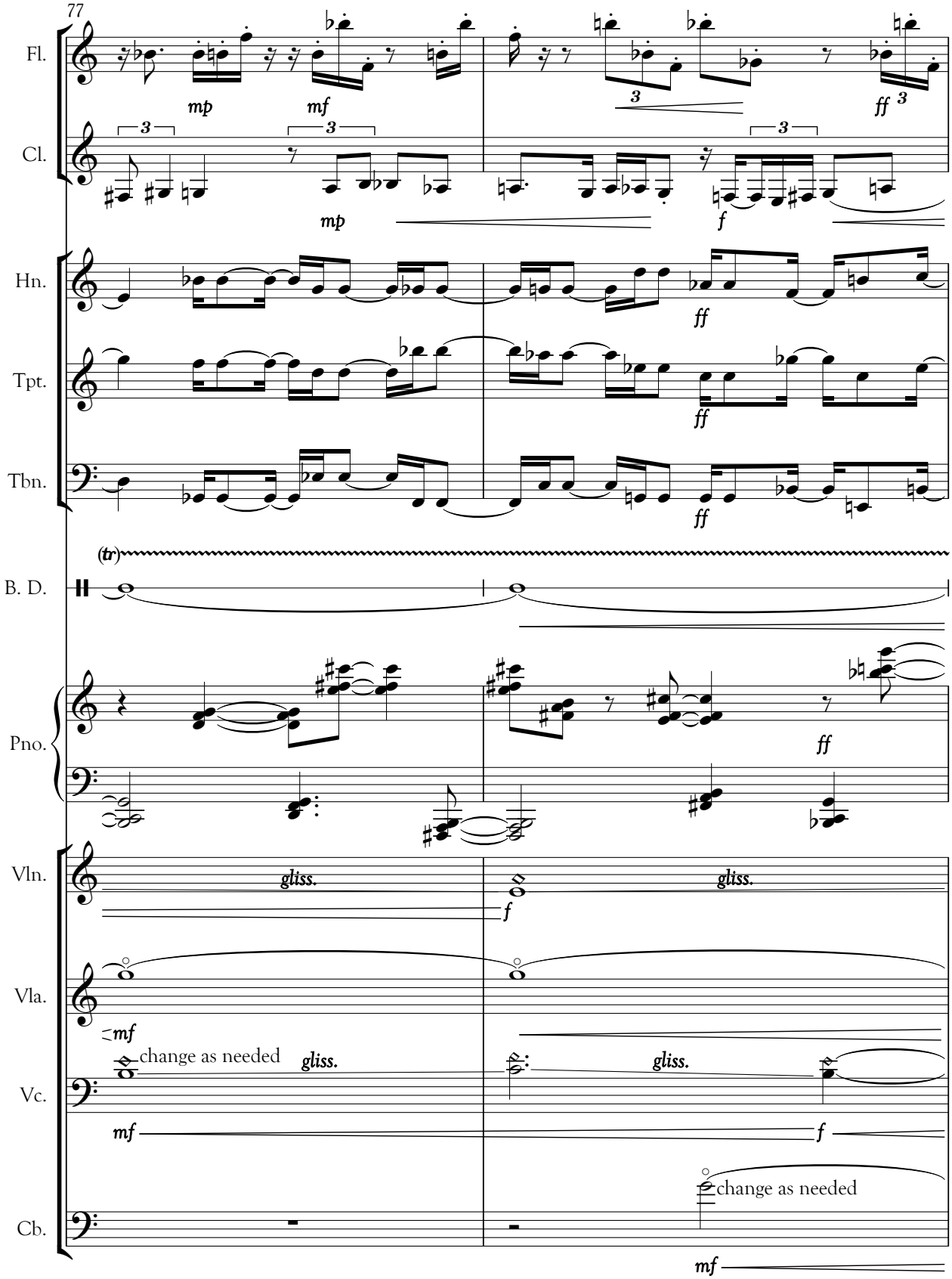

62
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
(tr)
ff
p
mf
f

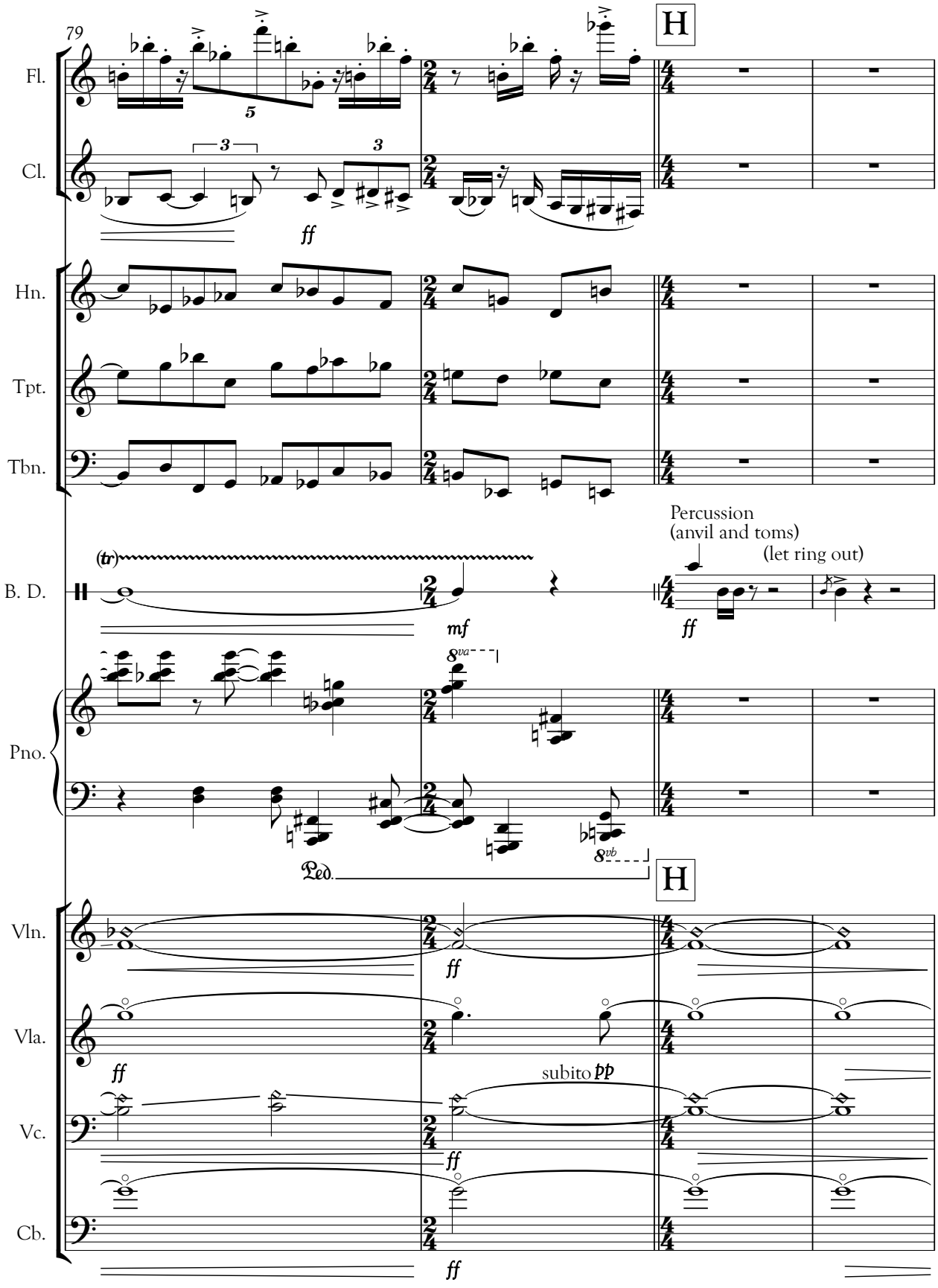

65
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
mp
f
p
pp
pppp
(tr)
tr

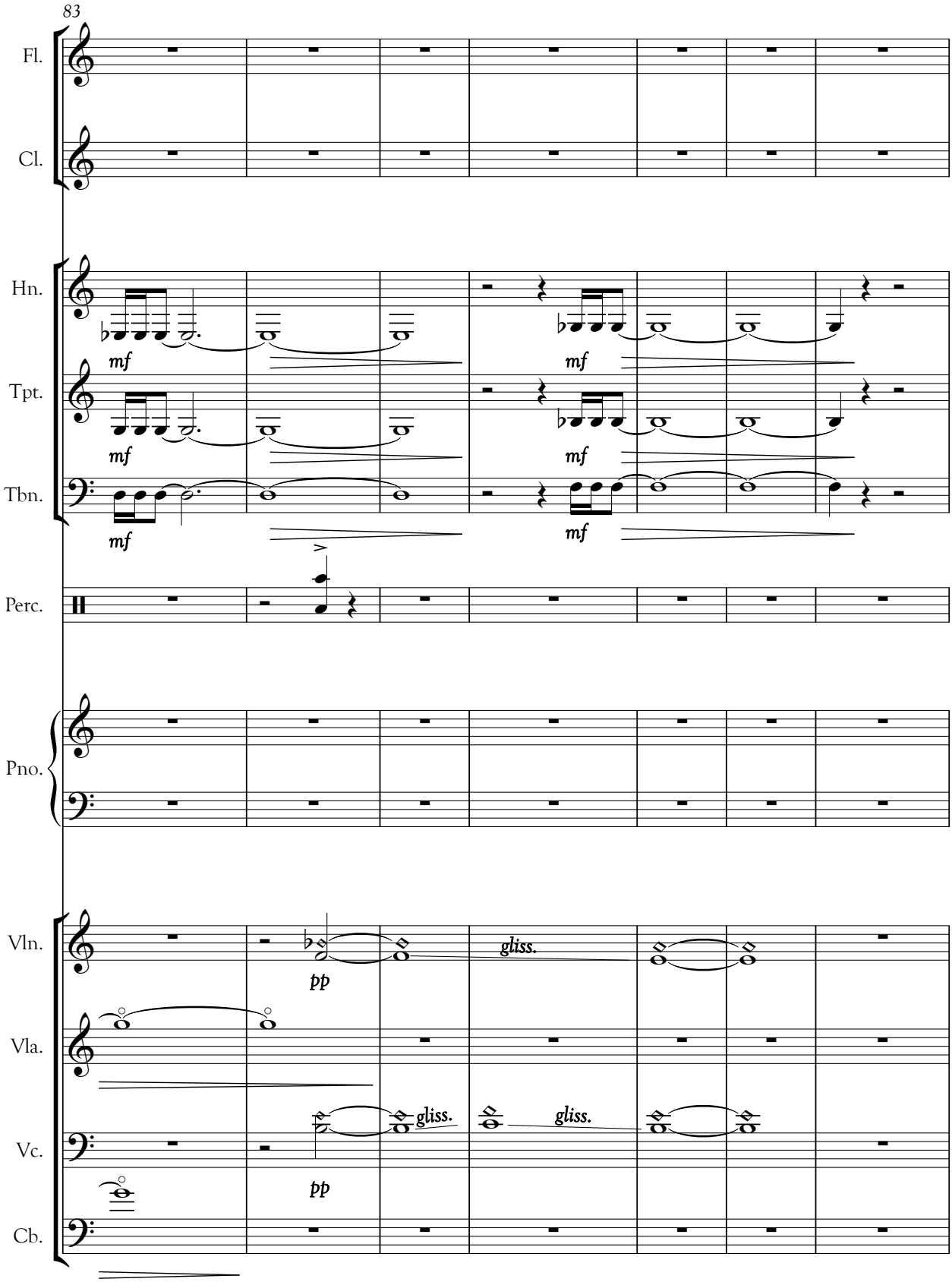

69
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
(tr)
mp

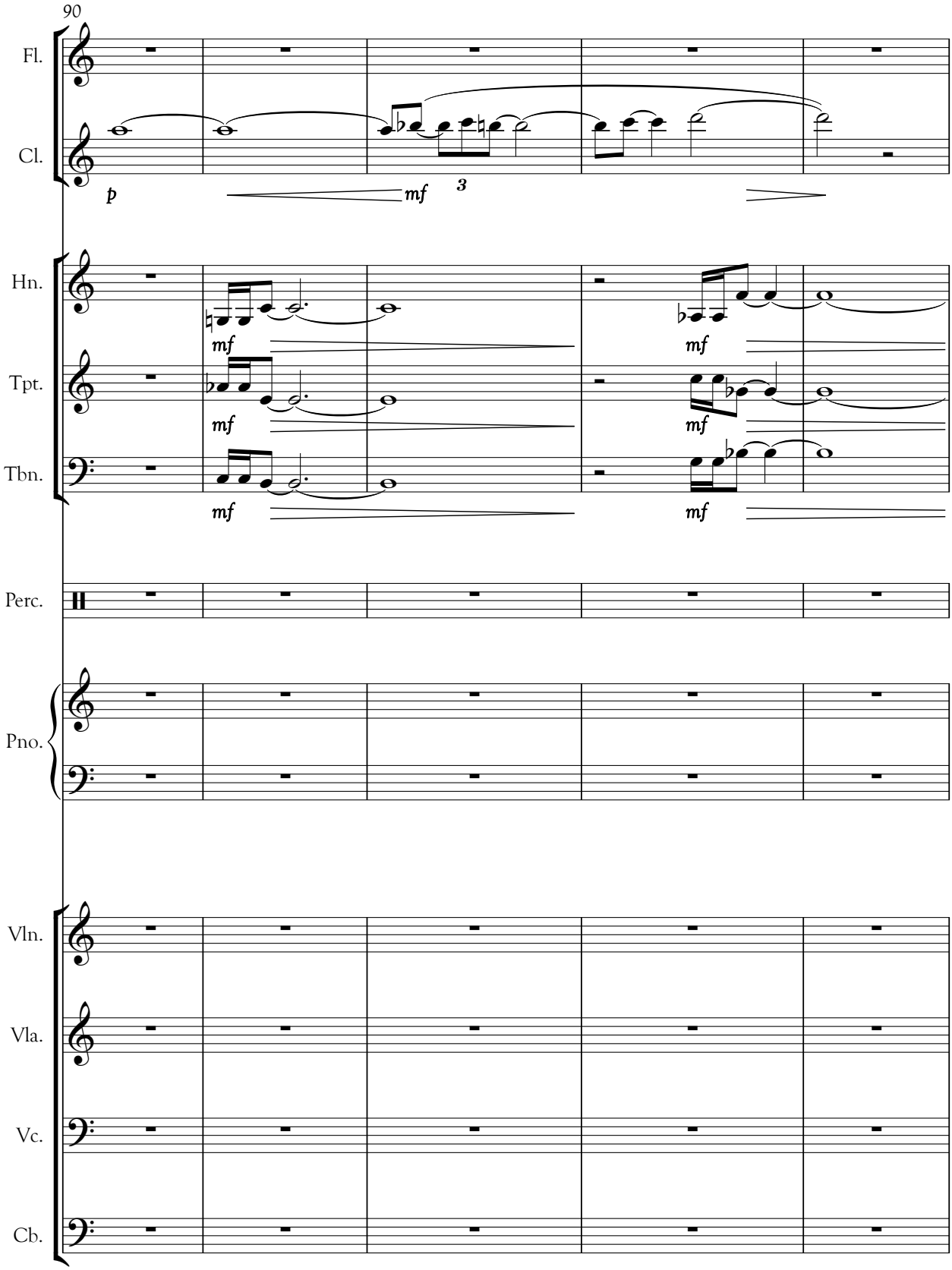

G
72
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
G
change as needed
Vln.
Vla.
Vc.
Cb.
ff
mf
mp
p
f
pp
gliss.
change as needed

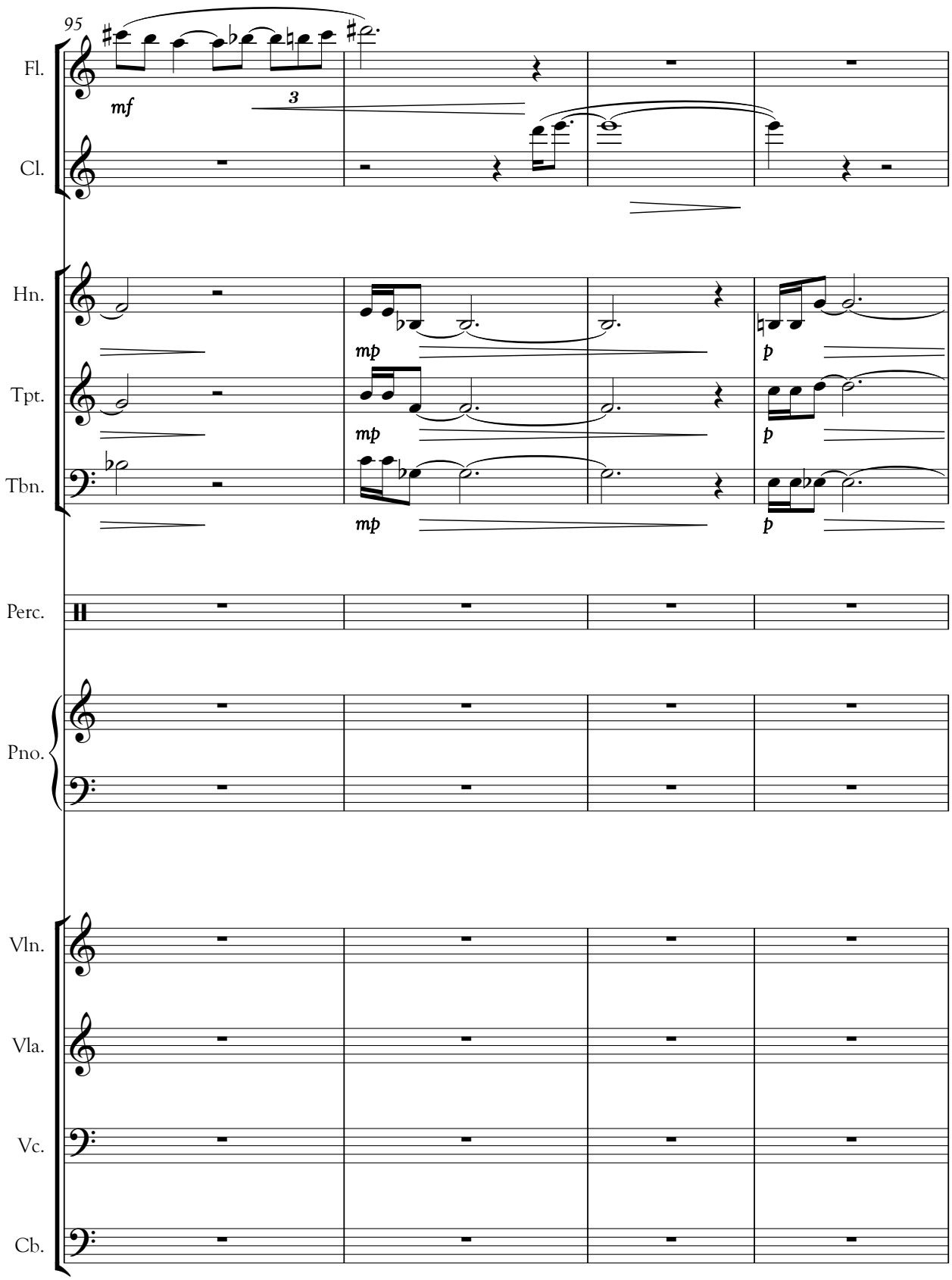

75
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
(sim.)
(sim.)
(sim.)
gliss.

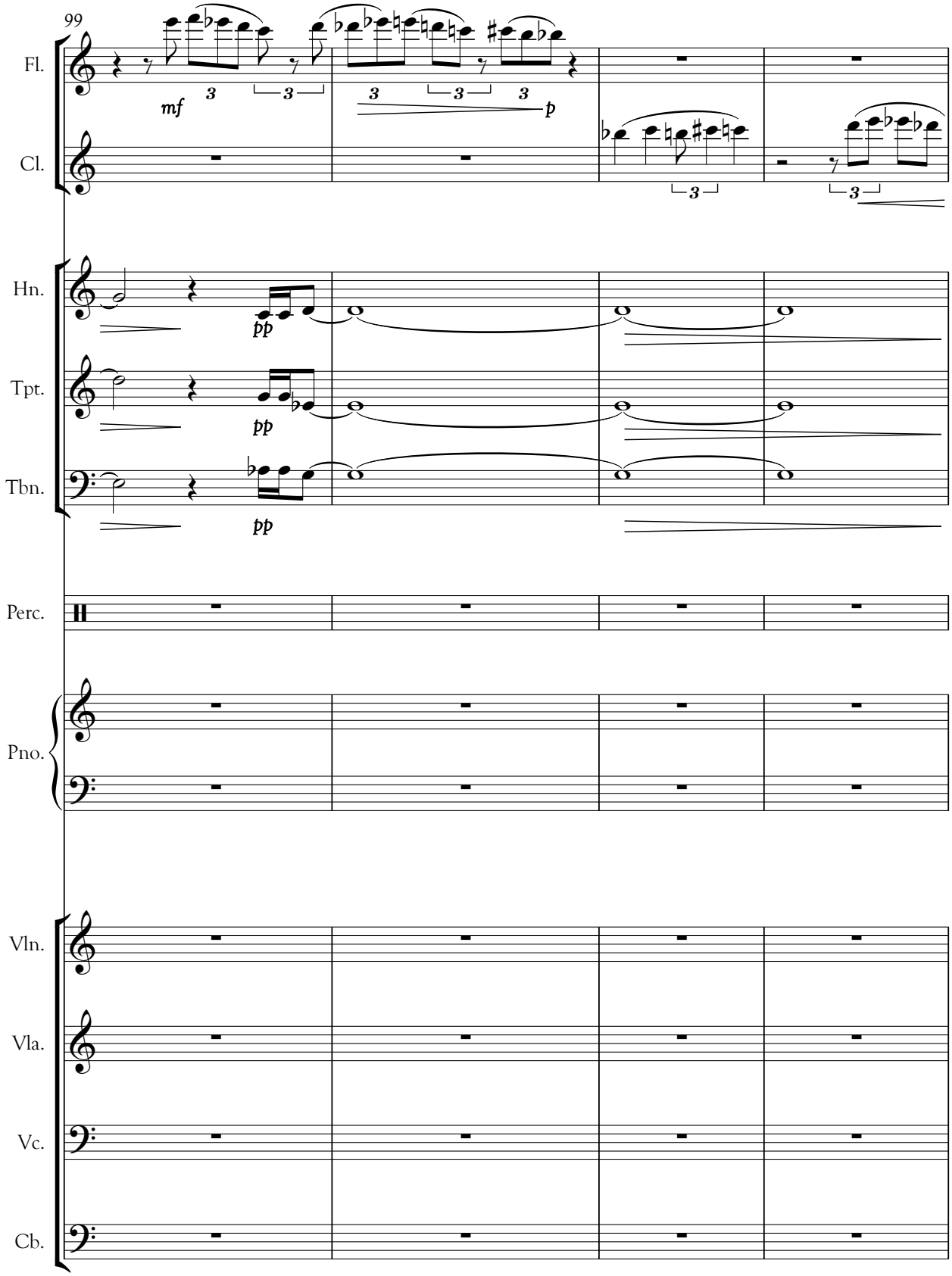

77
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
mp
mf
ff
f
(tr)
gliss.
change as needed

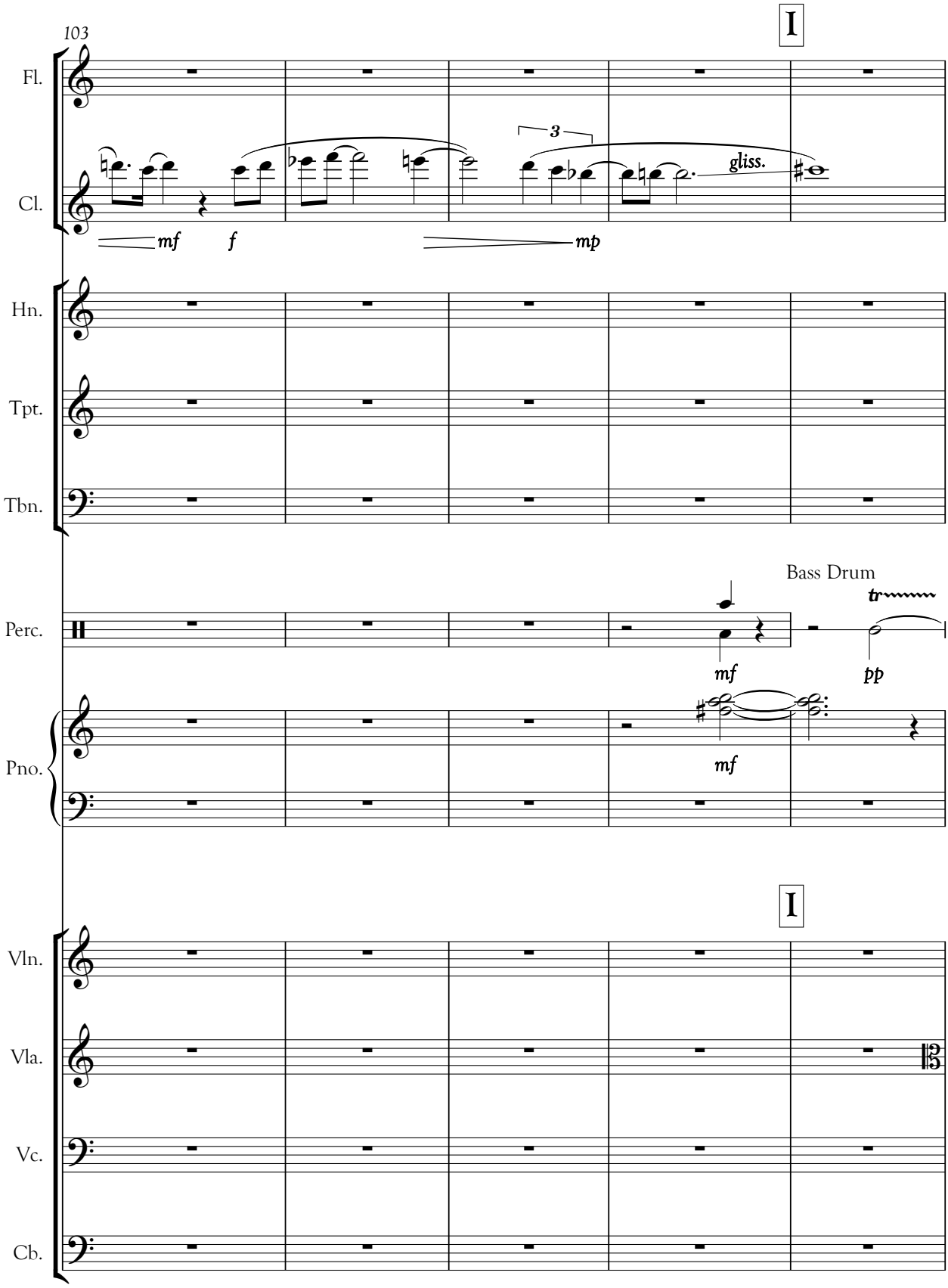

79
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
H
H
(tr)
mf
ff
Percussion
(anvil and toms)
(let ring out)
8va
8vb
Ped.
subito pp

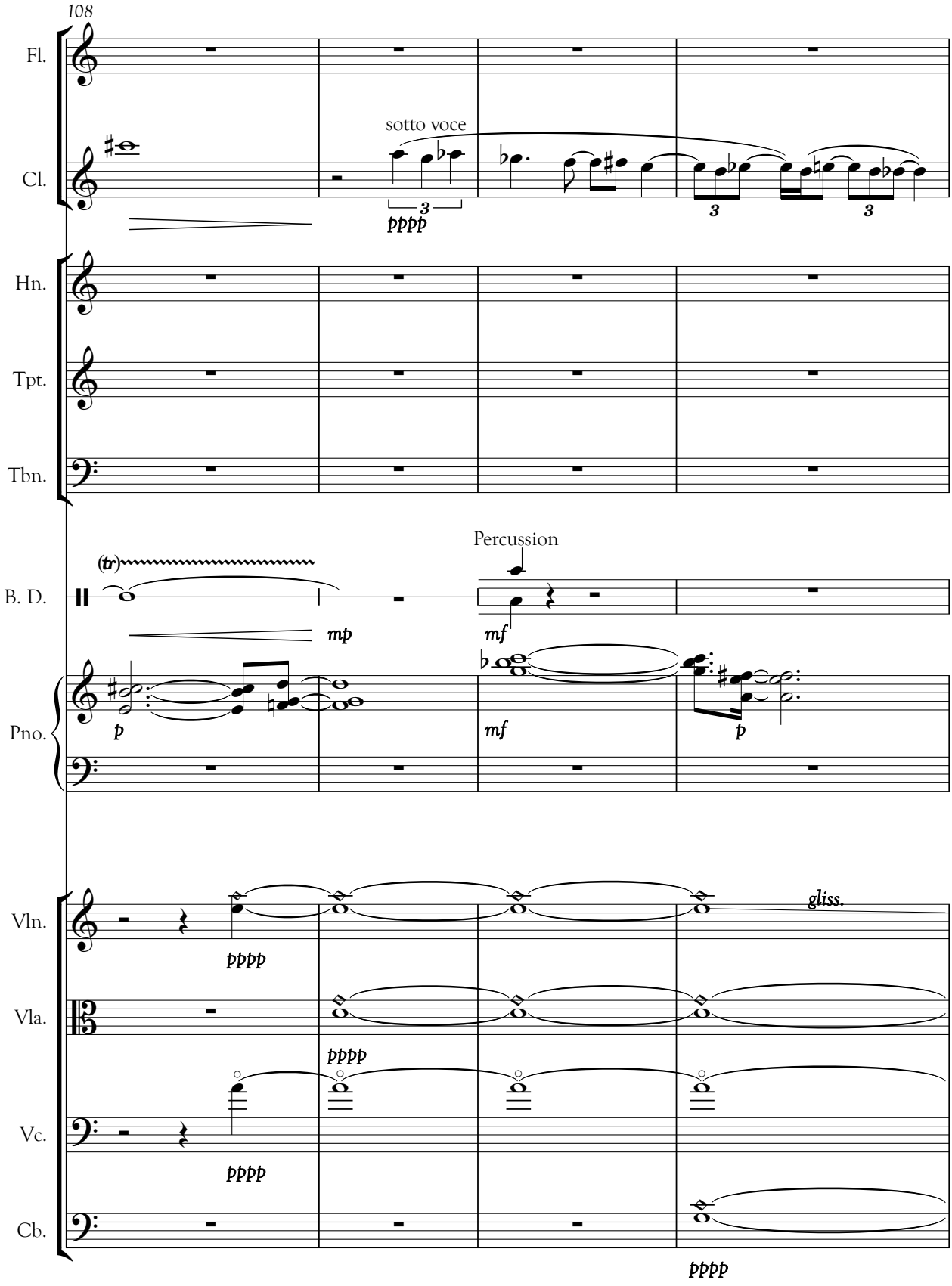

83
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
pp
gliss.

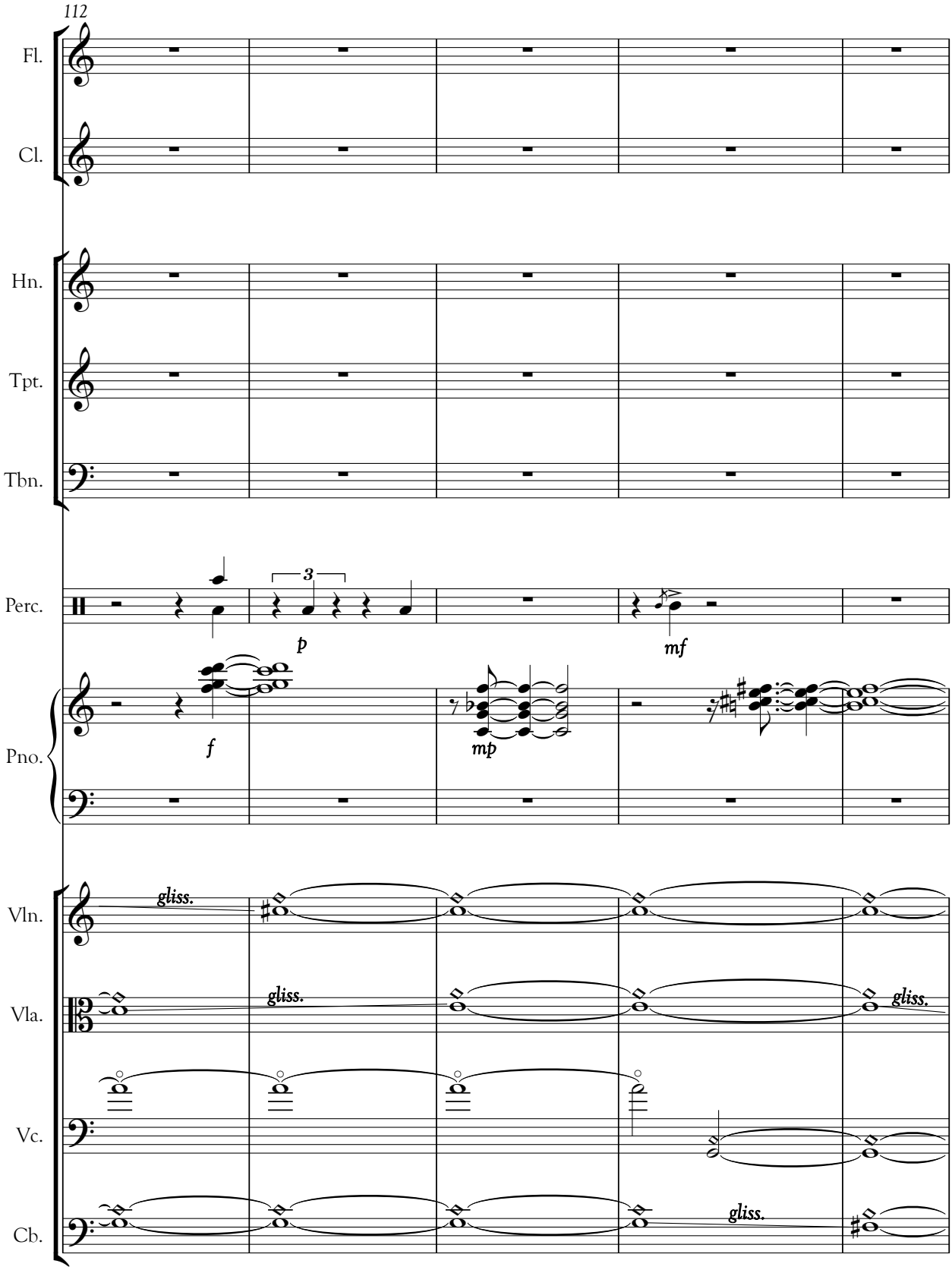

90
Fl.
Cl.
p
mf
3
Hn.
Tpt.
Tbn.
mf
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.

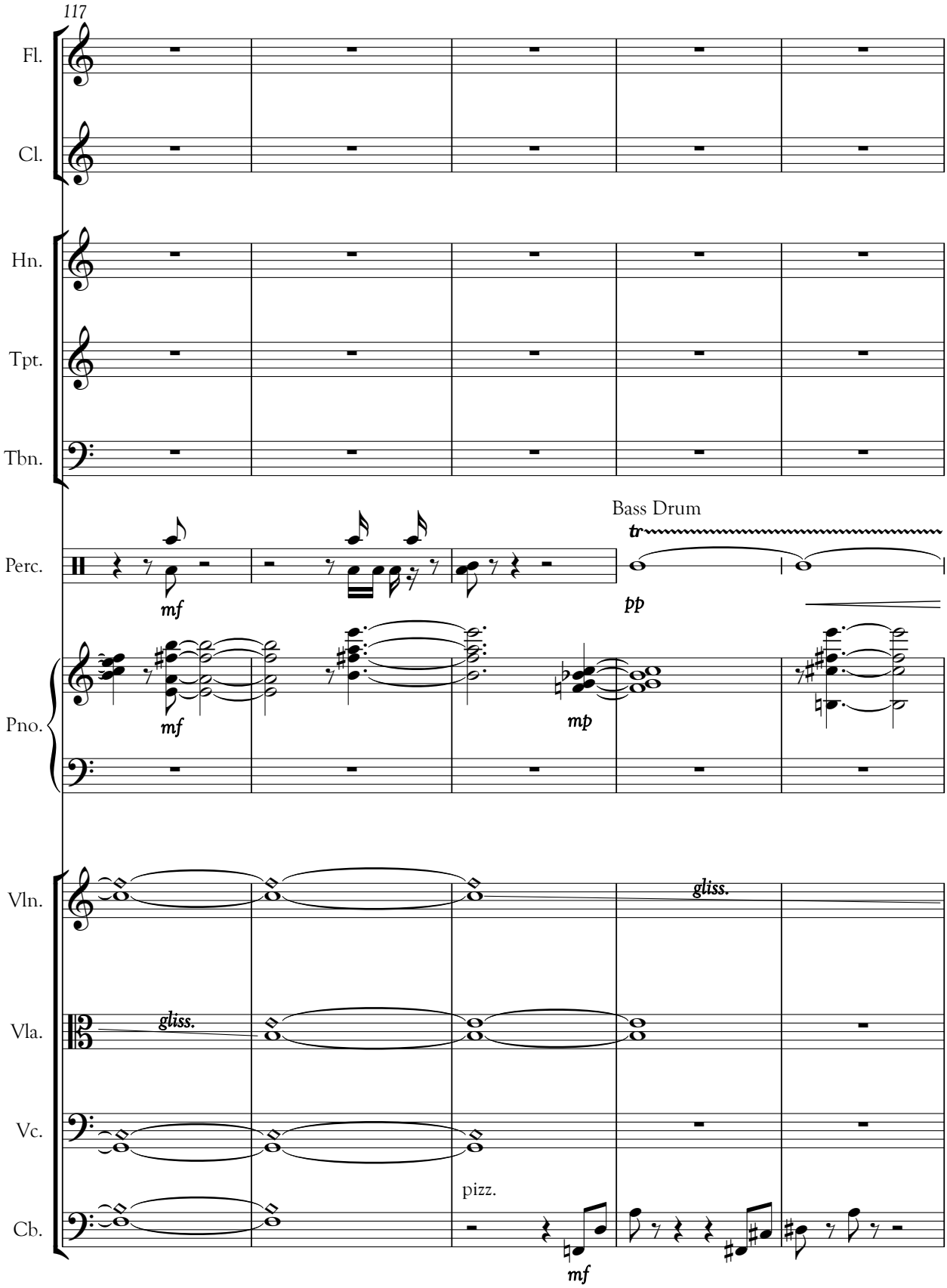

95
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
3
mp
mp
mp
p
p
p

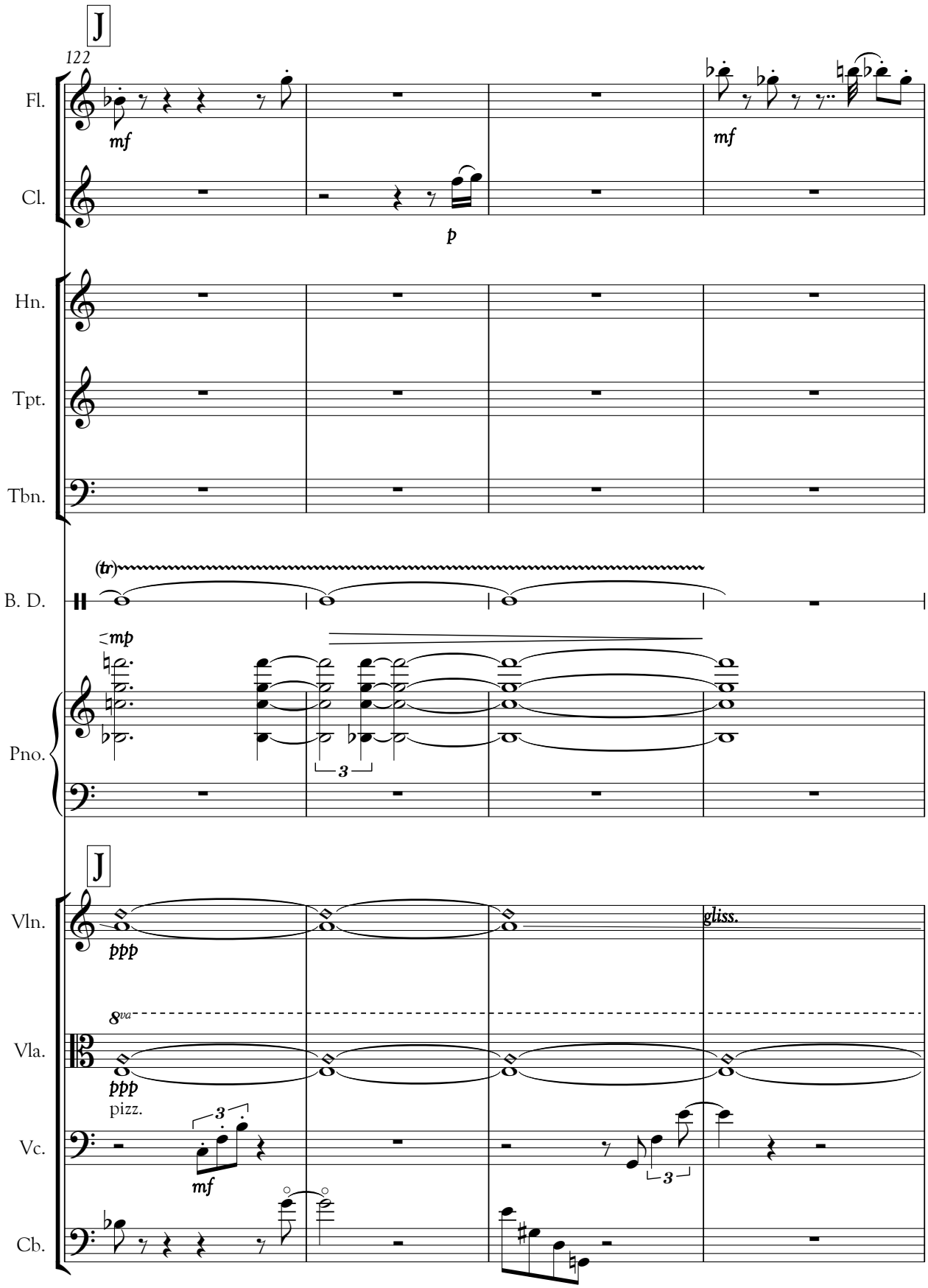

99
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
p
pp
pp
pp

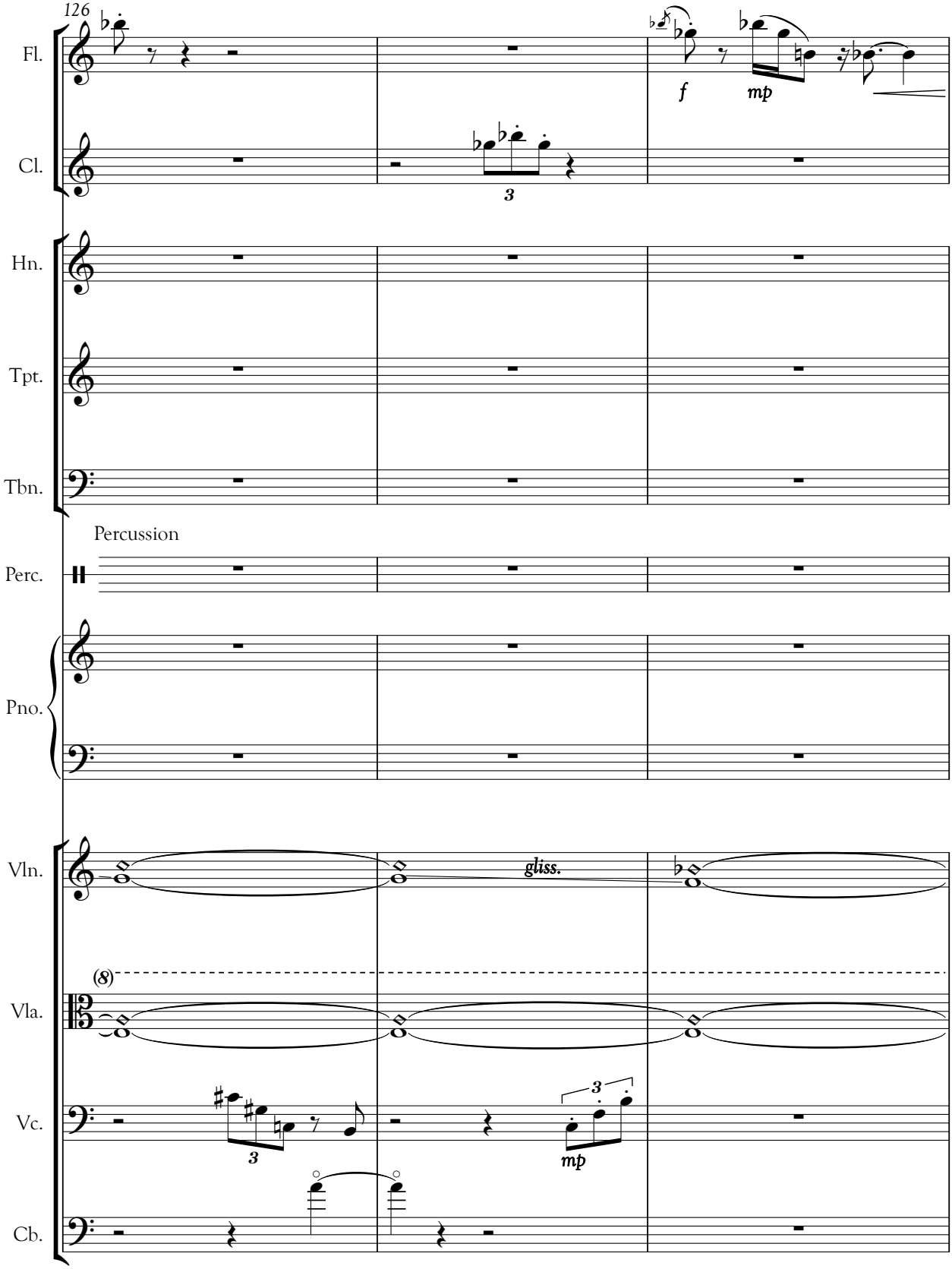

103
I
Fl.
Cl.
3
gliss.
mf
f
mp
Hn.
Tpt.
Tbn.
Bass Drum
Perc.
tr
mf
pp
Pno.
mf
I
Vln.
Vla.
Vc.
Cb.

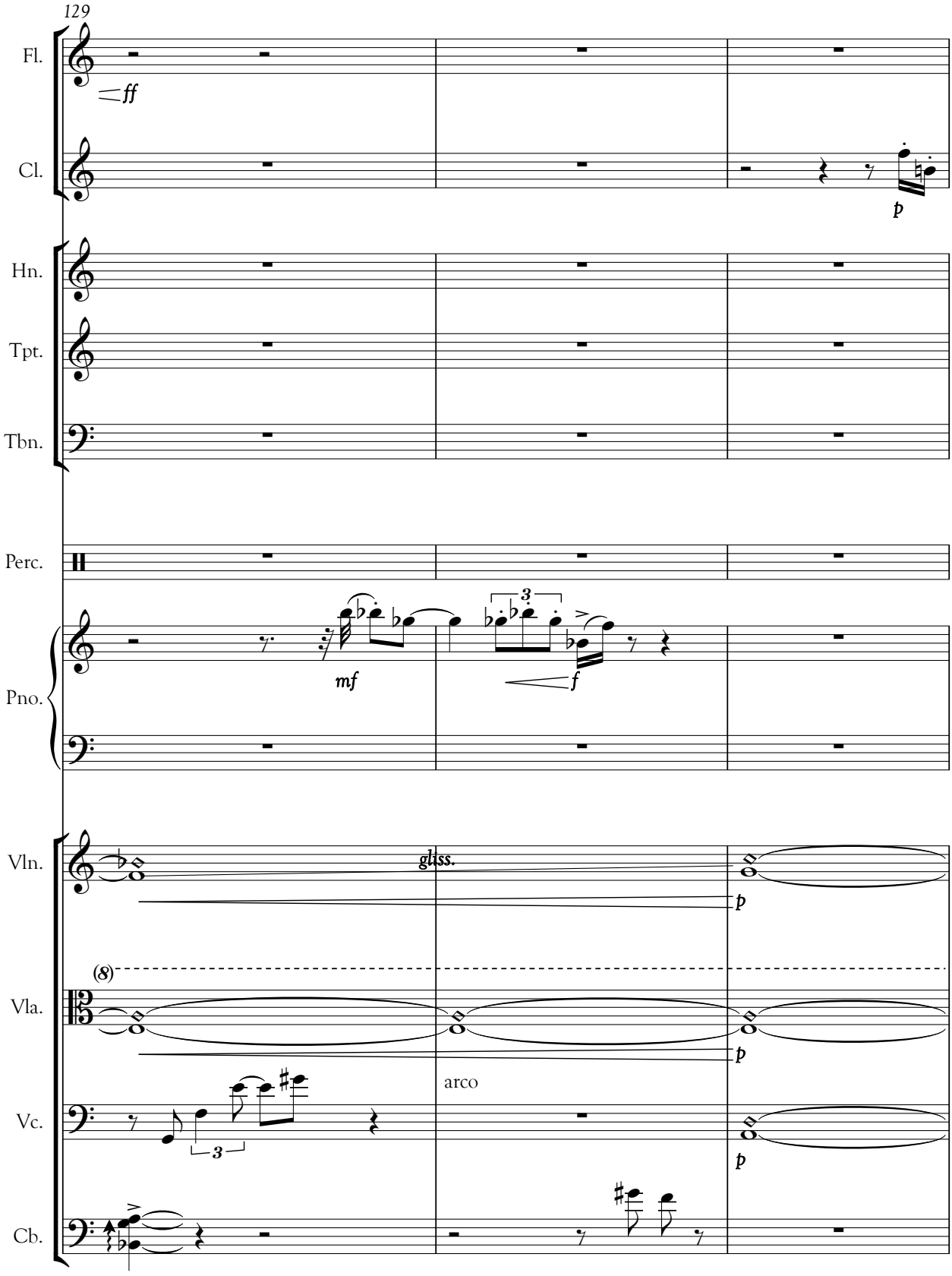

108
Fl.
Cl.
sotto voce
pppp
Hn.
Tpt.
Tbn.
Percussion
B. D.
(tr)
mp
mf
Pno.
p
mf
p
Vln.
gliss.
pppp
Vla.
pppp
Vc.
pppp
Cb.
pppp

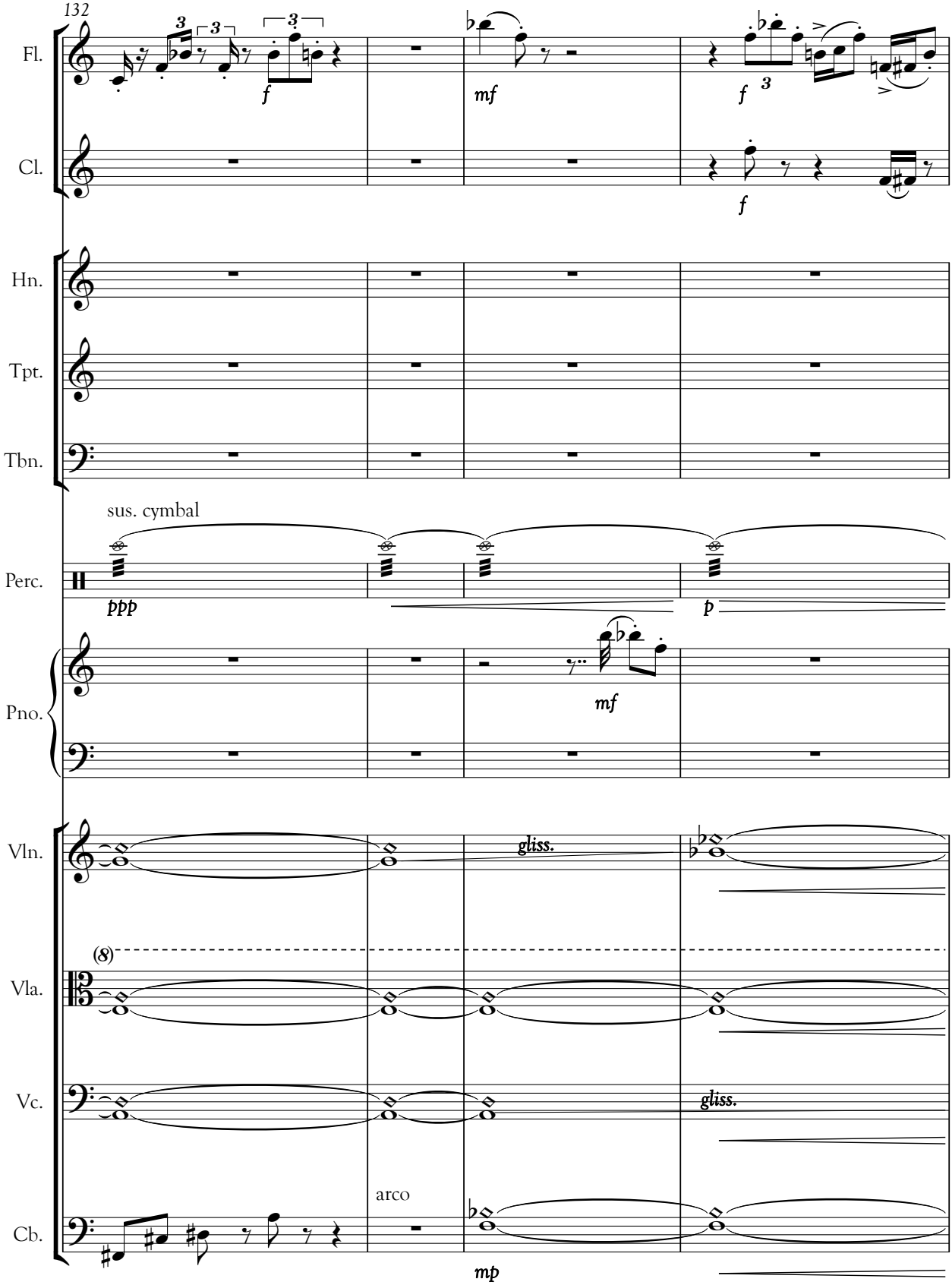

112
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
3
p
mf
Pno.
f
mp
Vln.
gliss.
Vla.
gliss.
gliss.
Vc.
Cb.
gliss.

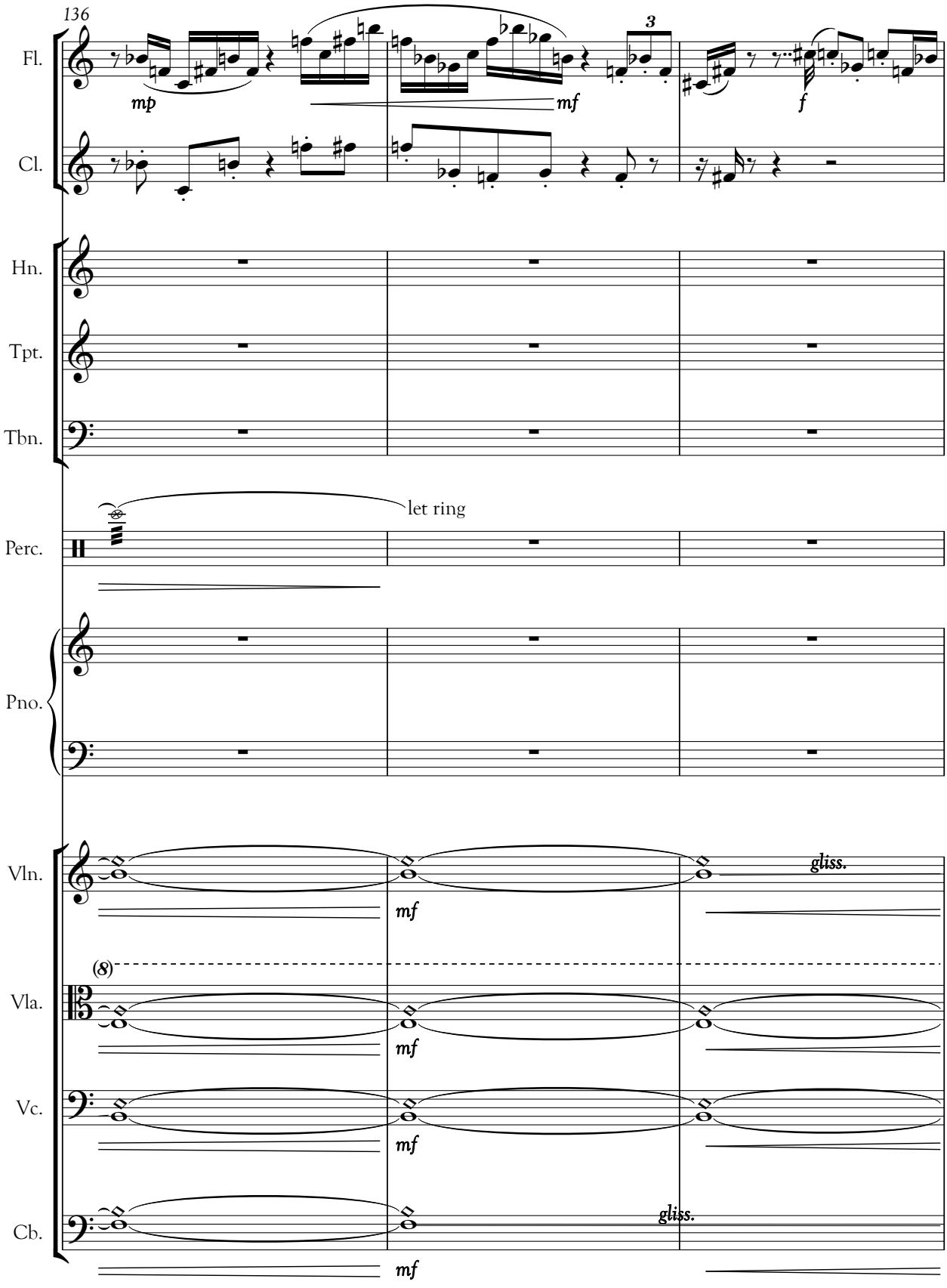

117
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Bass Drum
tr
mf
pp
Pno.
mf
mp
Vln.
gliss.
Vla.
gliss.
Vc.
Cb.
pizz.
mf

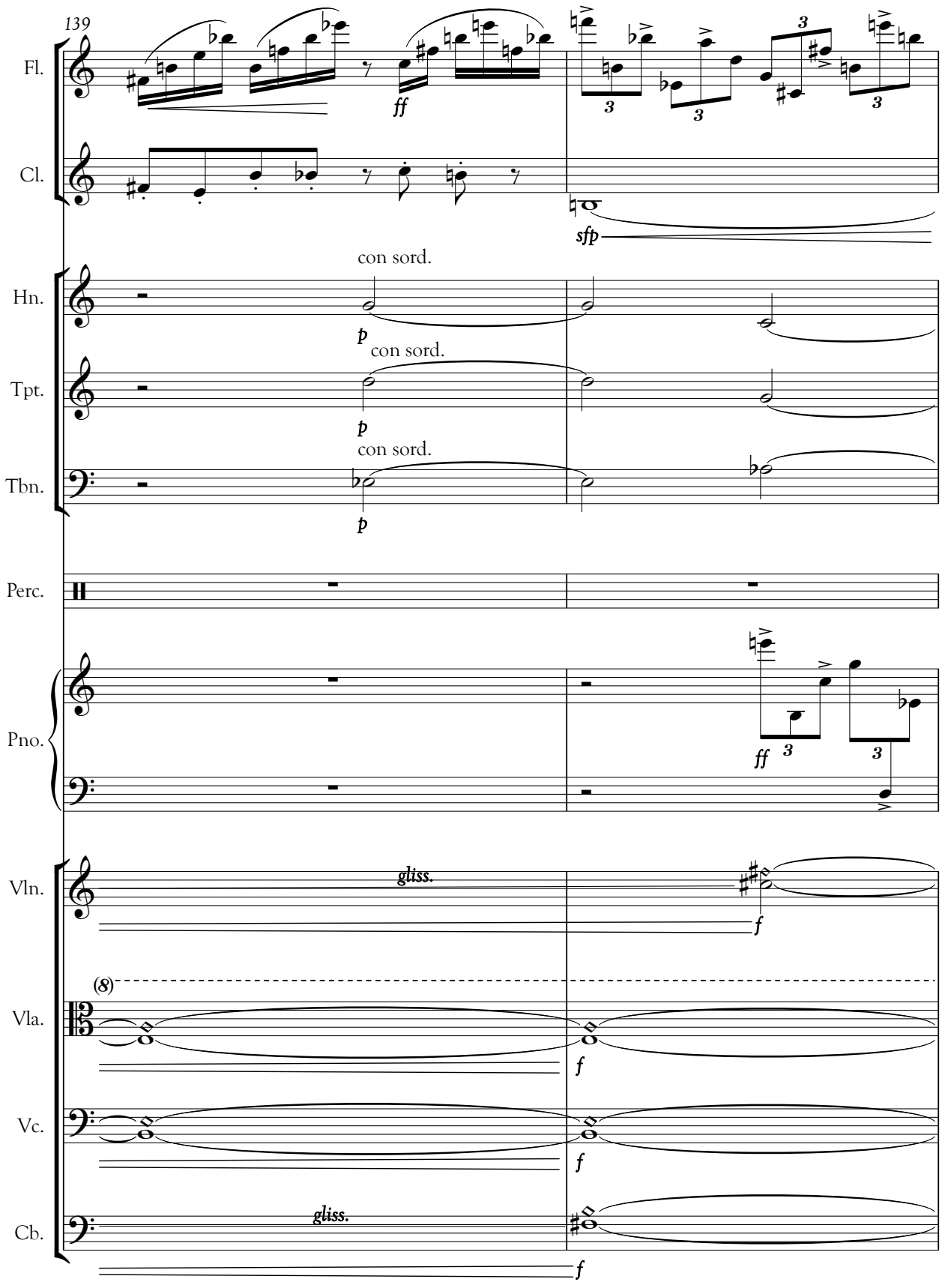

J
122
Fl.
mf
mf
Cl.
p
Hn.
Tpt.
Tbn.
(tr)
B. D.
mp
Pno.
3
J
Vln.
ppp
gliss.
8va
Vla.
ppp
pizz.
Vc.
3
mf
3
Cb.

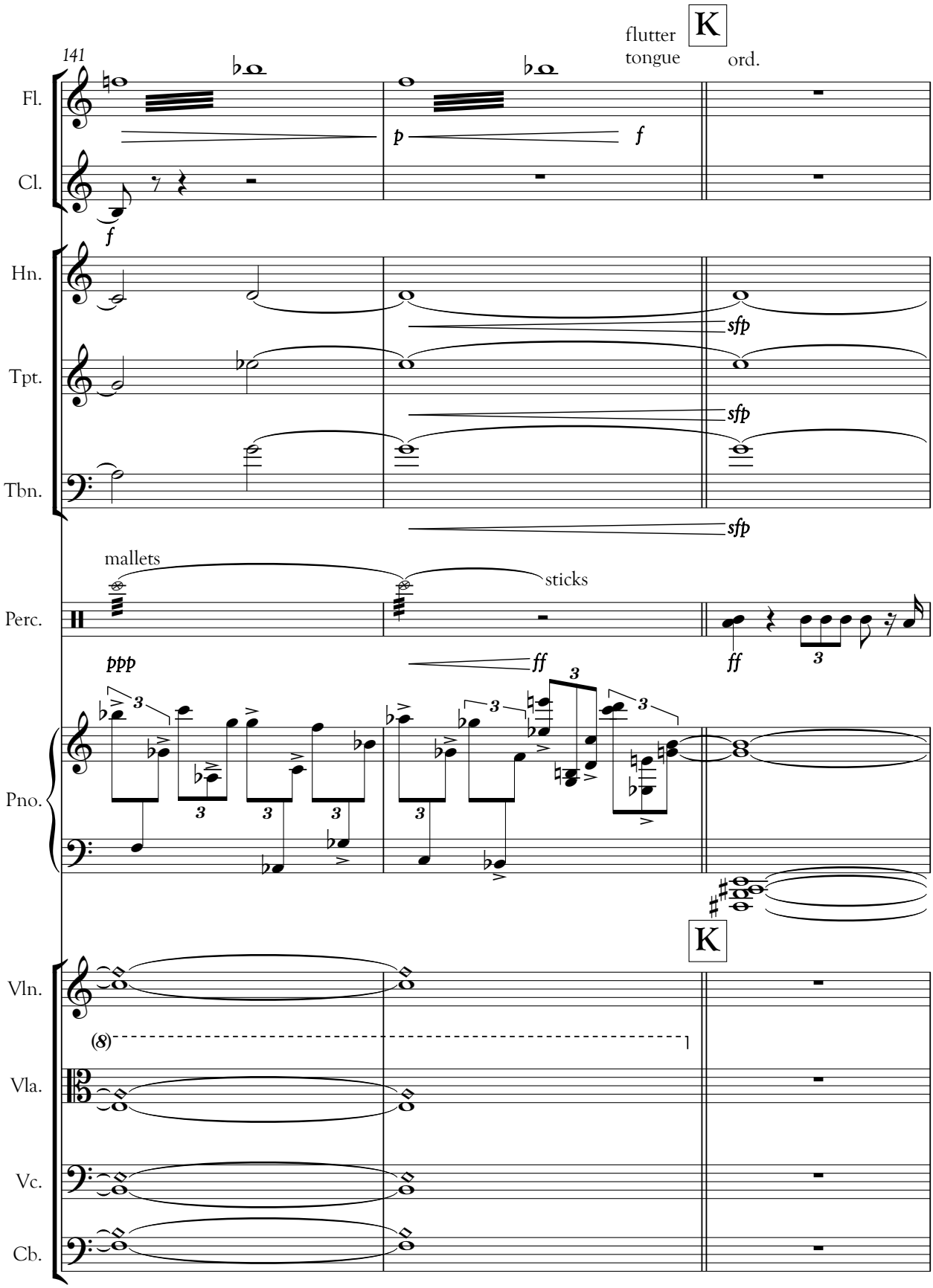

126
Fl.
Cl.
Hn.
Tpt.
Tbn.
Percussion
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
f
mp
3
gliss.
(8)
3
mp

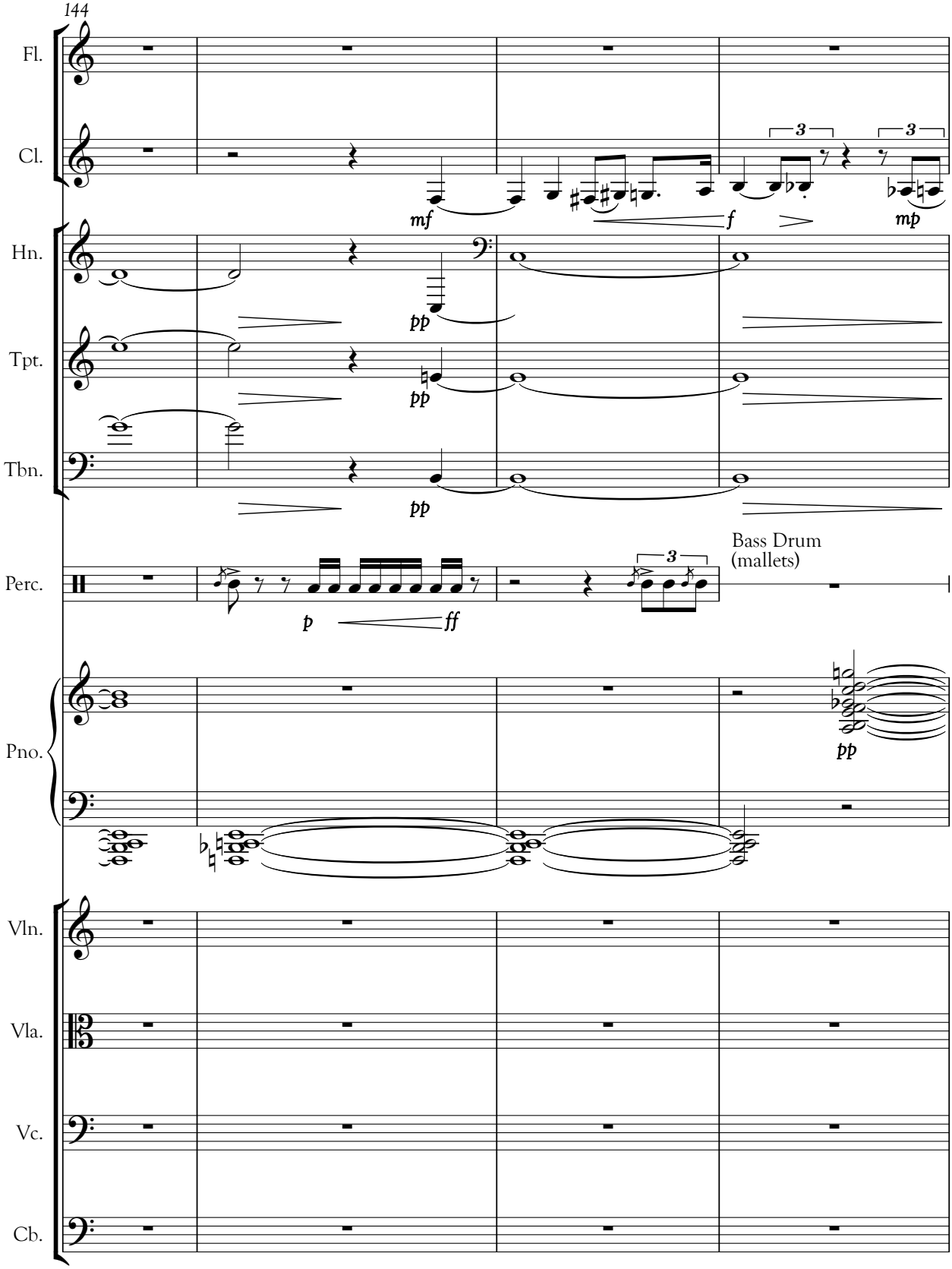

129
Fl.
ff
Cl.
p
Hn.
Tpt.
Tbn.
Perc.
Pno.
mf
3
f
Vln.
gliss.
p
(8)
Vla.
p
arco
Vc.
3
p
Cb.

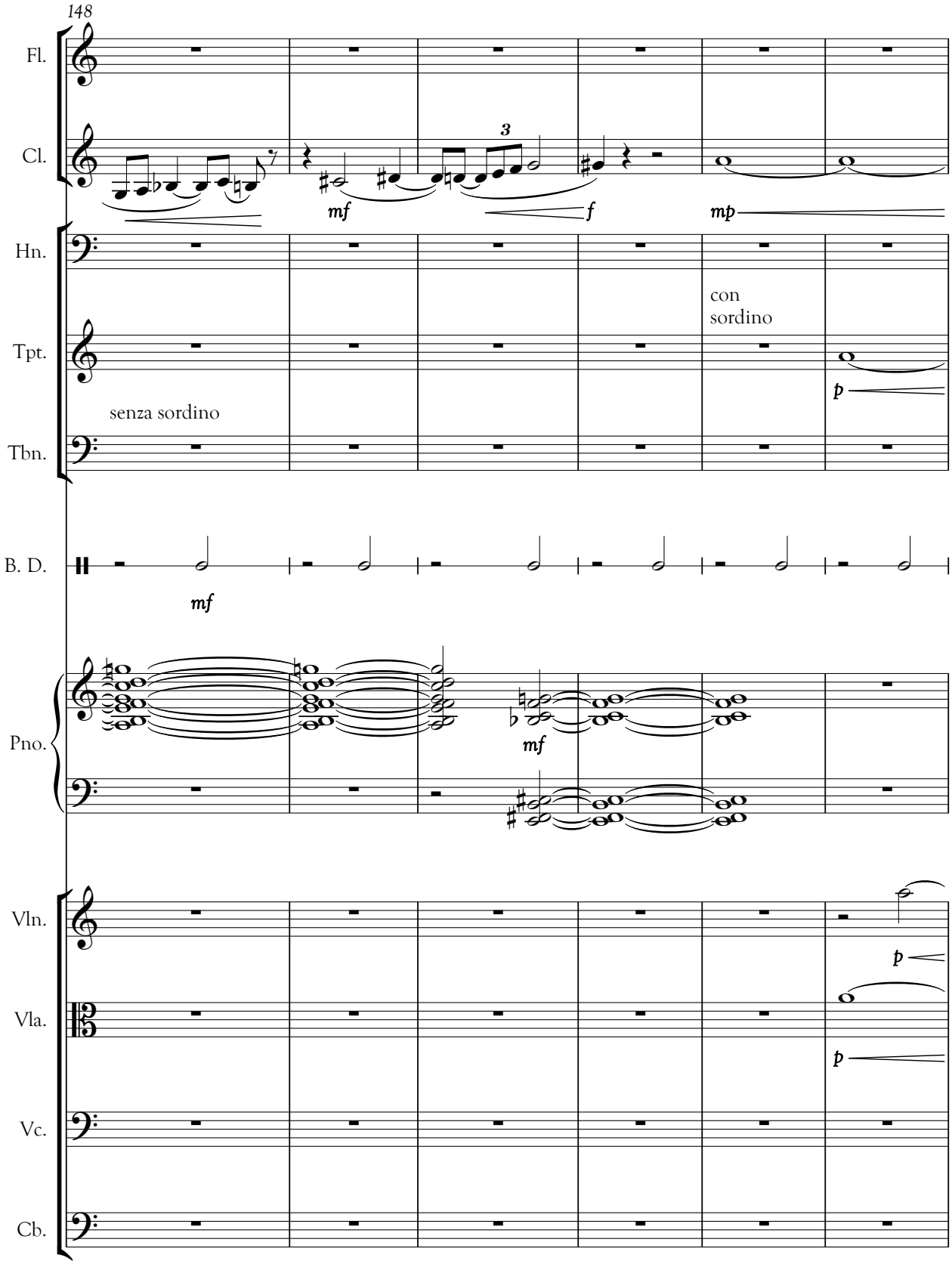

132
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
sus. cymbal
ppp
p
mf
f
gliss.
(8)
arco
mp

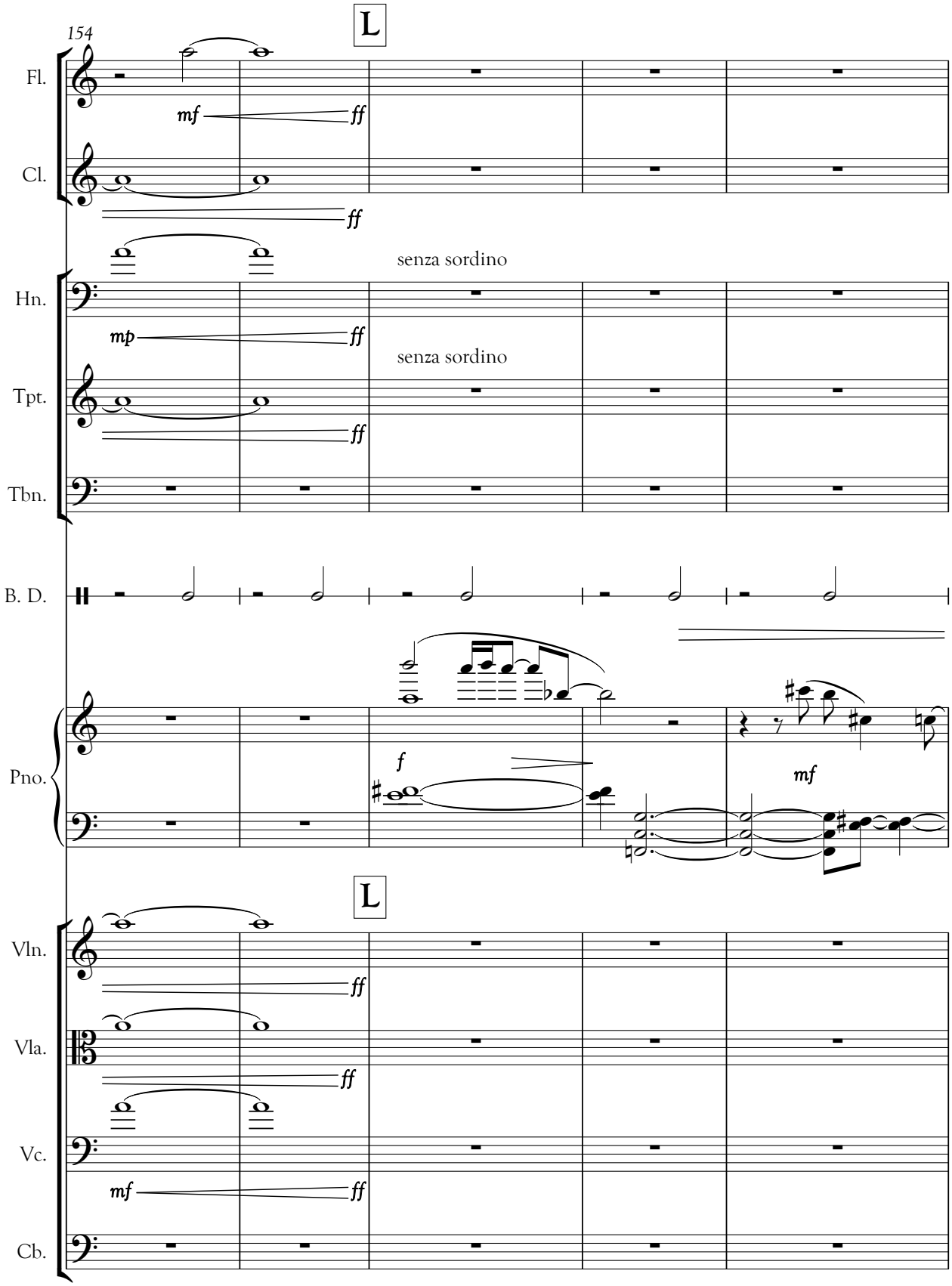

136
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mp
mf
f
3
let ring
gliss.
(8)

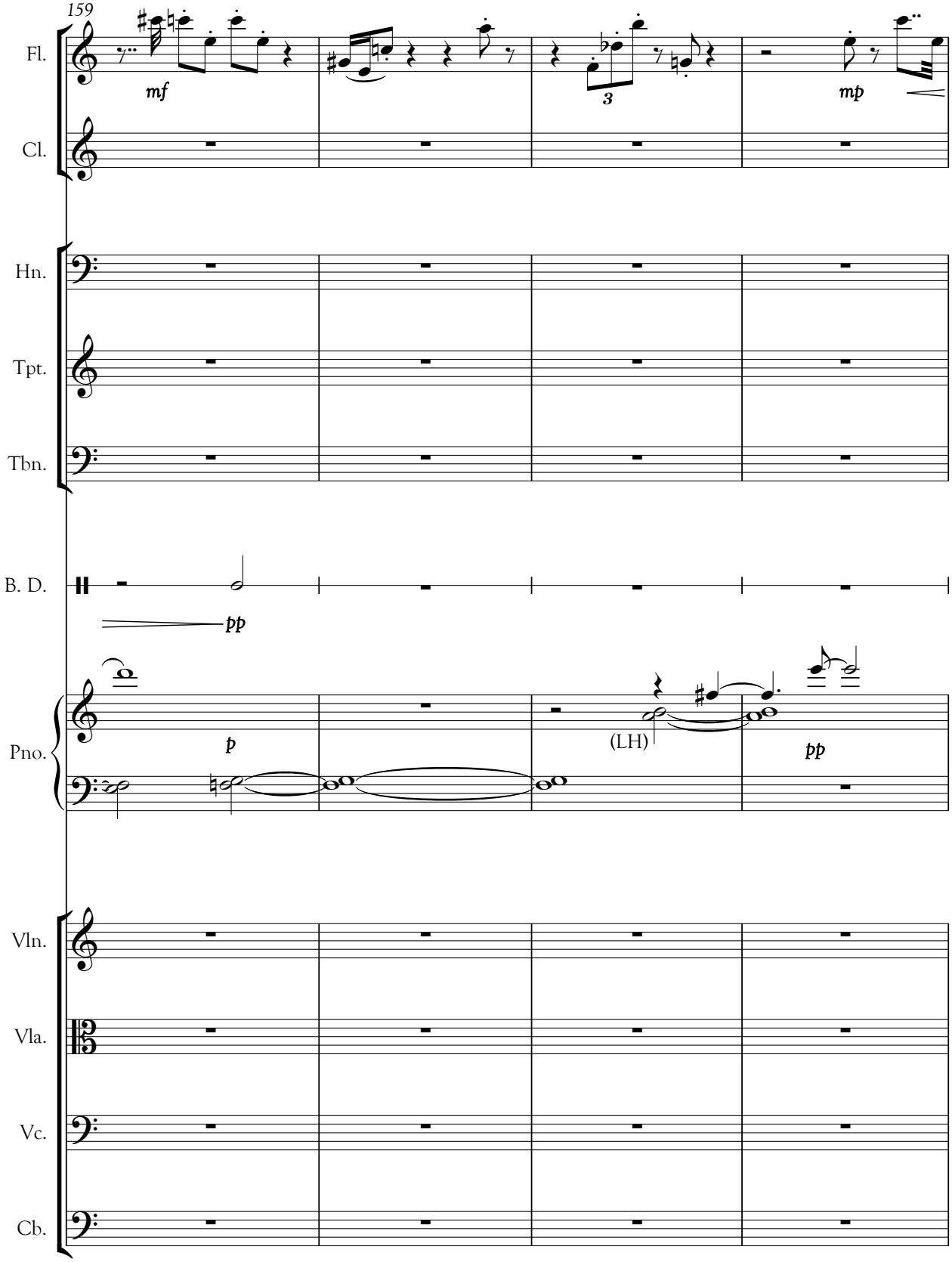

139
Fl.
Cl.
ff
sfp
Hn.
con sord.
p
Tpt.
con sord.
p
Tbn.
con sord.
p
Perc.
Pno.
ff
Vln.
gliss.
f
(8)
Vla.
f
Vc.
f
Cb.
gliss.
f

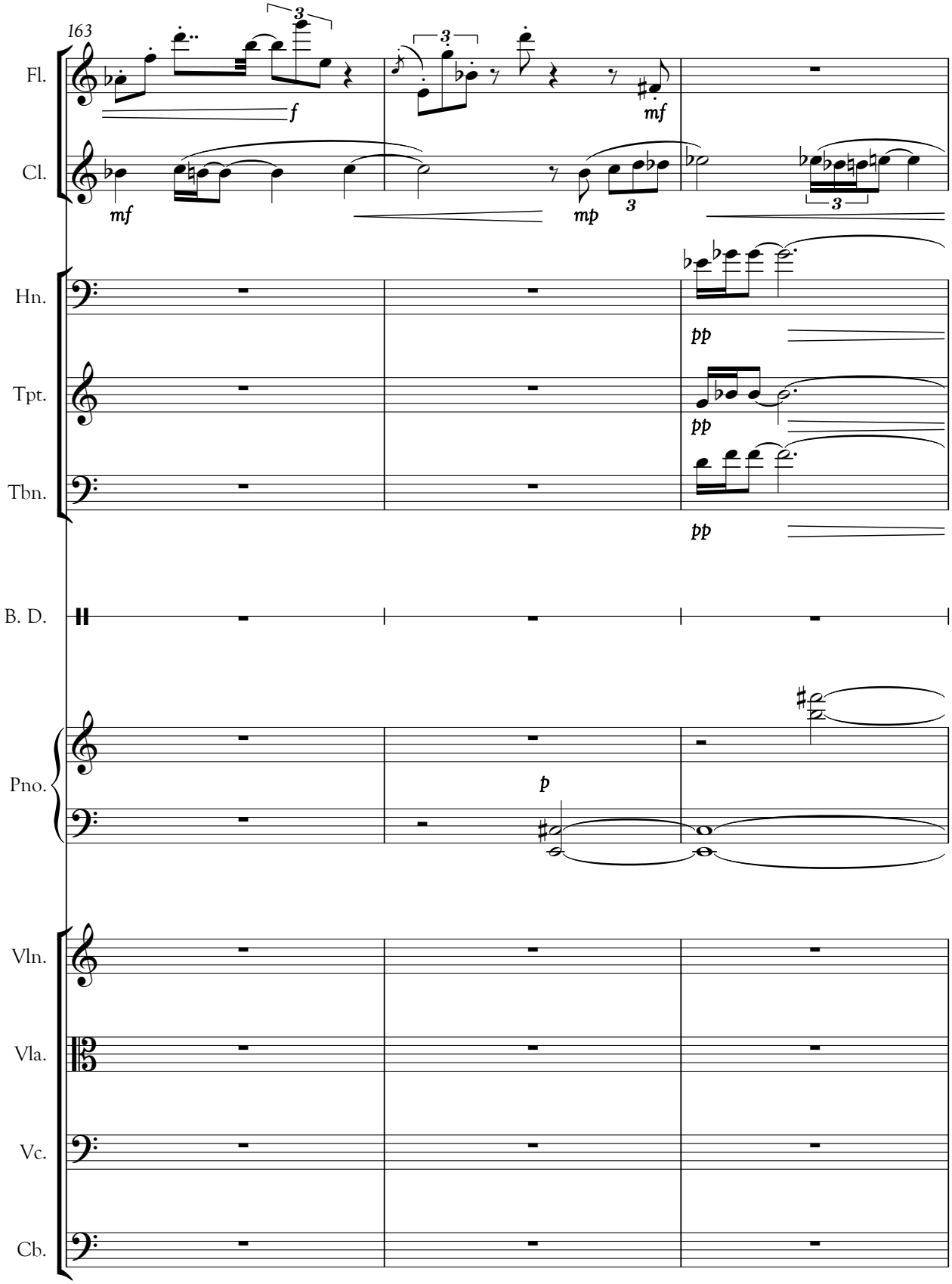

141
flutter tongue
K
ord.
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mallets
sticks
p
f
sfp
ppp
ff
K

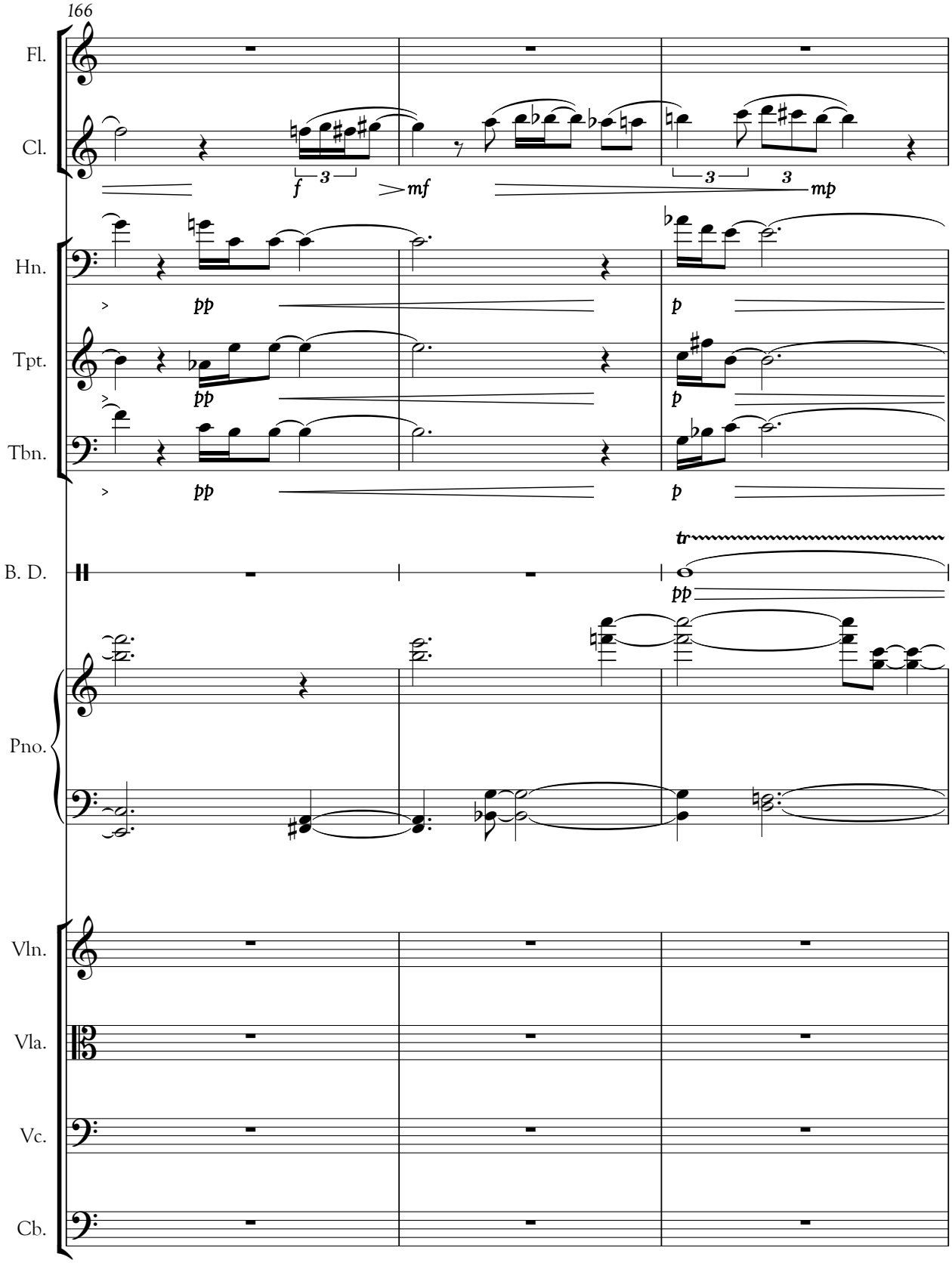

144
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
f
mp
pp
pp
pp
p
ff
pp
3
3
3
Bass Drum
(mallets)

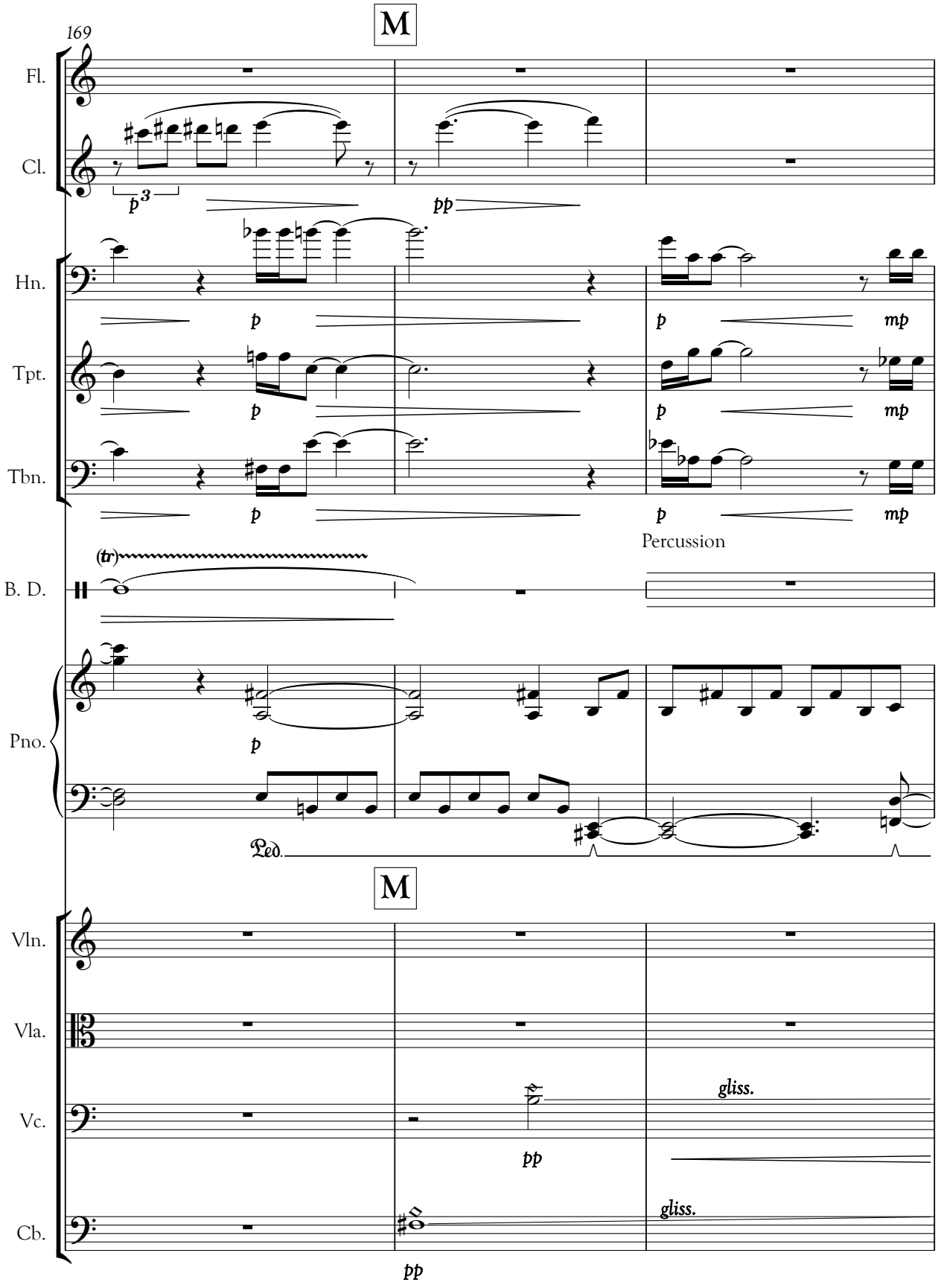

148
Fl.
Cl.
3
mf
f
mp
Hn.
con
sordino
Tpt.
p
senza sordino
Tbn.
B. D.
mf
Pno.
mf
Vln.
p
Vla.
p
Vc.
Cb.

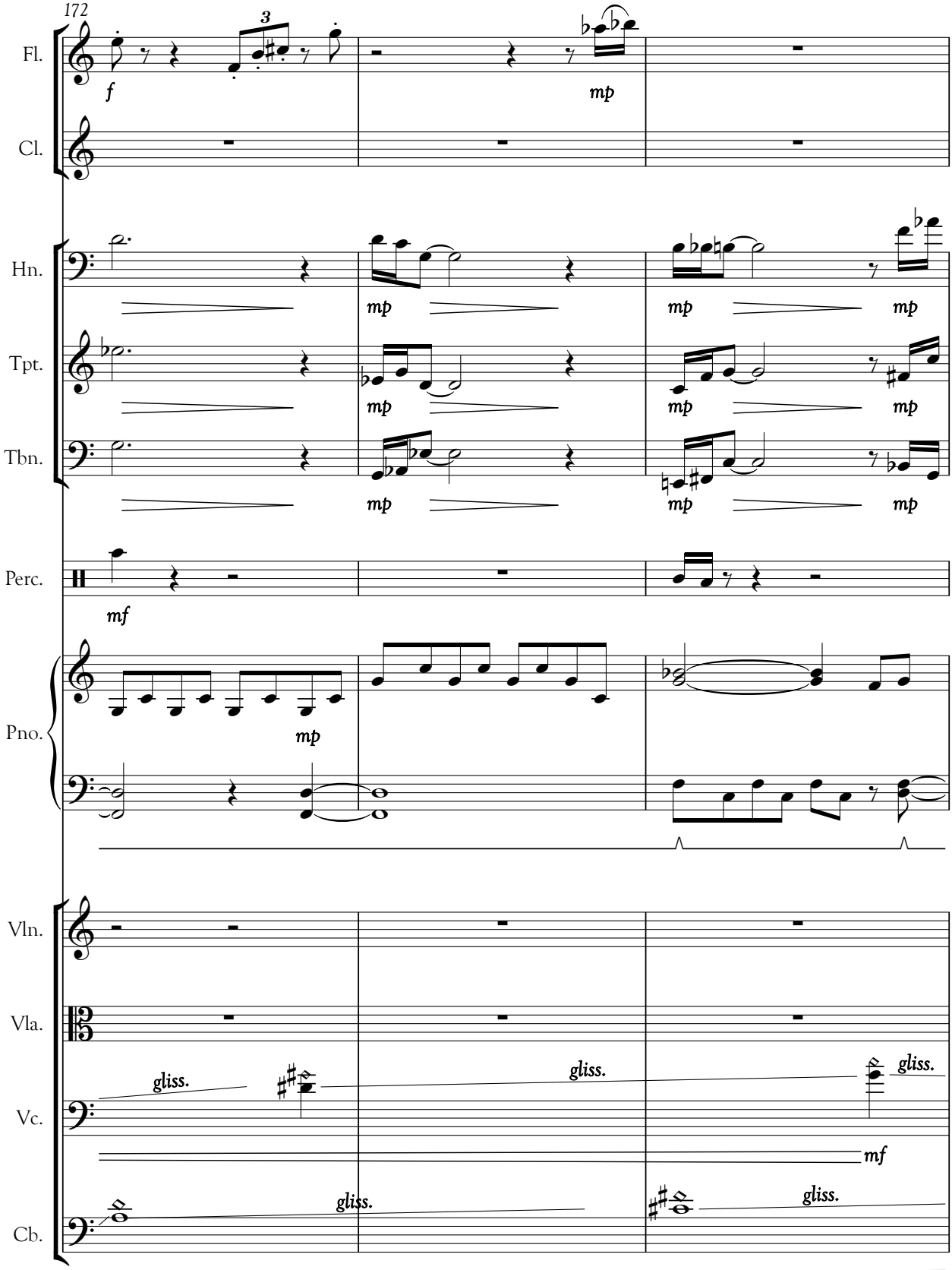

154
L
Fl.
mf
ff
Cl.
ff
senza sordino
Hn.
mp
ff
senza sordino
Tpt.
ff
Tbn.
B. D.
Pno.
f
mf
L
Vln.
ff
Vla.
ff
Vc.
mf
ff
Cb.

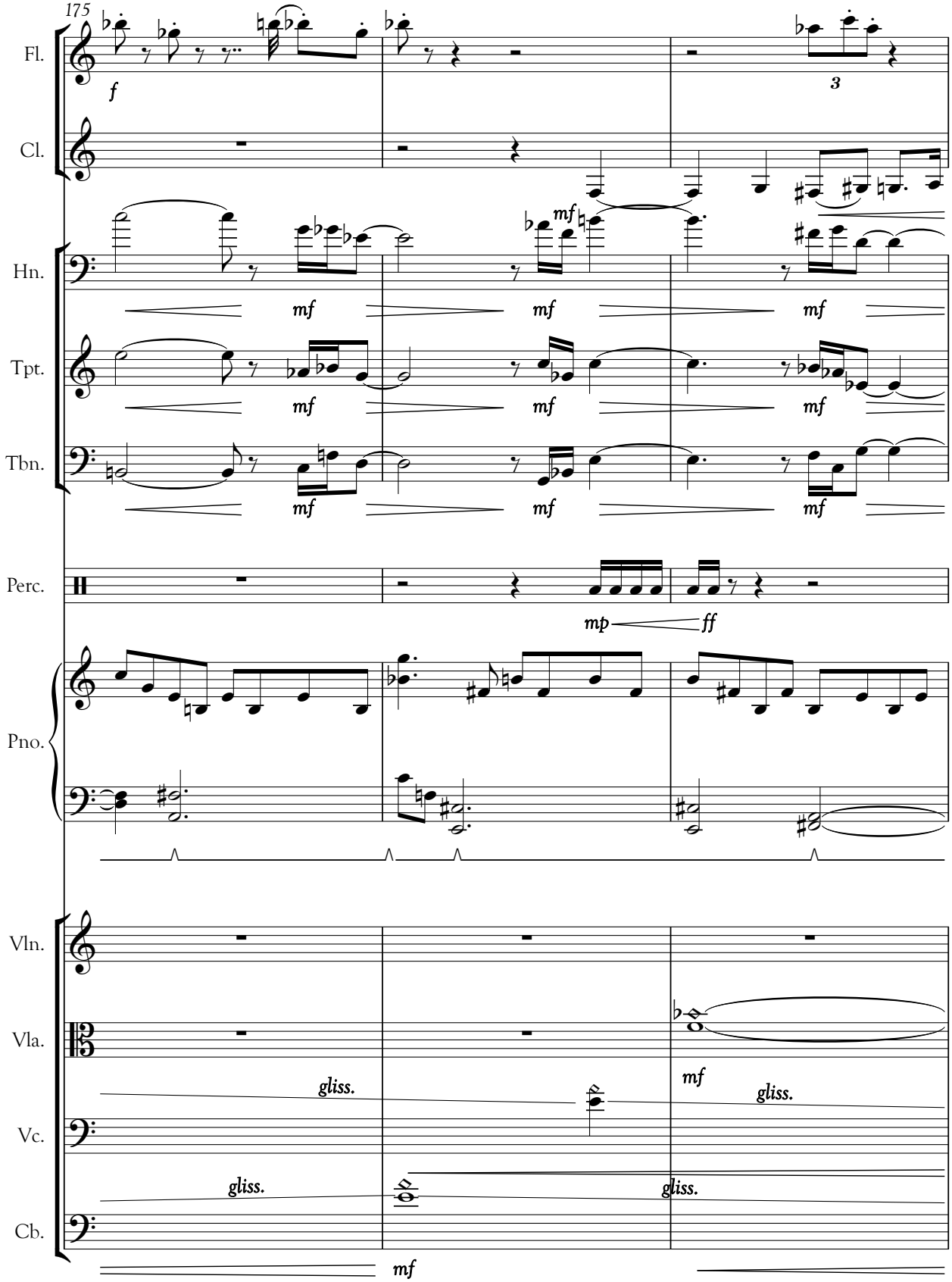

159
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
3
mp
pp
p
(LH)
pp

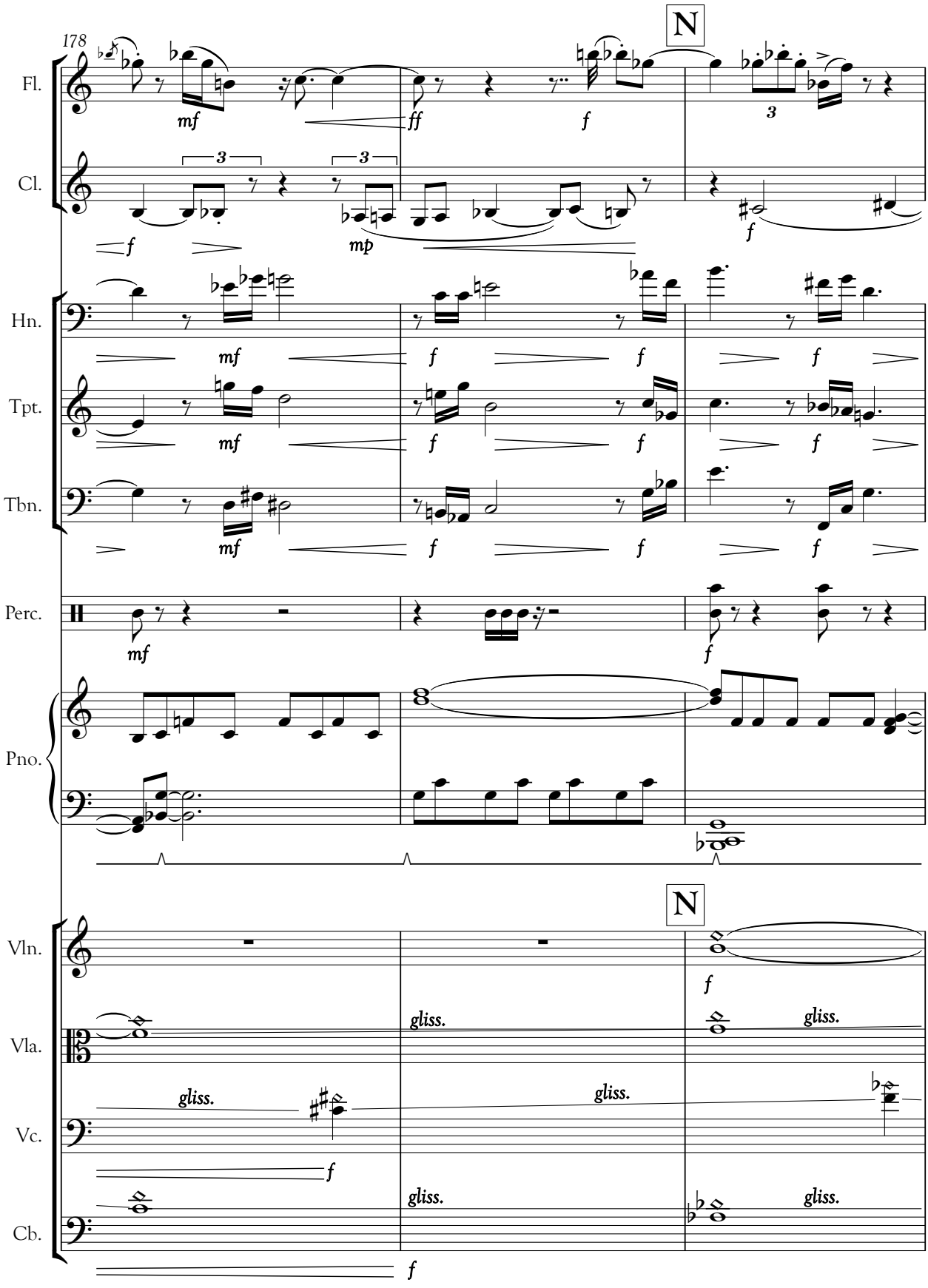

163
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
f
mf
mf
mp
pp
pp
pp
p

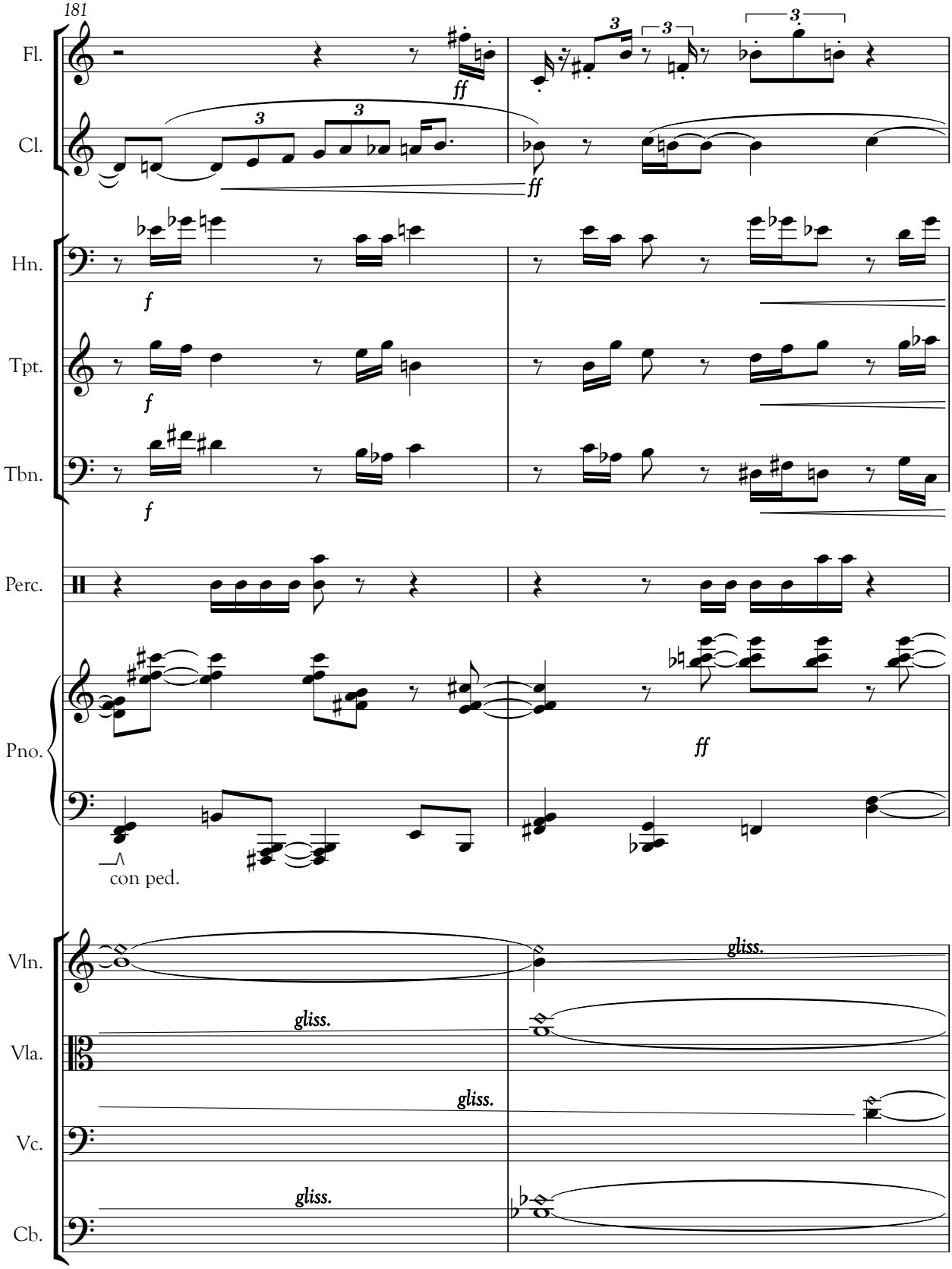

166
Fl.
Cl.
Hn.
Tpt.
Tbn.
B. D.
Pno.
Vln.
Vla.
Vc.
Cb.
f
mf
mp
pp
p
tr

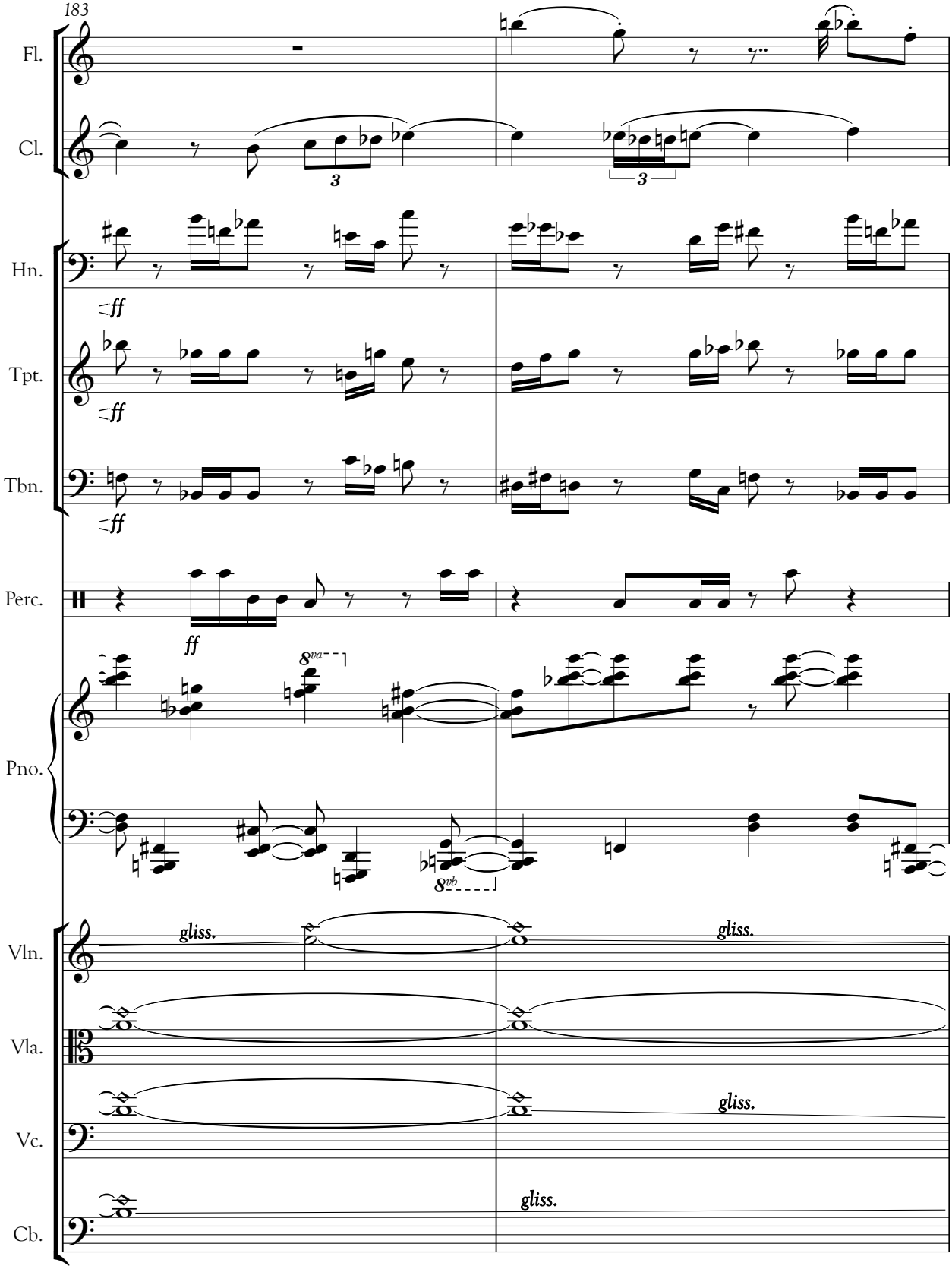

169
M
Fl.
Cl.
p 3
pp
Hn.
Tpt.
Tbn.
p
mp
Percussion
(tr)
B. D.
Pno.
Ped.
M
Vln.
Vla.
Vc.
Cb.
gliss.
pp

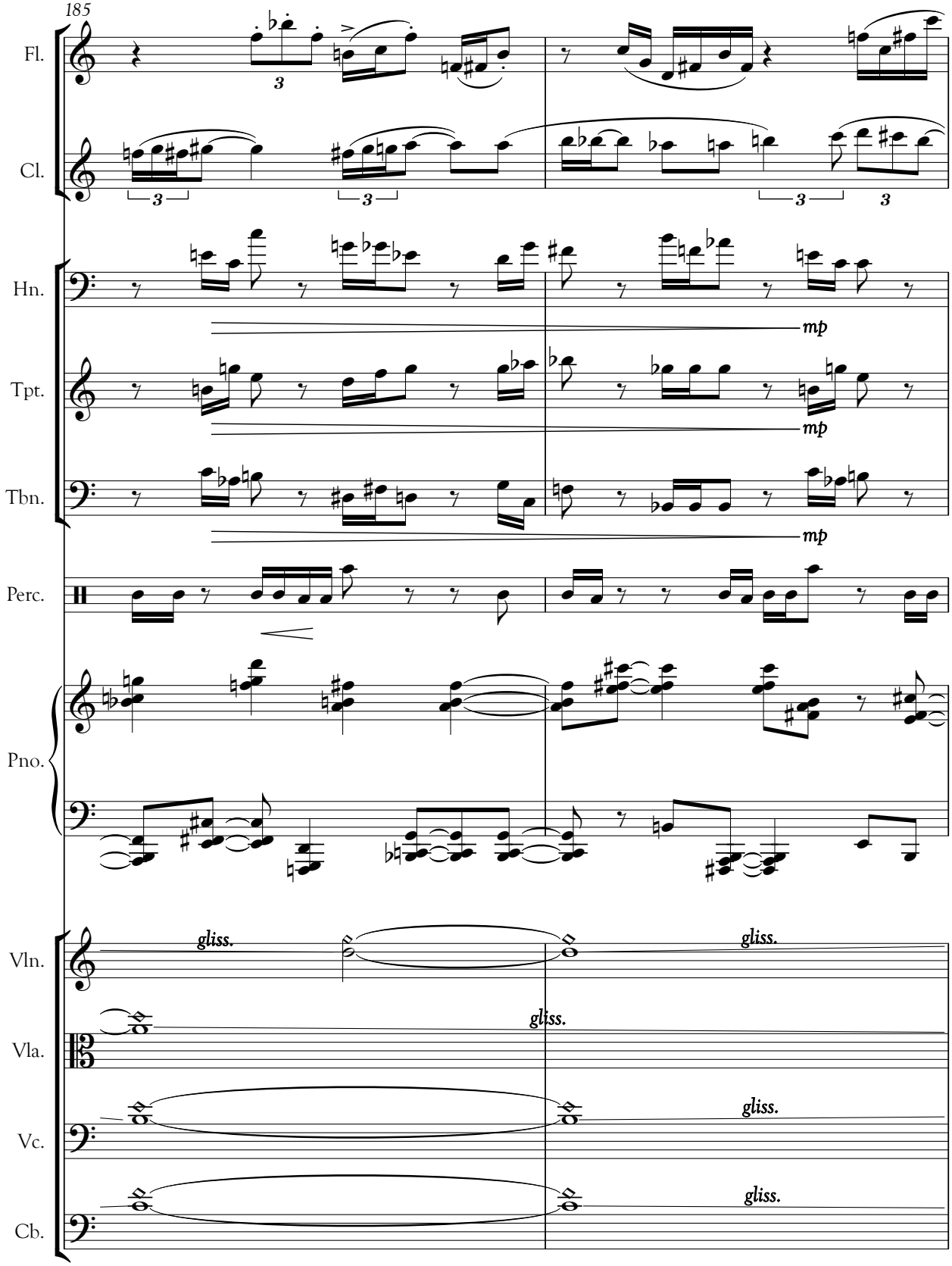

172
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
f
mp
mf
gliss.

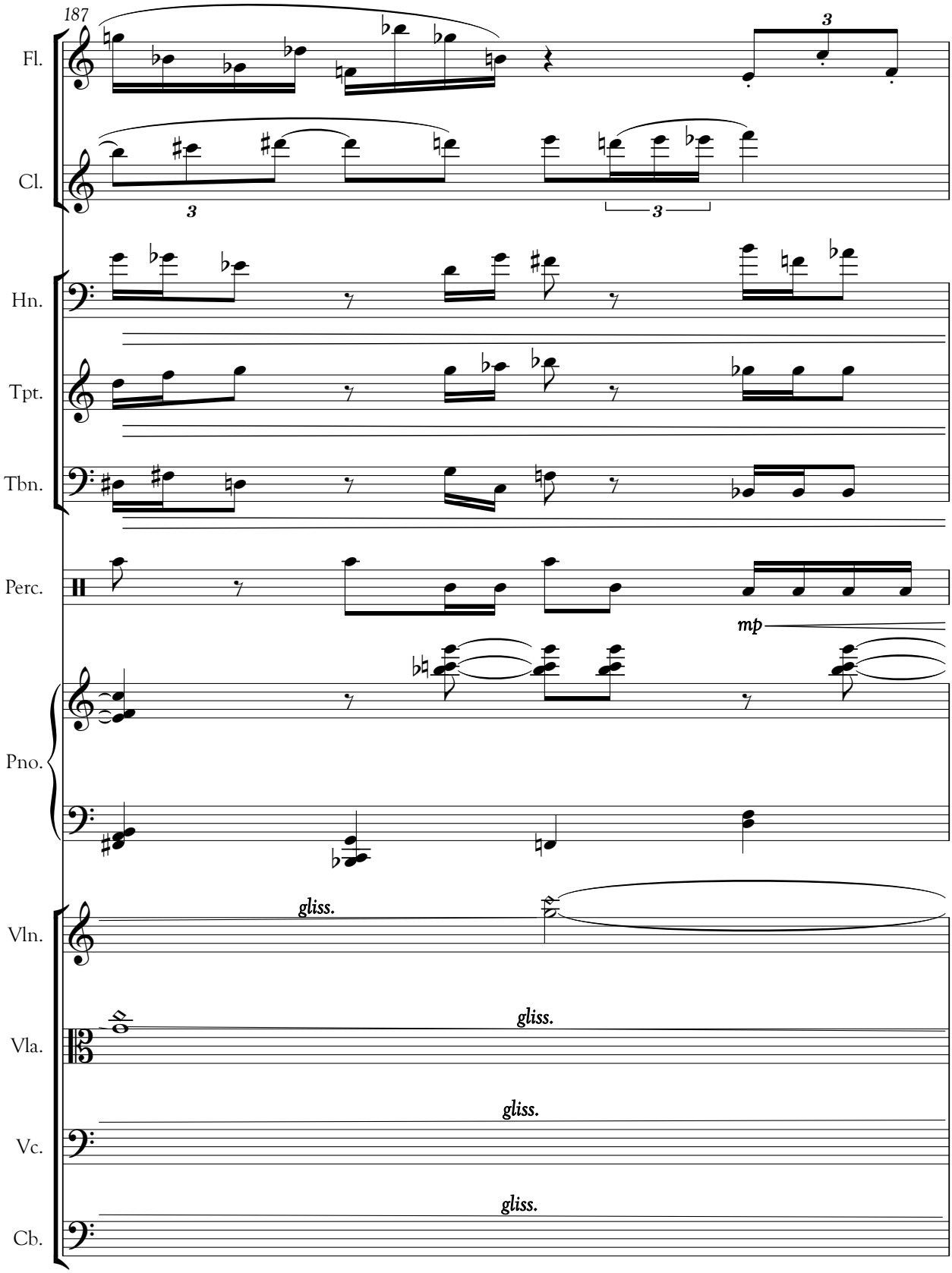

175
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
f
3
mf
mp
ff
gliss.

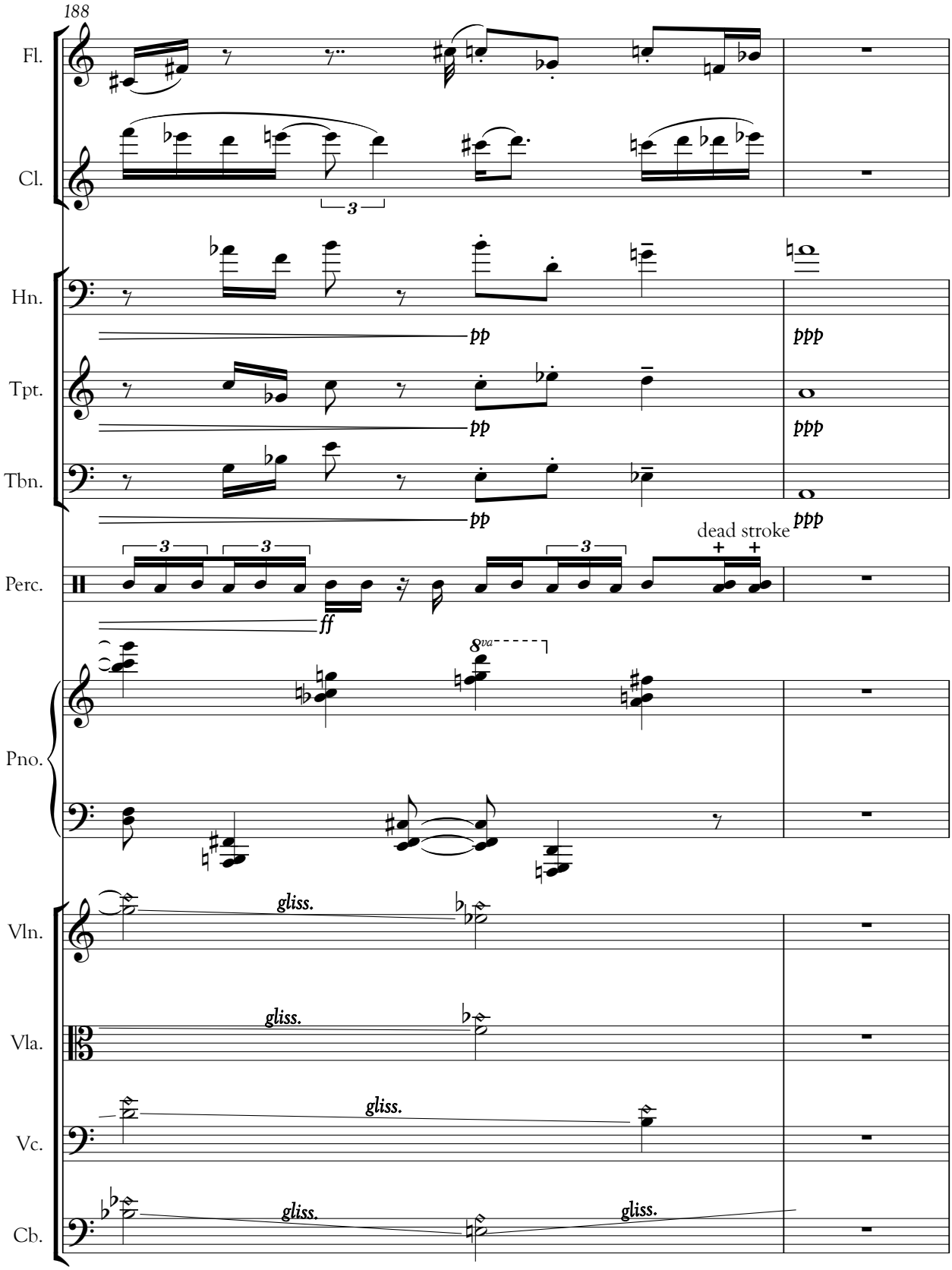

178
N
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mf
ff
f
mp
gliss.

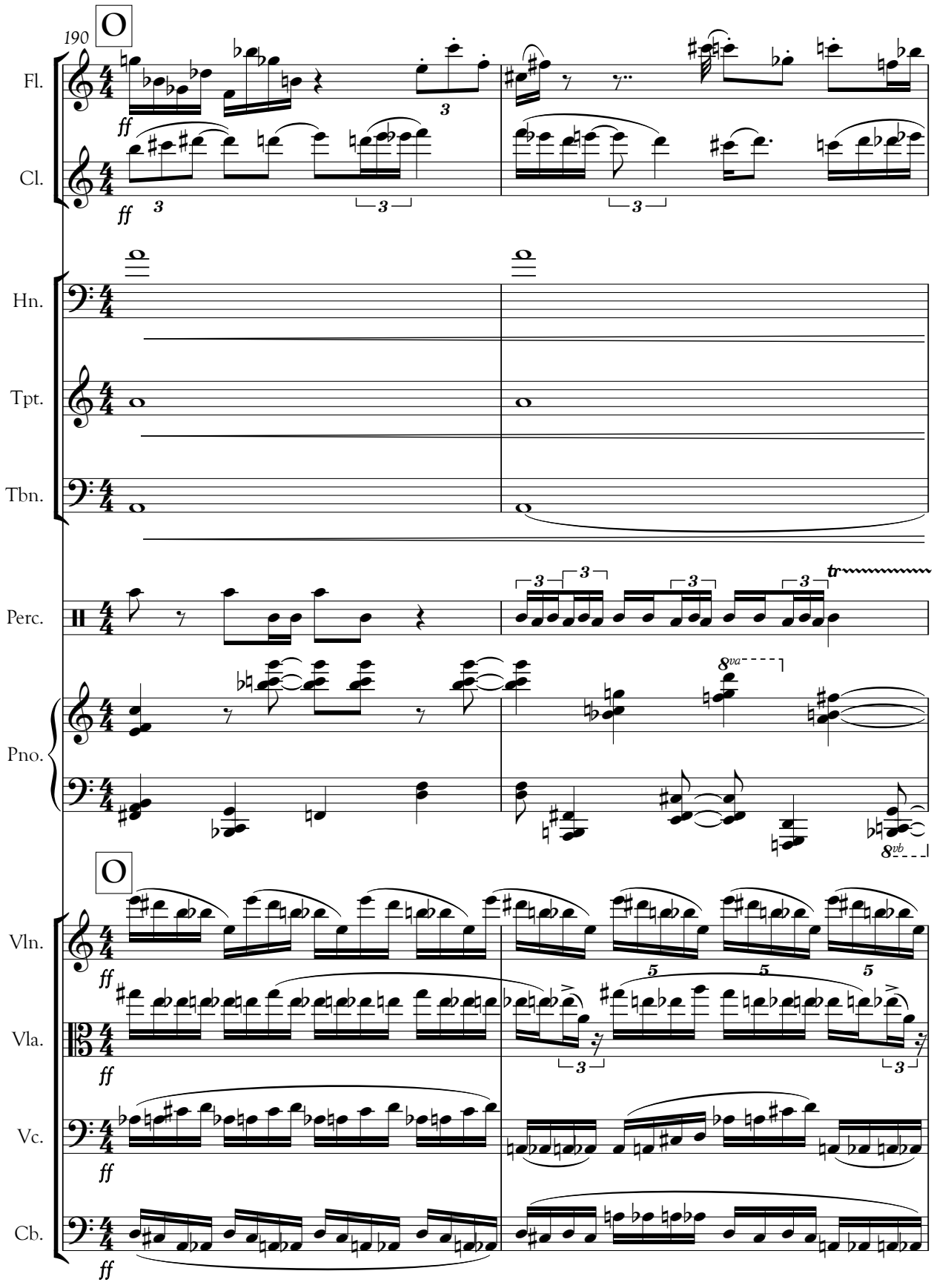

181
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
ff
f
con ped.
gliss.

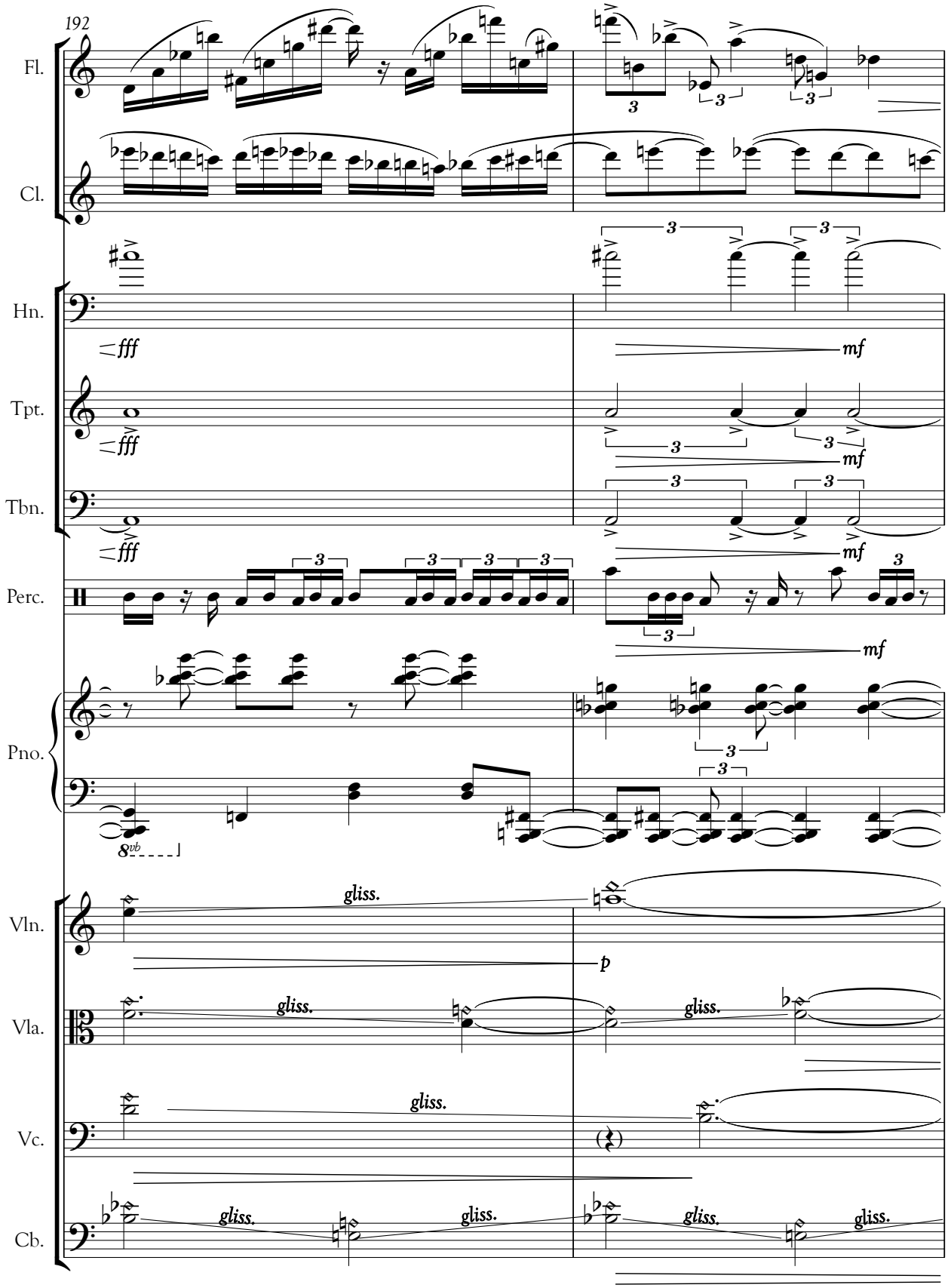

183
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
ff
gliss.

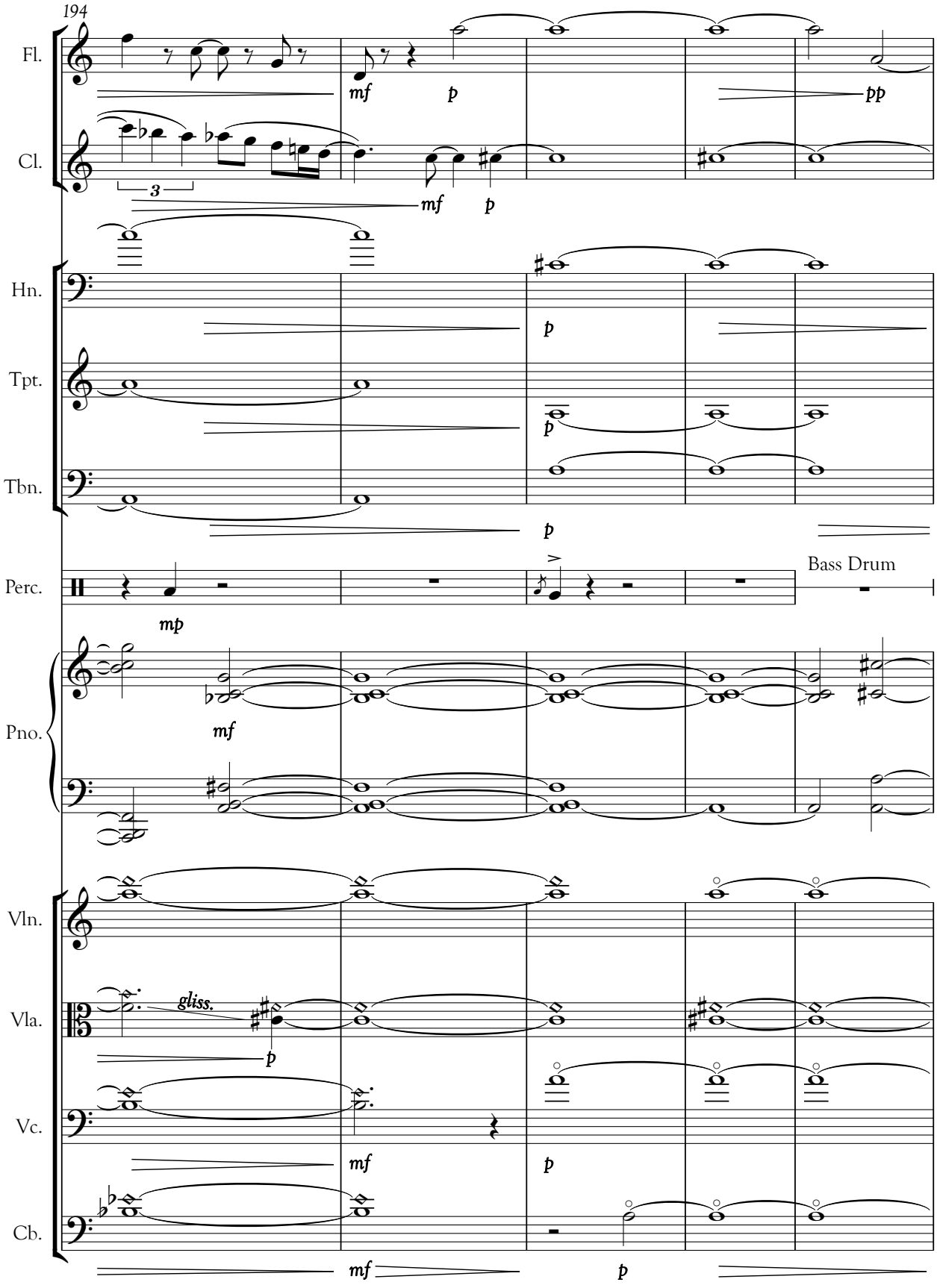

185
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
mp
mp
mp
gliss.
gliss.
gliss.
gliss.
gliss.

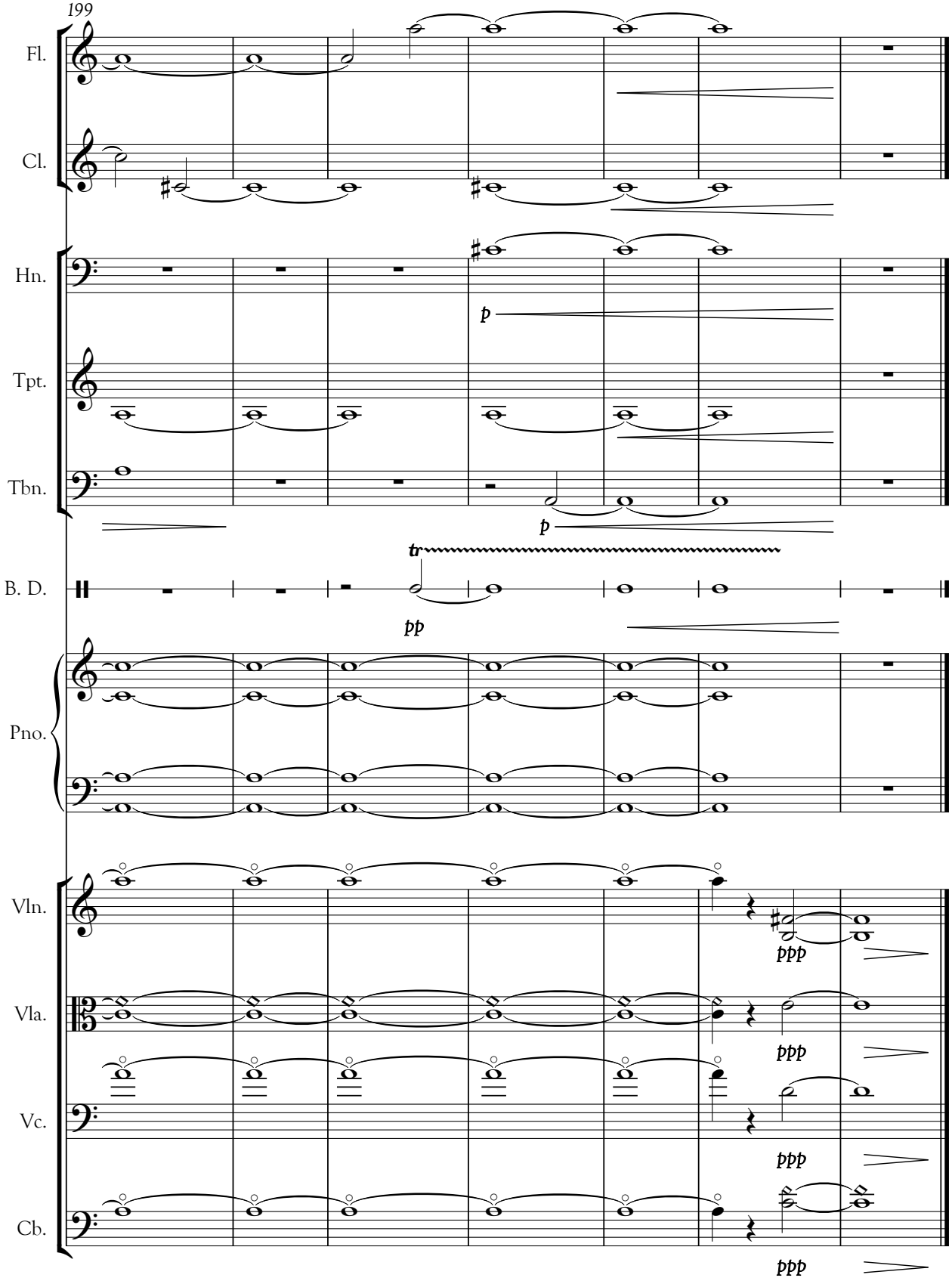

187
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
3
3
3
mp
gliss.
gliss.
gliss.
gliss.


188
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
pp
ppp
ff
dead stroke
8va
gliss.


190
O
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
O
Vln.
Vla.
Vc.
Cb.
ff
tr
8va
8vb


192
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Pno.
Vln.
Vla.
Vc.
Cb.
fff
mf
p
gliss.
8vb


194
Fl.
Cl.
Hn.
Tpt.
Tbn.
Perc.
Bass Drum
Pno.
Vln.
Vla.
gliss.
Vc.
Cb.


199
Fl.
Cl.
Hn.
p
Tpt.
Tbn.
p
tr
B. D.
pp
Pno.
Vln.
ppp
Vla.
ppp
Vc.
ppp
Cb.
ppp