PORTFOLIO OF MUSIC COMPOSITIONS

Vol. I of III

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Vol I of III

Commentary

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Abstract

The following pages form a commentary on my own thoughts, notes, sketches and final printed texts of six pieces written between 2009 and 2013. The purpose of the text is twofold: to inform the reader of the intentions and poetic impulses of the composer and to make an accompanying statement for a researcher or musicologist who might attempt an actual analysis of the pieces. It is not, in my view, the work of a composer to self-analyze the extensively or to deconstruct the entities that are represented by finished compositions. However, the commentary itself is a reflection of the music – a personal account of what was important during the creative stages of 'inventing' a music the very essence of my thoughts during the period when I composed the music. In that it is, unquestionably, the most complete, appropriate and succinct account the composer might offer, regarding the thoughts behind the sounds.

From a technical point of view, the methods I used for the compositions in this portfolio range from using scalar formations and basic techniques such as inversions, permutations, augmentations or diminutions of materials[1] all the way to more abstract methods of organising sound, whereby the choice of register, for example, is the outcome of a correspondence with an extra-musical narrative.

The structure of my commentary is that of a sonata, with this abstract being the *motif*. After an introduction (*Nostalgia* – 'what is silence?'), I start out with a triple exposition (*Regeneration – Ordinatio – Nos dec*), continue with a development (*Exelixis*, meaning literally 'development') and finish off with a recapitulation (*Quantum*, where the themes of

[1] during the writing of the works, not necessarily evident in the final texts.

the exposition and the recapitulation meet). The coda is a resounding ‘confession’ that if little has been achieved, much has been questioned in the process. Why the sonata form? A commentary on certain structures ought to be structured in an opposite way.

Score in chronological order

No.	Year(s) of composition	Title and instrumentation of the work	Duration ca.
1	2009	Nostalgia, for Violin, Guitar, Piano	9’. 40’’
2	2009	Regeneration, for Piano Trio	10’. 12’’
3	2010-11	Ordinatio, for 4 Clarinets in Bb	9’. 54’’
4	2011-12	Nos Dec, for String Quartet	10’. 15’’
5	2012	Εξέλιξις (Exelixis), for Chamber Orchestra and Solo Voice	10’. 26’’
6	2013	Quantum for Orchestra	25’. 10’’

Chapter One

introduction

Nostalgia

for violin, guitar and piano

This commentary will commence with a discussion of *Nostalgia*, a piece which is very different from all my other works in this portfolio in a very basic respect: the pitch material used in the work is not organised in a methodologically meaningful way; i.e. the choice of notes, dynamics, chordal formations and melodic shapes does not adhere to a systematic process. In actual fact, even the choice of instrumentation was rather impulsive and involved little forethought; my intention in setting out to write the work was to shift emphasis from conventional means of organising a composition to less obvious but equally crucial points of consequence. In doing so, I was immediately faced with the task of controlling my own intuition to avoid authoring what might result in meaninglessness – another, non-specific layer of organisation stems from intuitive writing. However, far from being a problem, these unconventional or seemingly crude beginnings proved to be a viable and fruitful creative platform.

Once a traditional discourse in pitch organisation has been abandoned, sound events can become almost non-hierarchal, empty gestures that invite a counterpoint from another field of dramatic, musical activity – perhaps from the intervention of the performing hand. It was whilst writing those fairly spasmodic, automatic and arbitrarily varied series of musical gestures for *Nostalgia* that it occurred to me that the substance of cohesion and poetic

variation missing from the work was the organisation and inspection of silence as something which *contains* systematic possibility not merely by its duration, but by its position and influence on other sound events. There is little one may notate with regards to silence, without using words; I chose to notate very simply with little allusion to extra-musical meaning. In a way, *Nostalgia* is about silence engulfing, interjecting or interrupting sound materials and transforming the succession of events into music. This is not to suggest that silence is a form of remedy for unorganised sound. It does not suggest a 'lack' of organization, but a musical space where 'lacking' and 'sufficing' are irrelevant notions. On the contrary, if the study of *Nostalgia* was to draw conclusions, the basic conclusion would be that silence must be[2] an absolute equal to sound in music making. By absence, presence or design.

Nostalgia is characterised by long pauses which are generally points of interchange between stillness/silence and the sound of musical instruments. The basic theme is the presentation of different 'timbres of silence'. Throughout the work, everything emanates from silence[3]; a number of silent tones are present at the beginning and towards the end of the music. Scholarly debate and creative precedent concerning this structural approach is considerable and some discussion of known thoughts and influence is appropriate. According to Metzer (2006, p.338) for instance, "music is inherently dependent on silence, particularly when an artist wants to distinguish between silence and other periods of sound as well as allow the dynamics, rhythms and melodies to have greater impact on the piece". Reading Metzer confirmed a comforting suspicion for me, namely that my own thoughts were not new and that I shared them with others, possibly countless others in music history and pre-history.

[2] this imperative is used with some degree of conviction

[3] in spite of the order of writing, as described previously

On the one hand my discovery no longer held its former naive excitement, on the other hand my readings on the subject helped me reconsider and scrutinize my own thoughts.

In a similar way, but also to a much larger extent, composing *Nostalgia* was influenced by the use of silence in the works of Wolfgang Rihm and John Cage. John Cage negotiated silence as a central musical event in both his writings and music. His well-known experimental[4] work, *4'33"*, consists of 4 minutes and 33 seconds of silence, "with the intention to highlight the ambient sounds around the listeners"(Campbell, 1992, p.88). In spite of the work having been both 'spiritualized' and mocked by thousands of music students and others, it is nonetheless an extremely interesting proposition which I felt I had to think afresh and consider extensively. Cage continued his singular employment of silence in his piece *Waiting* from 1960, where the piano is the instrument of choice. In *Waiting*, a deep sense of anticipation pervades through the piece. A couple of delicate ostinato phrases are repeated and followed by an ever-shorter silence. This can be viewed and heard as a methodical exercise in sound/silence counterpoint[5]. *In Nostalgia*, I attempted the same counterpoint for a different reason, i.e. to allow the intention of silence to become integral *in the flow* of the music. The notation is mensural and the fermatas are not mere punctuation points but parts of the music. Ascertaining their duration in both the composition of the piece and its performance being the operative criterion that distinguishes between a pause and a silence.[6]

[4] in my view the term 'experimental' is a musicological enigma; its use here is colloquial.

[5] I use the word counterpoint to emphasize the organic and contrasting relationship between sounds and silence and without allusion to the technique of tonal counterpoint.

[6] However, this distinction will not be observed in the wording and course of my analysis for reasons of philological continuity. It is, at any rate, a distinction which I deem true and central to my music and its performance, but am not yet confident to discuss. Sometimes a commentary has to include a 'no comment' clause.

Wolfgang Rihm is another composer of influence who has also used silence structurally in his work. *Chiffre IV*, for example, may be divided into four distinct sections with a short codetta at the end. Rihm has written long pauses to 'dispel' pitch collections, as it were. Here, a rest becomes a cadential tension-release device and silence has been used both for articulation and active textural/semantic functions. Rihm argued that, as composers, "we must always be shaken by the energy of the music or we must fall silent before it becomes void" (Rebhahn, 2012) I have found this statement, pertaining to the striving towards severe economy and compact meaning, both interesting and enigmatic; inevitably it has become a statement of some influence for me. Silence, it seems, holds a very different meaning for Rihm, that of moments of musical catharsis.

Both Wolfgang Rihm and John Cage have emphasised the idea of language in their pieces as opposed to the idea of structure: consequently my commentary presents an analysis of the use of silence as a stylistic feature in *Nostalgia* and how this style relates to my research aims both as a philosophical point of reference and as a general mien.

Silence within music is often overlooked "given its subtle articulation of the relationships between pitched and un-pitched sounds" (Clifton, 1976, p.163). Clifton (1976) cites Cage's argument that silence serves a purpose of open possibilities: discerning heterogeneous noise, assimilating what is thought of as extramusical into music. Silence must be considered within the context in which it occurs as a meta-sound (environment), creating a relationship between itself and immediately sounding elements. Clifton goes on to illustrate how silence may surprise and disrupt the anticipation of subsequent events or, more intricately, redirect or heighten the listener's anticipation. Overall, he maintains that silence functions as a *medium of articulation* in the linear or non-linear narrative of the music: pauses

aim to shift the listener's attention. The particular use of silence is, therefore, a musical element which acquires and administers a counterpoint of overtones and undertones through a reciprocal relationship to sounds. This simple poetic position is, in a way, a pre-requisite for my own music.

At this juncture it is worth noting that this is not a new musical concept. In a way, the poetic use of silence can be traced back to the common practice period, however, in its Romantic and Classical guise moments and periods of silence are not always employed in a deliberate and gestural poetic manner but are often a by-product of metrical and phrasal conventions. If one may comment from a relative distance, one may deduce that accurate and astute performances of older music ought to contain a deep understanding of the nuances of silence. This is mentioned here in order to clarify that the importance of silence is almost inevitable and 'ecumenical', outside of the stylistic and historiographical conditions and trends it may exist in. My own work and commentary is contemporary and contained in what is known to be 'new music'; there is no scope for historical musicology in here, but the point is made as some degree of reference to musical 'archaeologies' has transpired necessary and illuminating.

My creative impetus and my choice of certain types of silences have also drawn from extra-musical paradigms. Outside of music, silence is often used as a means of communication in a number of areas, including during spiritual/religious practice or in non-verbal contexts. Indeed, silence merely acts as a catalyst towards obtaining the freedom to identify and experience surrounding environments, whilst it may still be observed itself. In some cultures, silence is widely used during rituals or meditation. Stylistically, its occurrencemay be an effective means of encouraging the creation and experience of balance,

harmony and concordance in any situation. Similarly, the appearance of silence in a composition should not be misconstrued as the absence of 'element', but the invitation of unifying constituents that are, in some ways, less tangible and obvious. A musical sound may become monotonous upon unnecessary repetition. It is true that there is much fine music that requires very little silence; J.S. Bach's music offers the obvious example where the music offers very little in the direction of structural silence but where musical flow is undisputed. My discussion of silence is not and may not be mistaken for a polemic against music that is continuously 'busy' or even monotonous. However, balances and forms created in *Nostalgia* by interchanging between stillness/silence and the sounds of musical instruments, have provided both the punctuation and cohesion which I was looking for in order to maintain an interesting flow of events.

I would hesitate to be too specific about something which is, in a way, seeking to portray unspecific qualities, but a few particularities may be discussed. To begin with, *Nostalgia* employs different timbres of silence, or more simply put, the space a silence occupies is defined by the precedent and following sounds; equally, the precedent and following sounds are defined by the intervening silence. In fact, silences precede and follow intervening sounds: an 'equal counterpoint' is at the heart of the composition.

The piece is designed to be perceived as a series of events involving long pauses, which are necessary for an interchange between stillness/silence and the sounds of the musical instruments. Each component carries with it a distinctive purpose to provide a variation of musical flow in order to engage and capture the listener's attention, even during pauses (anticipation). A central aim of mine, given all the above, was to provide a musical environment in which silence becomes an equally important part of the performance for the

performer and for the listener, not just the composer. To be more specific, my aim was to write a text which would require that the listener treats sounds and silences in the same way, before being able to appreciate the content of the composition.

Moreover, in *Nostalgia* I aimed to indicate and notate the release of tension as a product of silence following sounds or, conversely, the accumulation of tension when anticipating new sounds within a silent duration – this one might call the psycho-acoustic 'timbre' of silence. In general, the length of pauses and silences, the 'magnitude'[7] of silences and the duration between periods of silence in any piece has a significant impact on the listener which I felt had to be a central point of my poetic judgments. A typical example of the use of interchange between sound and silence to release or create tension is bar 3 which is preceded by a long period of silence that helps to raise tension, followed by a guitar crescendo. In bar 79, the piano's absence separates the music and this is intended to serve as a release of tension, altering the nature of the high-pitched violin sound. Overall, it would be accurate to describe most of the ensemble changes from duet to solo to trio and the tutti silences as variations of tension and release which punctuate the music but more importantly, provide a cohesive gestural environment for the sound events.

The orchestral use of silences, i.e. the principle of punctuating masses of symphonic sounds with silences, is a classical device and it seems almost redundant to analyze the point. Almost but not quite; as verbose writing can never be over-criticized. Fragmented by

[7] a period of silence has, I believe, more than a duration; it holds the echo of the precedent events and the promise of the following events. I use the word 'magnitude' to hint at this secret theatre which defines the quality of a pause and the pacing of a music.

definition[8], *Nostalgia* hovers between instrumental sounds and silence. While sound is mediated by silence, silence is equally mediated by the sounds of the instruments. This results in a disengagement from a linear flow and a cohesion that owes much to counterpoint between sound and silence. The instrumental sounds do not grow together as a whole but remain the components of something more important and central, outside themselves, their capabilities for expression and communication. The above is more specifically manifested by my use of orchestration in conjunction with the pitch material used, Nostalgia makes use of a single scale transposed three times and presented in its retrograde form once. For the purposes of clear reading I name the mode I am using 'A', its retrograde form 'AR' and its three transpositions 'A1', 'A2' and 'A3'(figure 1).

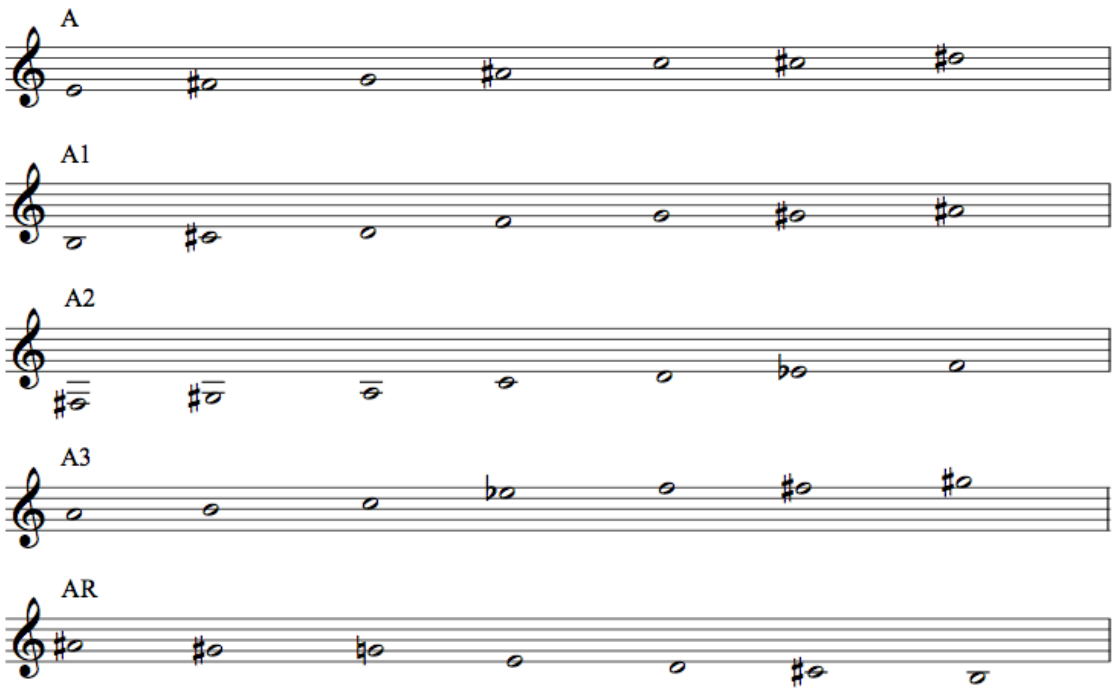

figure 1 – *Nostalgia* -A, A1, A2, A3, AR

[8] a literary allusion is allowed here. The discussion of *nostos* by Homer is one of the most striking events in Greek literature; this is not least achieved by the fragmentation of memory and the dislocation of the narrative from a linear disclosure of events.

The following table shows the structural 'canon' that forms the basis for the organisation of pitch:

Instruments/bars	1-43	44-59	60-79	80-95
Guitar	A	A	A	A
Violin	A3	A2	AR	A3
Piano (right hand)	A1	A1	A2	AR
Piano (left hand)	A2	A3	A1	A1

The harmonic constant in the work is the material played by the guitar (A). A1, A2 and A3 share three commont tones with A and are both present in the first half of the work. AR shares three tones with A and is present in the second half of the work. This creates a sense of absence of one extra tone and is a form of harmonic 'silence' as it were – a lessening of the harmonic tensions available. Moreover, as time passes A and its transpositions are established from an intervallic point of view and when AR is introduced there appears to be a loss of stability. This may not be mistaken as an introduction of new material – on the contrary this new sound formation is a silence: it is a similar sound, born and resembiling of A but its sole purpose is to obscure the quality of the music as it stood so far.

There is a musical movement which best illuminates and highlights my own interest in the potential that silence has to "unmoor the roles of performer, composer and listener and to connect presence and representation while drifting freely in the tides of conceptualization" (Kim-Cohen, 2009, p.167): the 'Wandelweiser Collective'. Melia and Saunders (2011, p.450) describe the collective's focal point as follows: "silence [occupies] a large share of the often extended performances, with harmony, rhythm and melody playing (at best) a subordinate role or, perhaps, no significant role at all. It was in fact Melia (2011) who furthered the

investigation of silence in the music of the collective. Highlighting this attitude became my own incentive when composing *Nostalgia*; silence, it transpired, is as much about its very nature as it is about increments of duration, time and place. Mine became a deliberate attempt[9] to allow duration, time and place to play a unique role in the listening experience: "cutting a hole in the musical fabric and jerking the 'carpet of sounds' from underneath the listener who is left to hover over an 'abyss' of temporary silence." (Melia and Saunders, 2011, p.447). Another member of the collective Jürg Frey maintains that there are many different types or categories of silence (Warburton, 2001). This could generate a thesis in itself, but in its simplest form, the position poses the question whether a silence serves to interrupt a music with its intangible, ambient responses or whether a music interrupts a silence with its inherently organized, self-contained meanings. From a performance point of view, the degree to which the performer will choose to listen to the audience and involve its sounds in the performance is a matter of interpreting the dynamic exchanges inherent in any score. Notating then, becomes a case of making a psychographical map for the performer, rather than dictating a number of prescriptions or events.

To conclude this first chapter about *Nostalgia*, what best encapsulates my employment of silence, guided by Cage's attitude towards authoring silent events and inspired by the *Wandelweiser* collective, is the concept of indeterminacy, where a shift occurs in focus from the composer to the listener via the performer. The concept of indeterminacy as an agent of freedom became a modulation point for my next pieces; this willbe discussed in the second chapter of this commentary. Ultimately, silence is the 'barometer' of music; *Nostalgia* was conceived and composed with that in mind, that silence and musical freedom share more than is commonly assumed.

[9] admittedly, not a seminal contribution to world-knowledge, still a creative attempt

Chapter 2

exposition

Overview

It has been argued[10] that aleatoric music has taken three forms which involve, correspondingly, 1) the use of random aspects to determine a given fixed score, 2) a mobile form[11] (Latham, 2001), or 3) an indeterminate notation, which takes into consideration graphical notation and texts. In this chapter I will discuss three of my compositions corresponding with these three broad categorisations. The first composition, *Regeneration*, uses the first of these forms, i.e., changing parameters which determine the function of a fixed score. Strict and free elements are combined in order to achieve a balance between concrete musical ideas and chance events. *Regeneration* was written in homage to Marcel Duchamp, a painter and pioneer in music experimentation utilising chance operations[12]. The second piece, *Ordinatio,* gives an example of a 'mobile form'. The third piece is entitled *Nos Dec*[13], and makes use of indeterminate notation; it is also characterized by a high degree of complexity: the performers must be able to switch from reading conventional notation (requiring accuracy) to 'translating' indeterminate notation (requiring invention and conviction). In *Nos Dec* in particular, I have found that offering performers varied degrees of 'responsibility'

[10] I have taken Griffiths's discussion of aleatoric music (2001) as my starting point for this part of my research.

[11] A form that depends on mobile sections, phrases or events; the internal structure of these events is set over specific or non-specific periods of time but their placement is determined by the performers or conductor.

[12] *Erratum Musical for three voices* being the prime example of this.

[13] An anagram of the word second, the title means 'our ten'in Latin, referring to the quartet performing in the plural rather than individually, as it were, and with 'decimal purpose' when counting seconds of boxed and other indeterminate materials.

creates a high and special sense of dynamism which I find extremely appealing. I shall, at this point, delve into a more detailed description and analysis of the three 'aleatoric' pieces discussed above in three separate sections.

Regeneration

for piano trio

Regeneration, was inspired by the story of Spinalonga, a small island off the coast of Crete, which was used as a leper colony from 1903 to 1957. Composed for violin, cello and piano, it seeks to be a psychological portrayal of the situation and to be an echoing response, one where despair and isolation gradually give in to hope and rebirth. To complete the metaphor: chance events lead people to certain situations but 'fate' (music) is only given a direction and cannot be absolutely prescribed by chance.

As mentioned in the opening of the chapter, Duchamp's *Musical Erratum* (translated as 'musical misprint') from 1913 was a model idea for me. Duchamp used chance procedures (a draw) to develop a score for three voices. Together with his two sisters, he drew 25 notes from a hat and wrote them down. This series of notes then proposed the basis for a chance or random composition.[14] One of Duchamp's more famous motto was that 'you can view the viewing but cannot hear the hearing'[15] and it is precisely this sort of secret theatre that *Regeneration* is aiming for.

[14] this is a summary of a description of the work by Bloch (1974).

[15] Green box, 1934

To determine the parameters of the notations in *Regeneration*, I have used a number of complex rules in the same way Cage does in *Music of Changes* to help in choosing from charts of durations, pitches, intensities and other aspects of composition. Chance leads to prescription in Regeneration – every parameter is the result of chance operation and then fixed in its place in the score – allowing for some 'internal' flexibility. This is particularly evident in my notation regarding amplitudes, pitches, and synchronisation. Concerning the manner of chance operation, I chose to draw cards and throw dice, rather than use modern software tools with randomization features. It seemed right that if the end result was to be physically performed, then the initial act had to correspond at some level.

Aleatoric notation may shift the balance of responsibilities between the performers and the composer during a performance; one may think of it as a dual discipline in effect. In *Regeneration*, both spatial and conventional notation have been used to maintain a balance between strict metrical structuring and the more non-specific time scales of pacing; a mensural environment that may be deemed as temporal *quantization*[16]. This aspect of my composition is modelled on the social situation in Spinalonga, where although the inhabitants had total freedom to move around on the island, they were strictly confined within its narrow geographical limits.

Concerning formal elements

SECTIONS	BARS	DESCRIPTION
A	**1-29**	**Basic thematic material**

[16] Clarke, p.220

B	**30-31**	**More rhythmically free, using the same harmonic field**
C	**32-54**	**More intense and ascending ostinato**
D	**55-78**	**Freer than B, extending timbre and texture**

As the composition progresses from section to section, the increasing lack of prescribed placement of events allows more 'freedom' of choice for the performer and a gradual extension of the interpretation of the score into a loosely described or 'advised' free group performance. This can only be achieved if the transition is seamless, which was one of the main objectives pursued by the position of musical schemata and the inter-relationships of materials from section to section:

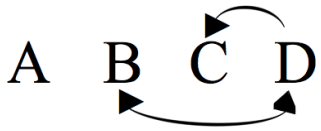

Diagram 1: The inter-relationships and influences on form between sections in *Regeneration*. The arrows signify 'influencing'.

Throughout the piece, the basic intervals of *Regeneration* are generally characterised by a minor 2nd, which is sometimes combined with a compound interval as a 9th as well as an augmented 4th/diminished 5th. This becomes evident from the very outset of the work (fig. 2) There is no strict adherence to this intervallic regime – notes are dislocated to serve the movement of the music and the expressivity of registration (e.g. b. 5 where the C# is premature) but the overall tonal environment emanates from these basic intervals.

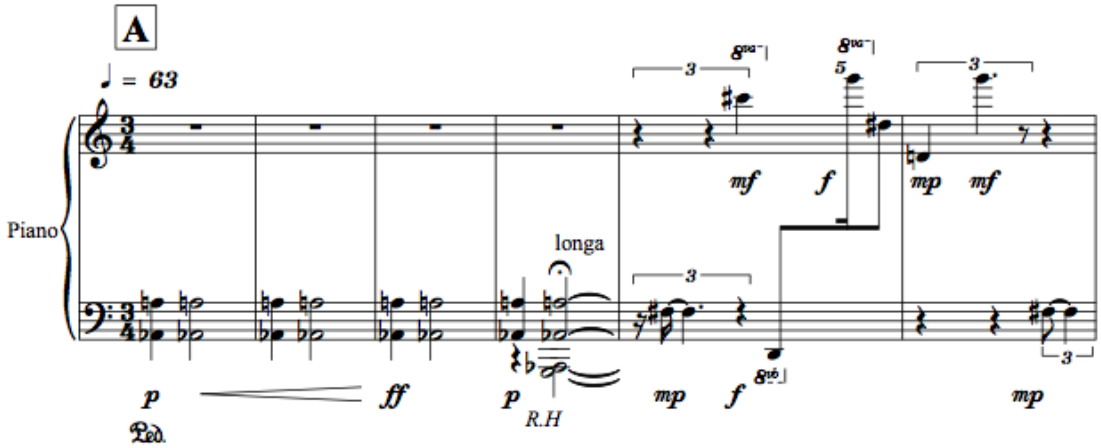

fig. 2 – *Regeneration*, bars 1-6

Boxed material allows but does not require repetition. There are two types of boxes, one consisting of verticalities: (bars 12 [fig.3], 13, 31b 31f) the other involving horizontal material as well as chords (bars 30, 31c-31e [fig.4]). When these boxes in one part are combined with metric notations in others (fig.5), the issue of performance synchronization transpires. The situation poses a question not unlike the most common 3-against-2 reading: an impossibility. Just as a triplet in double time is essentially a temporal illusion and notational 'error'[17] the same sort of compromise in counting is expected of the group on a much larger and demanding scale: the performer who plays the boxed material has to remain faithful to his notation but synchronize with the metrics of the other performers and vice versa. How much of this is fiction, compromise, habit or musical interpretation really depends on the amount of commitment and consideration gone into rehearsal – it is perfectly possible to give a performance on second reading, but a fine performance is a matter of deep familiarization with all the details and nuances available to choose from.

[17] obviously, there can never be an exact division of 2/3 – a triplet in double time is, in theory, an impossibility

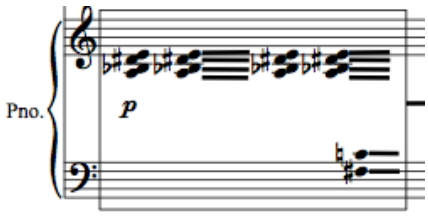

fig. 3 – *Regeneration*, bar 12

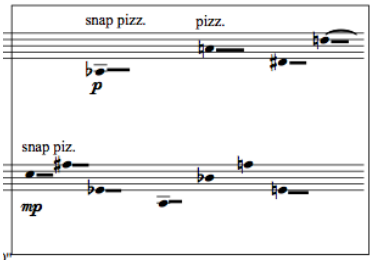

fig. 4 – *Regeneration*, bar 31c

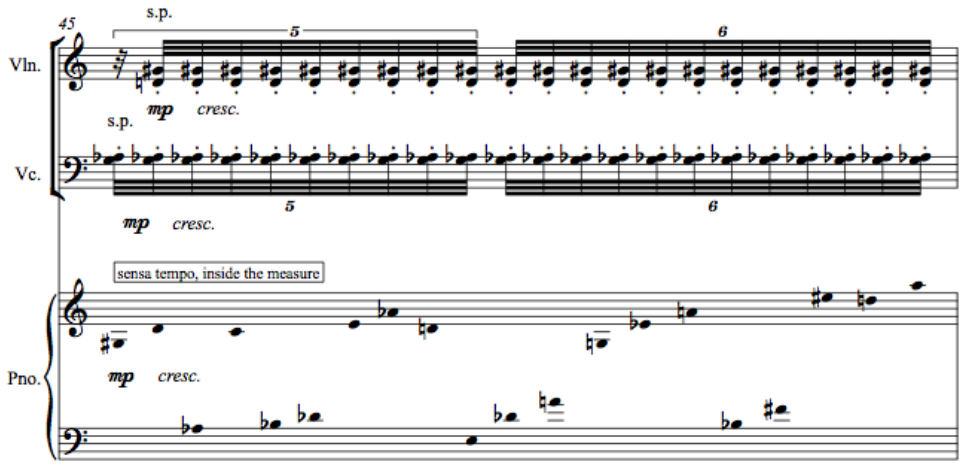

fig. 5 – *Regeneration*, bar 45

A comparison of two performances

Regeneration has been recorded by two groups with very different results, as would be expected. One may deduce little from a limited number of performances; perhaps safe conclusions with regards to notation may be reached with a more substantial 'demographic', still, it is quite appropriate to comment on the two renditions and their differences and similarities.

The two recordings discussed here were given by Trio dell' Arte[18] and members of Ricochet string quartet[19]. For the purposes of the next few paragraphs they will be referred to as recording I and recording II respectively. The first point of comparison is the length of performance; recording I is 9'48'' long and recording II is a little shorter at 9'17''. Given that the metronome markings are very specific and unusual and that all sections that are not mensural have specific durations, this 30'' differential is substantial – especially as both groups opted for the same ending. More importantly however, I would consider both performances to be a little too quick – if all the fermatas and broad, empty sections are accurately performed the piece ought to be longer than 10'. Nonetheless, both recordings achieve an interpretation of the score that can certainly stand scrutiny.

One of the differences, which deserves mention as it changes the soundscape altogether is the rhythmical reading of boxed materials. Recording I shows the pianist to be reading bars 12-13 as a 6/8 rhythm joining the tempo from bar 12 to 14, as it were. On the contrary recording II displays a much freer interpretation. There is no better or worse – if that were the case, a description of what was required would have been included in the score; it is precisely this sort of fluctuation from performance to performance, a fluid scoring that non-mensural notation pursues. Questions do arise however: should the score include "what is allowed"? Should it be made explicit that by "repeat the box" a single repetition or 200 repetitions in the space of a few seconds is in fact a possibility? Do performers need this sort of mental note to observe the multitude of possibilities that this score offers? One gets the sense that no matter how many performances this particular piece may receive, the

[18] Tommys Neofytou (violin), Frederic Dupuis (violoncello) and Emilie Moutin (piano), recorded at the Royal Academy of Music, May 25th 2012.

[19] Pavlov Andrii (violin), Patsovskyy Igor (violoncello) and Tavanets Dmytro (piano), selected by the Orient / Occident competition in Kiev and recorded, September 26th, 2013

overwhelming majority of the pianists would choose to play a slow ostinato. On the other hand, by indicating the extreme renditions, one would be making a point of them and would perhaps be imposing on the performers. If an answer were necessary, I consider my notation to be complete: the majority of performers would not consider the full range of possibilities at bars 12-13. But the correct spelling is to allow possibilities without indicating their extremes. To put it simply: much music is difficult to read and requires attention not only to the detail that is present, but also to what is absent and must be discovered by the players. The same stands for *Regeneration*.

There are many misreadings in these recordings, none of which make them less than musical interpretations of the score: the pianist in recording I releases the sustain pedal when he has been asked to keep it depressed (bar 10) whereas the pianist in recording II chooses to play inside the piano when he has been asked to play at the keyboard (bar 55a). There are numerous such events. This means very little with regards to the interpretation of the notation - these are mere errors which can be corrected. What is more quintessentially important is whether the score offers its ambiguitities intentionally or unintentionally. Notating is an act of affecting the readers' psychologies. Take for instance the piano part in section C: the pianist is not asked to pedal. The 'bass notes' in the left hand are crochets and the middle register is occupied by *laissez vibre* chords. Both pianists did in fact play this part with the same arm movement which creates a physical sense of strong vs weak. It may be argued that the notation is ambiguous or unclear: should the pianist pedal or not and where? But this incomplete instruction is a 'bait' for the performer's sensibilities. Not quite an aleatoric moment, but close, as the section is open to interpretation – the difference here being that not all choices are correct. Here an issue of 'stylistic' interpretation is present in the form of conventional notational 'baggage'.

The reader of this analysis may listen to the two performances and notice a number of other differences and similarities. What does not concur between the two is a 'common error' which would put the notation to question. *Regeneration* is, in that sense, a score without points of contention, although it seeks to highlight ambivalences and to project clusters of possibilities and intentions. What I learned from the two recorded performances was that performers need to approach the score with the same mindset that the classical repertoire is approached: the technical demands of the work are only a first level of negotiation. The true dialectic and interpretation of the music ensues once the secret spaces and timings of the work become important for the performers.

Ordinatio

for four clarinets in B*b*

Ordinatio is an example of a composition involving mobile form or *polyvalents*[20] (Latham, 2011). The order of sections and movements is unspecified at times and left to be decided by the performers. I have studied, to a certain extent, the scores of Roman Haubenstock-Ramati[21]. On the opposite side of the spectrum of mobile form music lay pieces such as Terry Riley's *In C*; the matter of formal organisation is very much dependent on content. Considering the above my own initial concern in *Ordinatio* was to position my own attitude within the field and to pose creative questions both to myself during the composition of the work and to the performers. One of the most important challenges was to ensure the preservation of the identity of musical elements in such a way that the composed structures would adapt to the variations in the choices of the performers. In other words, to predict all

[20] a notation that contains a number of forms, purposes and meanings

[21] *Interpolation* from 1968, for instance

possible outcomes and control the gamut of resulting forms without constricting it. The 'solution' to this problem was to make smaller components 'transparent', open and compatible with all others at both ends of their structure – elements and parts that may easily function as connections in a musical progression. I owe the philosophy of this solution to Kazimierz Serocki's 1962 piano piece *a piacere*. In *a piacere*, Serocki achieved a coherent musical progression even though the order of musical events is entirely the choice of the performers (fig. 6).

The historical precedent of this takes us back to an interesting German musical dice game known as *Musikalisches Würfelspiel*, attributed to Mozart and popular in eighteenth century Europe. The game involved the use of dice to generate music from 272 musical measures according to a table of rules. The game resulted in a randomly generated 16 bar minuet with a 16 bar trio. This is mentioned as a reminder that recycling is one of the most powerful creative tools; it would not be surprising to discover open form in even earlier and even non-documented music making.

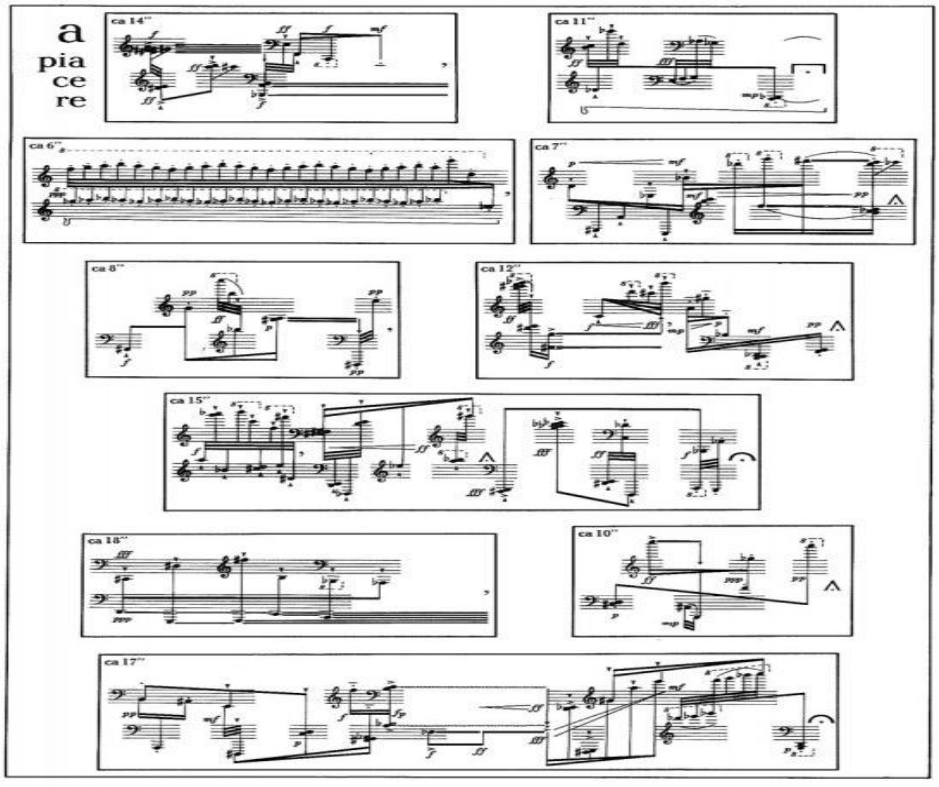

fig. 6 Kazimierz Serocki's *a piacere* (1963)

Ordinatio is a composition which demands interpretational reflection. The final section is a deconstruction of the quartet from a homophonic texture (from bar 48 onwards) to a solo ending of the piece. This section should be a 'codebreaker': how this last, long gesture is perceived by the performers ought to define the performers' reading of the mobiles. This information is not included in the score, nor is there a stipulation about whether the ensemble may or may not pre-determine its choice of events in mobile sections. The absence of information is deliberate: the ensemble which has rehearsed the first and final section sufficiently should grow an understanding of what to do and how to do it, with regards to the middle sections. In fact, every ensemble should find different 'solutions' to that problem. Freedom of choice is slightly different to freedom of will, if a hasty political analogy may be excused here: mobile form is, for me, not a presentation of dilemmas or possible choices, but a series of operations that may define a collective will more emphatically. The score, therefore, ought to enable the procedure that clarifies the performers' intentions, not to limit them to a bunch of options with no creative purpose. In short, the ensemble is not to perform functions, but to create intentions.

The combination of indeterminate materials and open form is displayed in bar 23 (fig.7) – this creates a notational issue: the designation of mobile sections as 'bars' was more a case of practical consideration than musical semantics. The much stricter and conventional writing (e.g. bar 12 – fig. 8) required a continuity in nomenclature and so mobiles were written as open 'bars' rather than distinct sections.

The two following pages represent one "bar" (b.23) of music lasting c. 40".

Every perfomer has 6 patterns (one in each box) to choose from;
The duration of each box is c.10" the performer must choose 4 of them to play in any order.

All text in treble clef.

Clarinet 1 in Bb
(Bar 23)

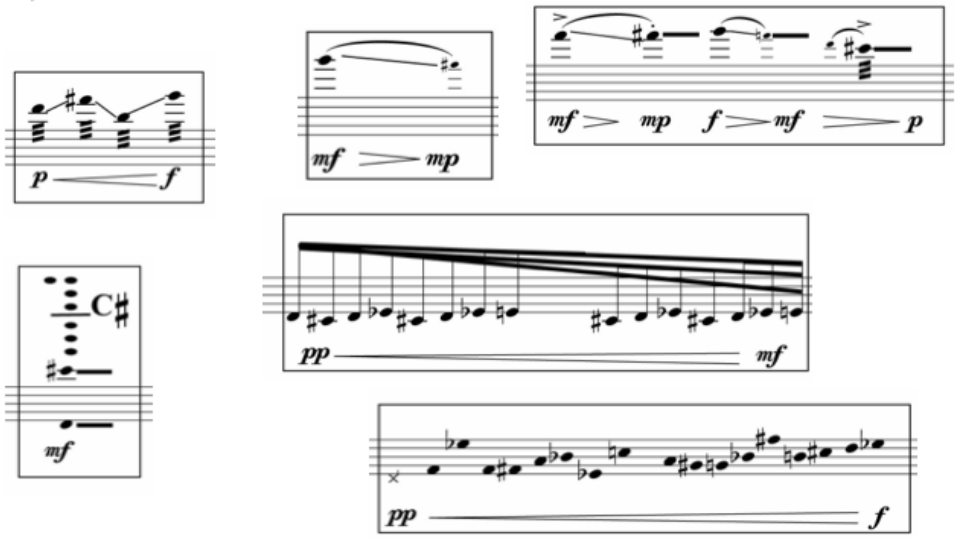

fig. 7 *Ordinatio*, bar 23 – clarinet 1

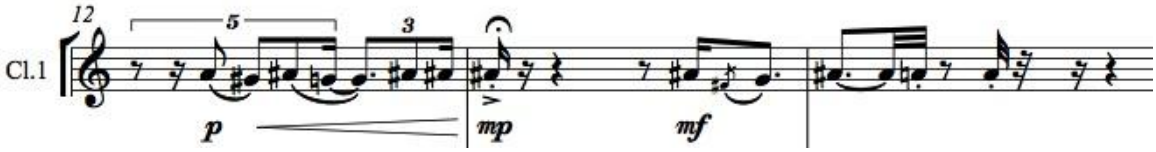

fig. 8 *Ordinatio*, bar 12 – clarinet 1

Conventional notation in *Ordinatio* reflects the use of conventional creative devices: the piece opens with a compact field of pitches and their rotation. I chose 6 notes, and used them as the basis for subsequent material, by rotating them in sequence, so that notes B, A#, E, A natural, C# and D, in the second version become A#, E, A natural, C# and D (fig. 9).

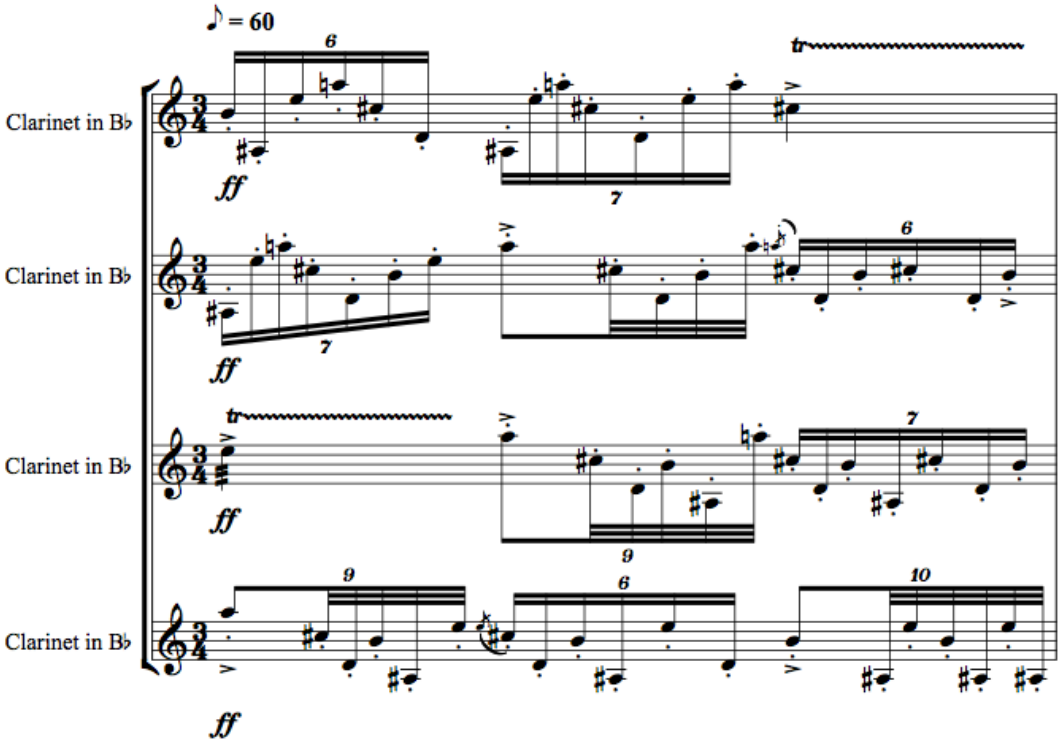

fig. 9 *Ordinatio*, bar 1 – opening rotations

The bars of pause (bars 24 and 27) may, for this reason, be viewed as transitional mechanisms: when crossing notations the latitude of possibilities expands and pauses are a tool of transition for both individual players and the ensemble. *Ordinatio* is a piece that pursues a contrast of contours by offering open orders of events. The fluctuation of intentions is also open and the score is only a mirror of the ensemble. But this metaphor goes further: the ensemble may distort the mirrors themselves at will.

Nos Dec

for string quartet

Nos Dec is the third composition discussed in this chapter, a string quartet which attempts to draw from both the historicity of the string quartet as an ensemble and the independent virtuosity of four players. The piece makes use of basic graphics, i.e. printed shapes and designs that lack in determination of pitch or precise rhythmic organisation. There is, in the history of the twentieth and early twenty-first centuries much music that is notated entirely in non-conventional graphics; my composition is by no means expressed in what might be called graphic notation. Nonetheless, graphics are employed in order to punctuate, develop or present material that is indeterminate and dependent on the performers' interpretation of the printed page.

Some pieces that inspired my composition of *Nos Dec* include Xenakis' *Charisma*, Earle Brown's *December 1952* and Morton Feldman's *Intersection No. 2*. In *Charisma* for instance, the formal distinction between indeterminate and aleatoric music is clearly shown, namely that in the latter "the performer normally only has a predetermined range of choices of what to play" (Cope, 1997, p65). My compositional aim in *Nos Dec* shares the dramatic impact that Xenakis engages in by using laws of probability to define the intention of random events. Striving for the same intensity of expressive potential, especially in transitions, I introduced instructions in *Nos Dec* such as, 'play the specific pitches as fast as possible in any order', 'play the specific pitches in any order, combining the specific rhythm in any order' or 'the first number shows the number of the notes that the performer must play and the second shows the time in seconds' (fig. 10-12). Here, I chose to internalize the procedure of freedom

of choice with basic verbal instructions, i.e. the score is non-specific with regards to notated particulars but very much defined in its basic purpose.

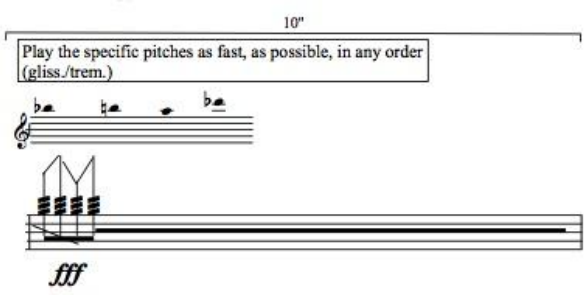

fig. 10 *Nos Dec*, bar 4

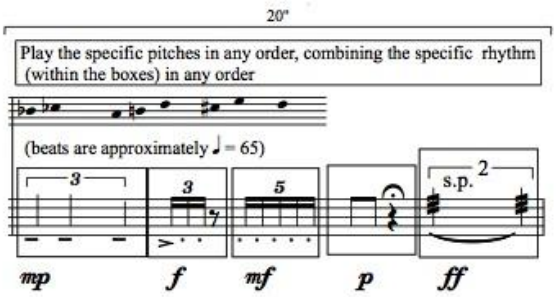

fig. 11 *Nos Dec*, bar 8

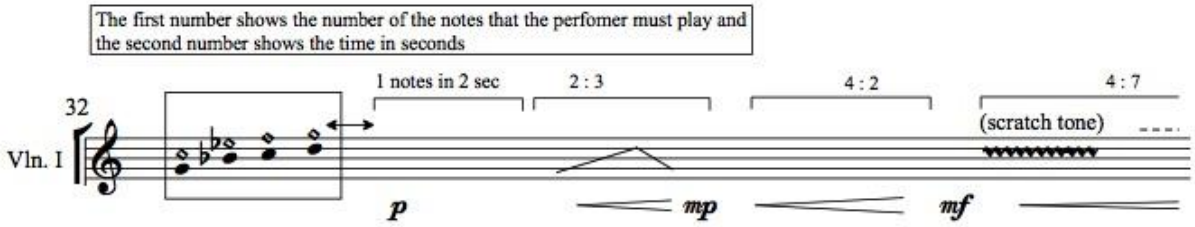

fig. 12 *Nos Dec*, bar 32

There is a level of cross-relation in this sense: structural direction, which is usually the realm of hermeneutics, becomes obvious and textural events which are usually notated in detail become obfuscated and dependent on the performer's interpretation. I deem this reversal of hierarchies to be the originality of chance or to romanticize shamelessly, Nietzsche's' dancing star'. Without doubt, in order for an ensemble to perform the work, 'improvising' ought to be replaced by an esoteric ability to coincide, invent together and interpret: the difference between the two is that improvising is a willful exercise in expression whereas interpreting is a an expressive manner of will.

In writing *Nos Dec*, I chose to offer a level of direction regarding relative pitch, rhythm and general contour. Timbre and amplitude are altogether left to the performers

however. ‘Skeletal’ notation, i.e. conventional notation that is only partly present provides another form of indeterminacy, one where the performers’ muscular and analytical memory also plays a role. Further to this, there is opportunity for the quartet to coincide, provided they happen to make the same choices. Interval groups and potential ‘isorhythms’ (fig. 10) may bring out repeated patterns as an ensemble feature if the ensemble so chooses. As new notational gambits and trends in score design continue to develop and emerge, graphic notations present a number of challenges for a composer. Intention, authorship and level of prescription are the main three problem areas. The main pursuit of such notation, musical freedom, may for these very reasons become very present or very absent, depending on performers, time, place and topical cultures. *Nos Dec* is, like *Ordinatio,* a ‘mirror’ in a score, only here the performers are ‘blind-folded’ at times.

What resonates as a common thread in *Nos Dec*, *Ordinatio* and *Regeneration* is the continual negotiation that transpires from the relationship between composer and performer. My expectations and aims are identical: I have come to view my own creative work as something which requires the creative input of performers before it can be validated. The gestures, musical meanings, structural contents of my own writing are only a preamble to the open sonic materialization of a performance. In this respect, indeterminacy, for me, is the quest for a ‘determined’ auditory process and all the considerations above relating to writing and performing are caused by the most ancient instinct of the musician: to imagine and invent what the listener will hear.

Chapter 3

development

Εξέλιξις (Exelixis)

for chamber orchestra and voice

Exelixis is a piece that centres around scalar formations. I have chosen to explore the trichordal formation 023, a group of distinct, tripartite pitch classes; the symbolism of the number 3 is constantly present in human history and appears to go back into our prehistory and the internal intervallic content of 023 contains a Fibonacci-esque essence of 111000[22]. Numerologies aside, the title of my piece contains a triple meaning too: 'exelixis' (from the Greek 'εξέλιξις') may be translated as 'evolution' or 'unwinding' or 'development'. These three meanings and their respective scientific, poetic and structural connotations did play a role in composing the work; indeed the work seeks to convey, albeit in an abstract manner, all these three separate meanings.

Relationship between Pitch and Noise

I tend to distinguish very plainly and individually when it comes to sound, music, silence or noise. Noise is, in my mind, the aggregate of all sounds which alarm humans. One may not categorize with academic accuracy on such subjective premises, since being alarmed by a sound is a fairly relative affair, still, I consider a broad range of sound events to fall

[22] I do not negotiate this in a meaningful way, it is there, nonetheless in that there are intervals of one, two and three semitones in the standard form of the trichord.

under this loose category. The term ‘noise’ is, therefore, not used here in a negative sense, nor with the intention to restore or uphold noise in the manner of the Futurists. Rather, noises constitute all sounds which cause a relative sense of alarm and tension in the listener. There is the obvious absence of science, music cognition, acoustics, physics and musicology in this proposition, but I choose to adhere to it as an axiom on grounds of intuition and empirical purpose: a piece needs to be written and sounds must be organised somehow. If the algorithms of dodecaphony could neglect, to an extent, the mathematics of acoustics and the harmonic series[23], then *Exelixis* may composed with an incomplete definition of noise in hand. Bearing the above in mind, the opening statement in the piece is noise, organised, not unlike the opening of Haydn’s *Creation*, where within the boundaries of a musical syntax a symbolic statement is made: the 023 cell present in the opening chord lingers on until noise has become music in bar 4. The entire work may be viewed in the same respect.

In *Exelixis* I have essentially used an octatonic scale (fig. 13) on a set number of pitches, never using its two possible transpositions. These eight pitches represent the tonal limits of the work, regardless of any added tones and inflections that appear at times (see for instance bar 20 in the viola solo, or the downward runs in bar 34)[24].

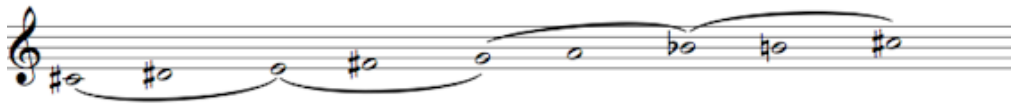

fig. 13 *Exelixis*, octatonic scale and the four “transposed trichords” that constitute it

[23] there is little in the arithmetics of total serialism that relates with the mathematics of the harmonic series – on the contrary the music of the common practice period makes a concerted effort to reflect basic acoustics.

[24] this is on a par with other works in the repertoire, for example *…voiles…* by Debussy: a whole- tone piece by all accounts, with the odd inflection that breaks the total adherence to using a single ‘scale’.

In using this particular scalar formation I have made a secret reference to the structural and poetic capacity of the ancient Greek tetrachord: a mobile tonal formation whereby a stable perfect fourth contains the tonal variations of two 'middle' tones which change according to an enharmonic, chromatic or diatonic spelling. In *Exelixis* I make no use of microtonal inflections or mobile tones as such, but I 'modulate' the idea with regards to timbre, position and melodic or harmonic contour within a trichord. The three tones, that is, contain a number of possible tensions that differ greatly from each other and I explore this in the flow of the music.

This fragmented use of the octatonic pallette and its four equal intervallic divisions-trichords resulted in two distinct functional tools being at my disposal:

a) the sense of different tones with similar intervallic structures not being tonal 'modulations', but separate entities and areas of music. To give an example, the opening is written in such a way that the trichord (023) is a point of release of tension. In bar 35 on the other hand a tritone, which is absent in the trichord, a 'Deus ex machina' of sorts, is the more stable tonal event, the 'tonic' as it were. In order to make these almost rhetorical uses of my tonal contour, I needed to 'hear' the different subtle possibilities that the octatonic scale offered. Dividing the 8-tone formation into 4 duplicate trichords greatly assisted me.

b) the 023 trichord is by its very nature an intimate cell; it holds 6 intervals including inversions within an octave (111000), i.e. a major and minor 2^{nd} and 7^{th}, a minor 3^{rd} and a major 6^{th}. This lack of perfect intervals allows for a lot of acoustic space. By presenting trichords in succession and as part of a 'slow' whole, an often insinuated rather than obvious octatonic formation, the composition declares an esoteric

movement (see bar 44 onwards). It is by way of distancing from the harmonic series than an evocation of its acoustic force is achieved. *Exelixis* is a distant echo of the octave and the perfect fifth – an extensive evolution of basic harmonies which are present *in absentia*.

It would be an omission to except the influence that Messiaen's thinking and – more importantly – his application of theoretical beginnings on the creative field have had on me during the composition of *Exelixis*. But it would also be an error to make specific references; as a whole, the way Messiaen understands acoustics and chooses to employ intervallic algorithms to enable poetic sound-making is a model, much more so than the music of the Second Viennese or the spectral school of composition, where method appears to dominate intuition. This is not a value judgement, but a necessary statement to indicate and comment on my own beginnings and influences.

My concern with both pitch and rhythm also mirrors the concern shown by Messiaen for these attributes. To return to the opening paragraph in this short chapter, the relationship between pitch and noise in *Exelixis* is a matter of rhythm, speed, pace, metre and musical pulse. In writing the work, I was perhaps unaware of what seems obvious to me now: the Nietzschean 'dancing star' that evolves out of chaos was at the heart of the drama in an otherwise plain theatre. Looking at the pages of *Exelixis*, I sense that the scope and purpose of the text was to 'order' a music out of noise, without ever 'measuring' it, but by way of evolving, unwinding and developing it indeed.

Chapter 4

recapitulation

Quantum

for orchestra

Quantum, as the name implies, derives from the need to research the interiority of sound, the fundamental building blocks of sound and how it relates to our psychophysical reception and is a natural technical continuation from all the questions that formed when composing *Exelixis*. The composition uses techniques related to the French spectral school of composition but also tries to enhance these fundamental spectral techniques by incorporating extended techniques, microtonal inflections and quasi-aleatoric parameters which create a balance and counterbalance; an ebb and flow between a stable and an unstable system, reflecting the `uncertain' principle of the quantum world.

The fundamental pitch material of the work derives from a partial tracking analysis of an E2 piano sample in SPEAR software and a realization into notation in OPENMUSIC software by exporting an SDIF version of the analysis. Partial tracking is a technique that analyses successive Fourier 'moments' and finds the best continuity between its sinusoid tracks. This results in a continuous stream of block chords, each corresponding to the instantaneous sinusoidal aggregates of the original E2 piano sample. A real world analogy of this technique would be the pressing of a pause button on a repeated predetermined timeframe revealing a successive stream of partials. This technique also captures the overall energy of the wave sample. As seen in figure 14, the onset of the piano sound corresponds to the 1st five

or so block chords. Because of the extremity of its energy levels, more partials/sinusoids will be present. As the sound progresses to its steady and decay state, this reflects to the analysis as less and less partials will be present.

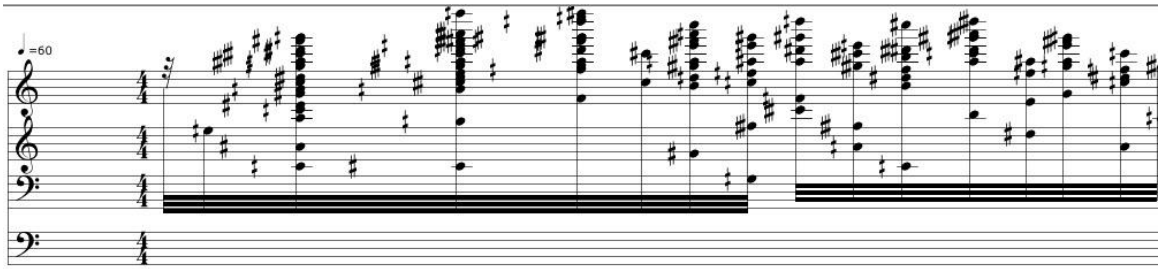

fig. 14 *Quantum*, partial tracking of a sounding E2 piano string – onset of the piano sound analysis

These sound blocks are then orchestrated and this is the point of contention with spectral composition – how does the orchestration, with its myriads of sounds that have wild morphologies themselves, correspond with the physiology of the primary model sound? No answers are offered in *Quantum*, just promises of intensive contemplation on the question.

With regards to the software used, it is worth noting that frequencies are notated conventionally, meaning that microtonal (quarter-tone in fact) writing is present. This is in par with what the spectral composers were theorizing, and especially Murail, about examining the microscopical events in music to evoke the larger structures. The more precise the microtonal approximation of a harmonic aggregate, the less beating occurs; the ear perceives the sound as fused into a single object with the same fundamental rather than as a chord with different elements. Murail (2005, p.190) explains this phenomenon with the term 'harmony-timbre'. Going back to the question of cohesion, we are - of natural creative course – interested in more than re-orchestrating a mimesis of the initial sound material. On the contrary, other

factors such as the use of extended techniques and aleatoric rhythms create a subjective impression of the initial sonority; a poetic instance of the sound rather than a mere copy of it.

The composition starts with an OPENMUSIC linear interpolation function between the 1st two block chords of the analysis of figure 13. Pages one to eight of the composition are based on eight interpolations between these two chords (fig. 15). Notice that octave transpositions are used as some of the upper partials of these chords are outside of the register of the orchestra.

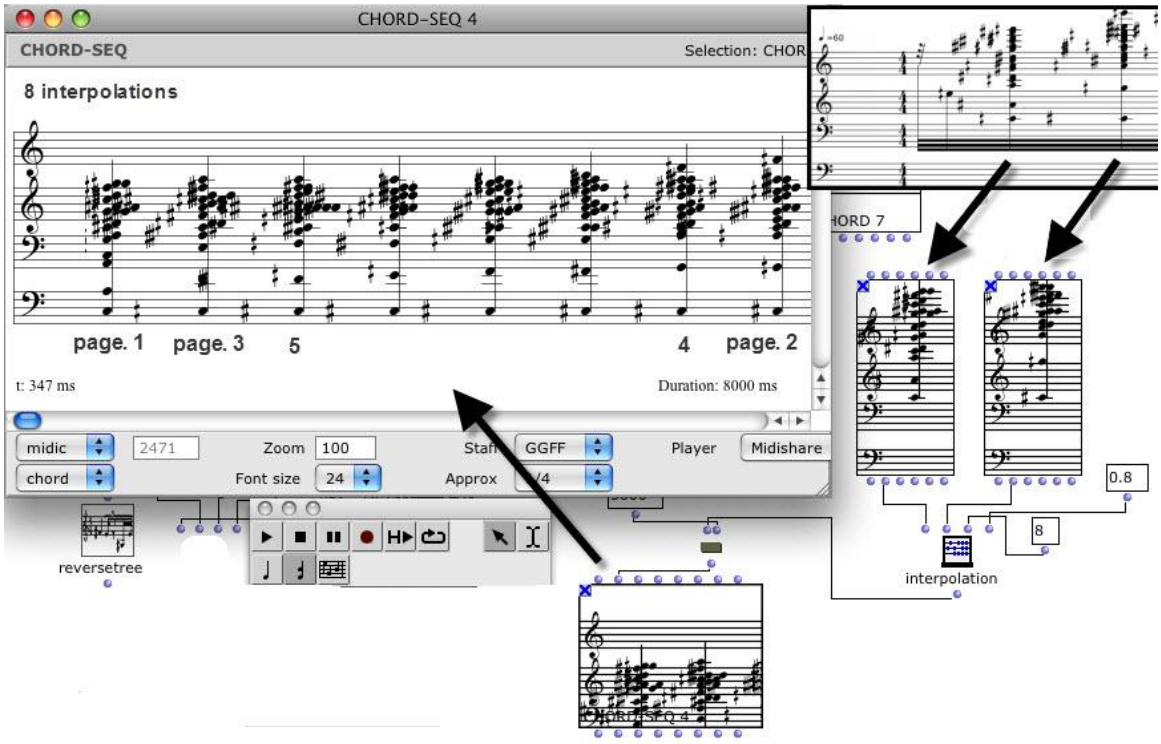

fig. 15 *Quantum*, interpolations used for the first eight pages of the composition

Pages 9 to 16 in the score are, again, based on eight linear interpolations between the third and fourth block chords of the initial analysis. The third chord is transposed down an octave and the fourth chord two octaves down (figure 16).

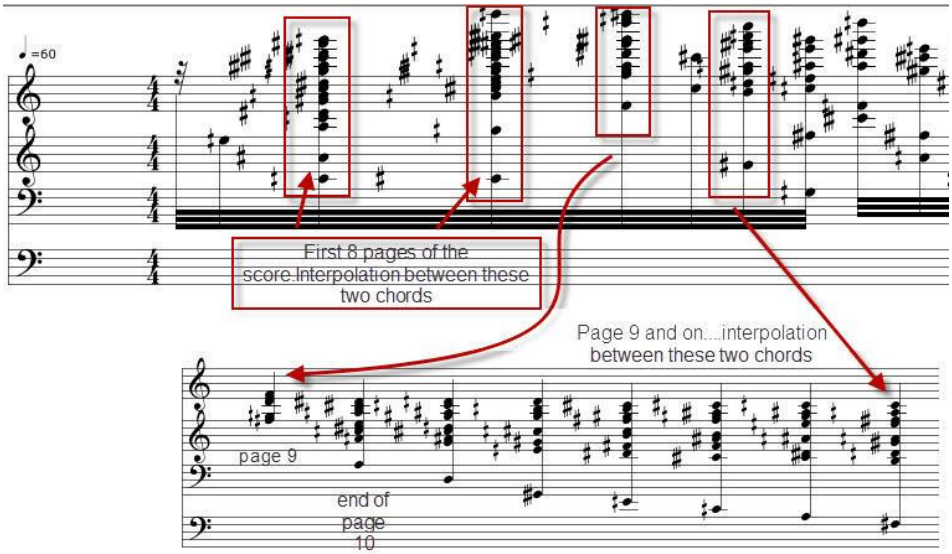

fig. 16 *Quantum*, eight linear interpolations between chord 3 and 4

Pages 17 to 20 are based on eight non-linear interpolations between chord five and six on the initial analysis (figure 17).

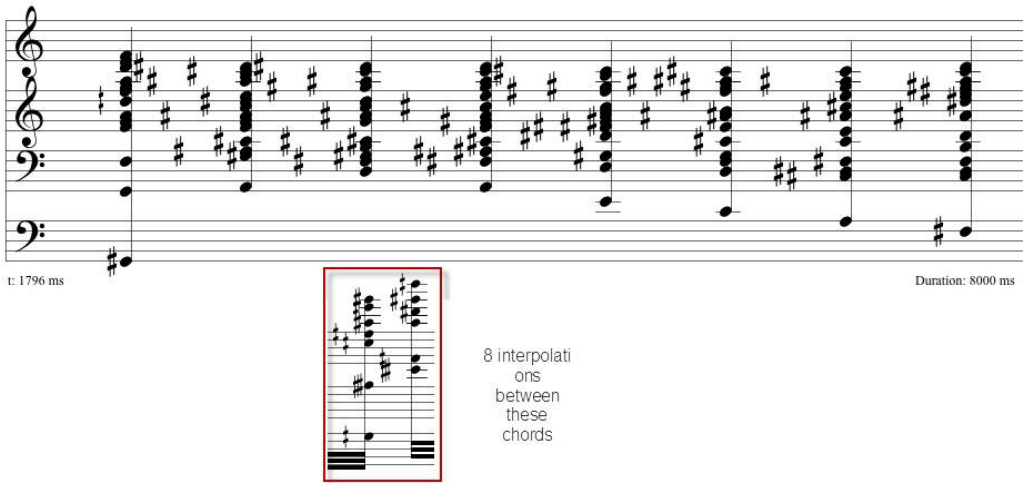

fig. 17 *Quantum*, eight non-linear interpolations between chord 5 and 6

Pages 21 to 24 are modelled on a ring modulation of chords from figure 16. The lowest pitch of the chord is treated as the modulator and the rest of the pitches as the carriers

creating even more inharmonic textures (figure 18). For the calculations, the RING-SINE function was utilized in OPENMUSIC utilizing the *Tristan* OPENMUSIC library.

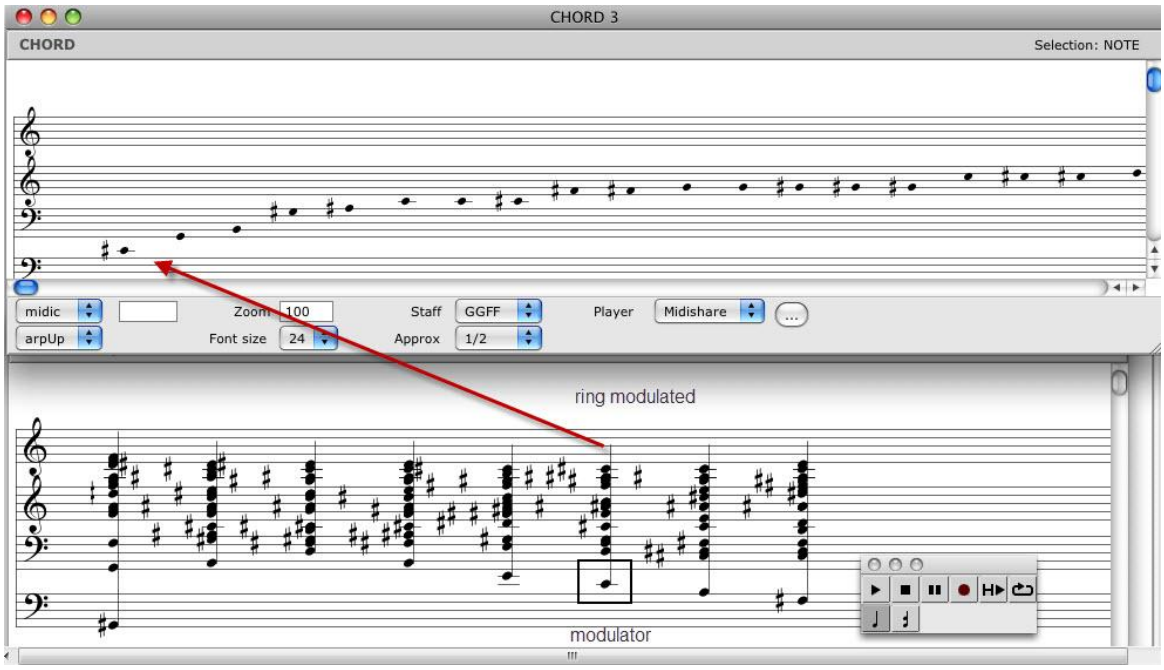

fig. 18 *Quantum*, ring-modulated material on page 21 of the score

To resume the description of events and functions: from page 25 of the score up to the 2nd movement the text is based on the non-ring modulated interpolations of figure 16. The 2nd movement starts with an amalgam of the 1st interpolation of figure 16 and a harmonic series on B3. From page 29 up to the 3rd movement, a G2, G1, A2, D2 and E2 harmonic series are presented successively that are gradually compressed or expanded using the DISTORTION function in OPENMUSIC with various distortion percentages. This way, the initial partials of the harmonic series are being stretched into an inharmonic sonority.

The 3rd movement is a departure from the harmonic aggregates of the previous two movements. It is based on primitive, extra-musical images and effects with close resemblance to the *musique concrète instrumentale* techniques of Lachenmann. Here, the interiority and

the microtonality of the harmonic series are being replaced by the interiority of the sound itself. Noises become as important as sound. This noise vs. sound dichotomy can be found scattered throughout the composition disguised behind the harmonic aggregates and is in direct relationship with my concerns in *Exelixis*. Notable techniques are the bow overpressure on the strings, and various muted sounds in the percussion section (muted timpani, hitting the shell of the timpani, scratch tones on the gong, etc.) and muted piano strings. Various scratch tones are also produced by using the fingernail on the strings and pizzicato/glissando effects on the piano strings as well as non-pitch techniques, for example, blowing air through the body of woodwind and brass instruments.

Furthermore, a departure from standard spectral techniques is augmented by the use of constrained aleatoricism. There are instances where certain pitches are written in squares in proportional notation or simply with no attached rhythm to them. Specific narratives or simple instructions are followed which guide the players to instigate their personal preferences and performance experience which blur the distinctions between performer and composer.

In conclusion, *Quantum* is a sonic depiction of an ebb and flow between stable sounds with their physical form and the unstable form of choice and interpretation, reflecting on the uncertainty of the Universe. Spectral techniques evoke a reality of ‘fate’ and extended techniques as well as aleatoric elements refer to the unstable state of ‘will’. There are philosophical pretensions in any of this, but a sense of wonderment about the equilibrium of human existence: *Quantum* is a plain drawing of this psychography and, perhaps, a first attempt at what may be a continual creative concern.

Conclusion

coda

Making a final comment on a series of preceding comments poses a philological complication. At any rate, reading my own commentary makes three very simple facts clear to me:

a) my intention to submit a portfolio with a wide range of techniques and display of interests has been met without force or exaggerating panoplies of technical information saturating the work content.

b) my intention to retain some form of cohesion in the works has been followed; this did not require much effort either. Even if one attempts to disengage the creative process from oneself, there is always a lingering common thread in one's creative output. More than this minimum cohesion has, however, been present.

c) my aim to write pieces that I can always include in my list of publishable works has been met in part; I cannot be certain at this early stage that all 6 pieces in the appendix will remain in my list of works permanently, but this is not unlikely. Certainly, there is no work in the portfolio that I feel, at this stage, is unpublishable or lacking the merit to be performed.

A PhD thesis is a contribution to world knowledge, or so goes the common saying. 'Contributing to world knowledge' is quite an intense pre-requisite for a composer.

Composers do contribute to world peace, Democracy, justice and a number of other wholesome, virtuous matter just by doing what they do – but world knowledge is something that composers reserve the right to marvel at rather than thrust upon; this composer offers an apology if the 6 works and accompanying commentary offer little new knowledge. The origin and end of their being was, after all, poetry.

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PORTFOLIO OF MUSIC COMPOSITIONS

Vol. II of III

DEMETRIS EFSTATHIOU

Ph.D Thesis **2014**

PORTFOLIO OF MUSIC COMPOSITIONS

DEMETRIS EFSTATHIOU

Vol II of III

School of Media, Music and Performance

University of Salford, Salford, UK

Submitted in Partial Fulfillment of the Requirements

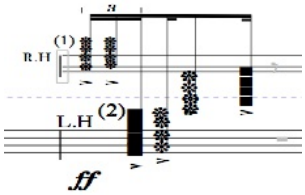
the degree of Doctor of Philosophy, January 2014

Nostalgia

for violin, guitar and piano

2009

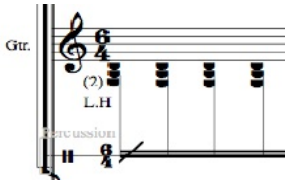
Total Duration: c. 9' 40''



(1) Hit very close to the bridge with the palm (R.H), and let the strings resonate. Hit the fingerboard with the palm (L.H).

(2) Hit with the palm above the soundhole (rosette) to mute previous vibration of the strings.

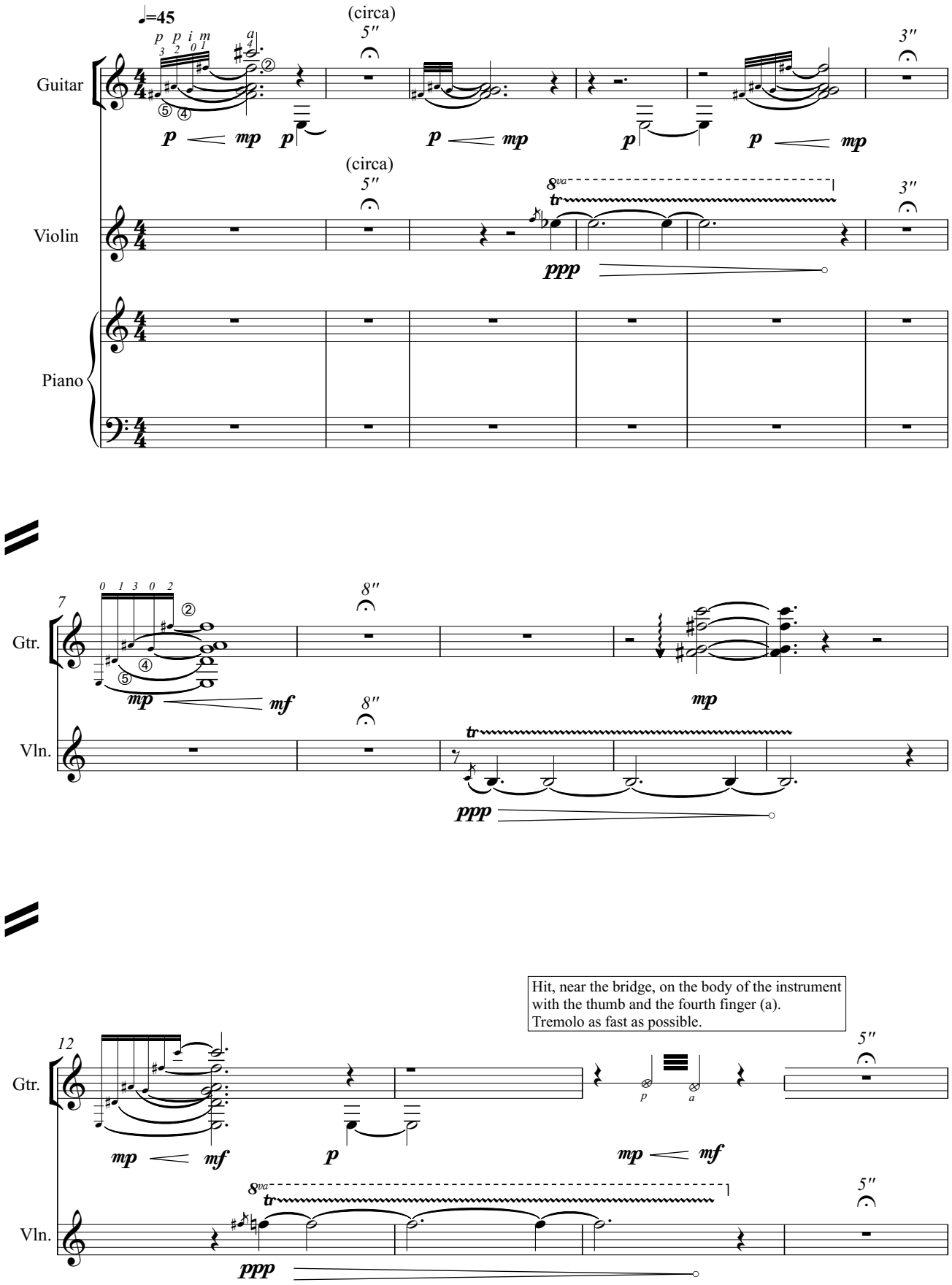
Hit near, the bridge, on the body of the instrument with thumb and the fourth finger (a).
Tremolo as fast as possible.

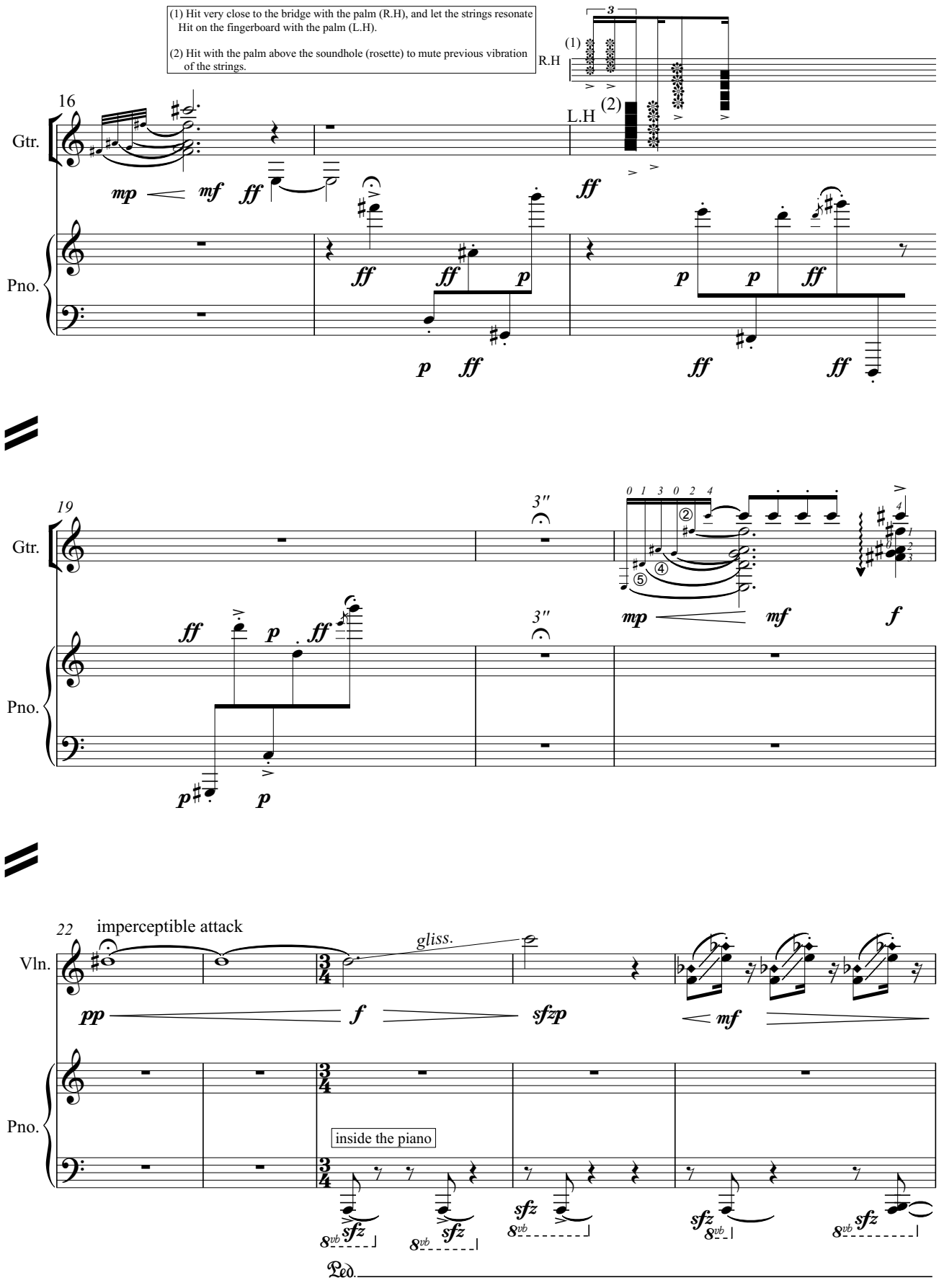


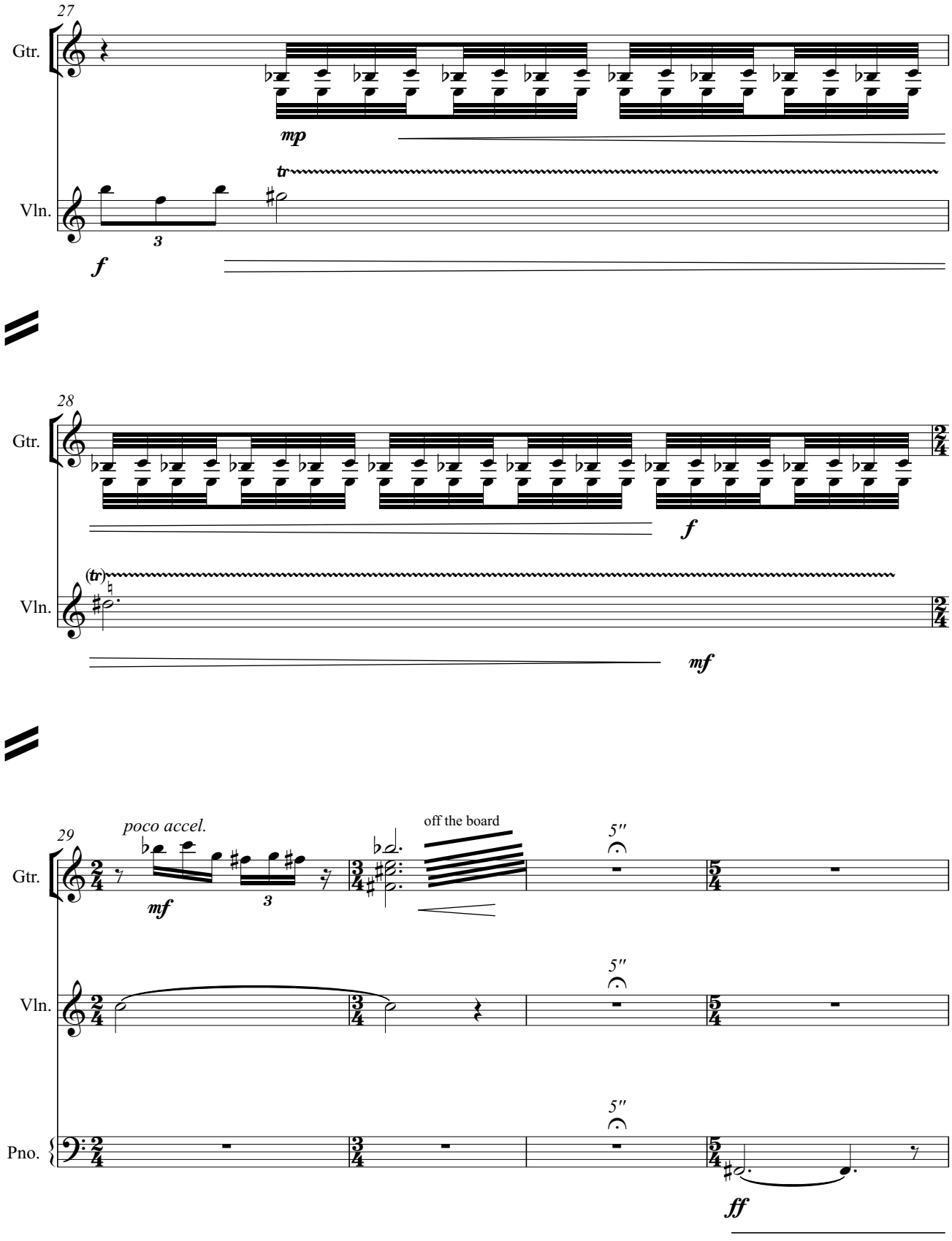
(2) Hit on the fingerboard with palm muting also the strings (very deep sound).

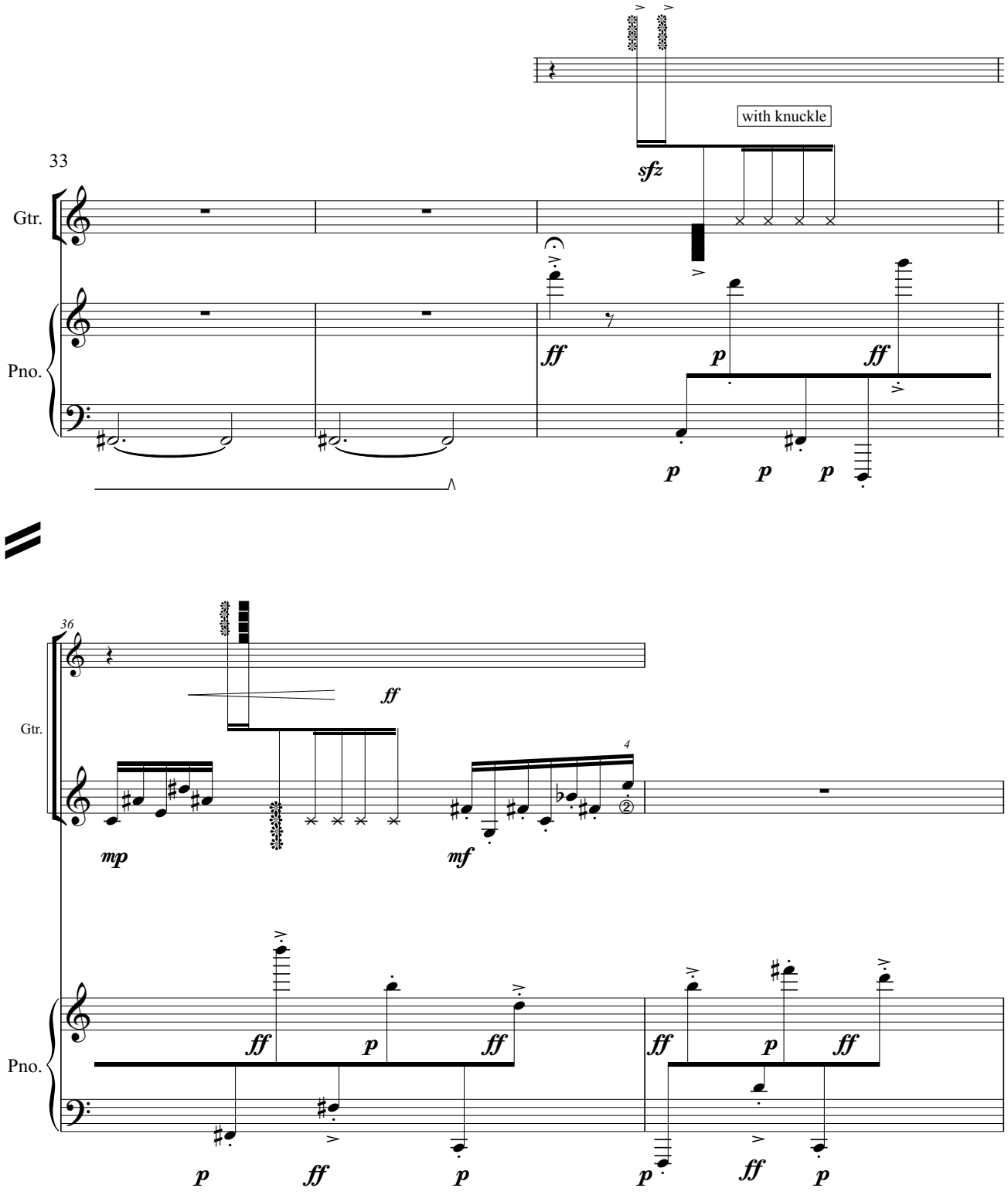
All other symbols are explained in the score.

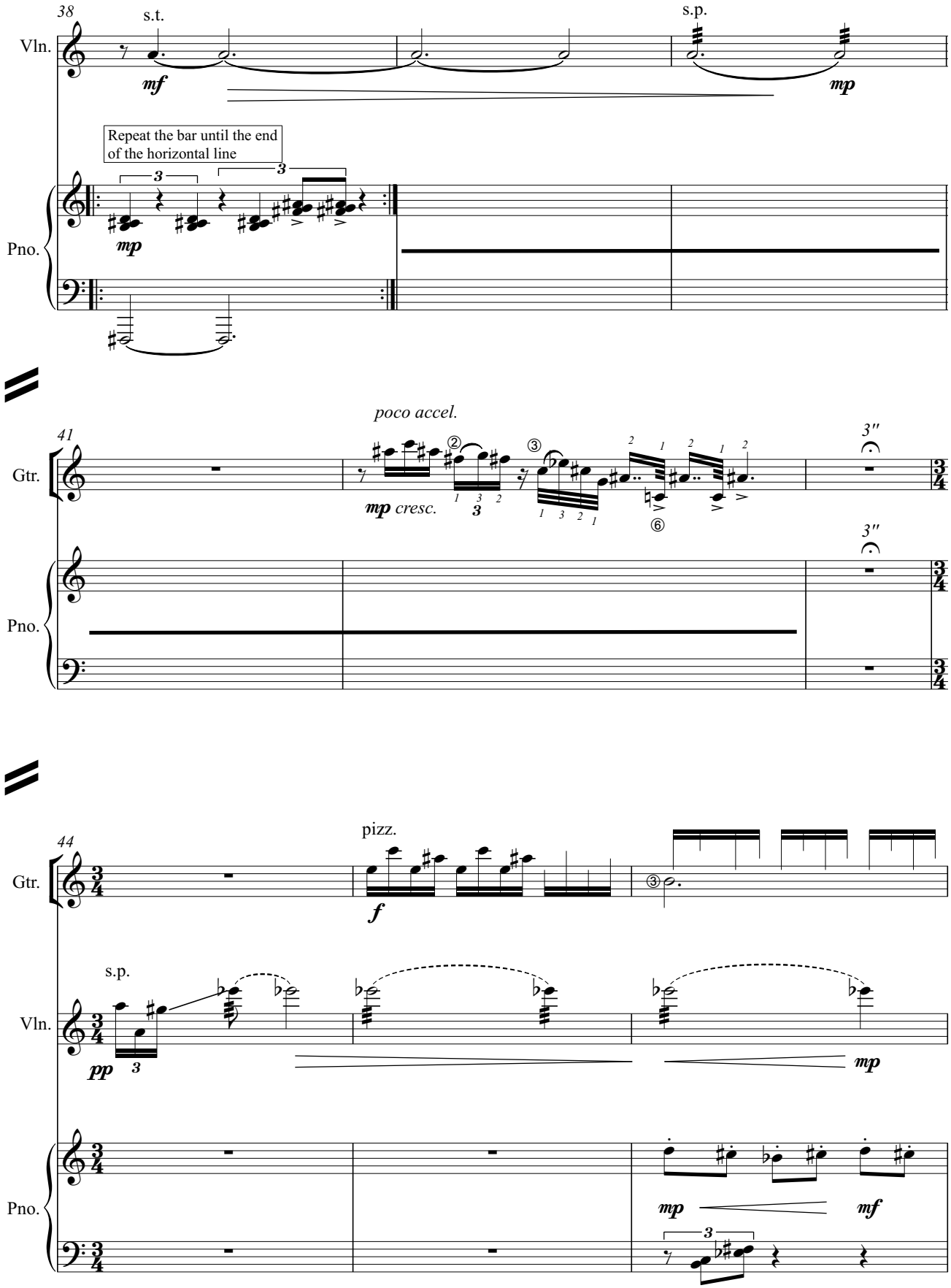
Nostalgia

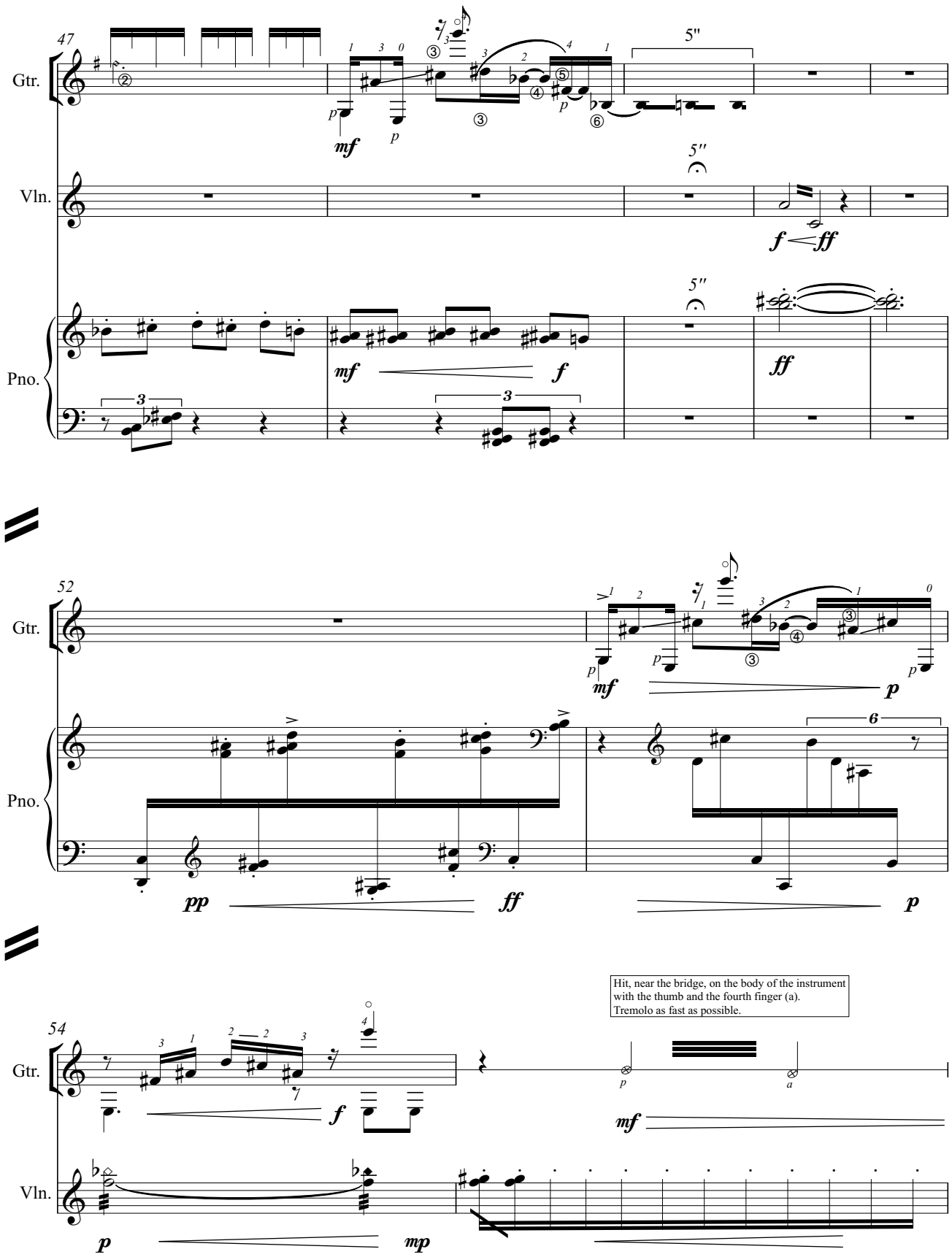

♩=45
Guitar
Violin
Piano
(circa)
5″
3″
8″
Gtr.
Vln.
7
12
Hit, near the bridge, on the body of the instrument
with the thumb and the fourth finger (a).
Tremolo as fast as possible.

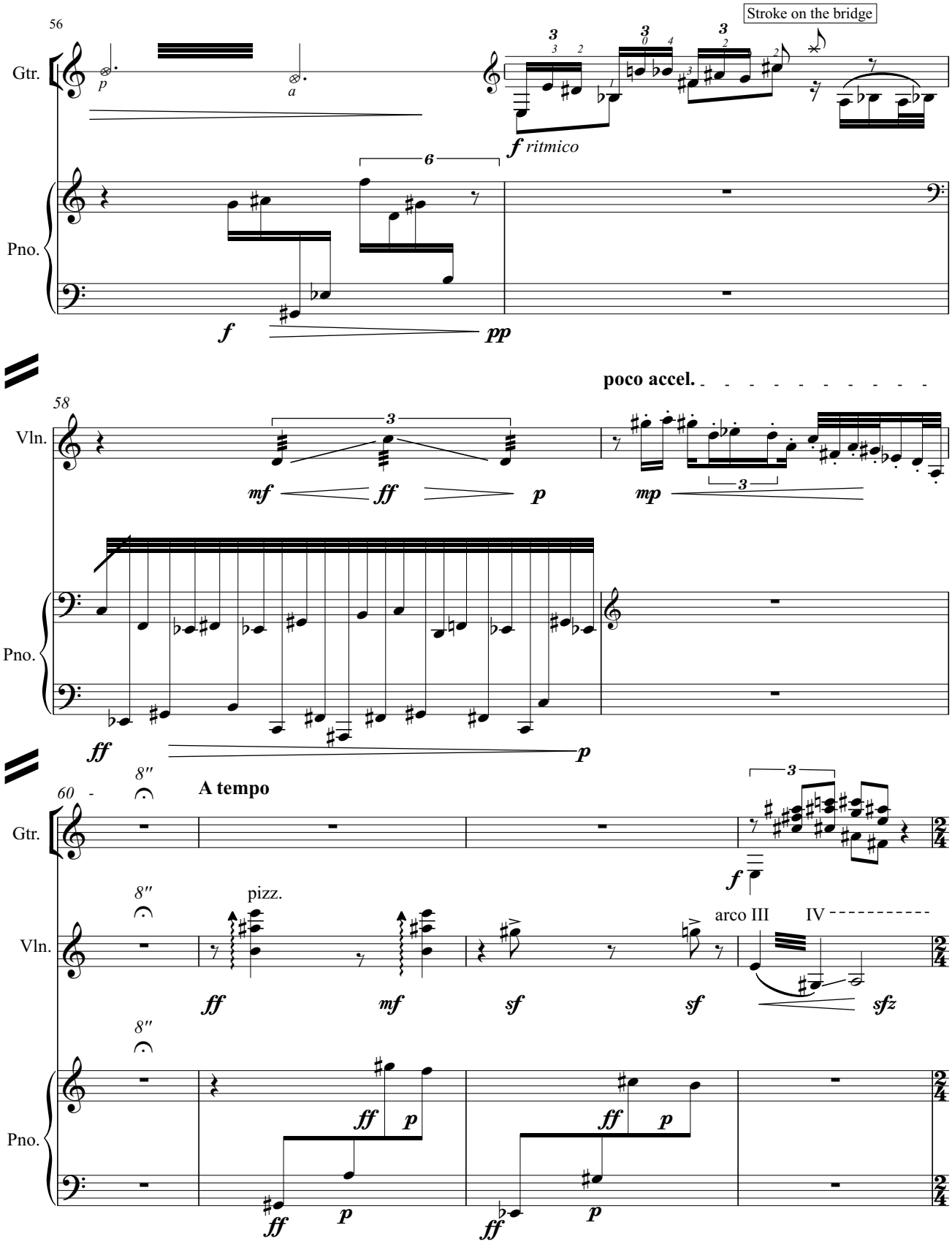

(1) Hit very close to the bridge with the palm (R.H), and let the strings resonate
Hit on the fingerboard with the palm (L.H).
(2) Hit with the palm above the soundhole (rosette) to mute previous vibration of the strings.
R.H
L.H
16
Gtr.
Pno.
19
3"
22
imperceptible attack
gliss.
Vln.
inside the piano

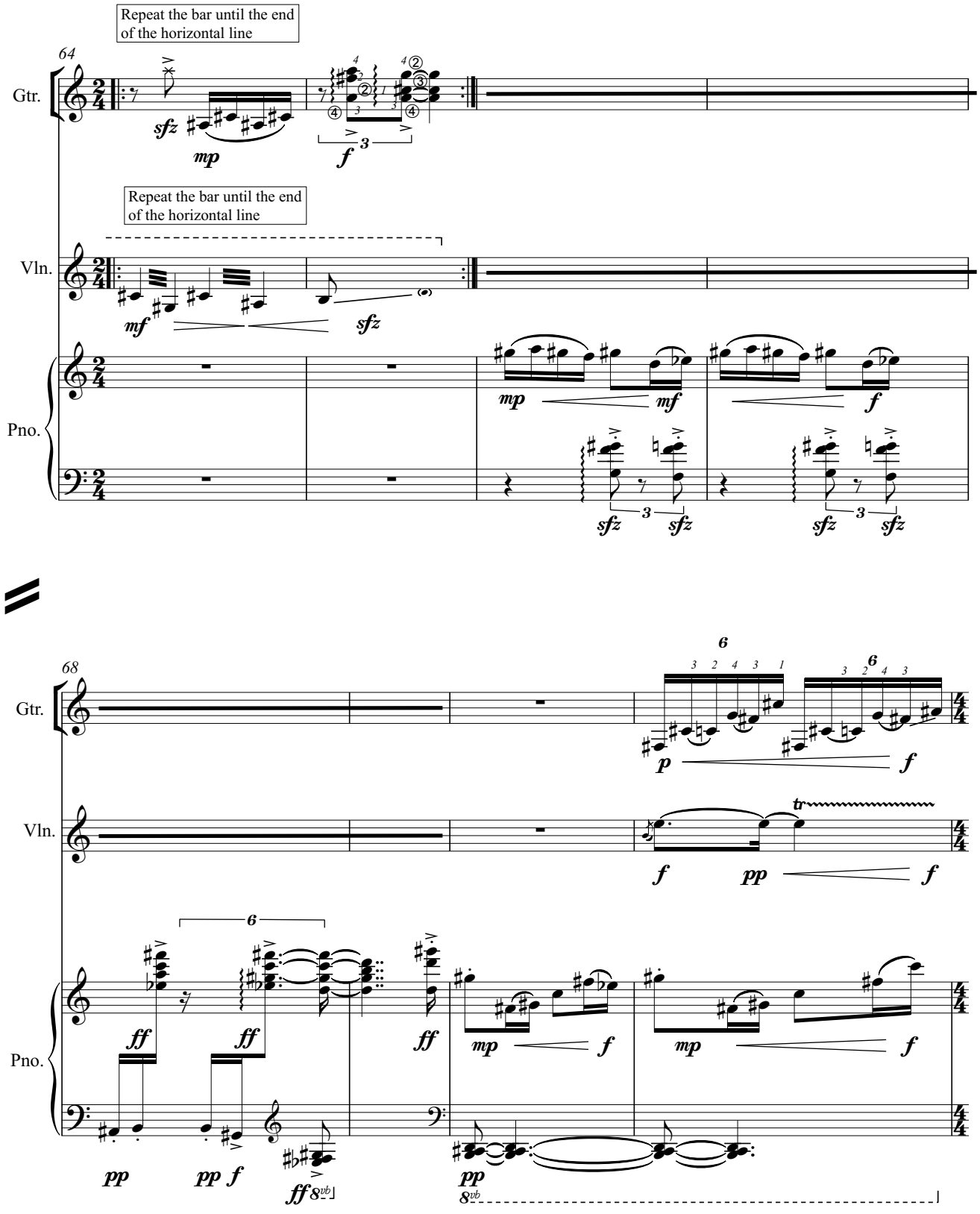

27
Gtr.
mp
tr
Vln.
3
f
28
Gtr.
f
(tr)
Vln.
mf
29
poco accel.
mf
3
off the board
5″
Gtr.
Vln.
Pno.
ff

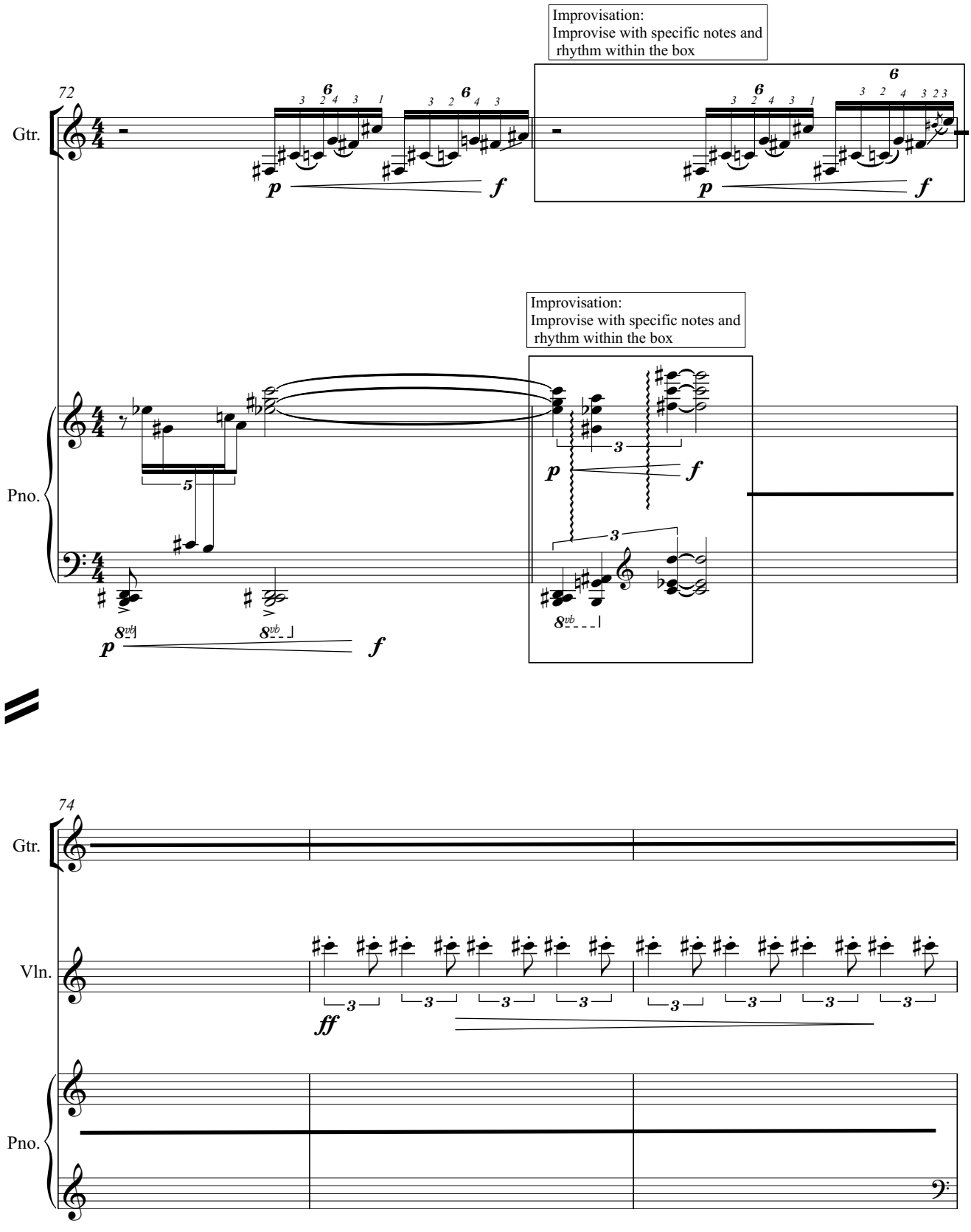

33
Gtr.
Pno.
with knuckle
sfz
ff
p
ff
p
p
p
36
Gtr.
Pno.
ff
mp
mf
4
ff
p
ff
p
ff
p
ff
p
ff
p
ff
p

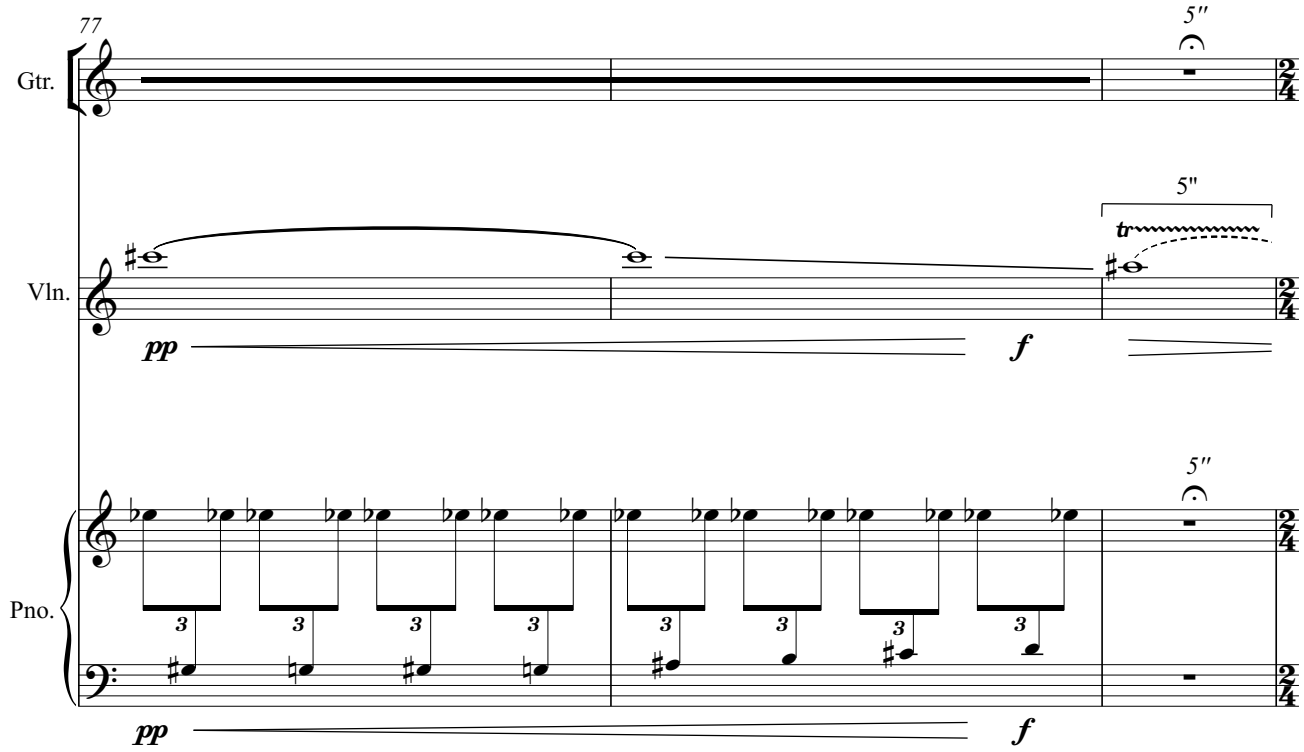

38
Vln.
s.t.
mf
s.p.
mp
Repeat the bar until the end
of the horizontal line
3
3
mp
Pno.
poco accel.
41
Gtr.
mp cresc.
3
3"
3"
Pno.
44
pizz.
f
Gtr.
s.p.
Vln.
pp
3
mp
Pno.
mp
mf
3

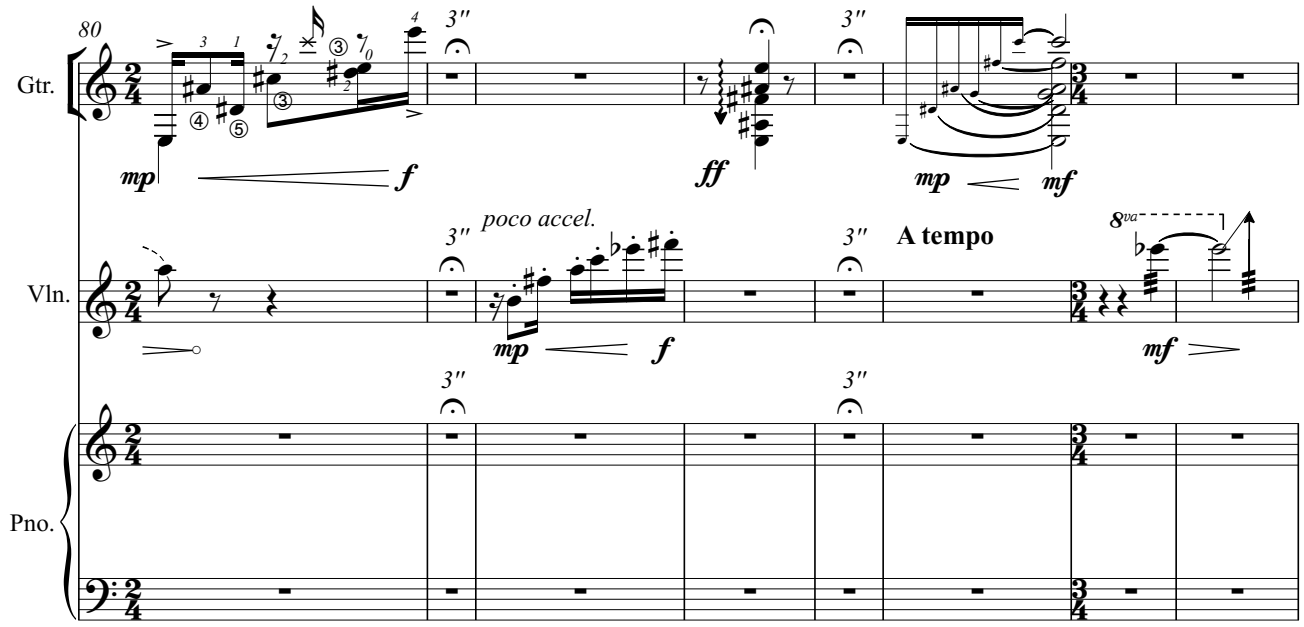

47
Gtr.
Vln.
Pno.
5"
5″
mf
f
ff
52
pp
p
54
Hit, near the bridge, on the body of the instrument with the thumb and the fourth finger (a). Tremolo as fast as possible.
mp

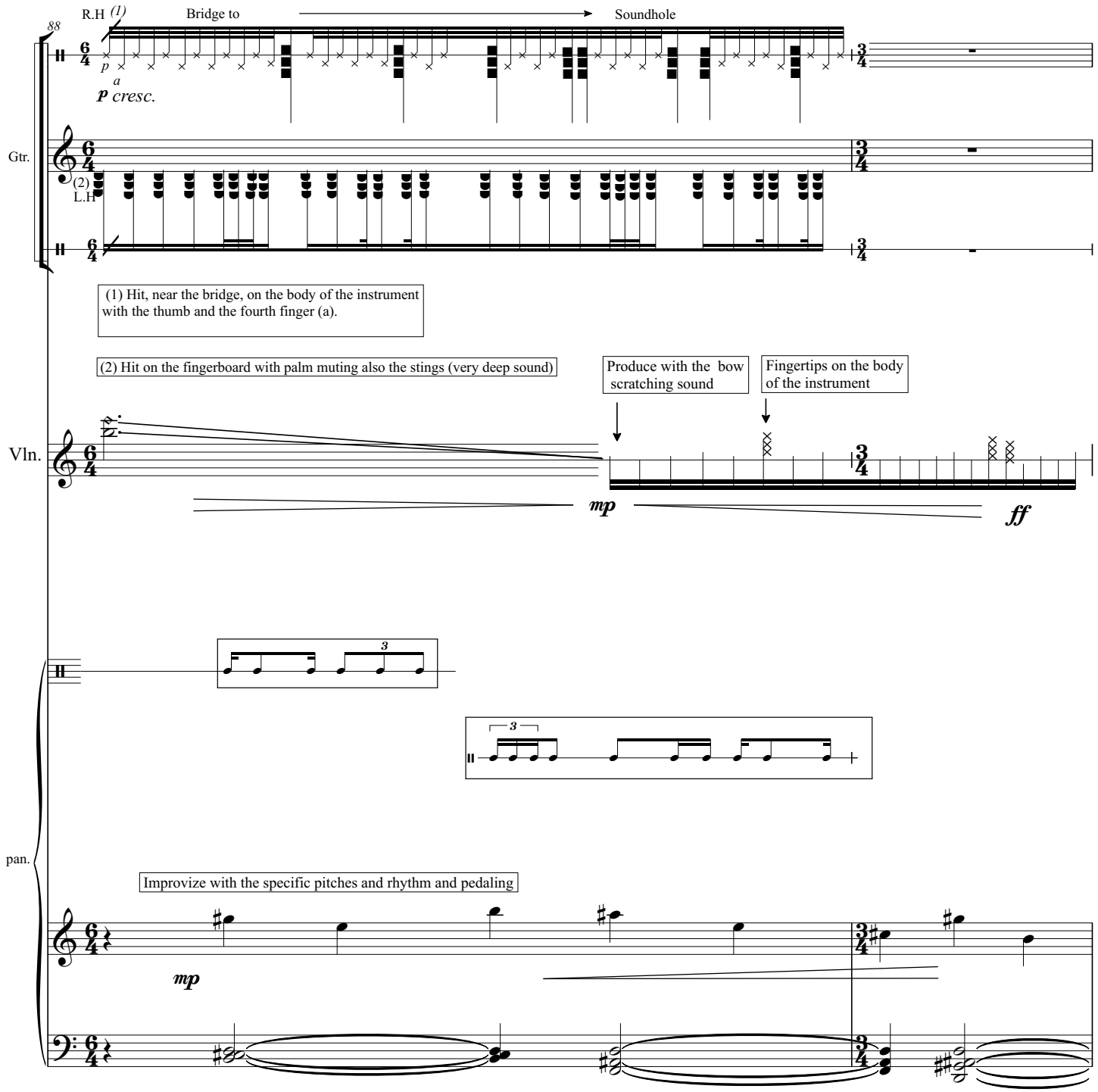

56
Gtr.
Pno.
Stroke on the bridge
f ritmico
f
pp
poco accel.
58
Vln.
mf
ff
p
mp
ff
p
60
8″
A tempo
f
pizz.
arco III
IV
ff
mf
sf
sf
sfz
ff
p
ff
p
ff
p
ff
p

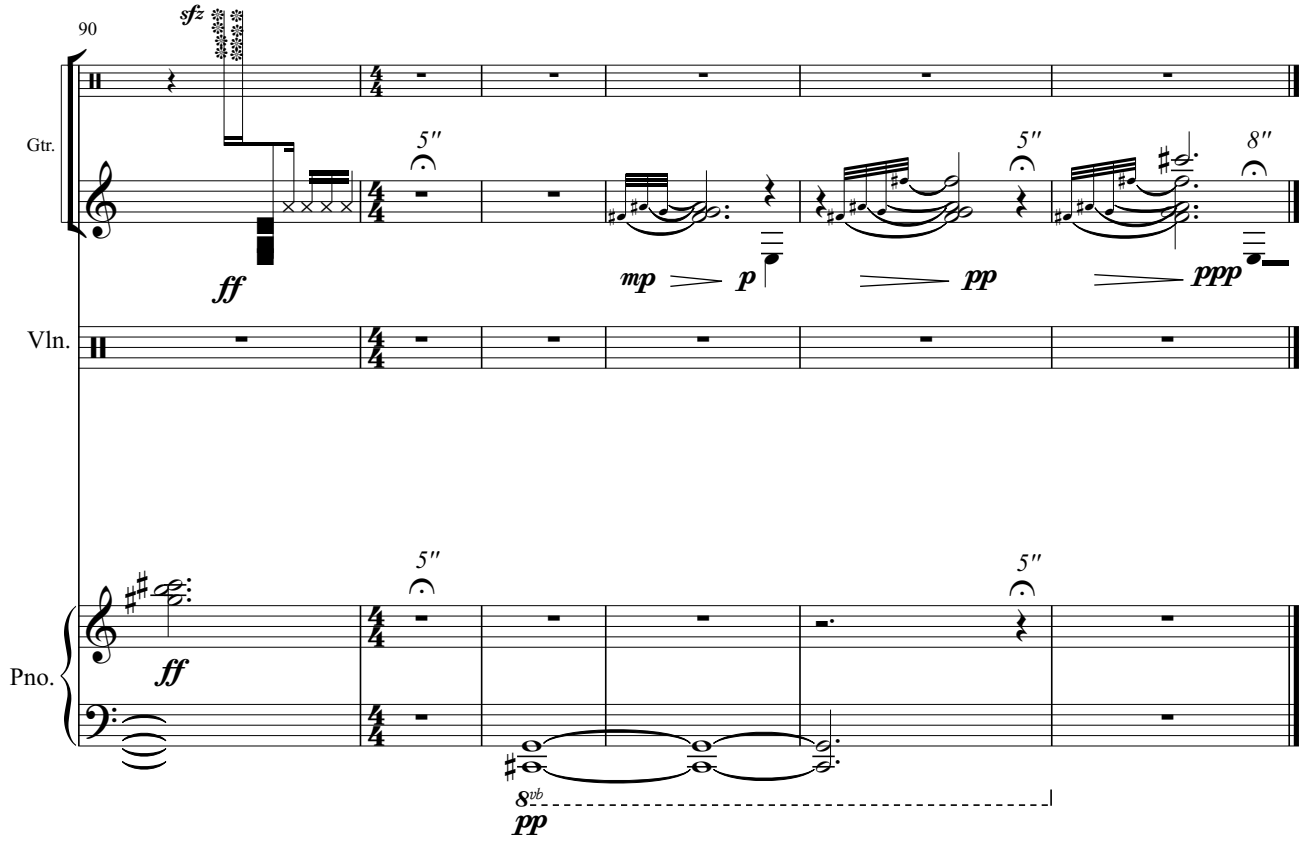

Repeat the bar until the end of the horizontal line
64
Gtr.
sfz
mp
f
Repeat the bar until the end of the horizontal line
Vln.
mf
sfz
Pno.
mp
mf
f
sfz
sfz
sfz
sfz
68
Gtr.
p
f
Vln.
f
pp
f
tr
Pno.
ff
ff
ff
mp
f
mp
f
pp
pp f
ff
pp
8vb


72
Gtr.
Improvisation:
Improvise with specific notes and
rhythm within the box
Improvisation:
Improvise with specific notes and
rhythm within the box
Pno.
74
Gtr.
Vln.
Pno.


77
Gtr.
Vln.
Pno.
5″
5"
tr
pp
f


80
Gtr.
Vln.
Pno.
3″
mp
f
ff
mf
poco accel.
A tempo
8va


R.H (1)
Bridge to
Soundhole
88
p a
p cresc.
Gtr.
(2) L.H
(1) Hit, near the bridge, on the body of the instrument with the thumb and the fourth finger (a).
(2) Hit on the fingerboard with palm muting also the stings (very deep sound)
Produce with the bow scratching sound
Fingertips on the body of the instrument
Vln.
mp
ff
3
3
pan.
Improvize with the specific pitches and rhythm and pedaling
mp


90
sfz
Gtr.
5″
5″
8″
ff
mp
p
pp
ppp
Vln.
Pno.
5″
5″
ff
8vb
pp

Regeneration

for piano trio

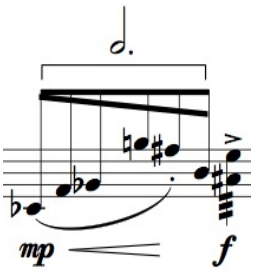
2009

Total Duration: c. 10' 12''

Accidentals apply to one note only
(Ties are considered to be one note).

Note duration are indicated with note-head extensions:
The longer the extension, the longer the note.
Interruption (gaps between extensions) indicate silences (rests).

The vertical broken arrows indicated the time of entry.



Accelerated note group: the accelerando takes place with the duration note above the bracket.

ABBREVIATIONS

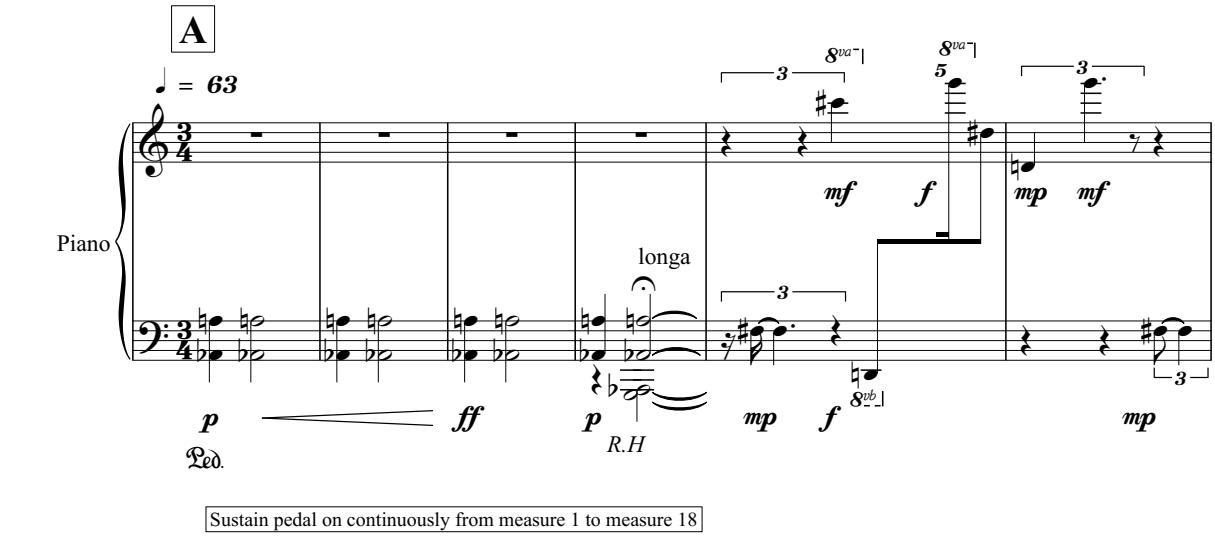
s.p = sul ponticello
clb = col legno battuto
s.t = sul tasto
ord. = ordinatio
norm. = normal

All other symbols are explained in the score.

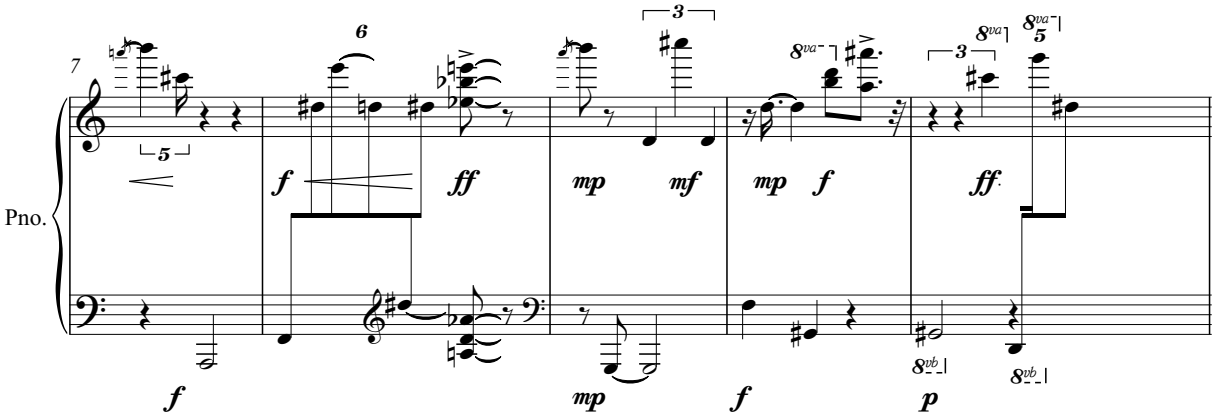
*** Performed by Trio Dell' Arte in 2011 at Royal Academy of Music in London.**
Violin : Chrysostomos Neophytou
Cello: Frederic Dupuis
Piano: Emilie Moutin

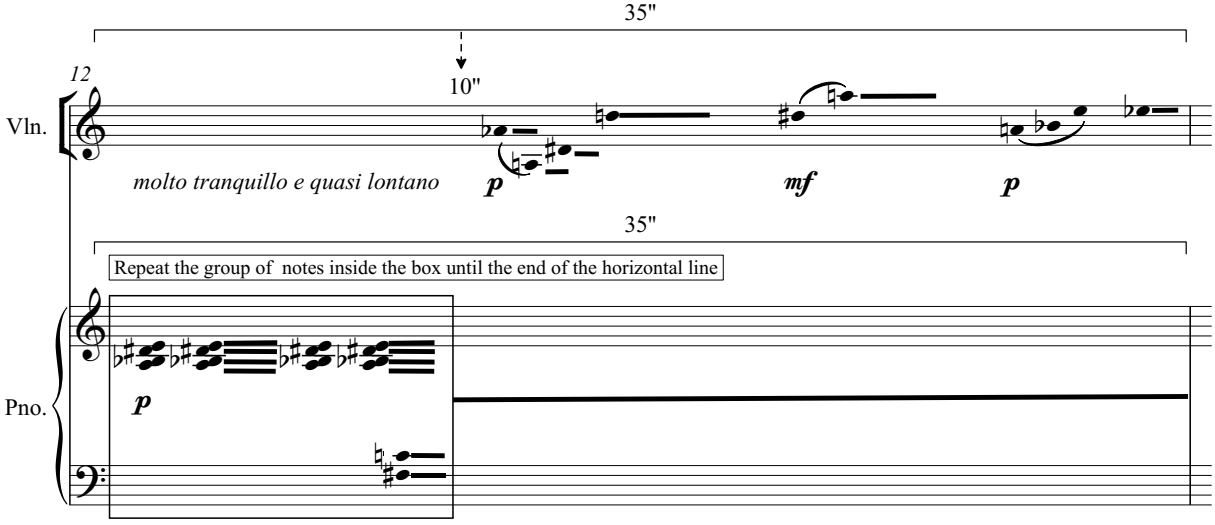
***Selected by Orient / Occcident competion in Kiev and Perfomed by members of Richochet string quartet in September 2013.**
Violin: Pavlov Andrii
Cello: Patsovskyy Igor
Piano: Tavanets Dmytro

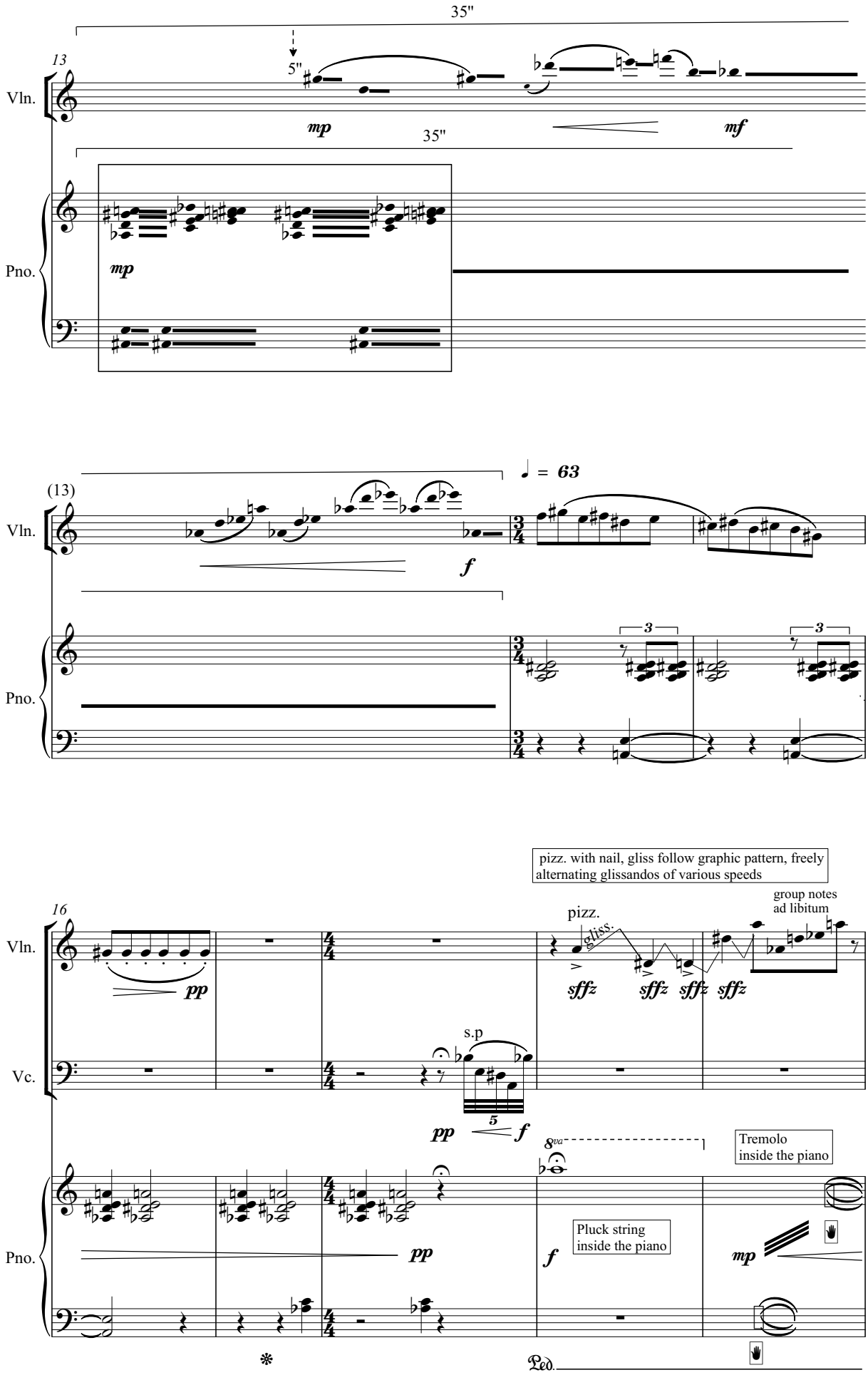
Regeneration

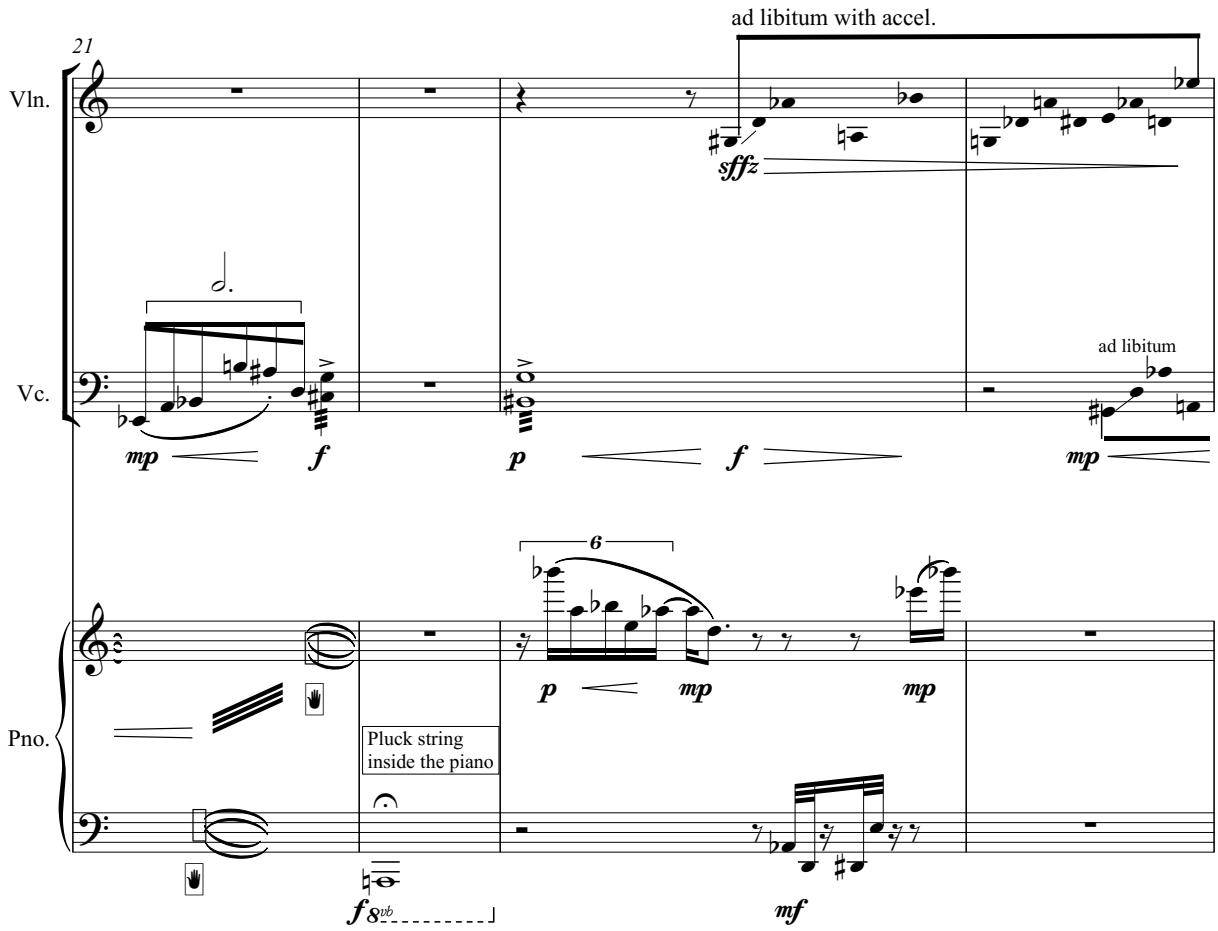


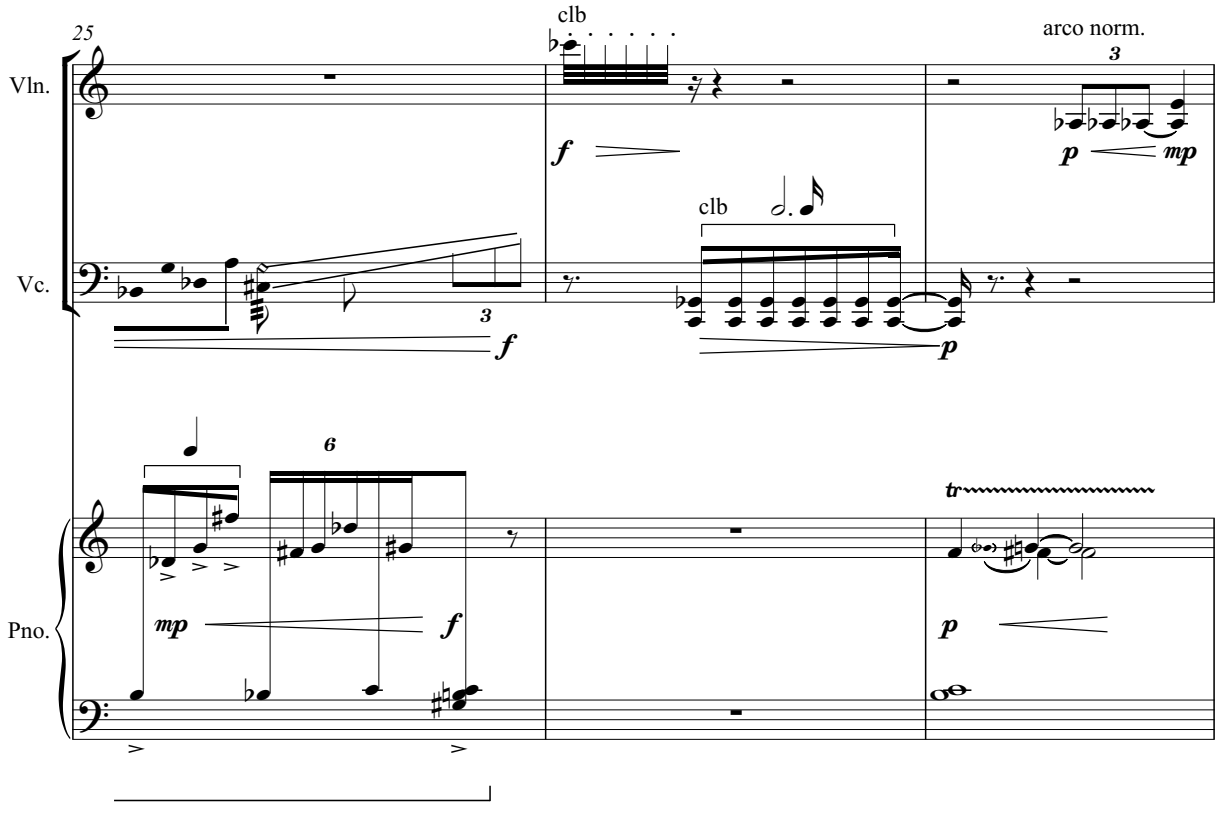
Sustain pedal on continuously from measure 1 to measure 18

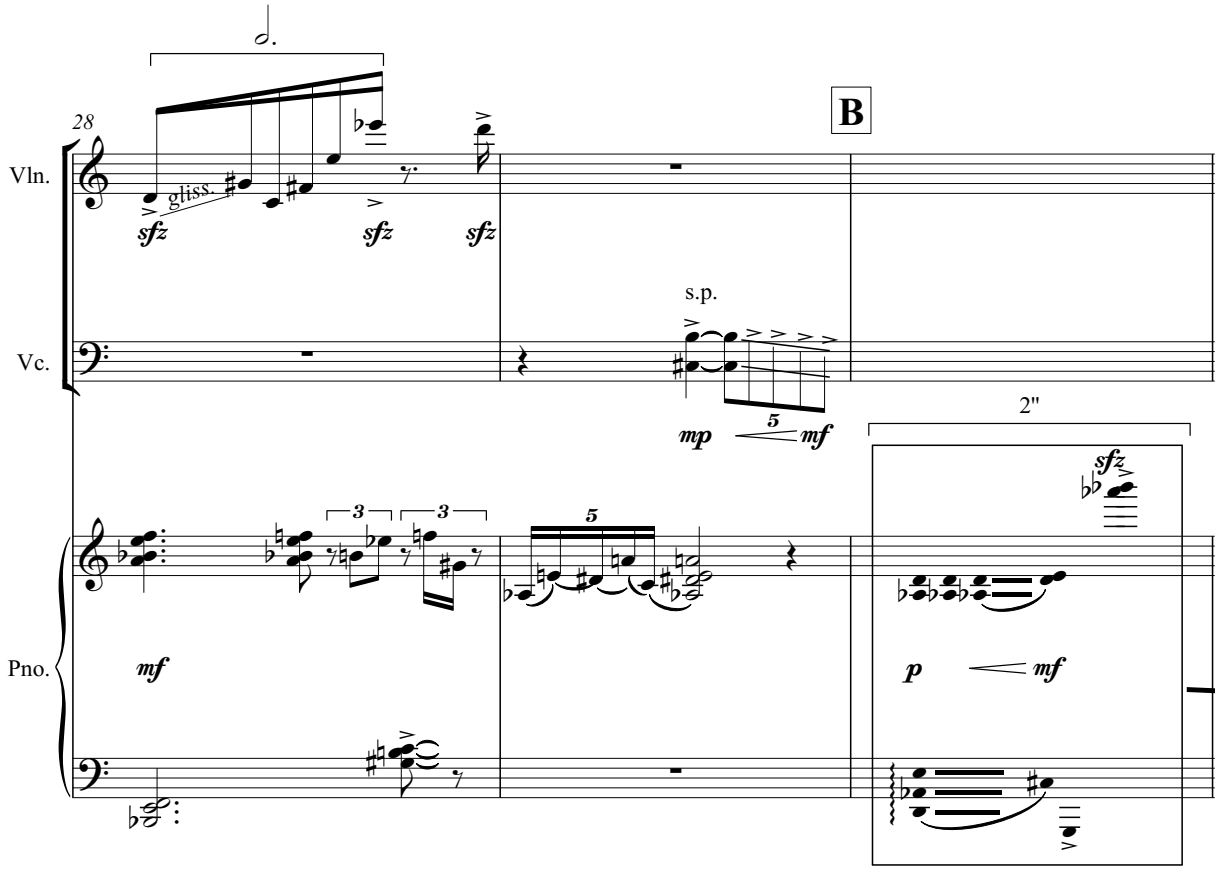


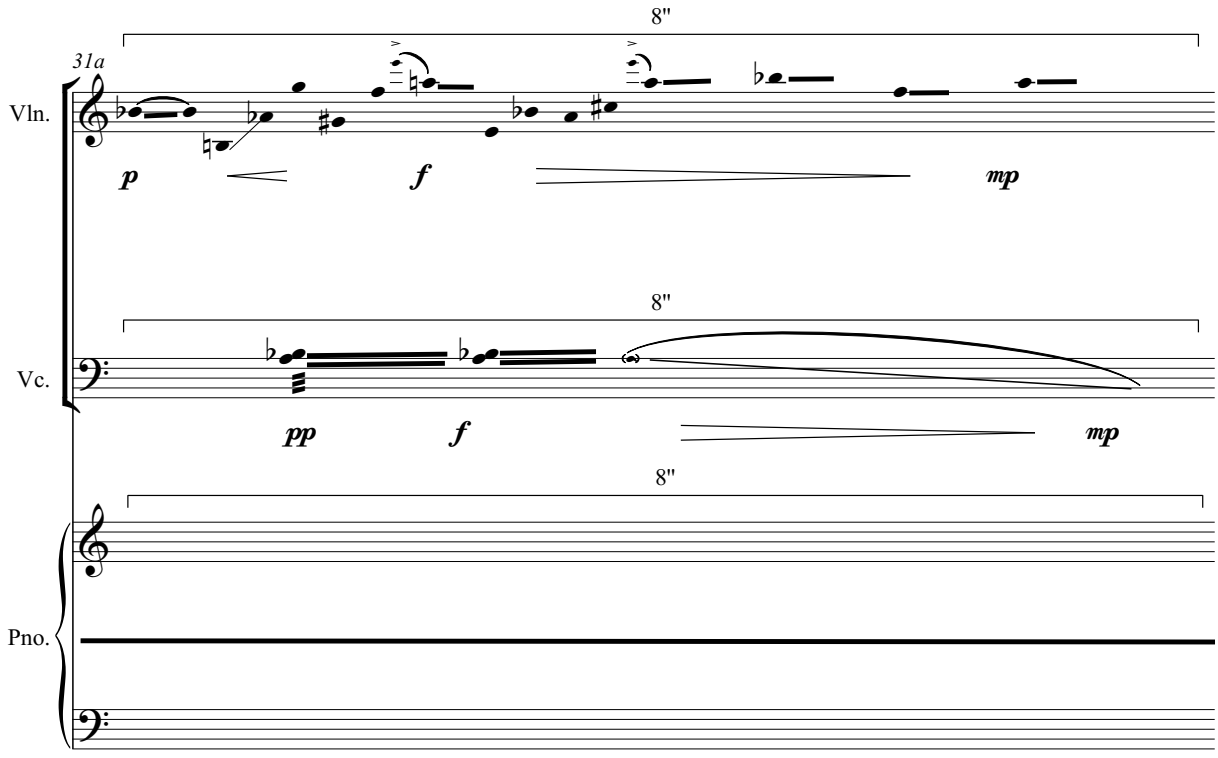


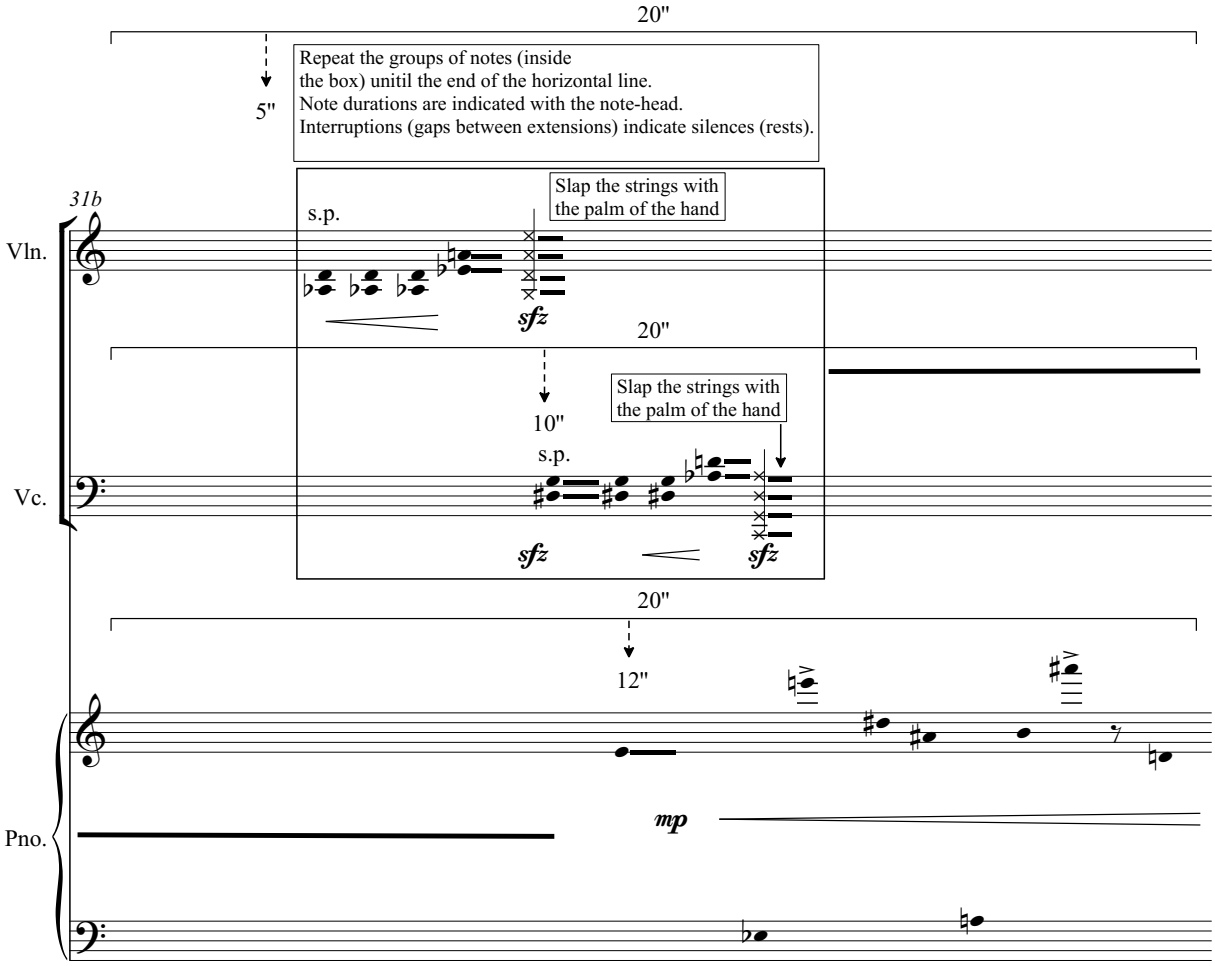

35"
13
Vln.
5"
mp
mf
35"
Pno.
mp
(13)
♩ = 63
f
3
3
16
pizz. with nail, gliss follow graphic pattern, freely alternating glissandos of various speeds
group notes ad libitum
pizz.
gliss.
sffz
pp
s.p
5
8va
Tremolo inside the piano
Pluck string inside the piano
Ped.

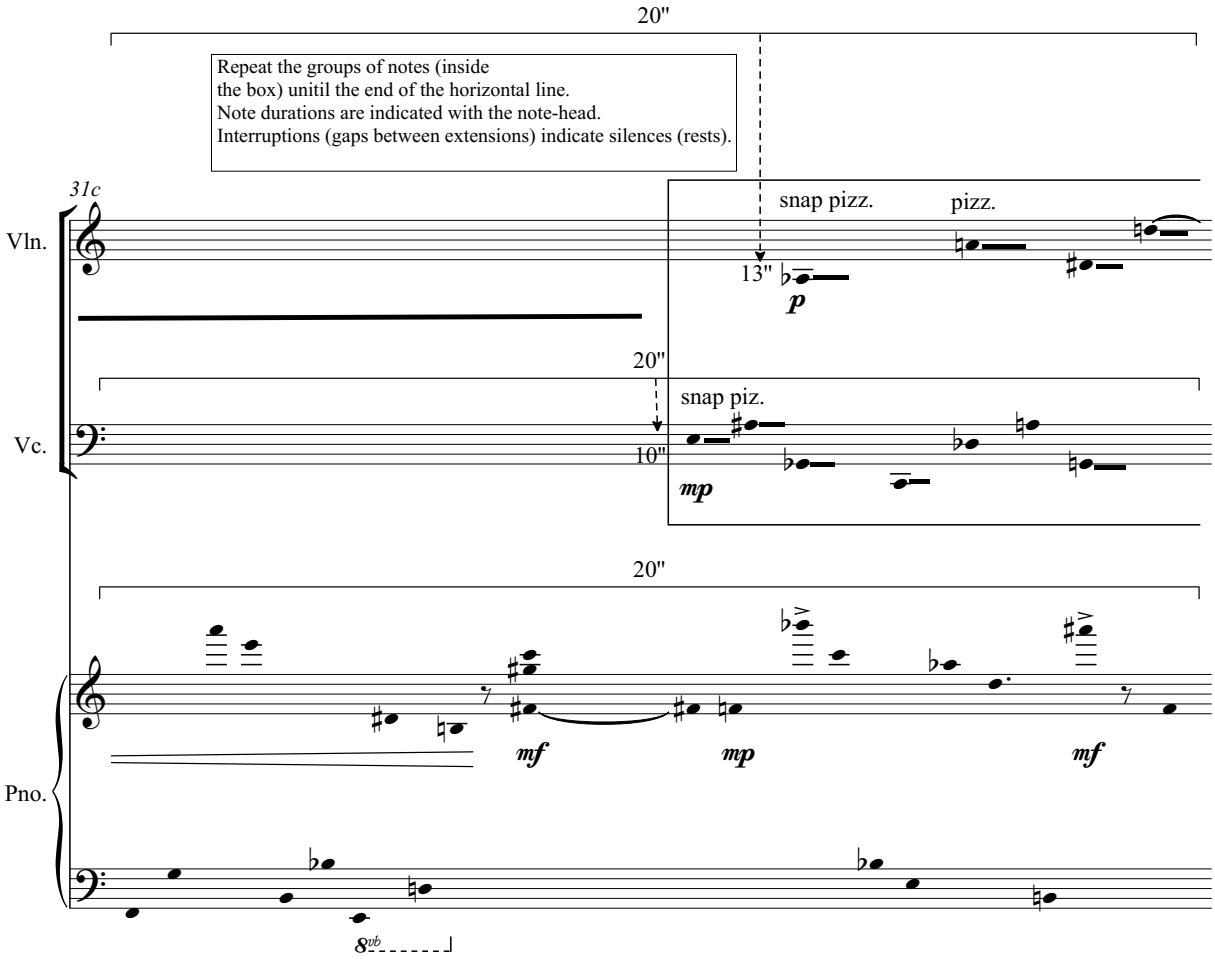

ad libitum with accel.
21
Vln.
Vc.
Pno.
sffz
ad libitum
mp
f
p
f
mp
6
p
mp
mp
Pluck string
inside the piano
f 8vb
mf

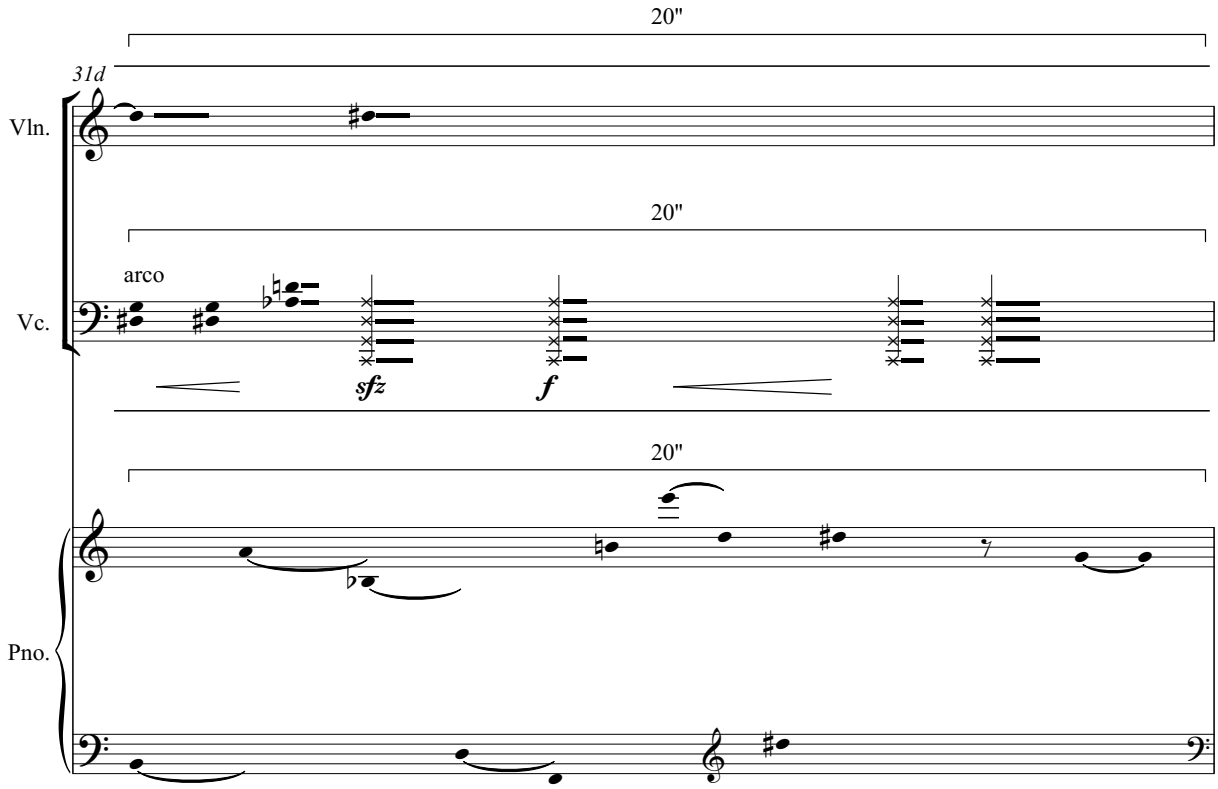

25
clb
arco norm.
3
Vln.
Vc.
Pno.
f
p
mp
clb
3
f
p
6
tr
mp
f
p

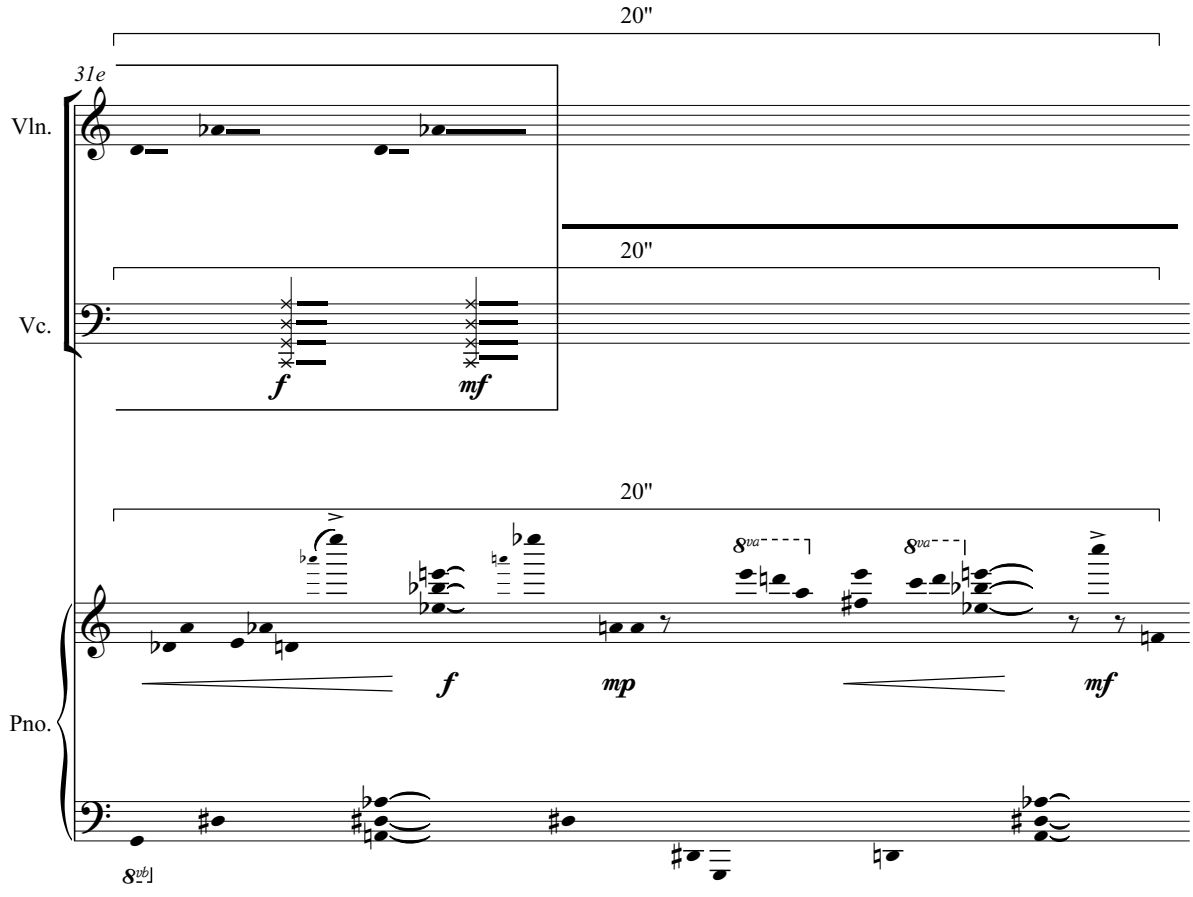

28
Vln.
gliss.
sfz
sfz
sfz
B
s.p.
Vc.
mp
5
mf
2"
sfz
3
3
5
Pno.
mf
p
mf

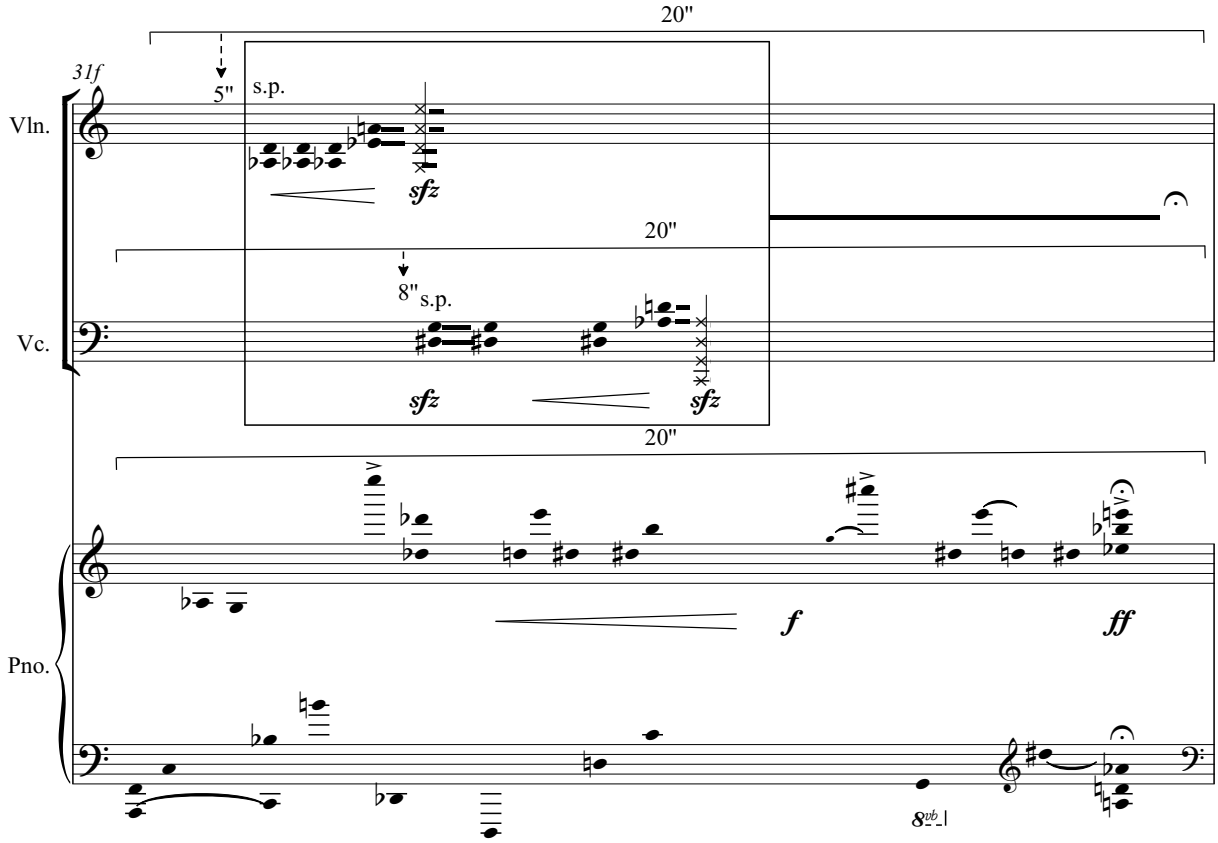

8"
31a
Vln.
p
f
mp
8"
Vc.
pp
f
mp
8"
Pno.

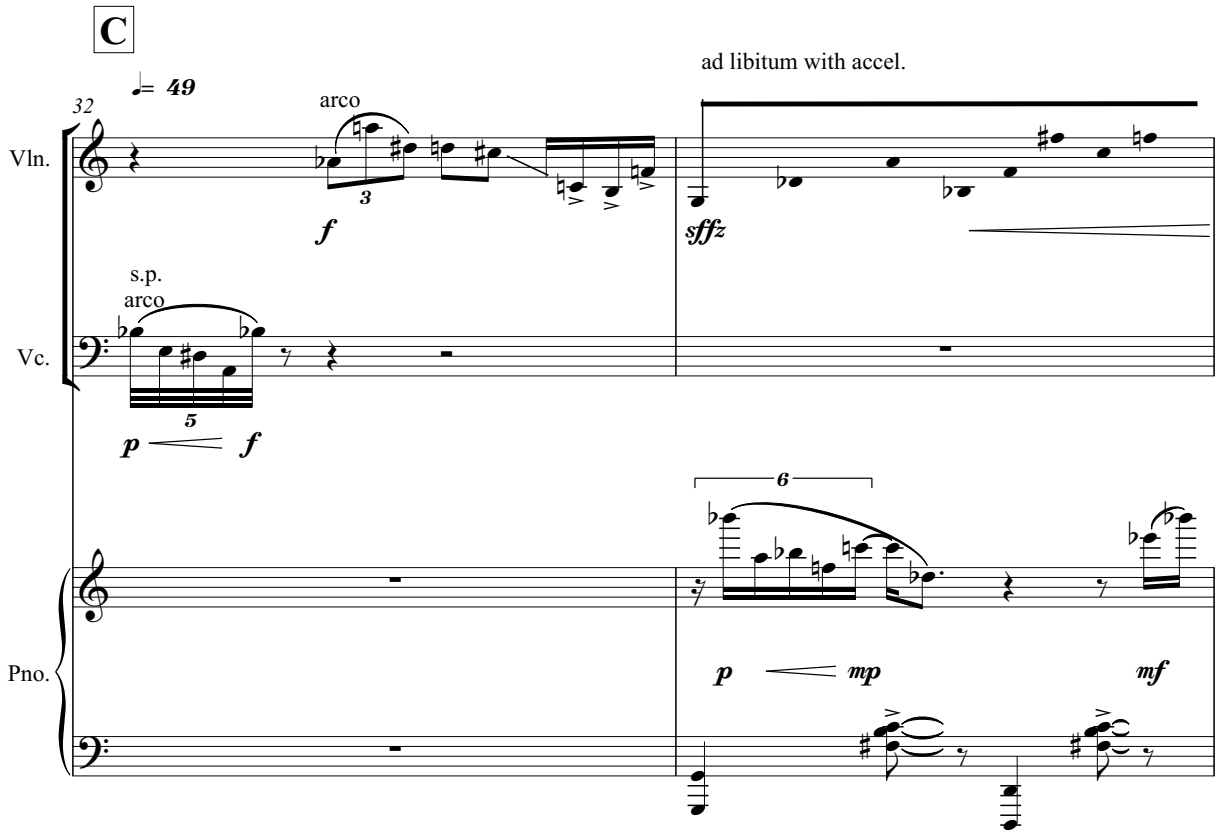

20"
Repeat the groups of notes (inside
the box) unitil the end of the horizontal line.
Note durations are indicated with the note-head.
Interruptions (gaps between extensions) indicate silences (rests).
5"
31b
Vln.
s.p.
Slap the strings with
the palm of the hand
sfz
20"
10"
Slap the strings with
the palm of the hand
Vc.
s.p.
sfz
sfz
20"
12"
Pno.
mp

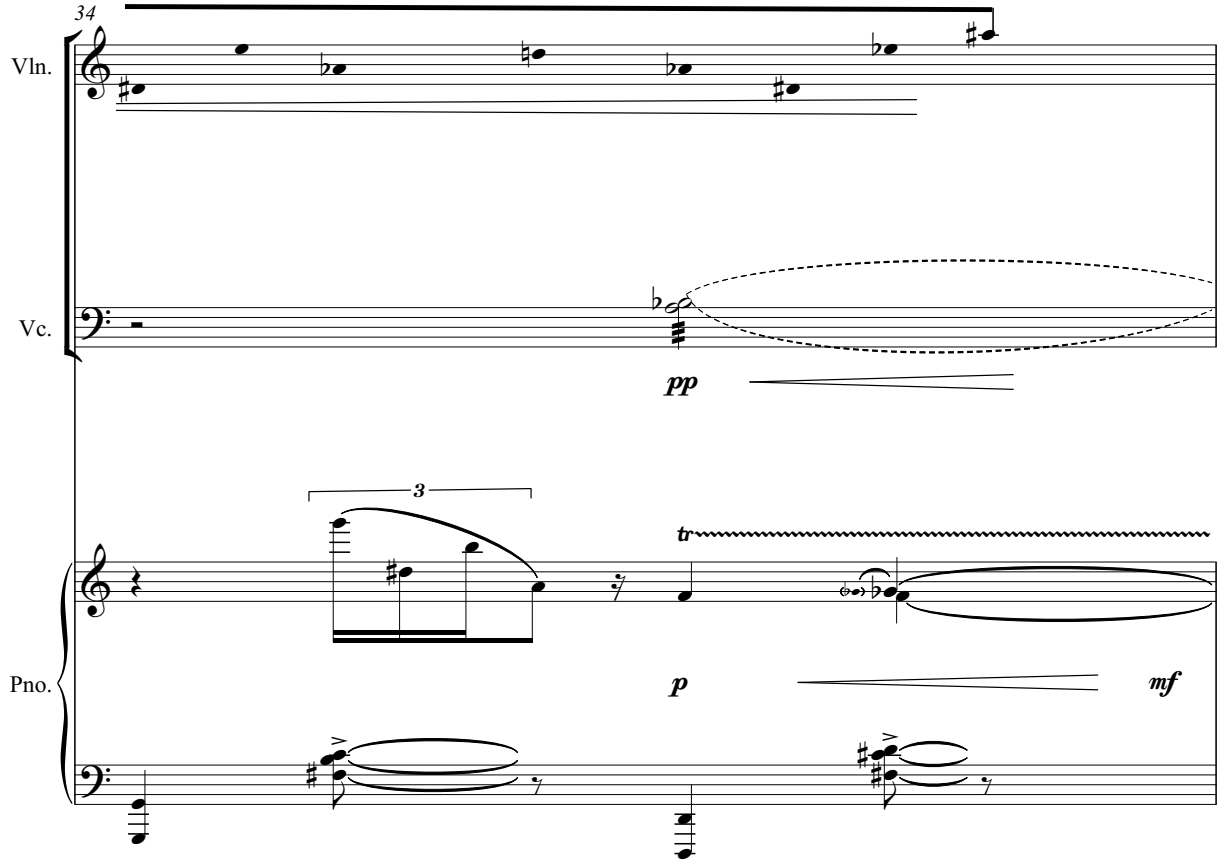

20"
Repeat the groups of notes (inside
the box) unitil the end of the horizontal line.
Note durations are indicated with the note-head.
Interruptions (gaps between extensions) indicate silences (rests).
31c
Vln.
snap pizz.
pizz.
13"
p
20"
snap piz.
Vc.
10"
mp
20"
mf
mp
mf
Pno.
8vb

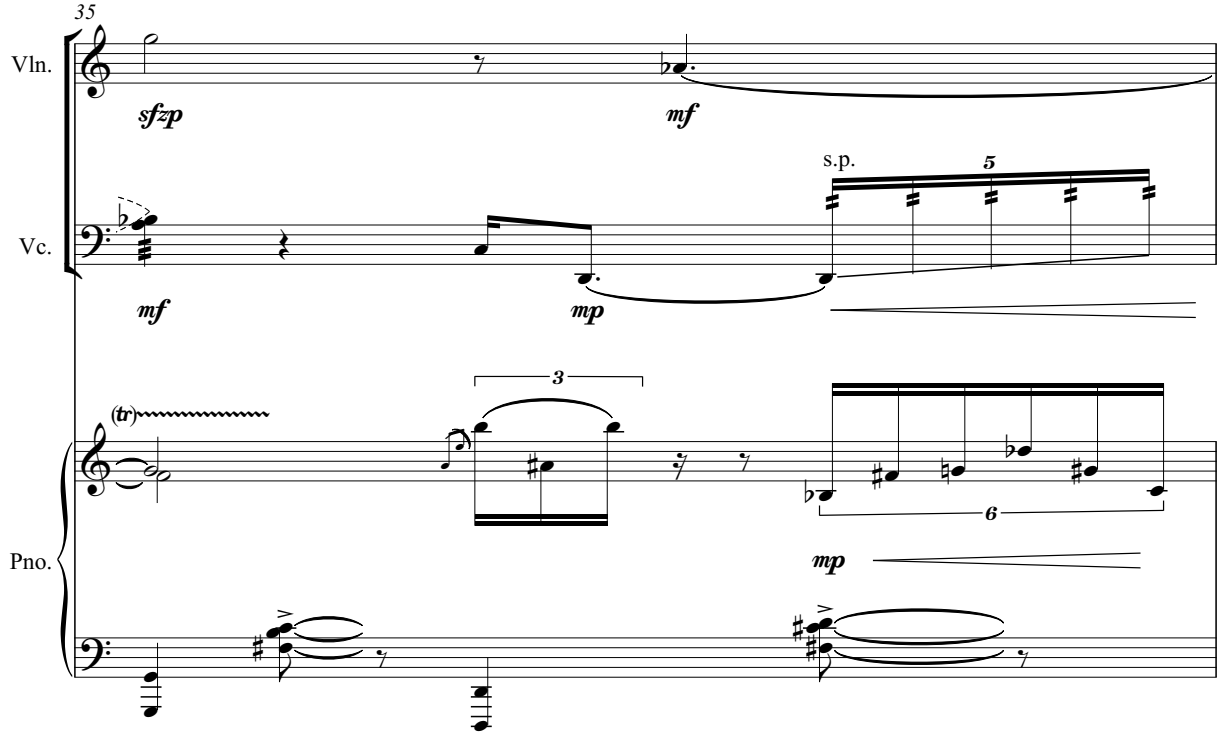

20"
31d
Vln.
20"
arco
Vc.
sfz
f
20"
Pno.

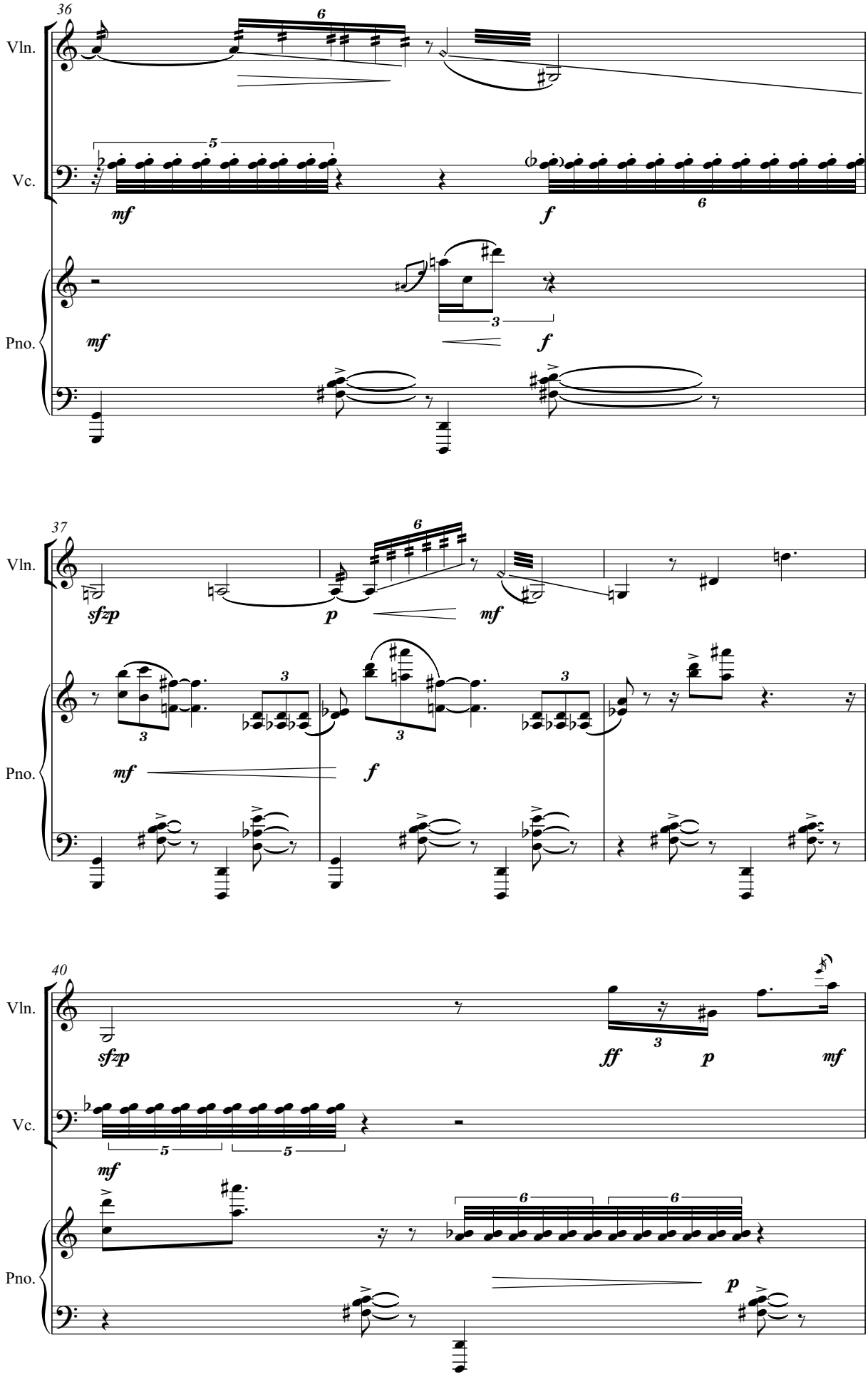

20"
31e
Vln.
20"
Vc.
f
mf
20"
8va
8va
f
mp
mf
Pno.
8vb

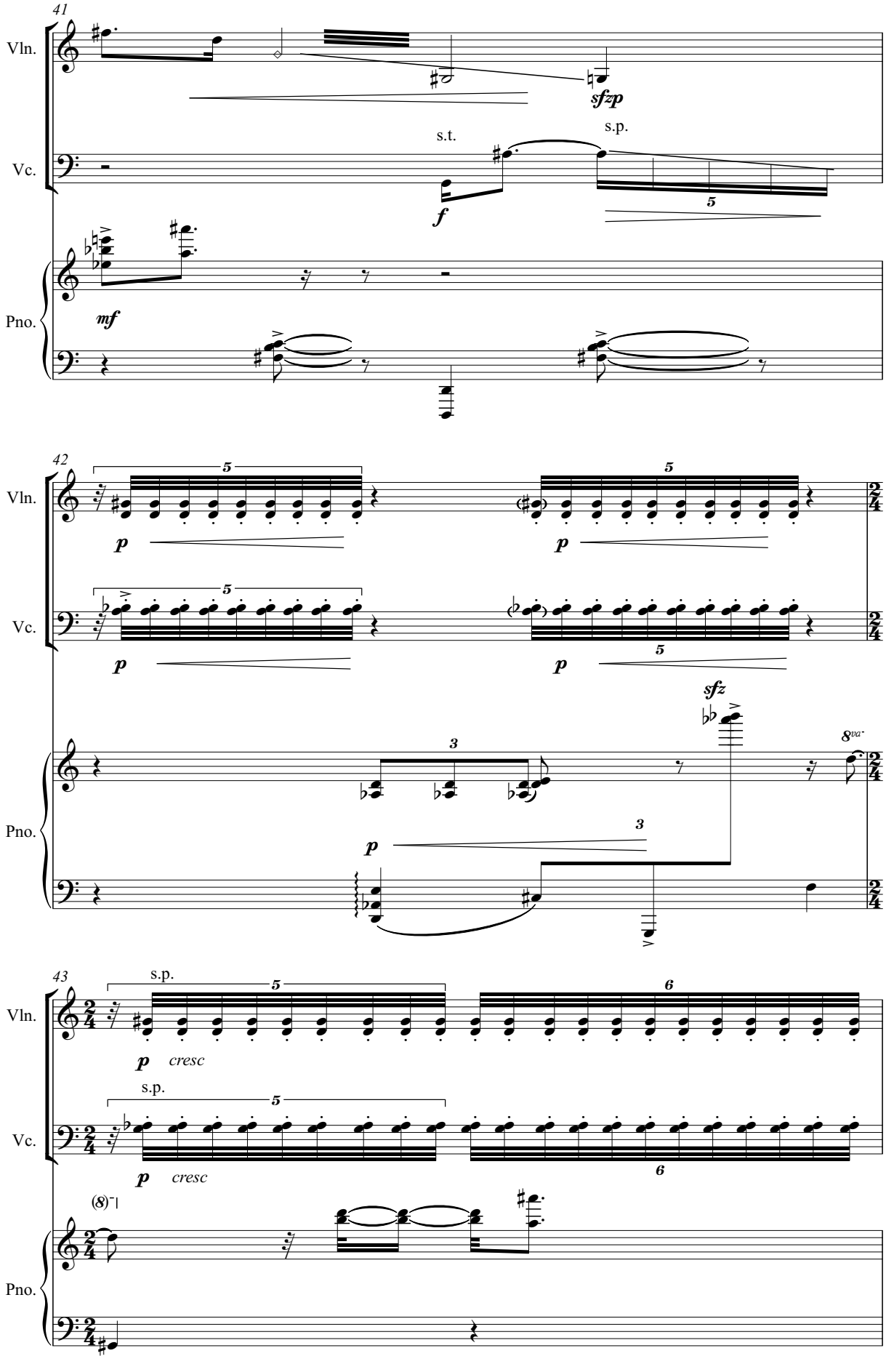

20"
31f
5"
s.p.
Vln.
sfz
20"
8"
s.p.
Vc.
sfz
sfz
20"
Pno.
f
ff
8vb

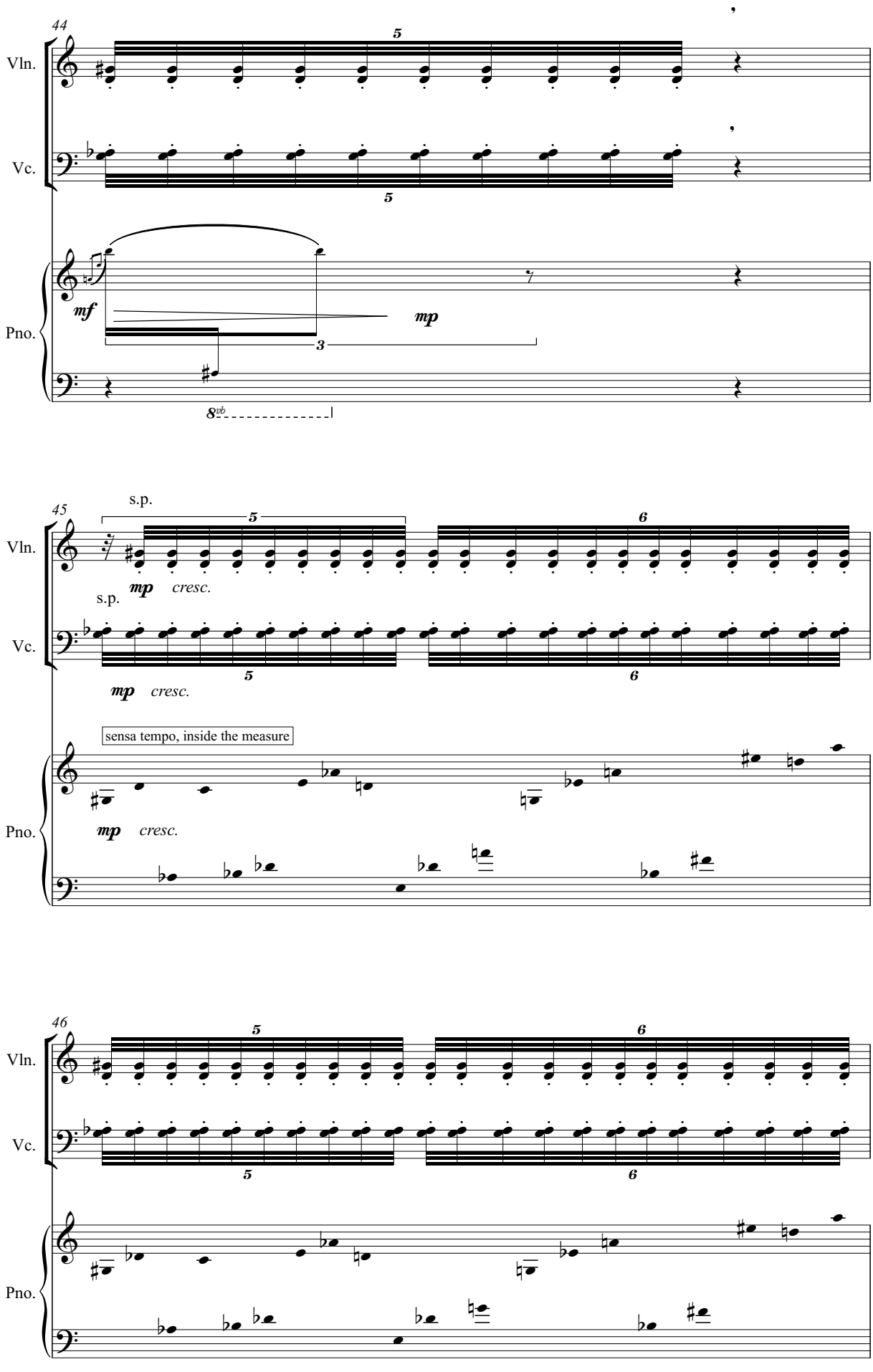

C
ad libitum with accel.
32
= 49
arco
Vln.
f
sffz
s.p.
arco
Vc.
p
f
6
Pno.
p
mp
mf

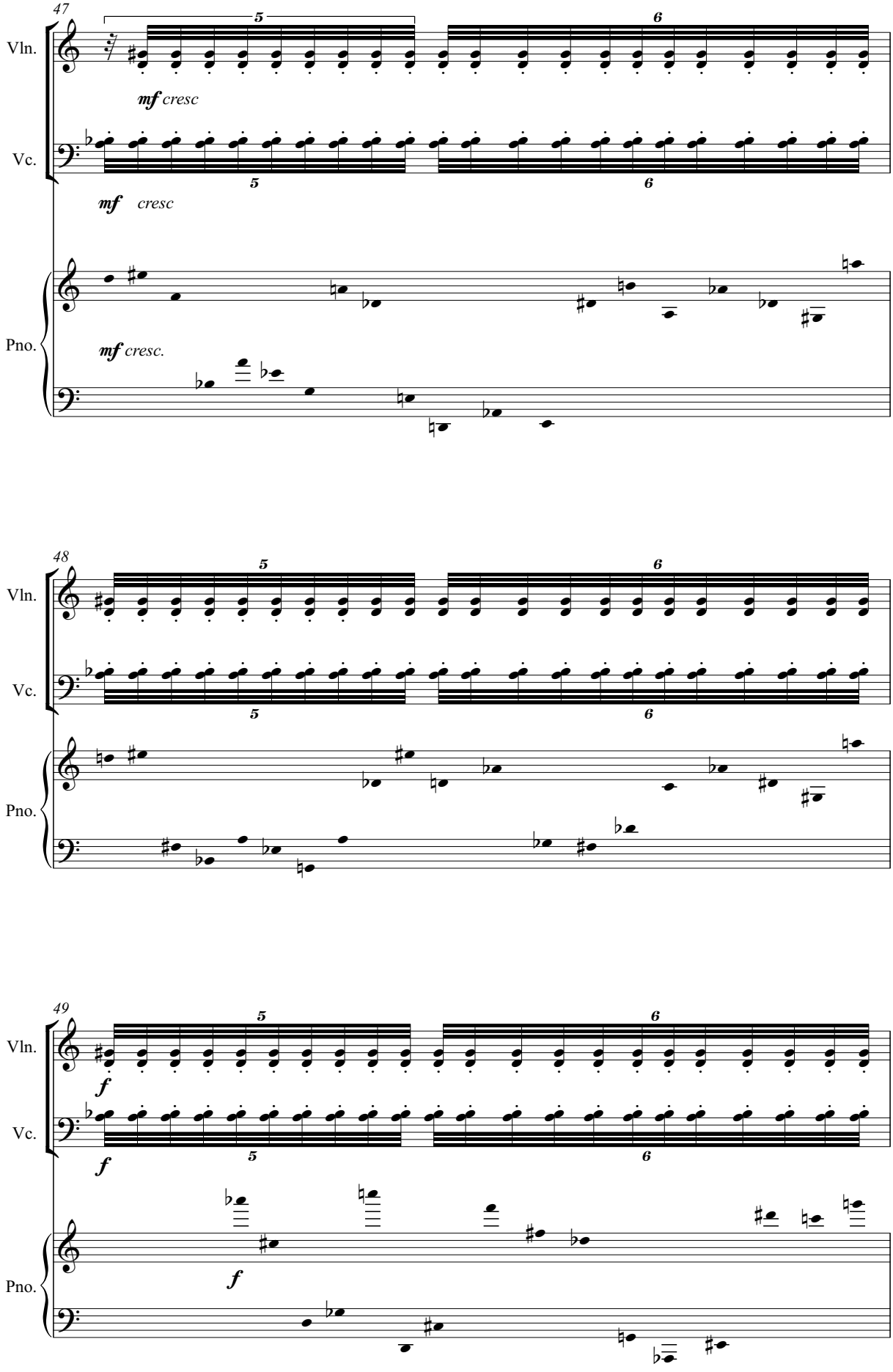

34
Vln.
Vc.
pp
3
tr
Pno.
p
mf

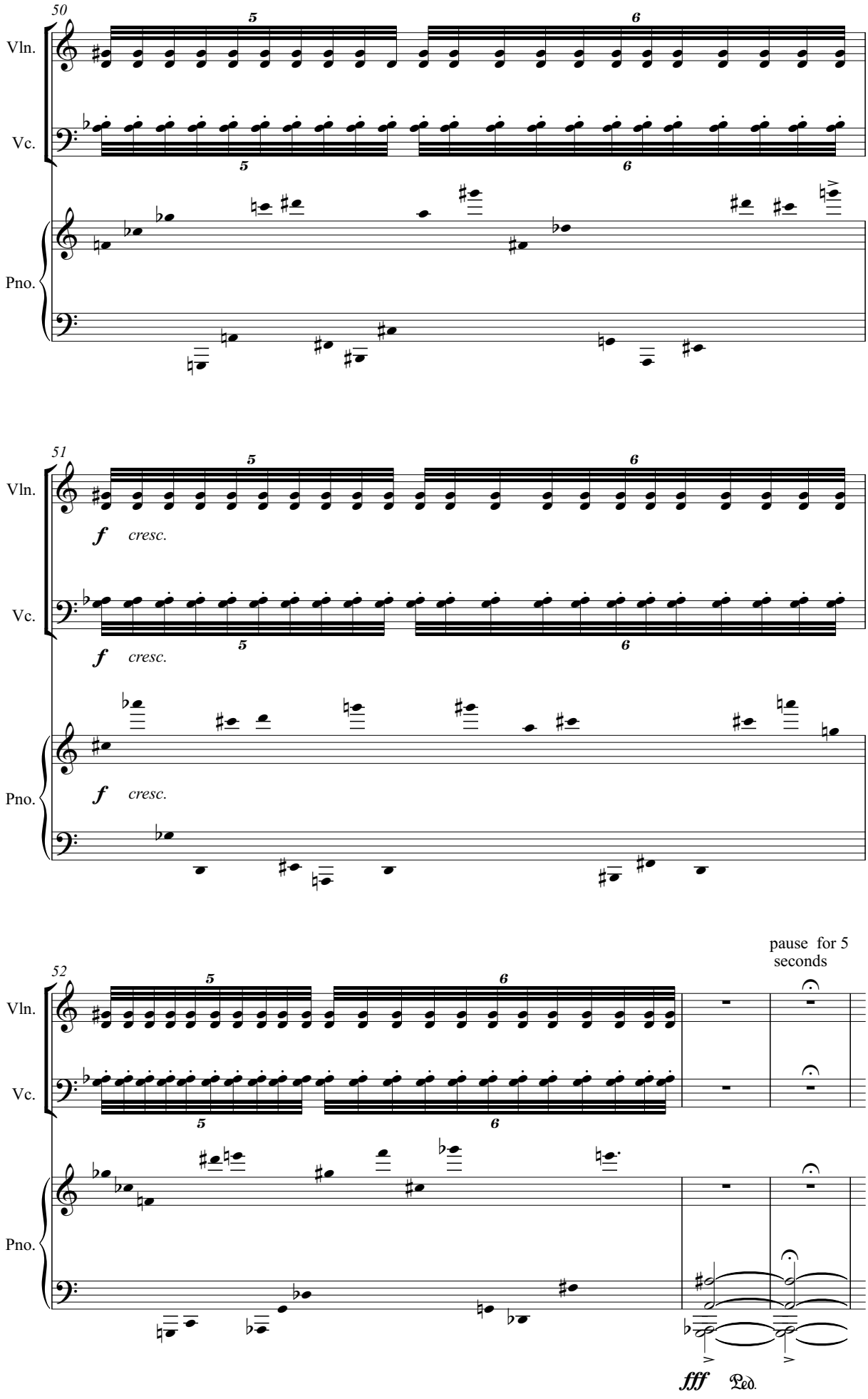

35
Vln.
sfzp
mf
s.p.
5
Vc.
mf
mp
3
(tr)
6
Pno.
mp

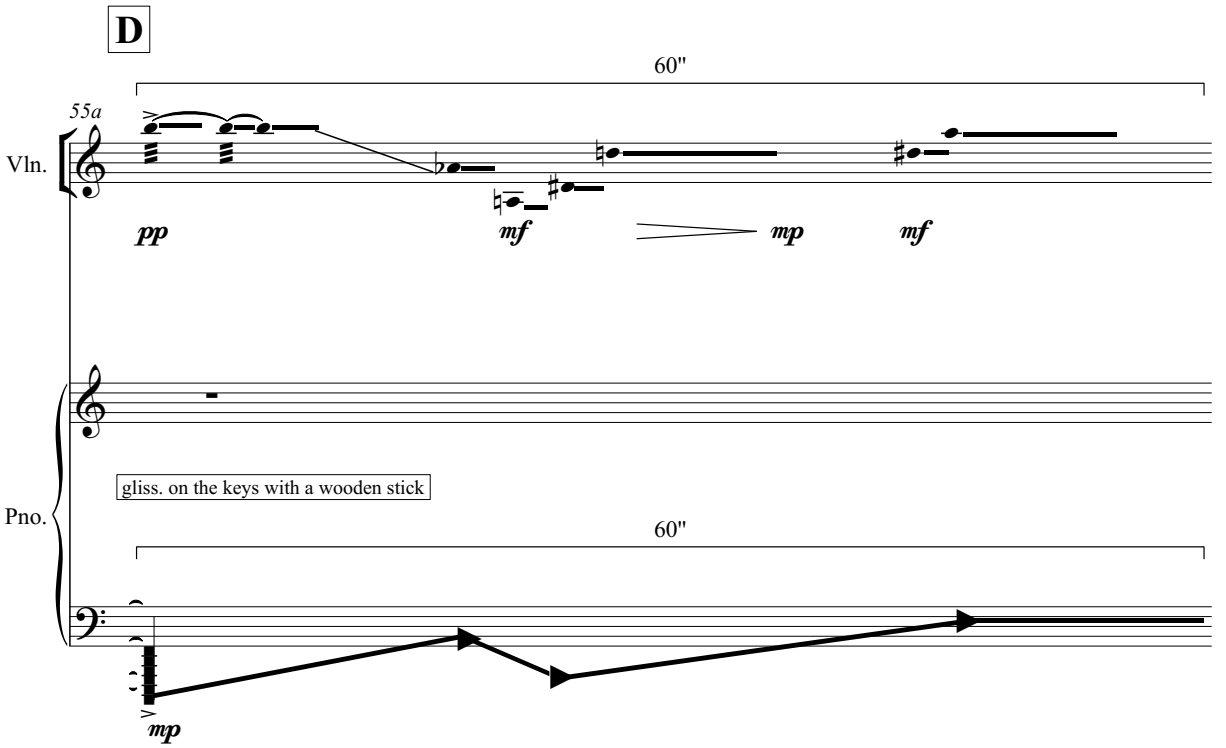

36
Vln.
Vc.
Pno.
mf
f
37
sfzp
p
mf
40
ff
p

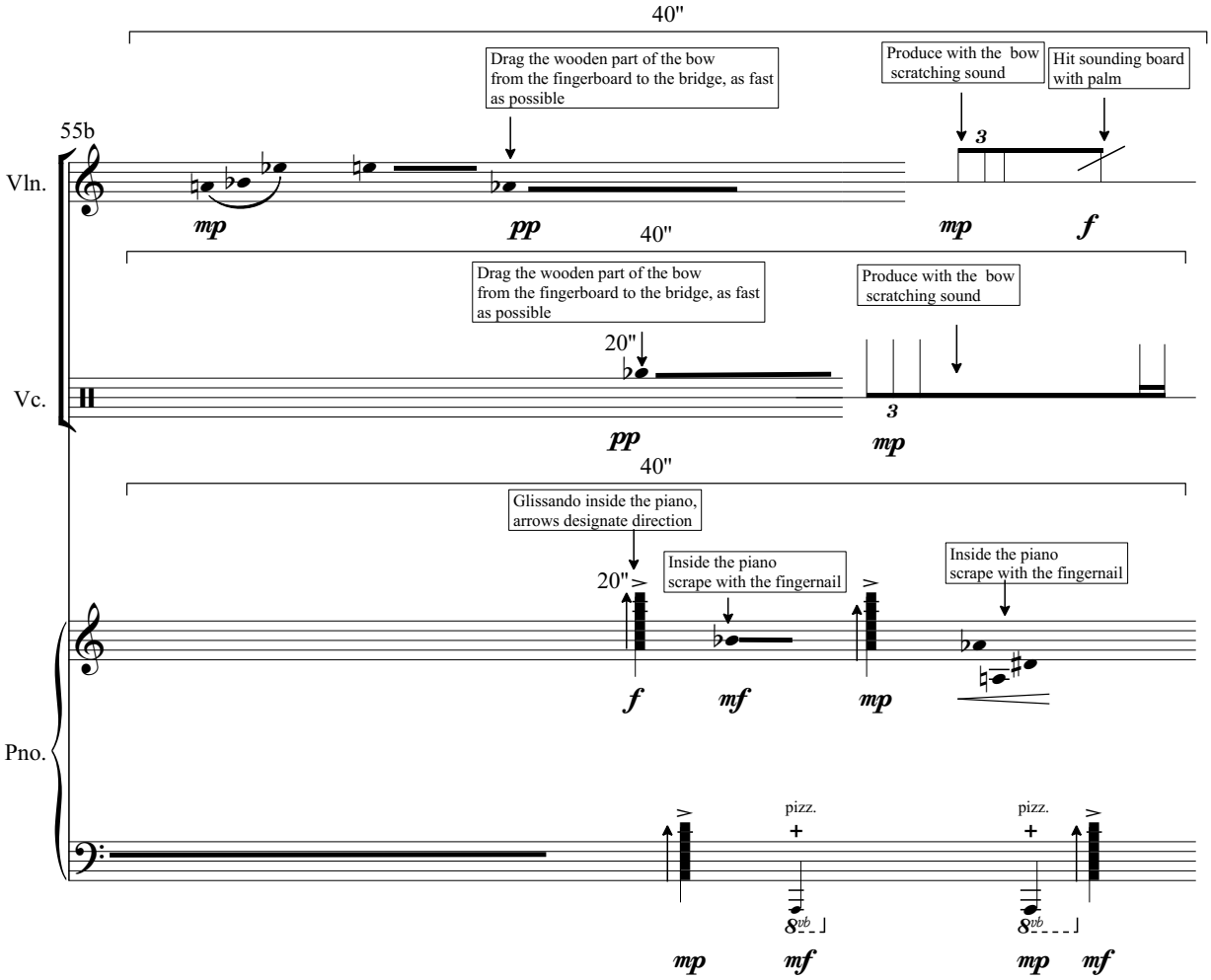

41
Vln.
Vc.
Pno.
sfzp
s.t.
s.p.
f
mf
42
p
sfz
8va
43
s.p.
cresc
(8)

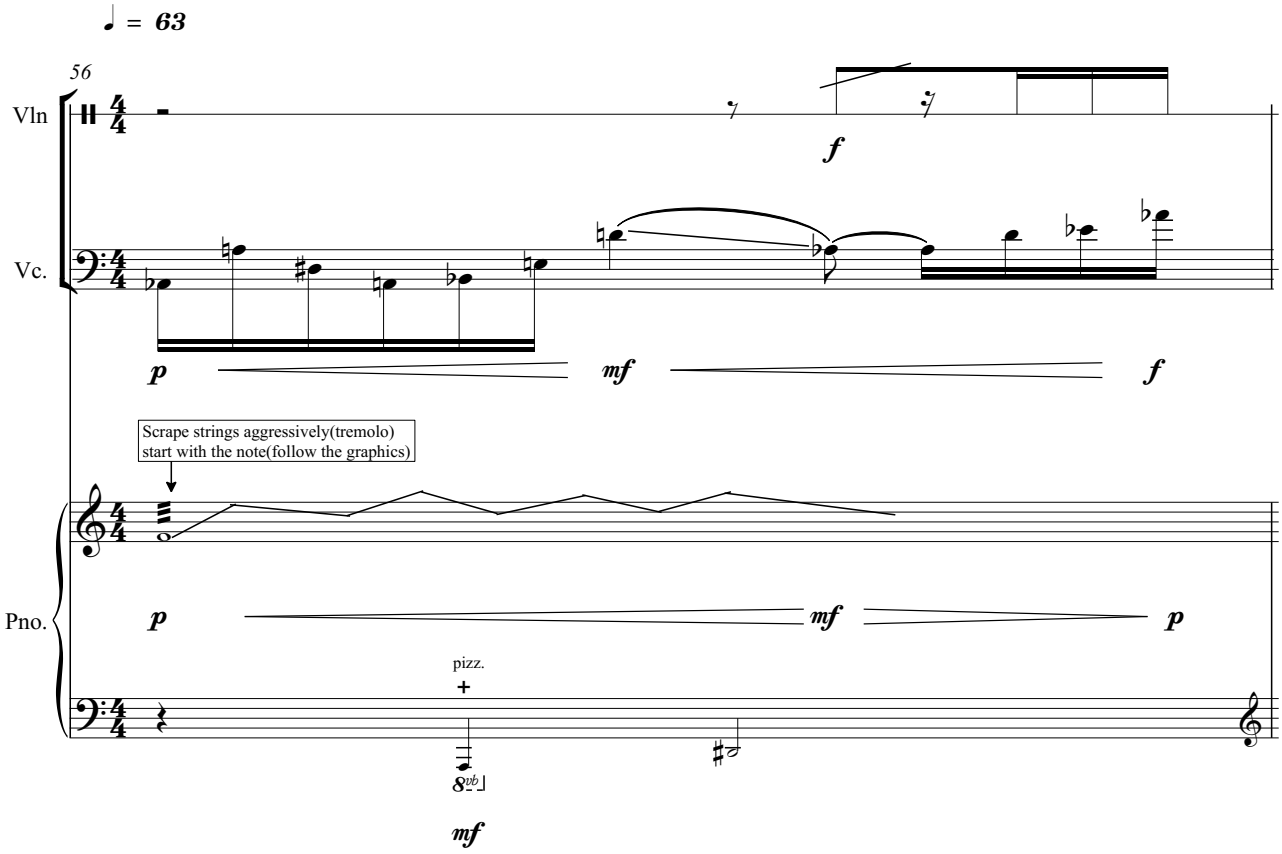

44
Vln.
Vc.
Pno.
5
5
mf
mp
3
8vb
45
s.p.
5
6
mp cresc.
s.p.
mp cresc.
sensa tempo, inside the measure
mp cresc.
46
5
6
5
6

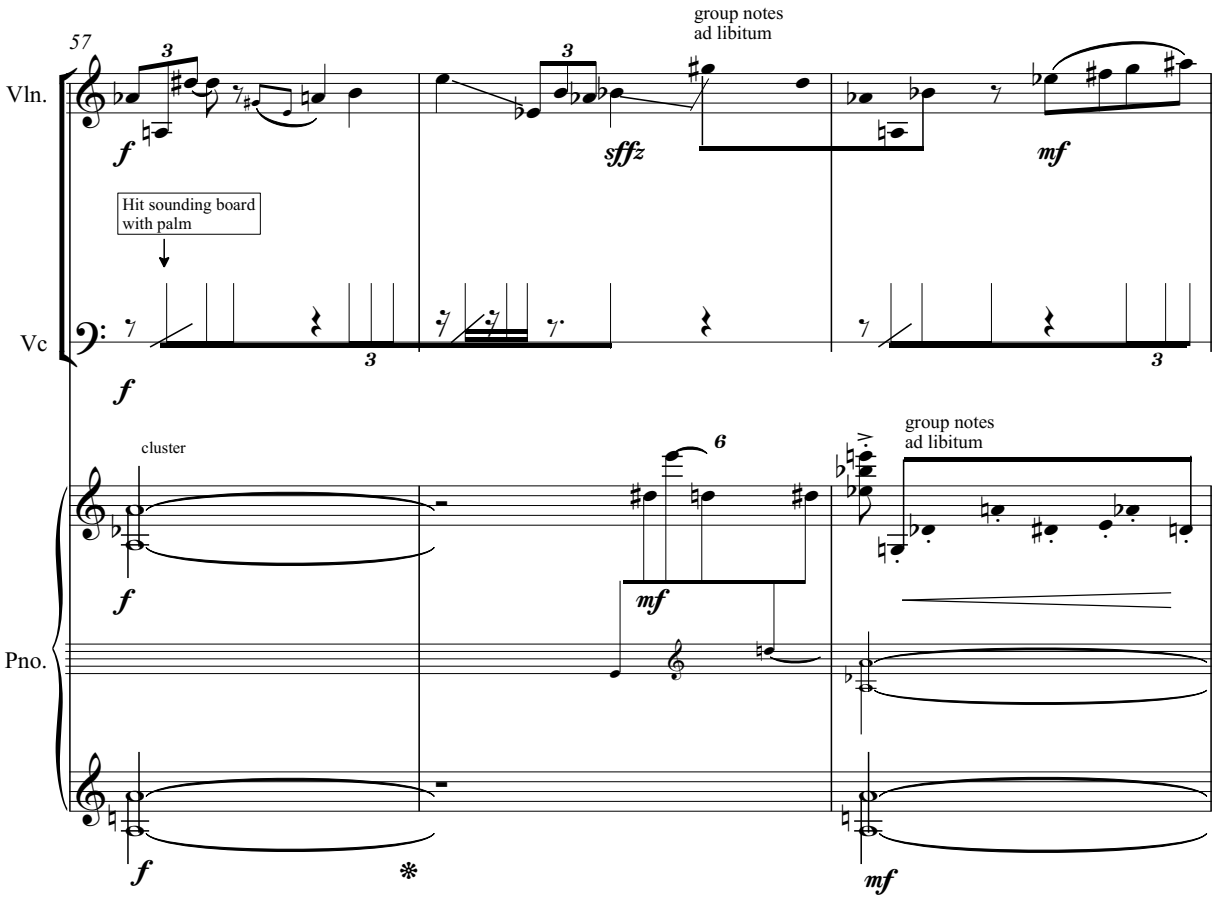

47
Vln.
Vc.
Pno.
mf cresc
mf cresc
mf cresc.
48
49
f
f
5
6

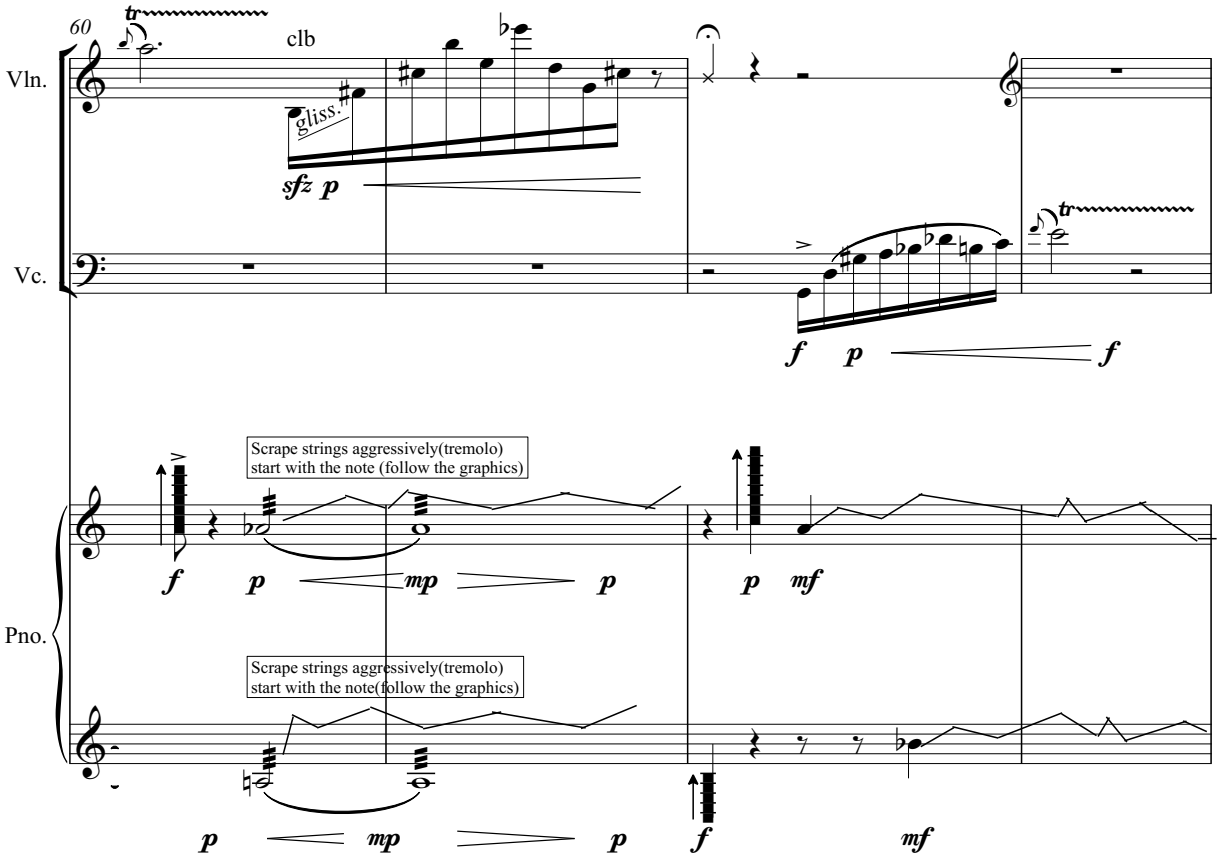

50
Vln.
Vc.
Pno.
51
Vln.
Vc.
Pno.
f cresc.
52
Vln.
Vc.
Pno.
pause for 5 seconds
fff

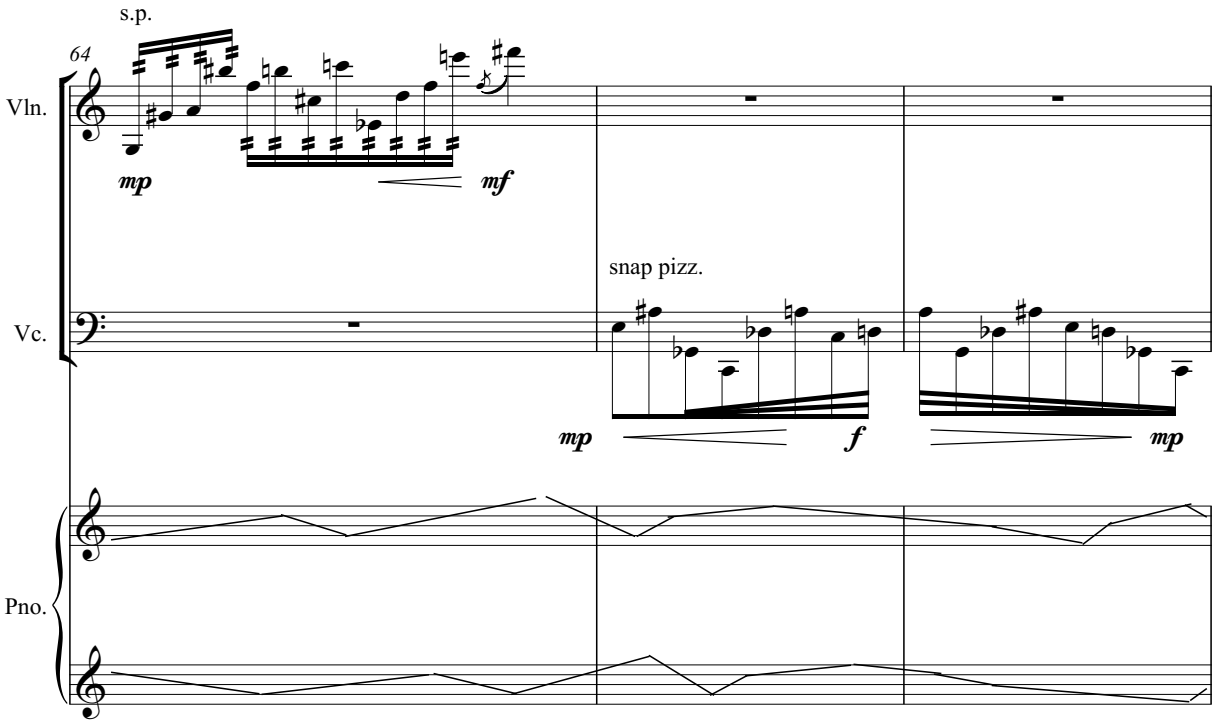

D
60"
55a
Vln.
pp
mf
mp
mf
Pno.
gliss. on the keys with a wooden stick
60"
mp

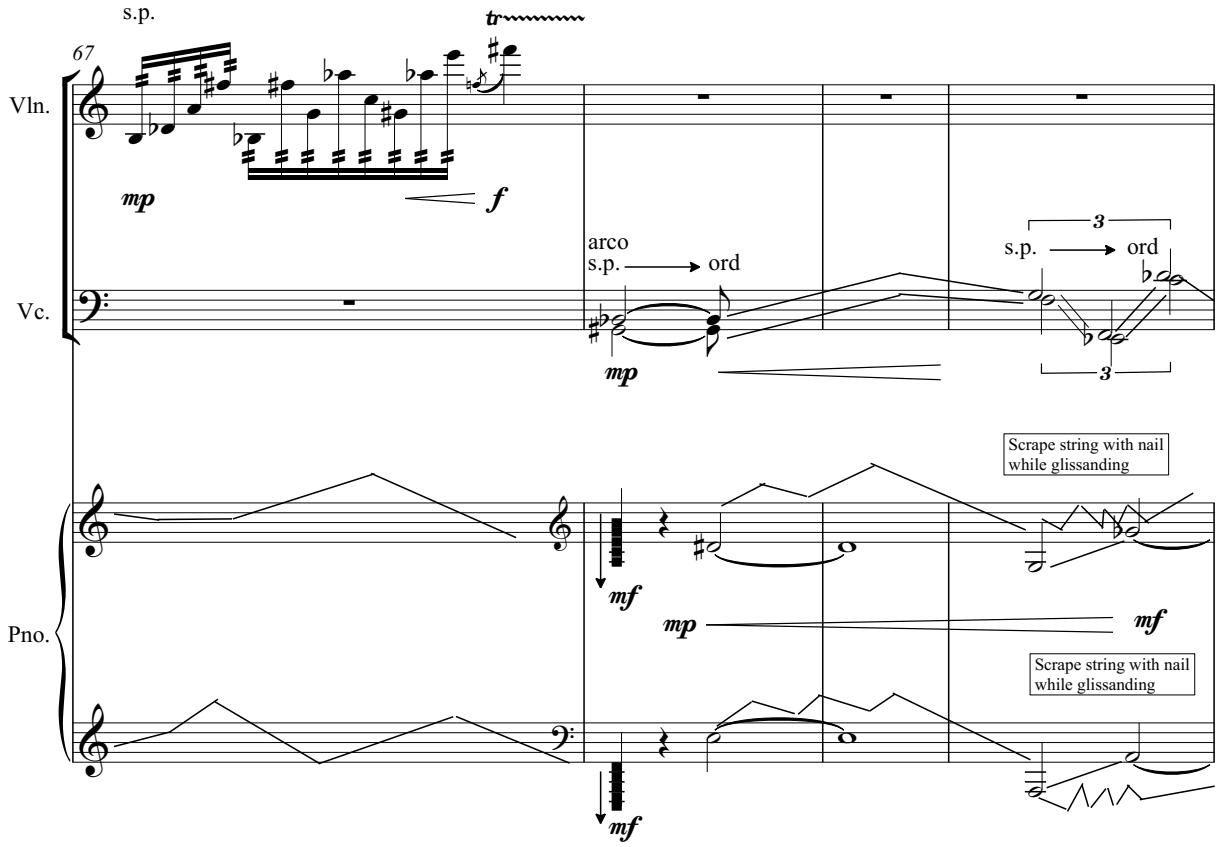

40"
55b
Drag the wooden part of the bow from the fingerboard to the bridge, as fast as possible
Produce with the bow scratching sound
Hit sounding board with palm
Vln.
mp
pp
3
mp
f
40"
Drag the wooden part of the bow from the fingerboard to the bridge, as fast as possible
Produce with the bow scratching sound
20"
Vc.
pp
3
mp
40"
Glissando inside the piano, arrows designate direction
20"
Inside the piano scrape with the fingernail
Inside the piano scrape with the fingernail
f
mf
mp
Pno.
pizz.
pizz.
8vb
8vb
mp
mf
mp
mf

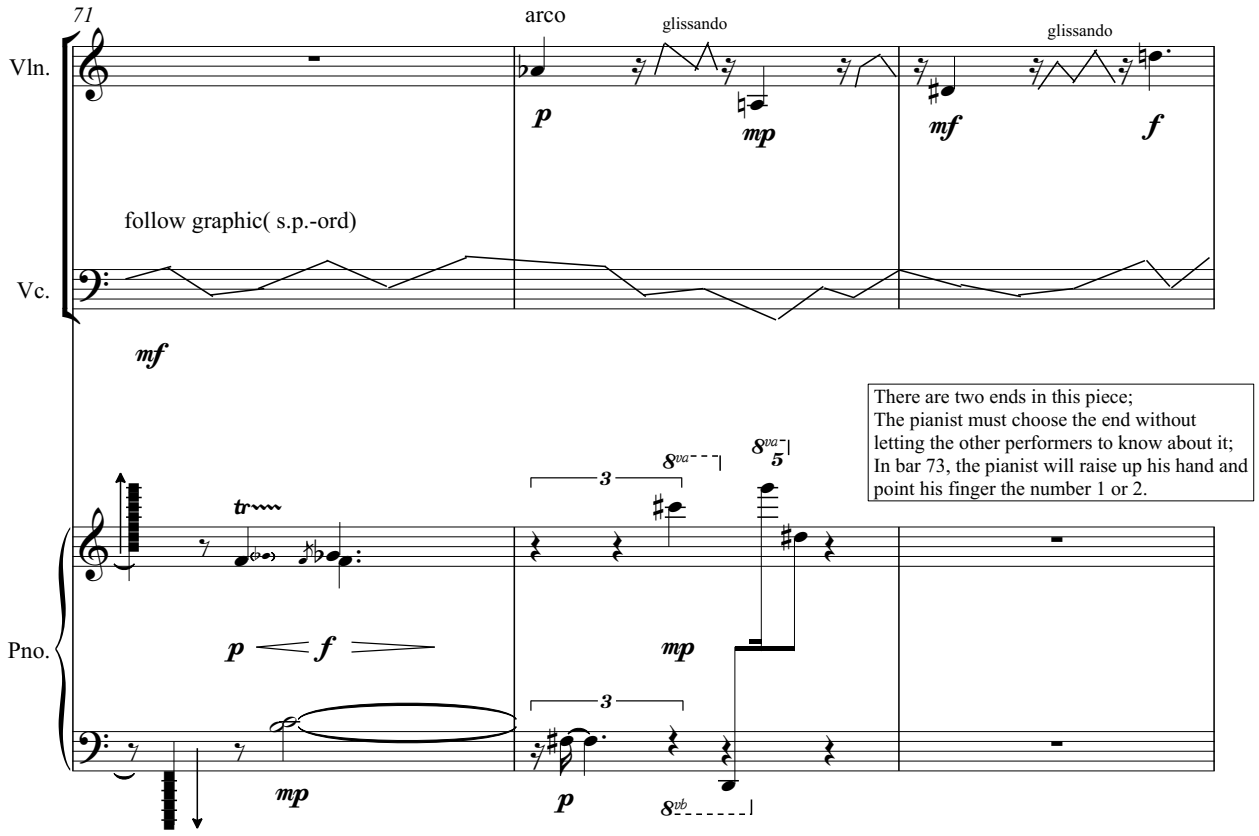

♩ = 63
56
Vln
Vc.
Pno.
Scrape strings aggressively(tremolo)
start with the note(follow the graphics)
pizz.

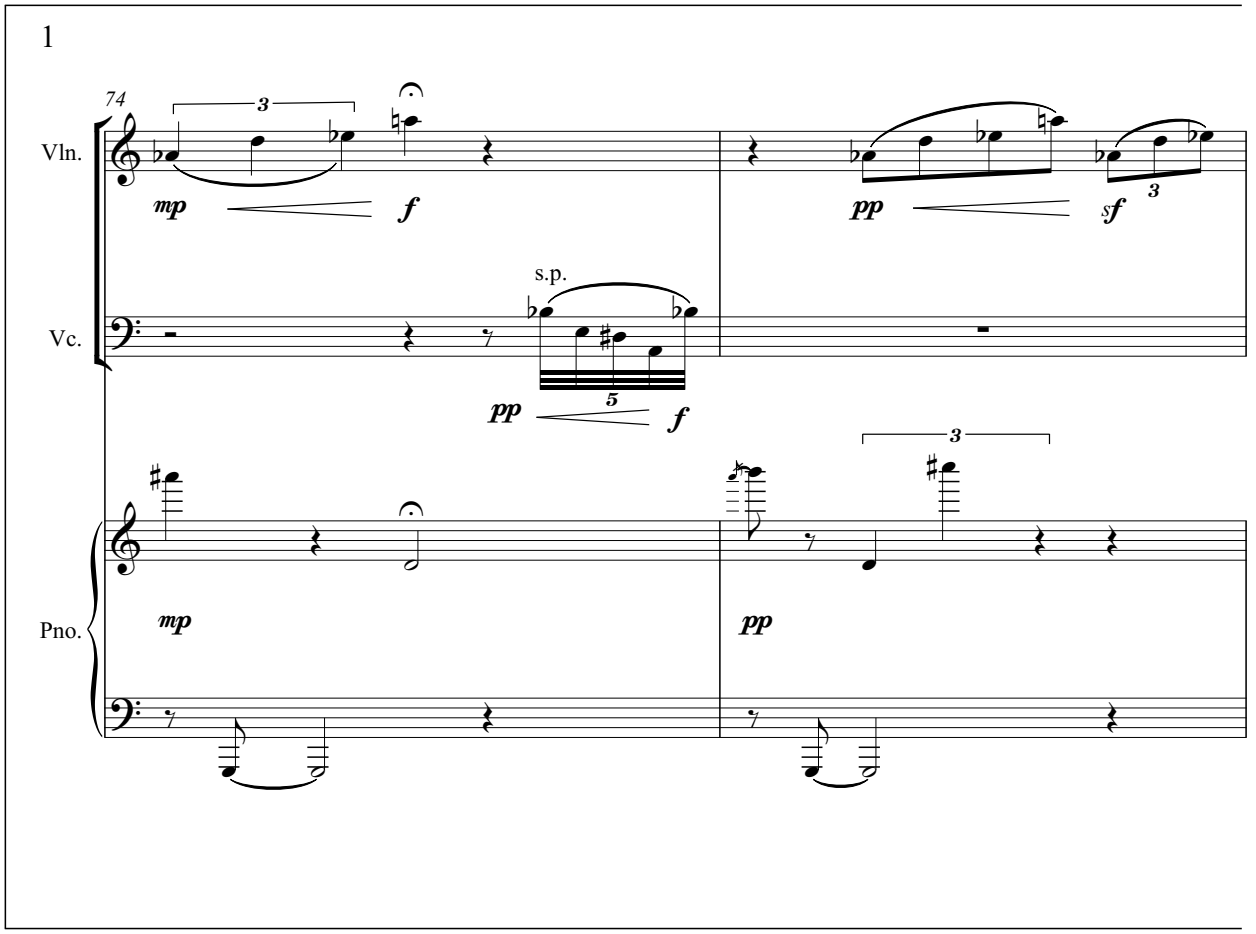

57
Vln.
Vc
Pno.
group notes
ad libitum
Hit sounding board
with palm
cluster
group notes
ad libitum

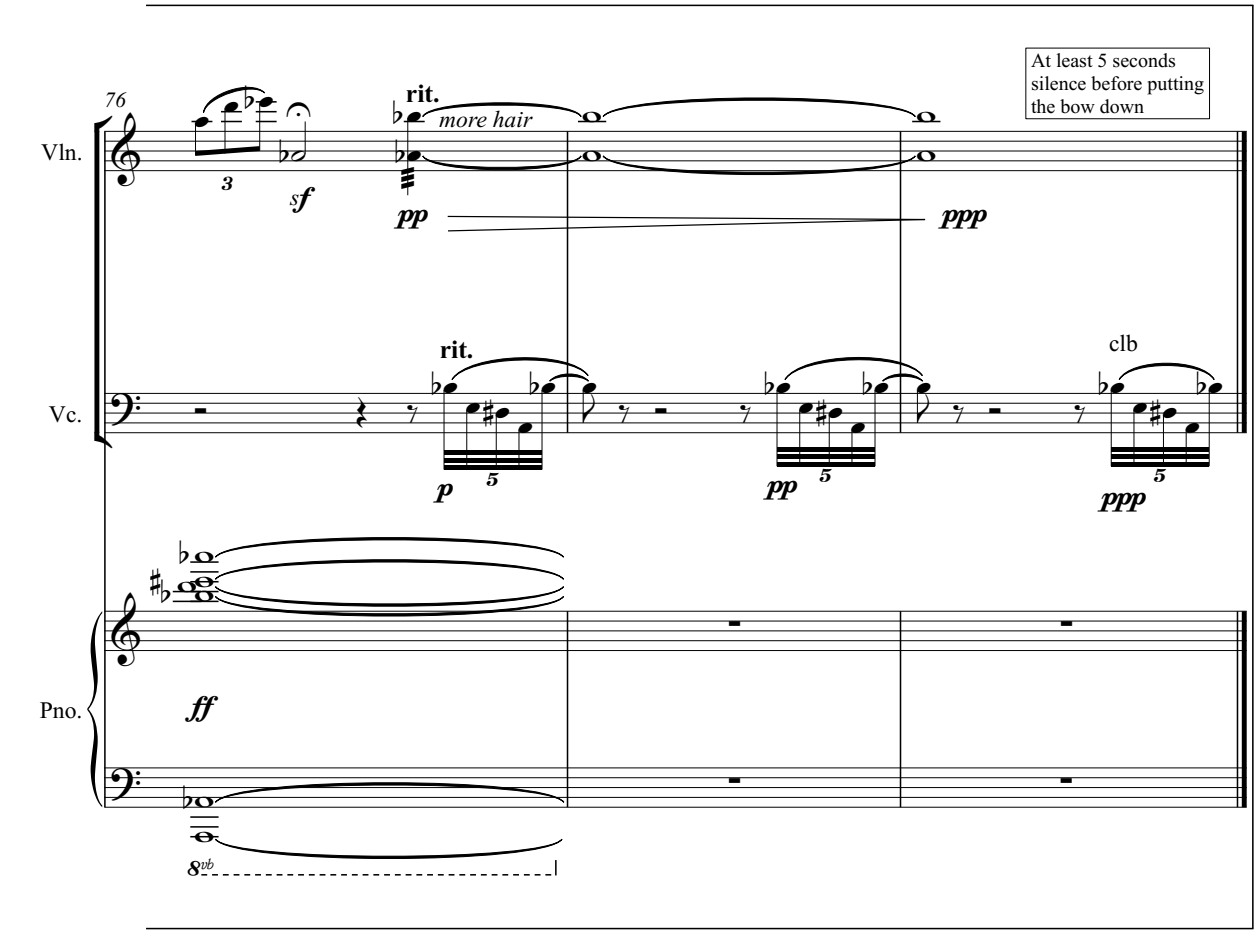

60
Vln.
Vc.
Pno.
clb
gliss.
sfz p
f p f
Scrape strings aggressively(tremolo)
start with the note (follow the graphics)
f p mp p
p mf
Scrape strings aggressively(tremolo)
start with the note(follow the graphics)
p mp p f mf


s.p.
64
Vln.
Vc.
Pno.
mp mf
snap pizz.
mp f mp

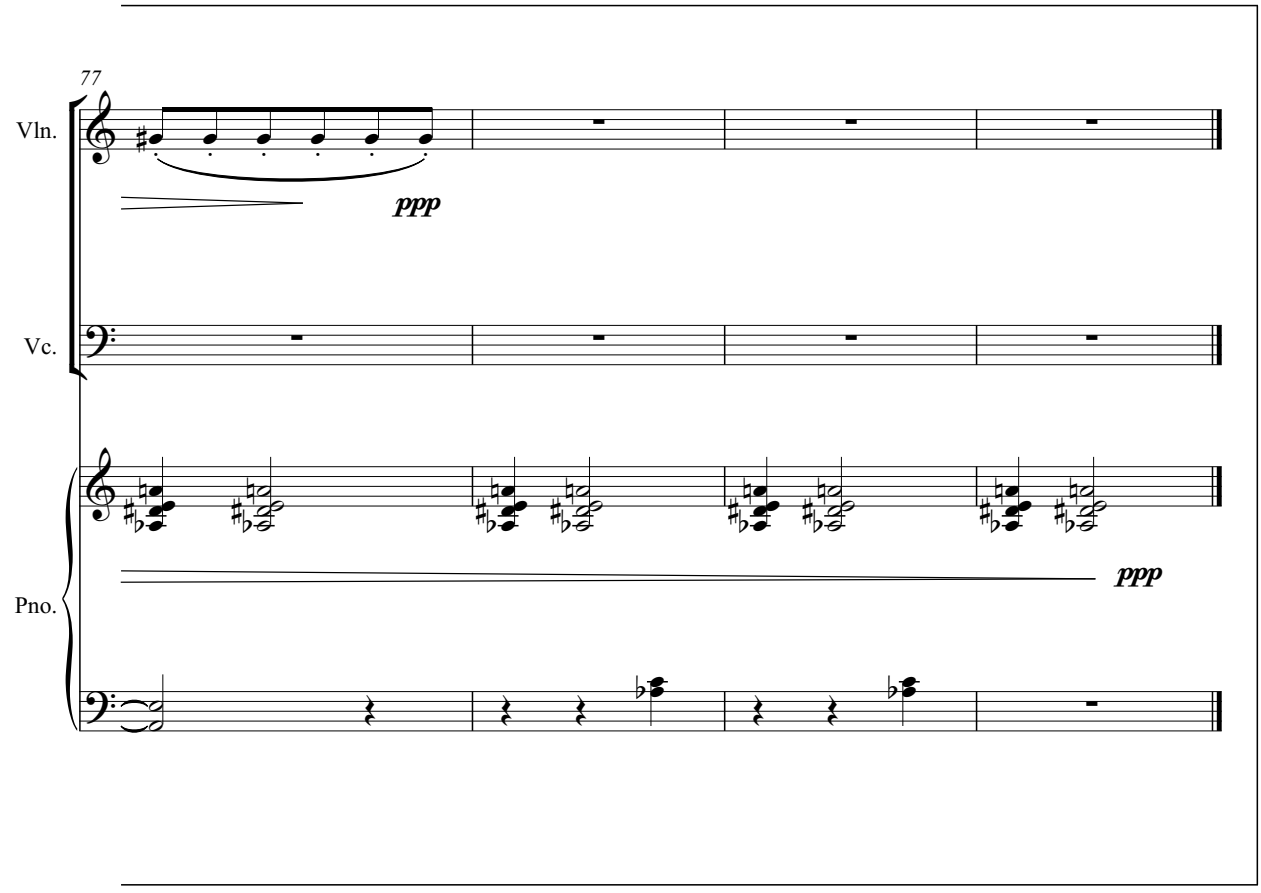

s.p.
67
Vln.
mp
f
arco
s.p. → ord
3
s.p. → ord
Vc.
mp
3
Scrape string with nail
while glissanding
Pno.
mf
mp
mf
Scrape string with nail
while glissanding
mf


71
arco
glissando
glissando
Vln.
p
mp
mf
f
follow graphic(s.p.-ord)
Vc.
mf
There are two ends in this piece;
The pianist must choose the end without
letting the other performers to know about it;
In bar 73, the pianist will raise up his hand and
point his finger the number 1 or 2.
8va
8va
5
3
Pno.
p
f
mp
3
mp
p
8vb


1
74
Vln.
Vc.
Pno.
mp
f
pp
sf
s.p.
pp
f
mp
pp


76
Vln.
Vc.
Pno.
sf
rit.
more hair
pp
ppp
At least 5 seconds
silence before putting
the bow down
rit.
p
pp
clb
ppp
ff
8vb


2
74
Vln.
Vc.
Pno.
mp
f
mp
3
3


77
Vln.
Vc.
Pno.
ppp
ppp

Ordinatio

for 4 clarinets in Bb

2010-2011

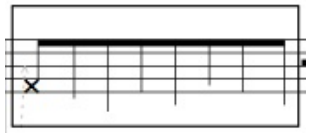
Tolal Duration : c. 9' 54"

Accidentals apply to one note only (Ties are consider to be one note).

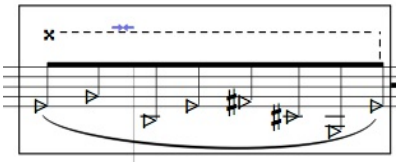
**Note duration are indicated with note-head extensions:
The longer the extension, the longer the note.
Interruption (gaps between extensions) indicate silences (rests).**

Trills always on the written note to the semitone above it.

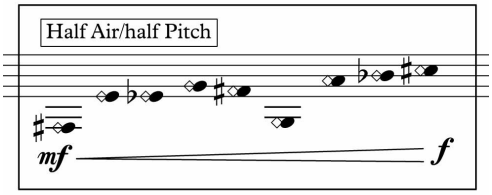
The veritical broken arrows indicates the time of entry.



Key clicks freely.



Key clicks and air on the specific pitches.

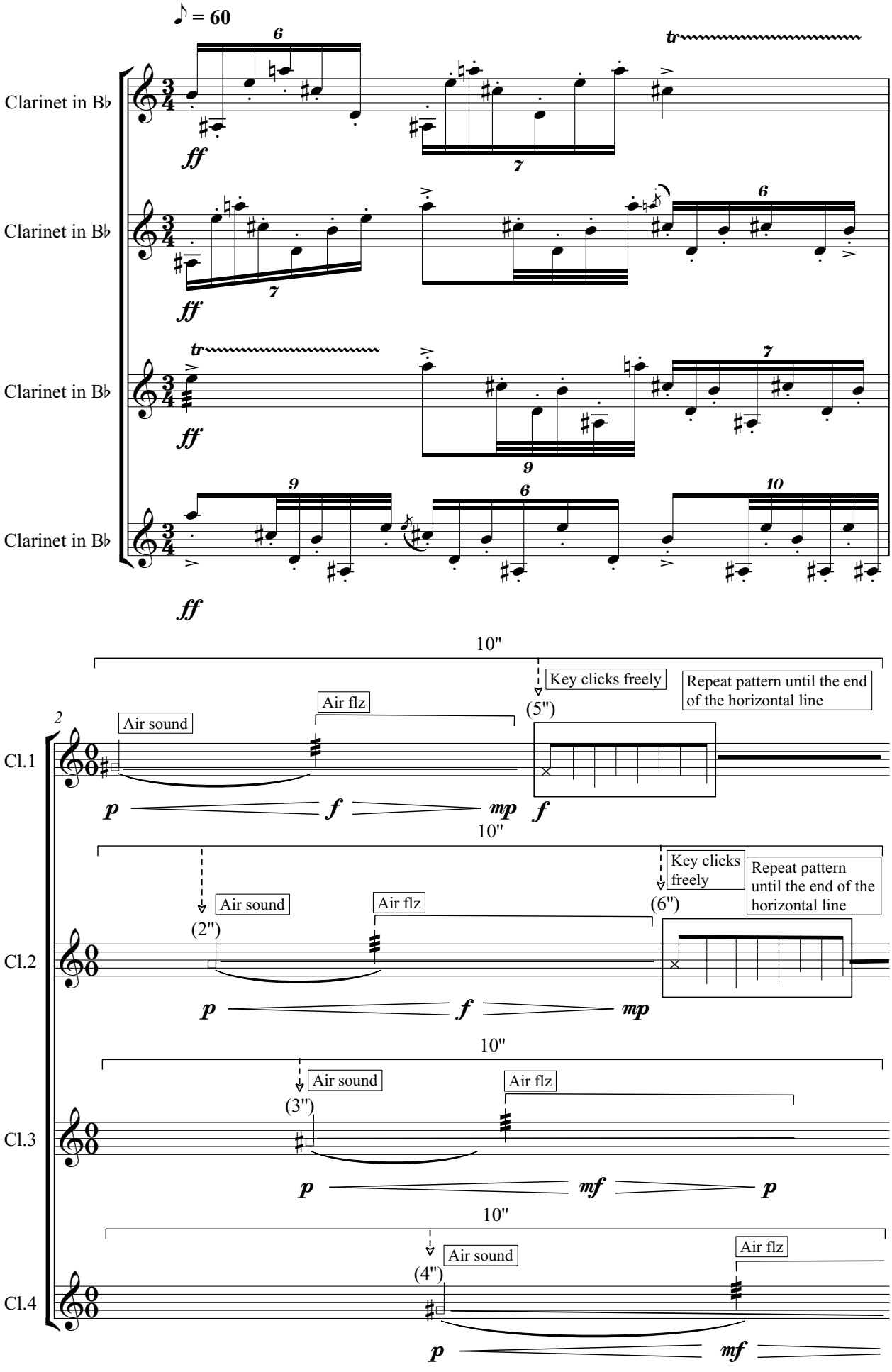


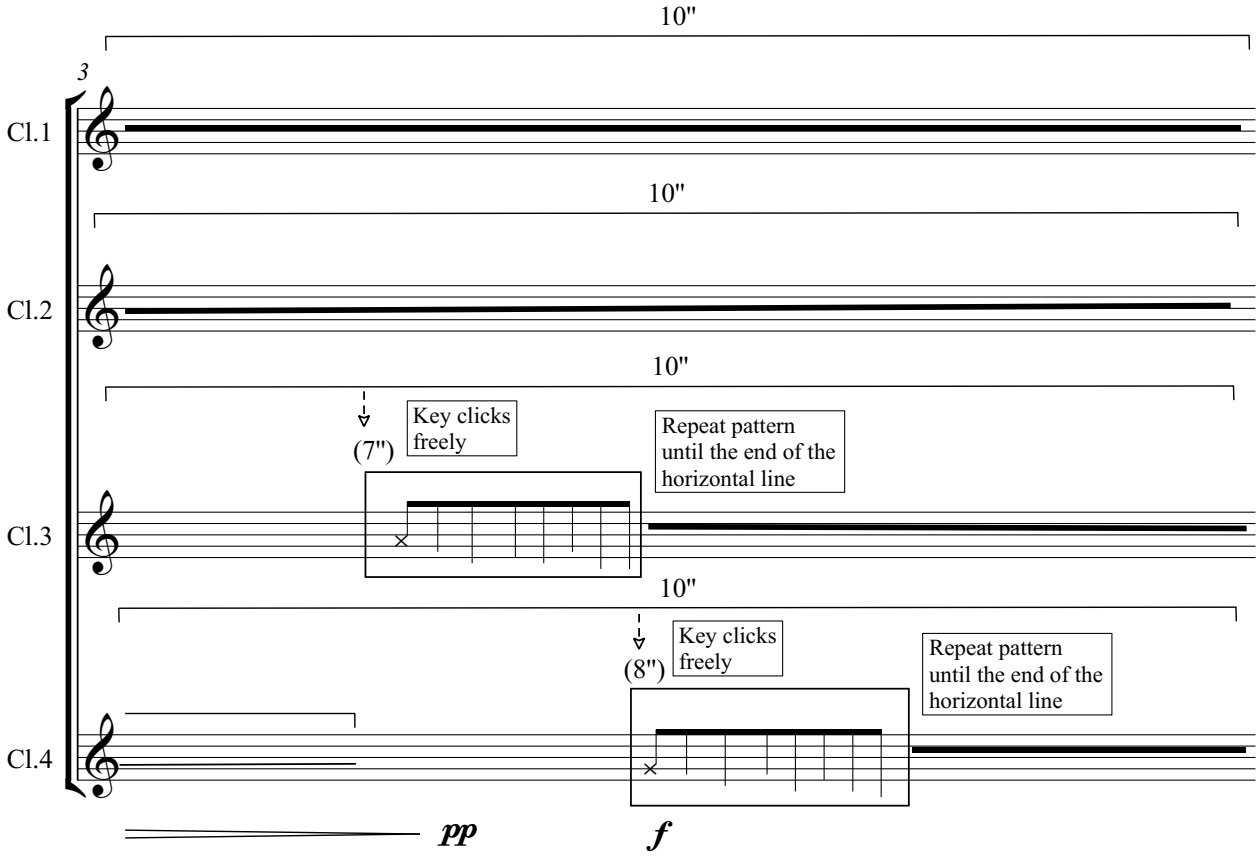
Half air/ half pitch.

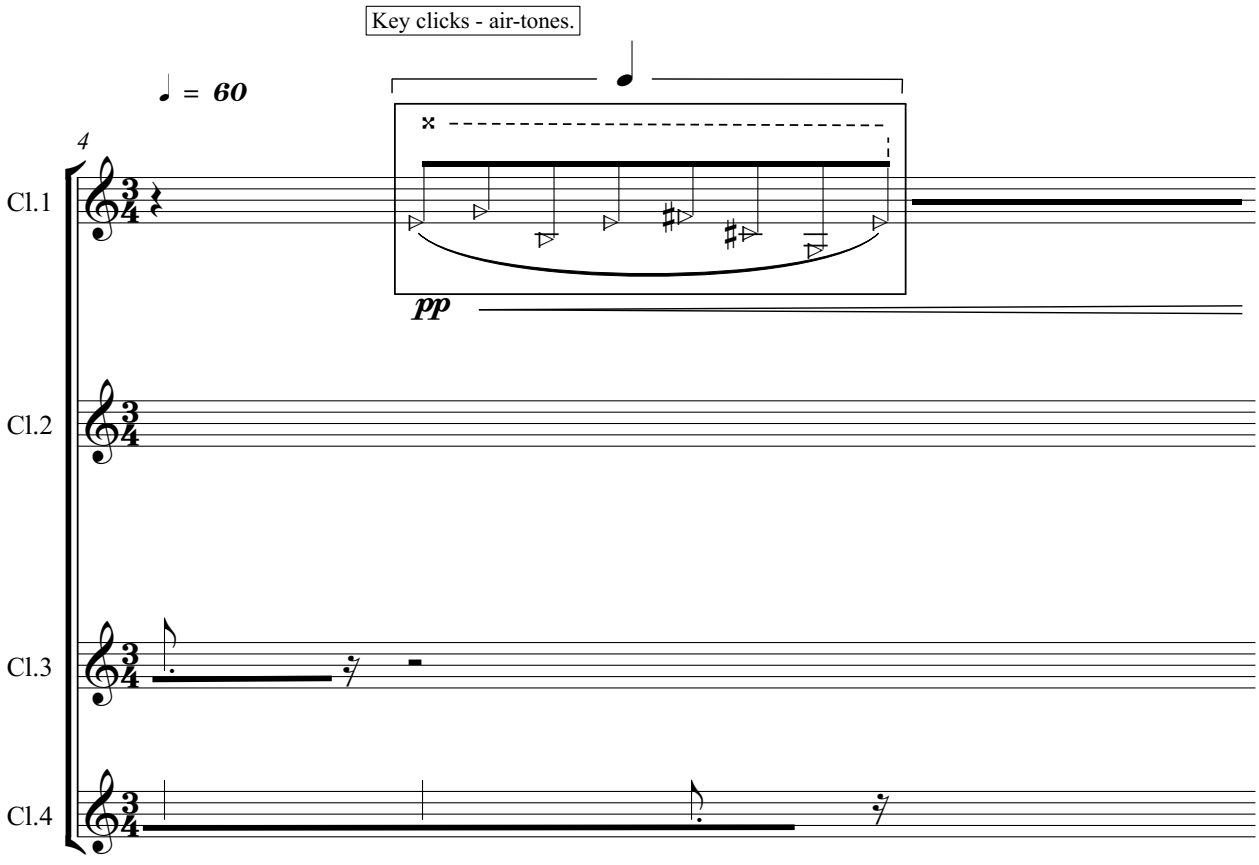
Multiphonics are taken from the book: 'New Direction for Clarinet' by Philip Rehfeldt University of California press.

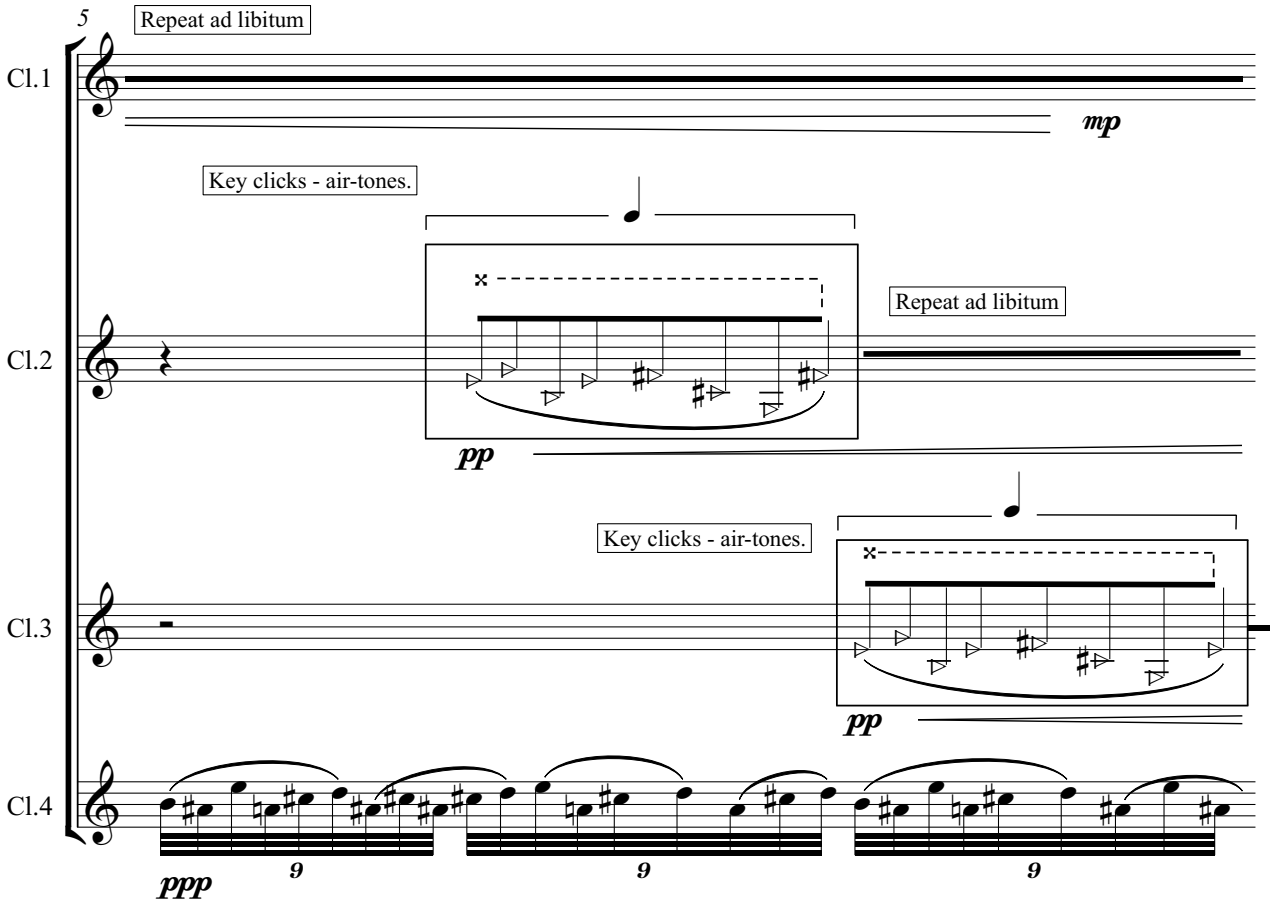
All other symbols are explained in the score.

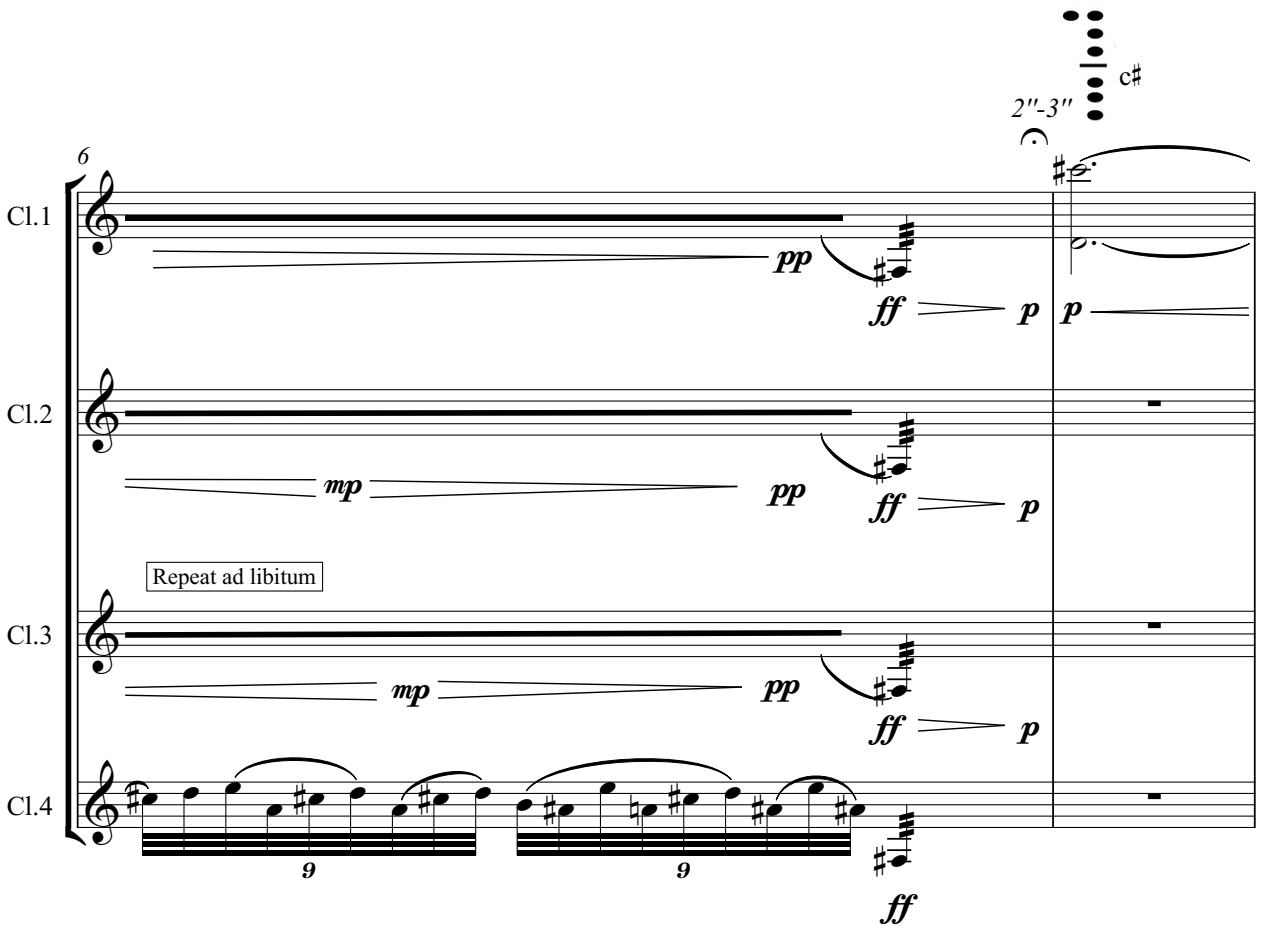
Ordinatio

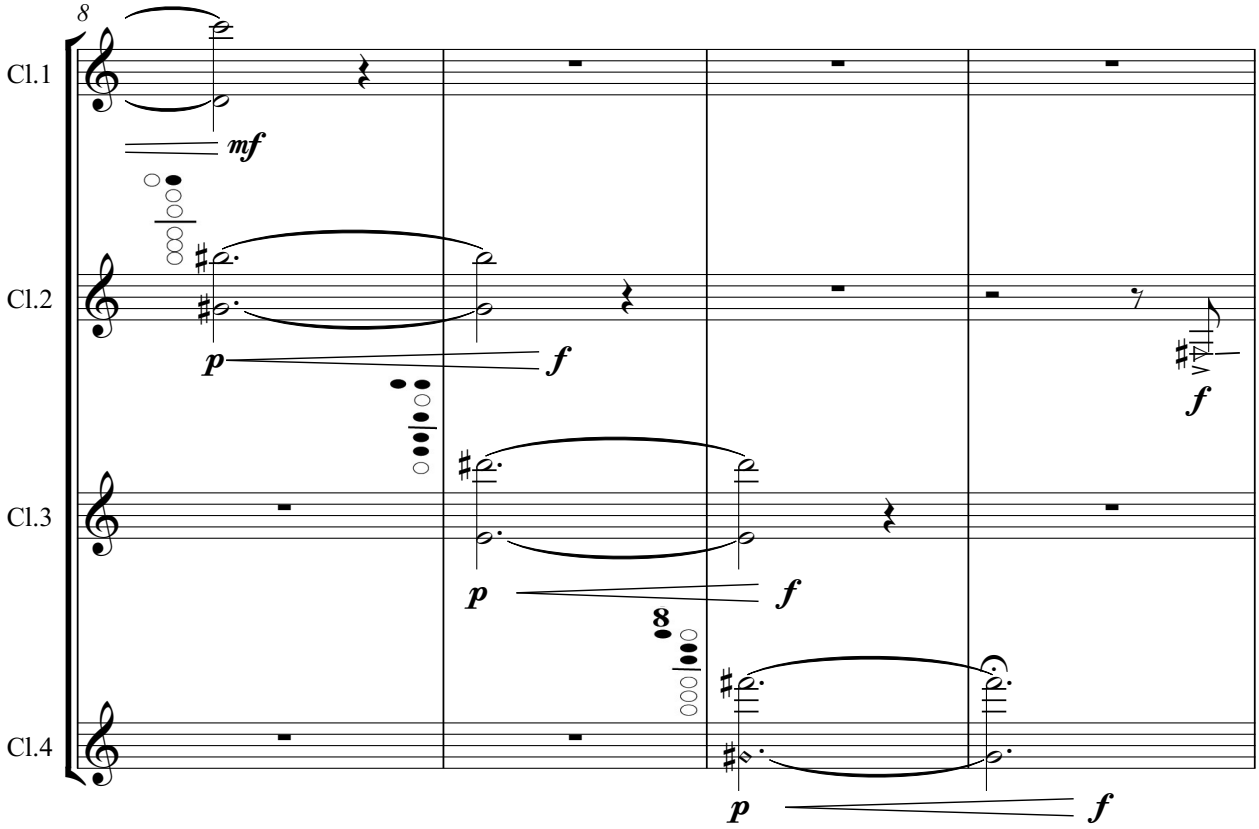

♪ = 60
Clarinet in B♭
Clarinet in B♭
Clarinet in B♭
Clarinet in B♭
ff
tr
2
Cl.1
Cl.2
Cl.3
Cl.4
Air sound
Air flz
Key clicks freely
Repeat pattern until the end of the horizontal line
Repeat pattern until the end of the horizontal line
10"
(2")
(3")
(4")
(5")
(6")
p
f
mp
mf

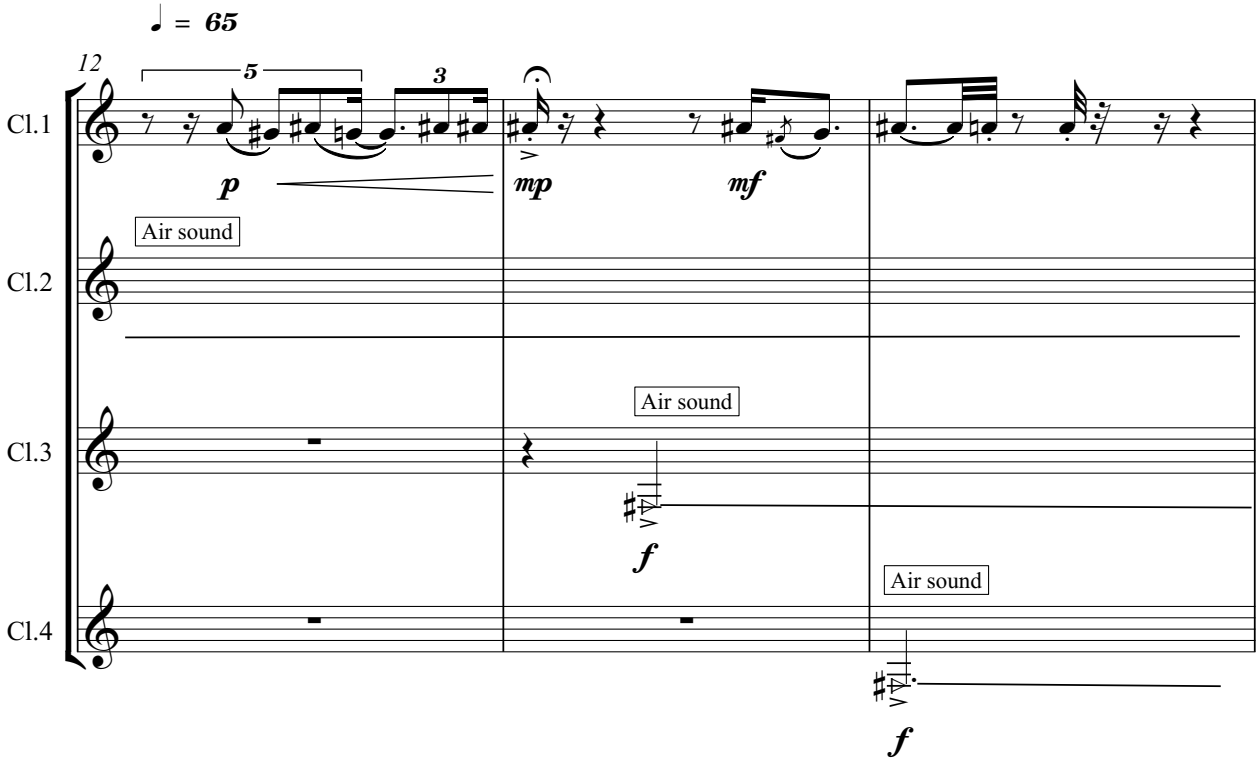

10"
3
Cl.1
10"
Cl.2
10"
(7")
Key clicks freely
Repeat pattern until the end of the horizontal line
Cl.3
10"
(8")
Key clicks freely
Repeat pattern until the end of the horizontal line
Cl.4
pp
f

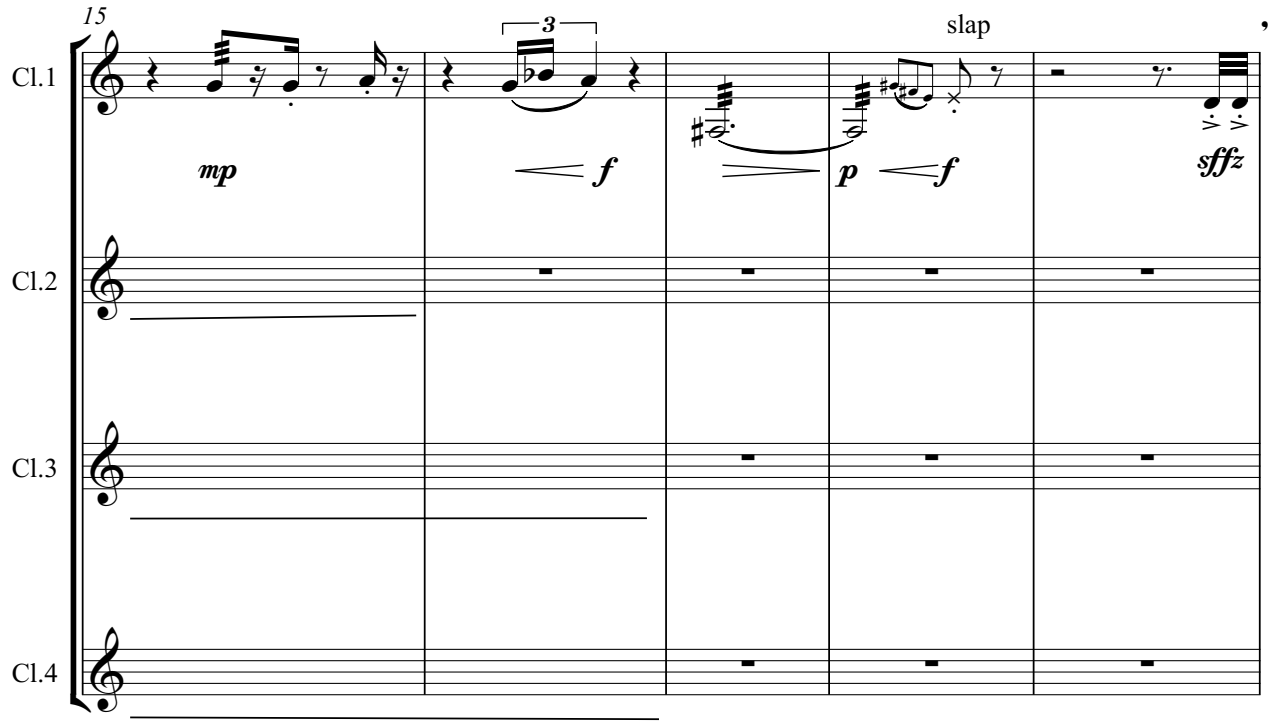

Key clicks - air-tones.
♩ = 60
4
Cl.1
pp
Cl.2
Cl.3
Cl.4

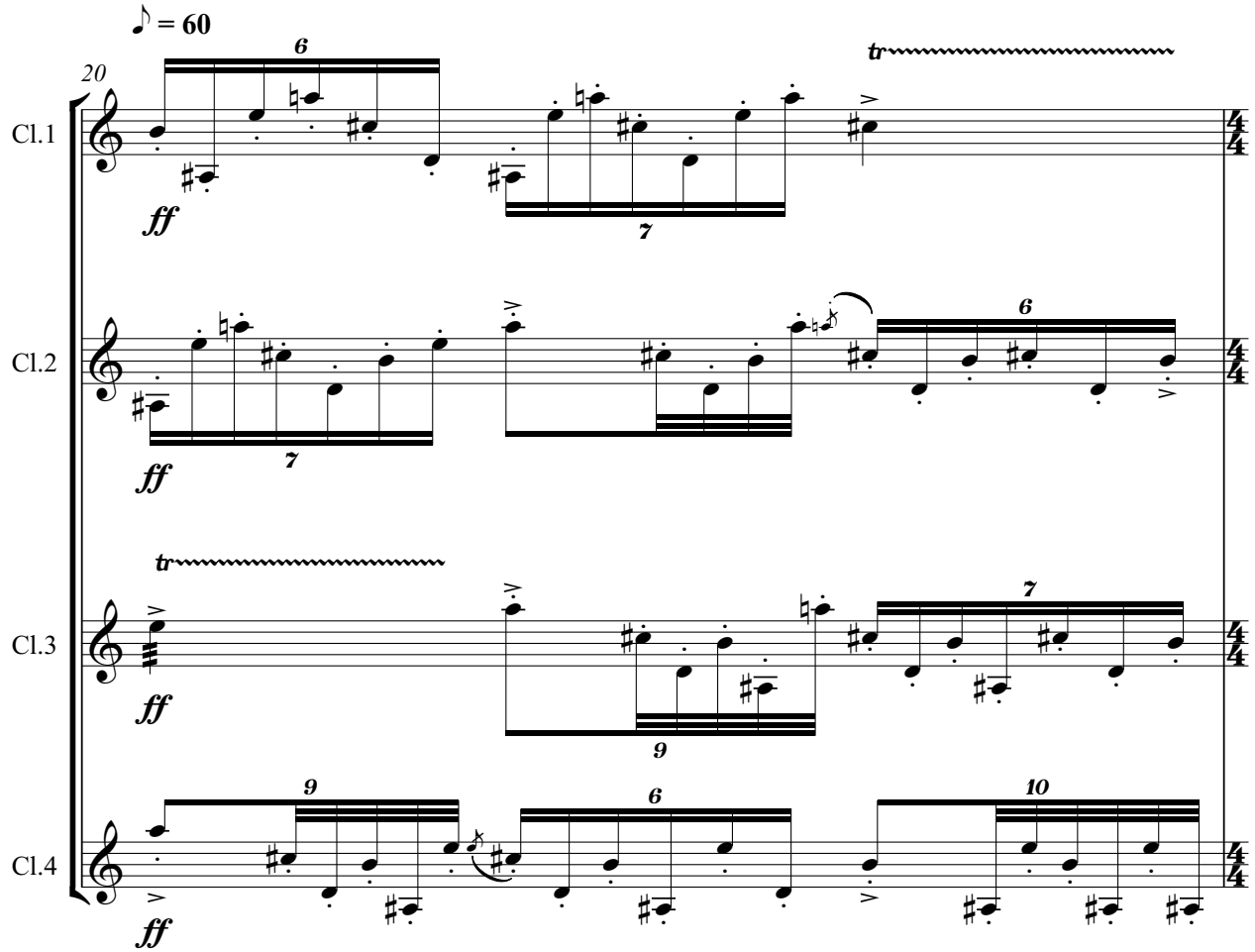

5
Repeat ad libitum
Cl.1
mp
Key clicks - air-tones.
Repeat ad libitum
Cl.2
pp
Key clicks - air-tones.
Cl.3
pp
Cl.4
ppp
9
9
9

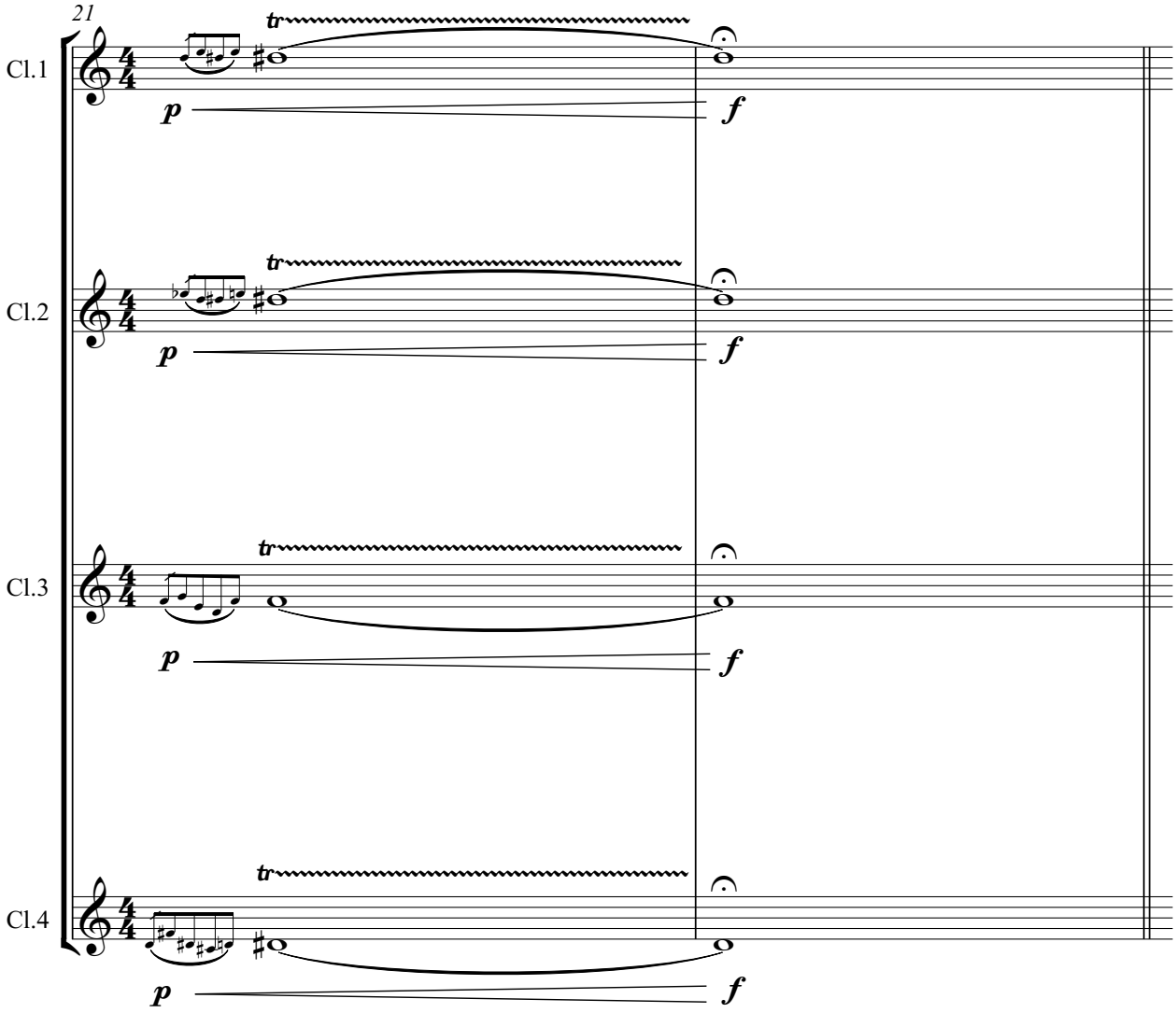

c♯
2″-3″
6
Cl.1
pp
ff
p
p
Cl.2
mp
pp
ff
p
Repeat ad libitum
Cl.3
mp
pp
ff
p
Cl.4
9
9
ff


8
Cl.1
Cl.2
Cl.3
Cl.4
mf
p
f
8


♩ = 65
12
5
3
Cl.1
Cl.2
Cl.3
Cl.4
p
mp
mf
Air sound
Air sound
Air sound
f
f


15
Cl.1
Cl.2
Cl.3
Cl.4
3
slap
mp
f
p
f
sffz


♪ = 60
20
Cl.1
Cl.2
Cl.3
Cl.4
6
tr
ff
7
6
ff
tr
7
ff
9
9
6
10
ff

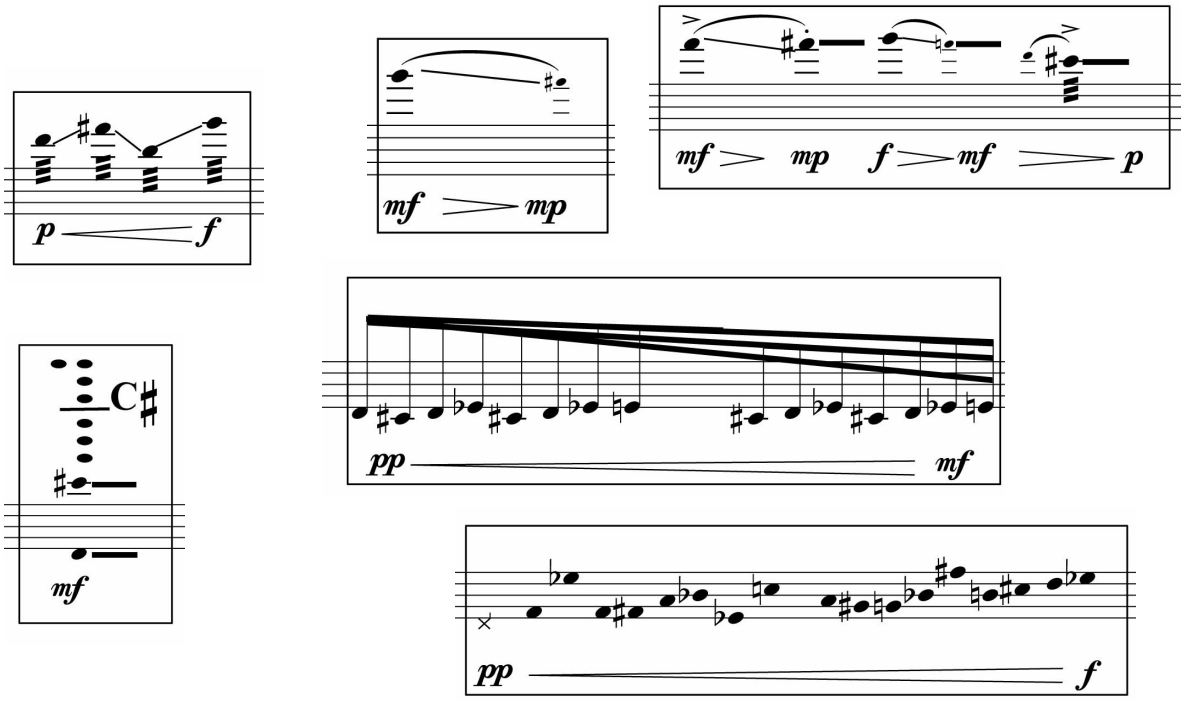

21
Cl.1
Cl.2
Cl.3
Cl.4
tr
p
f

The two following pages represent one "bar" (b.23) of music lasting c. 40".

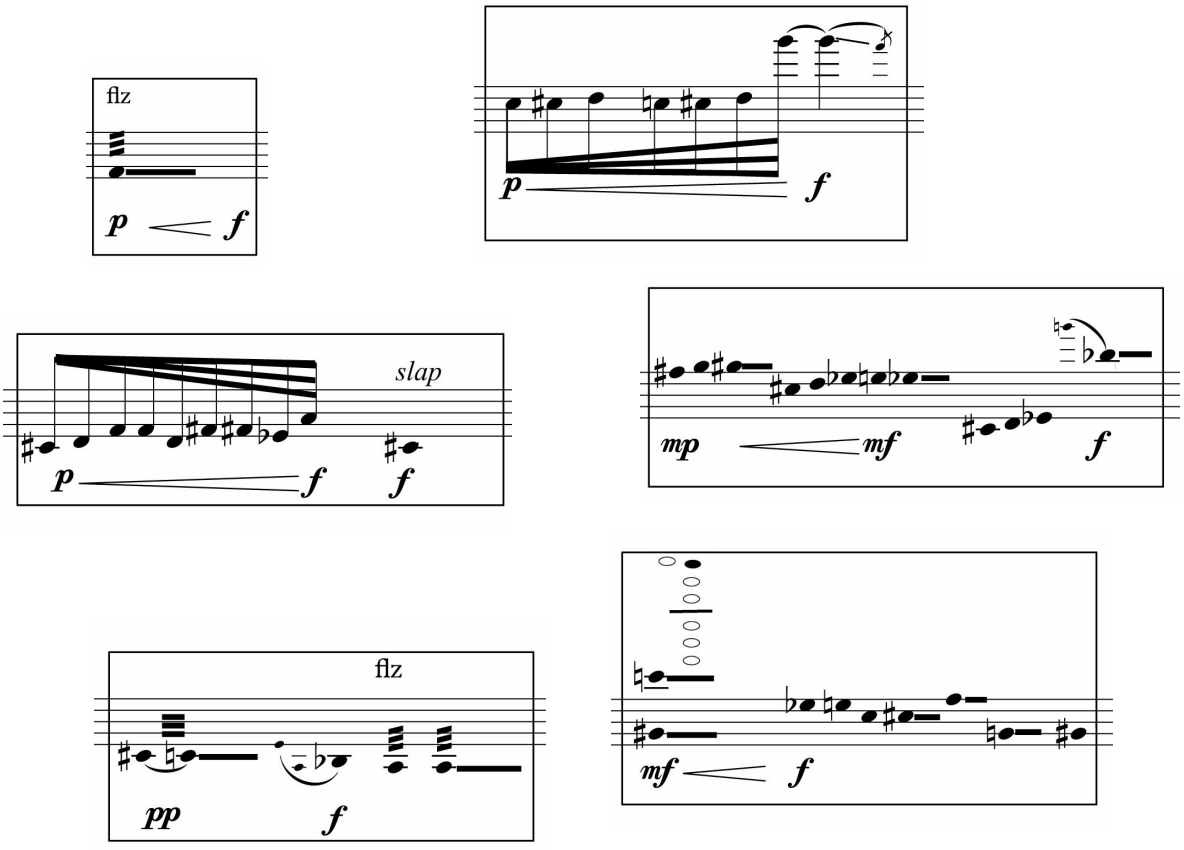
Every perfomer has 6 patterns (one in each box) to choose from;
The duration of each box is c.10" the performer must choose 4 of them to play in any order.

All text in treble clef.

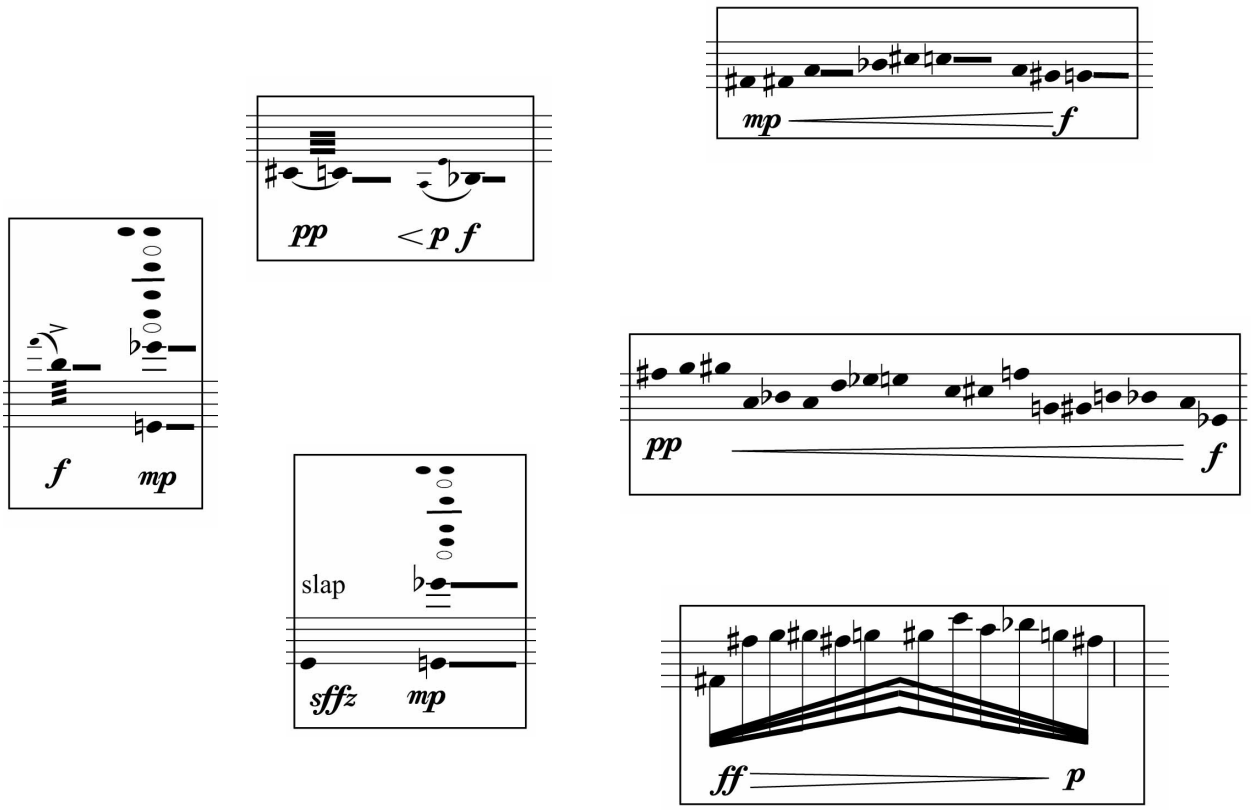
Clarinet 1 in Bb
(Bar 23)



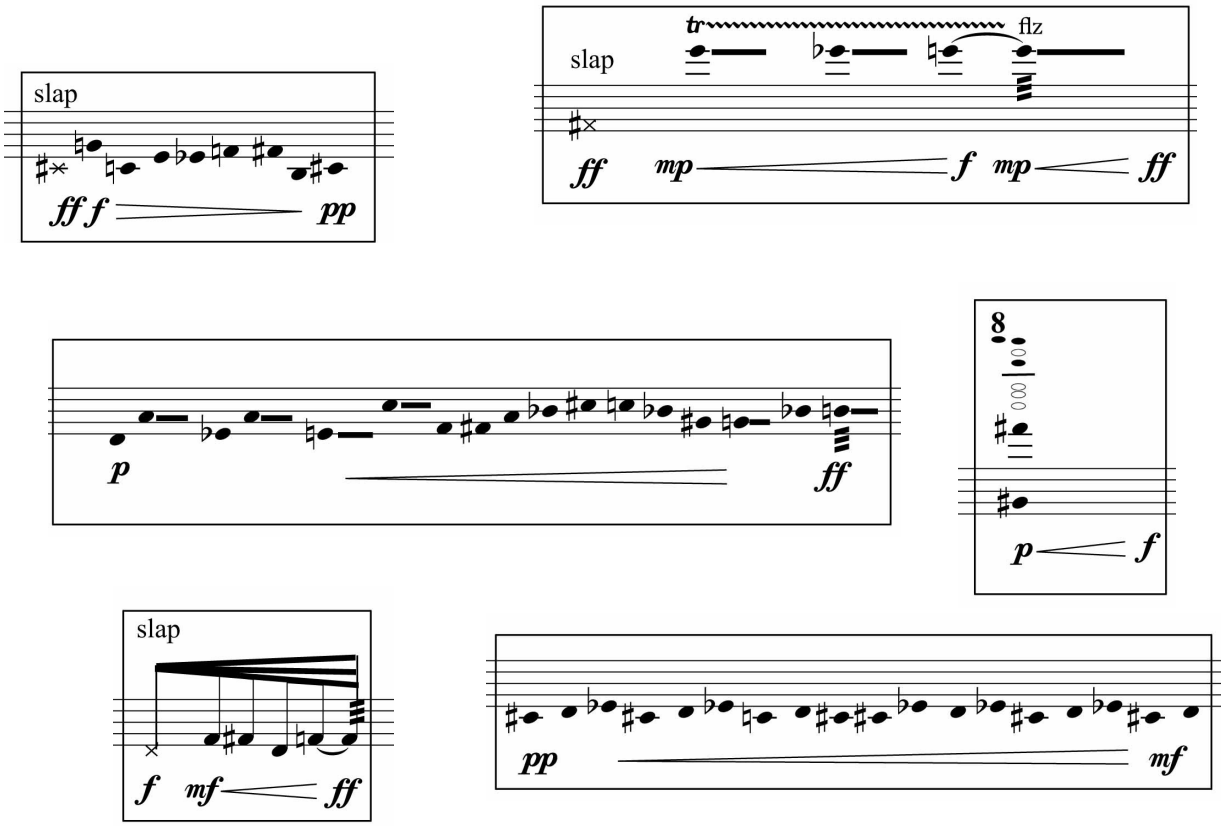
Clarinet 2 in Bb
(Bar 23)

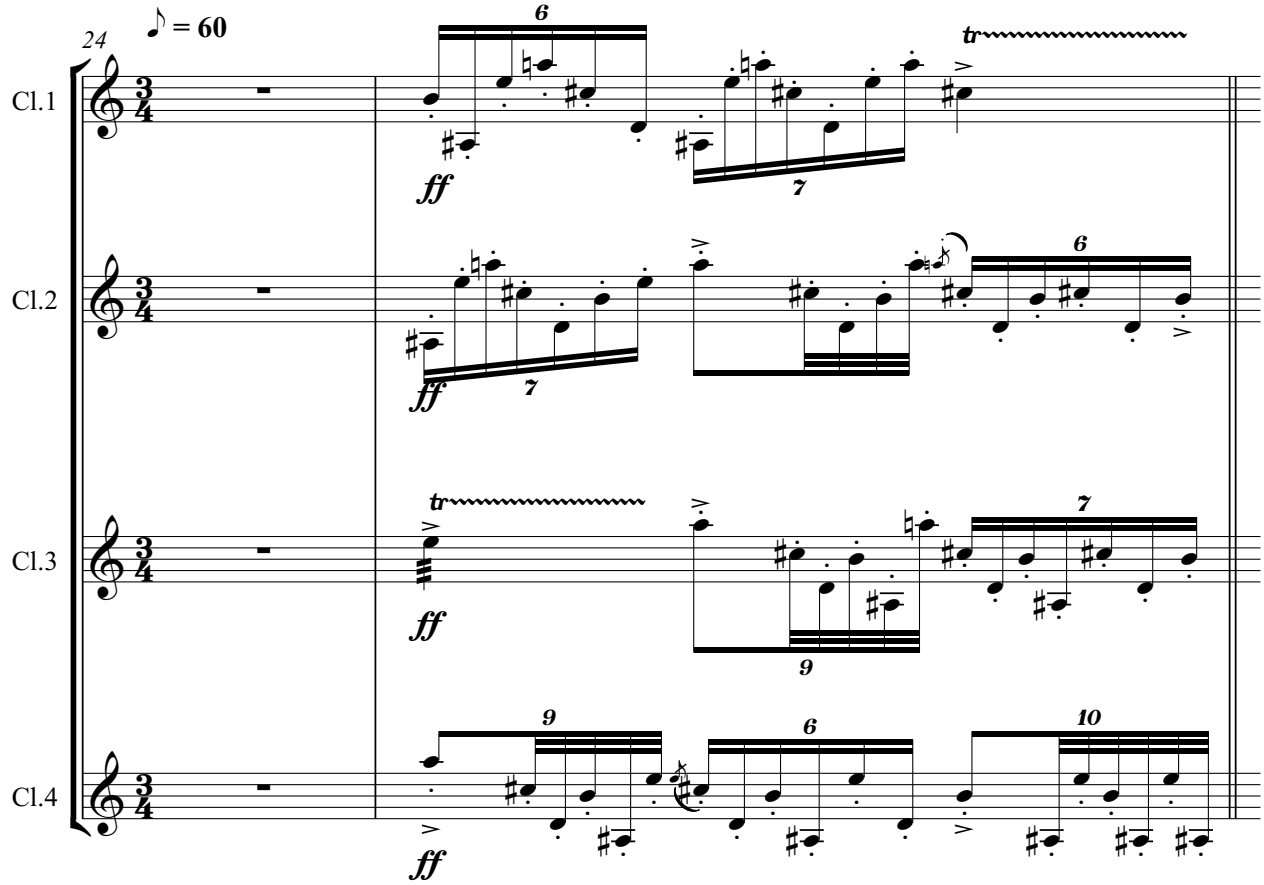


Clarinet 3 in Bb
(Bar 23)



Clarinet 4 in Bb
(Bar 23)



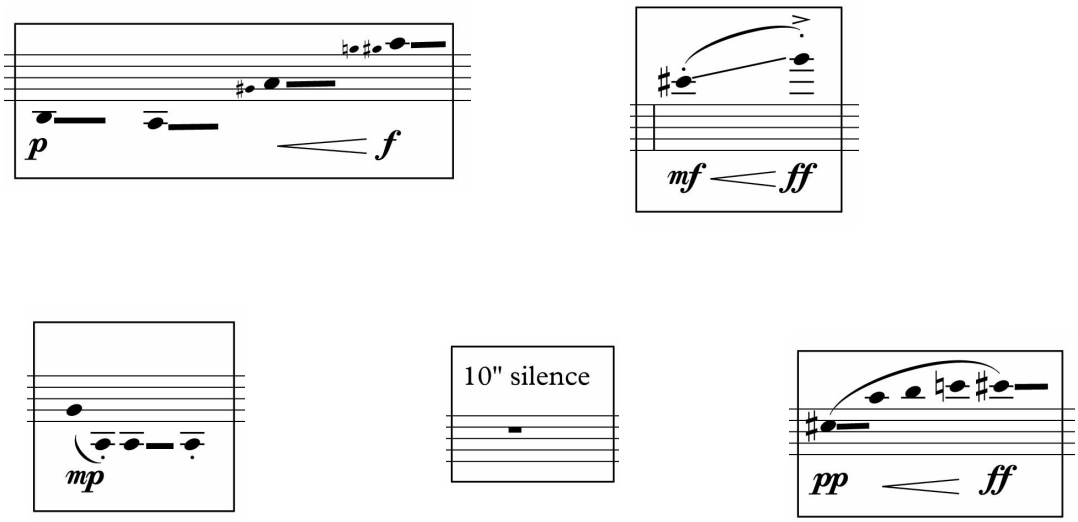

24
♪ = 60
Cl.1
Cl.2
Cl.3
Cl.4
ff
tr

The two following pages represent one "bar" (b.26) of music lasting c. 30".

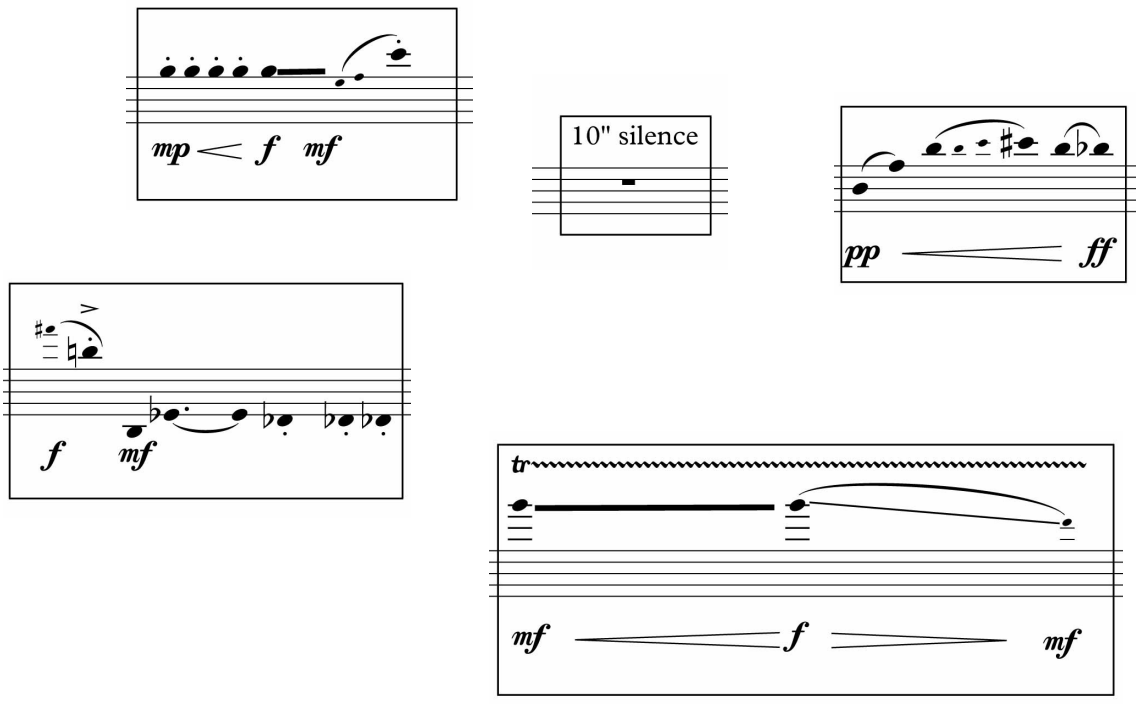
Every performer has 5 patterns (one in each box) to choose from;
The duration of each box is c. 10"; the performer must choose 3 of them to play in any order.

All the text in treble clef.

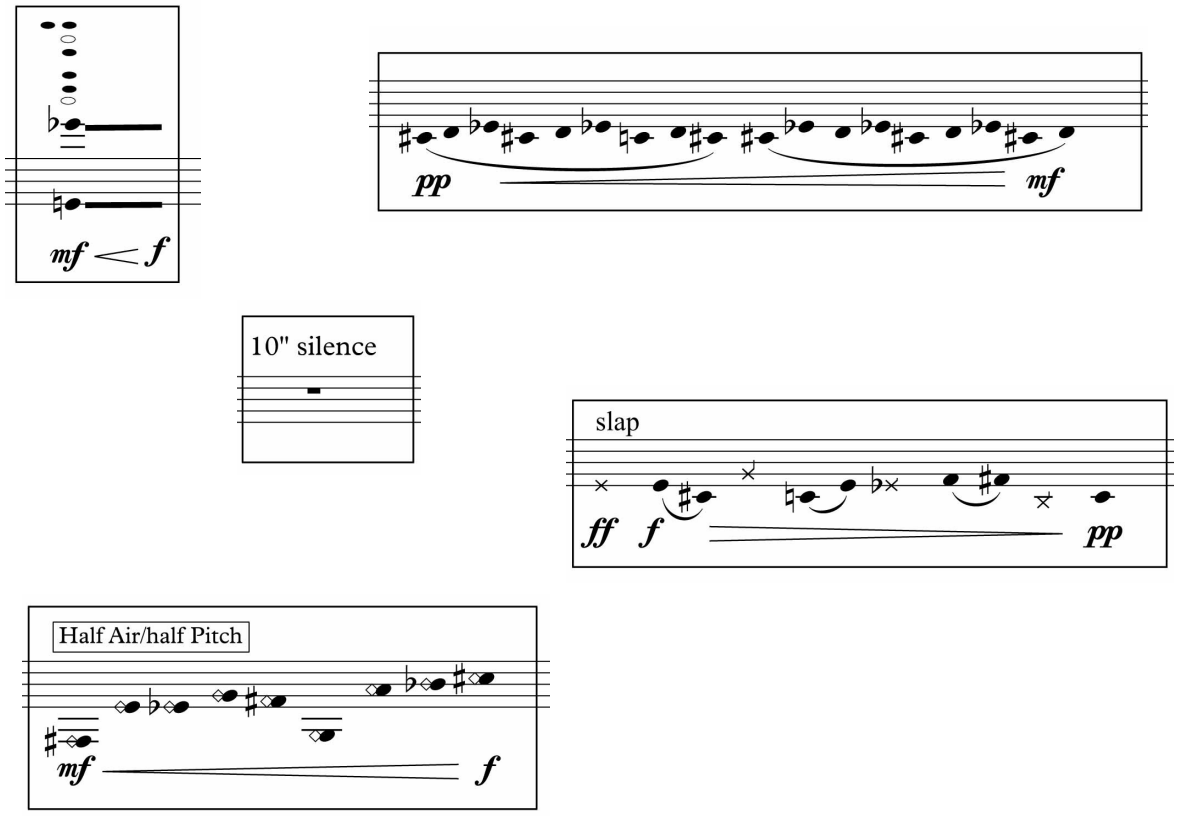
Clarinet 1 in Bb
(Bar 26)



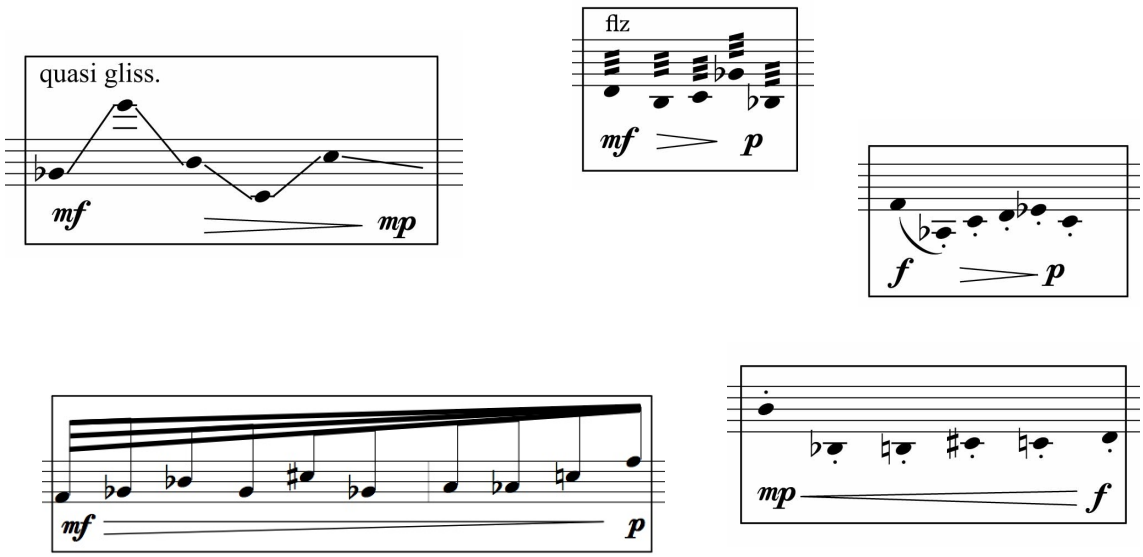
Clarinet 2 in Bb
(Bar 26)

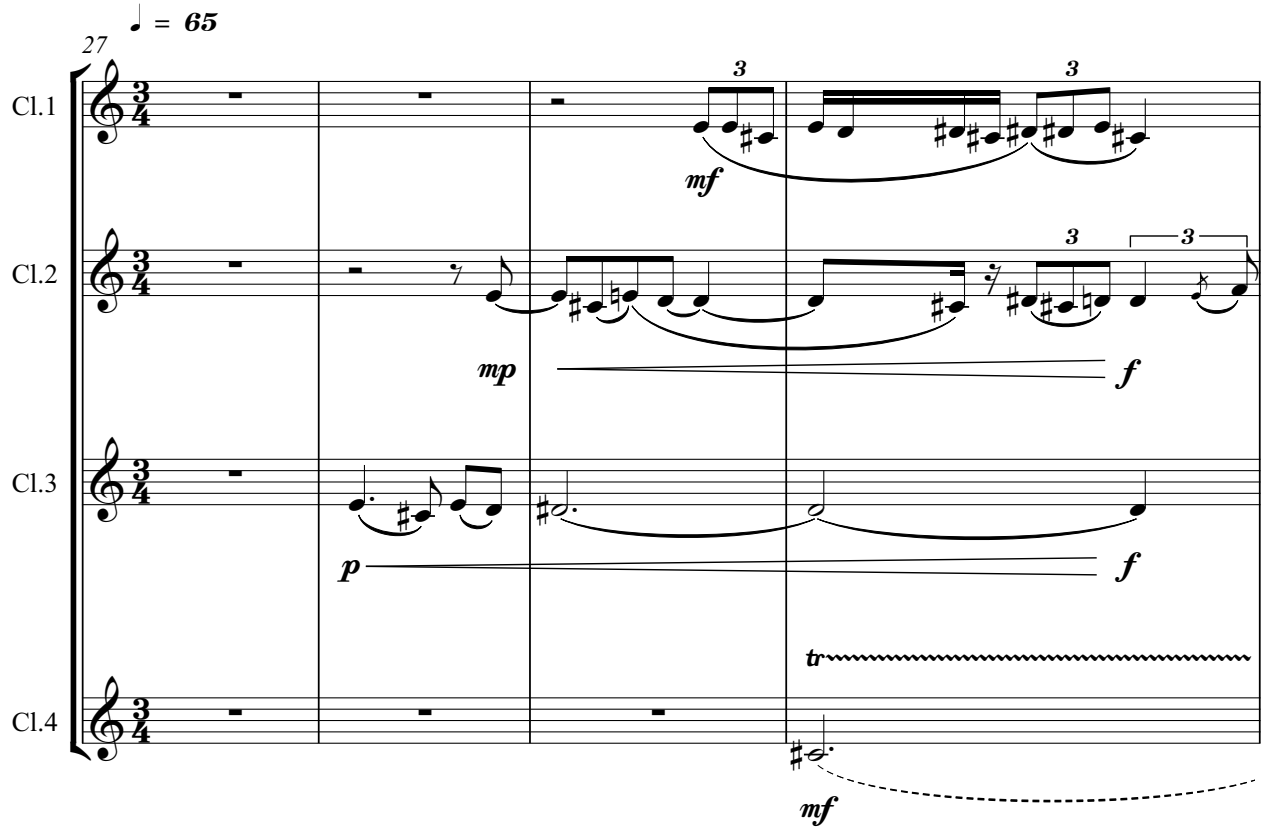


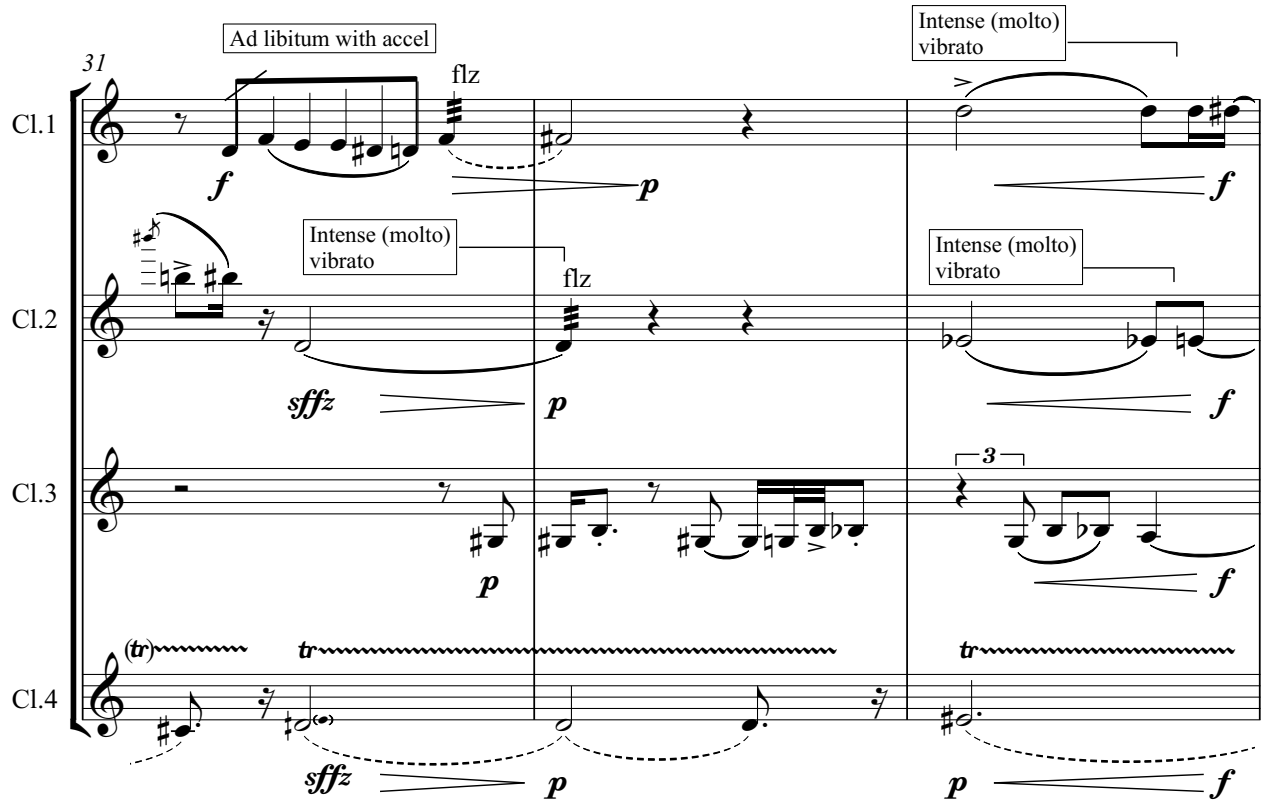
Clarinet 3 in Bb
(Bar 26)

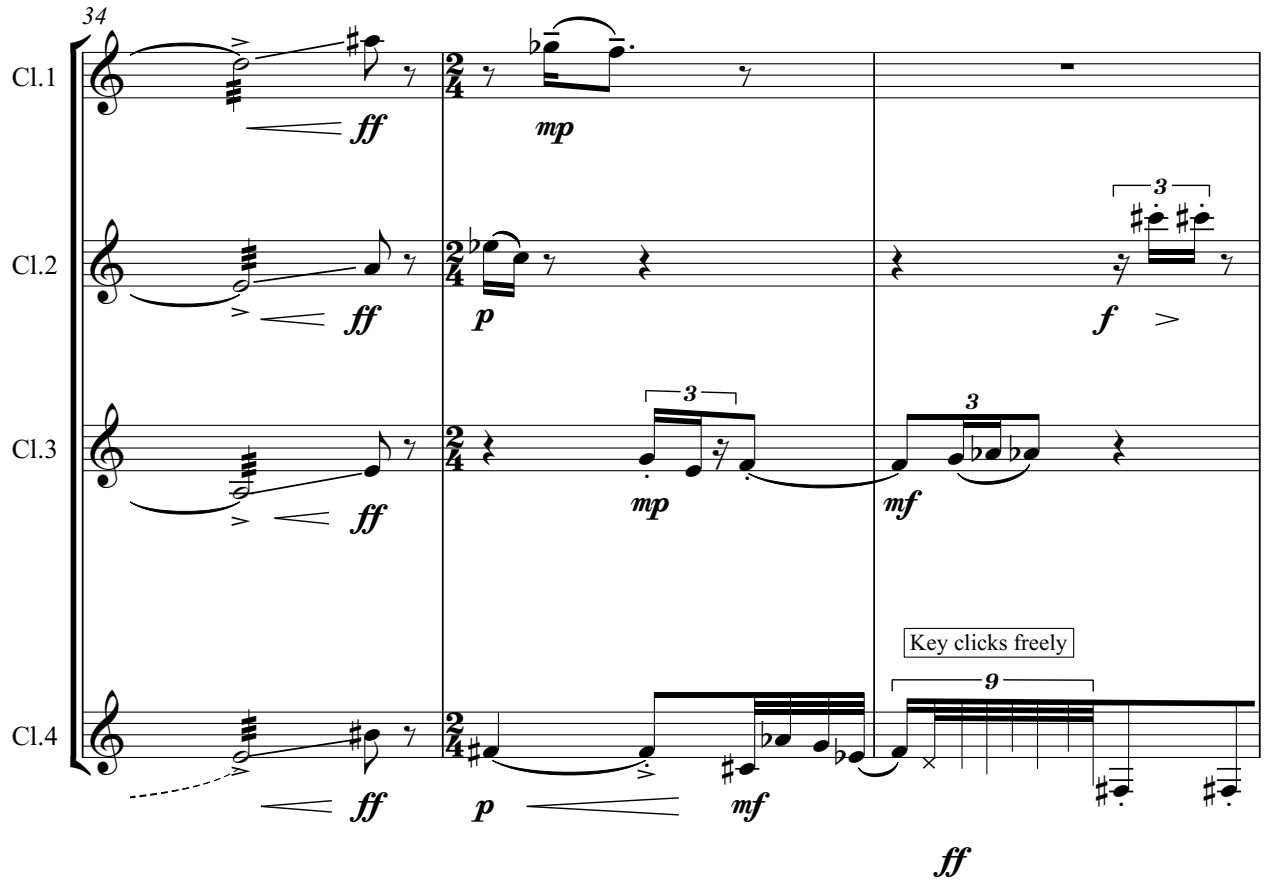


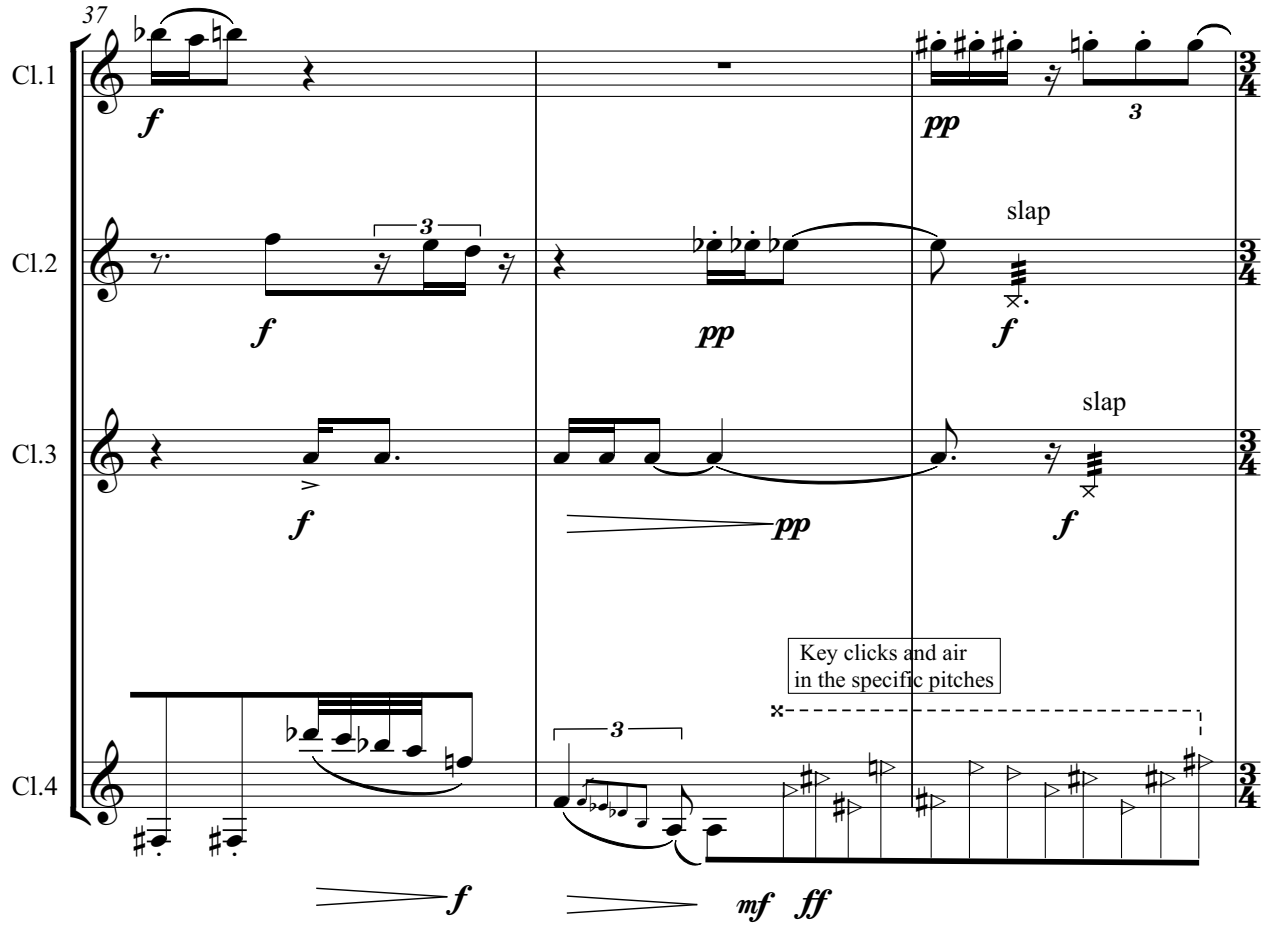
Clarinet 4 in Bb
(Bar 26)

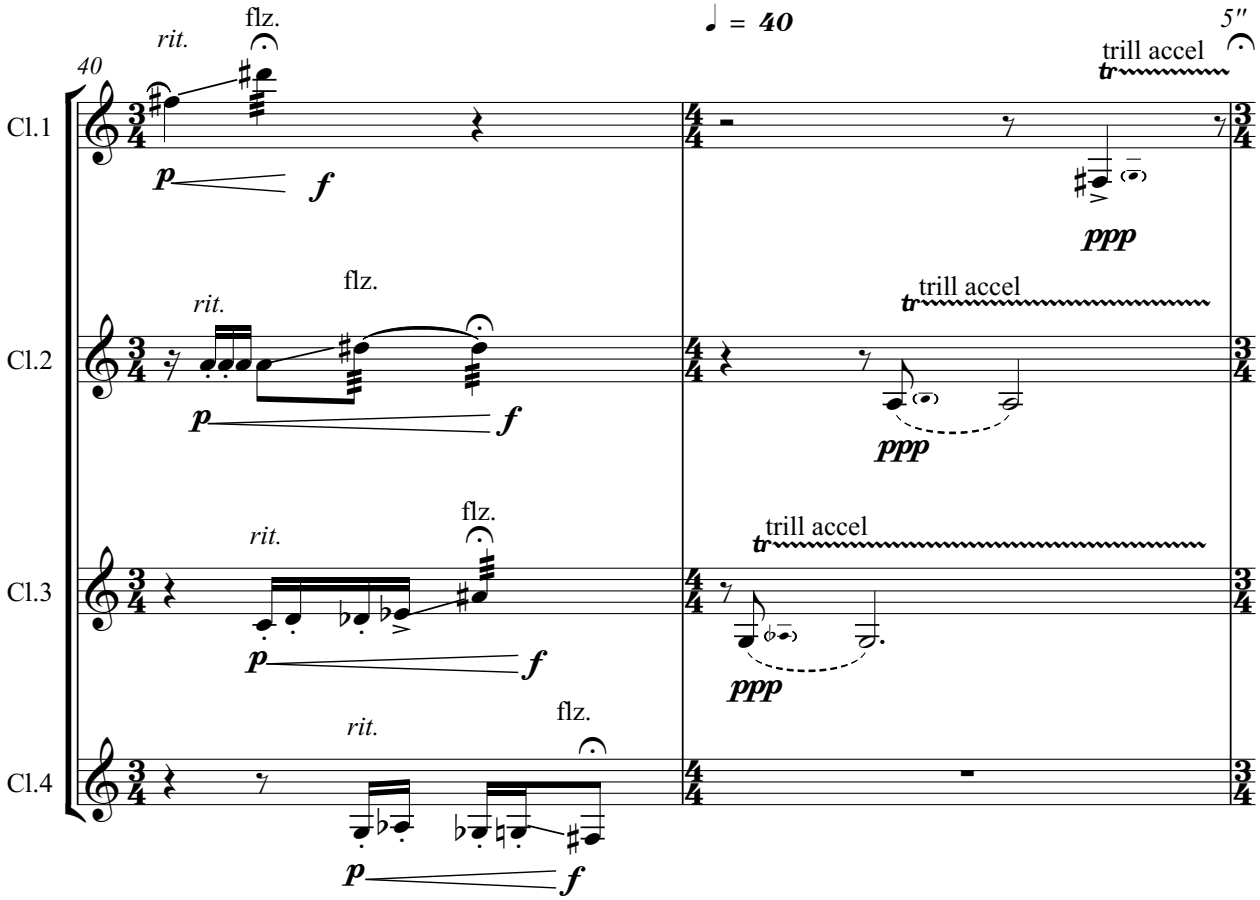


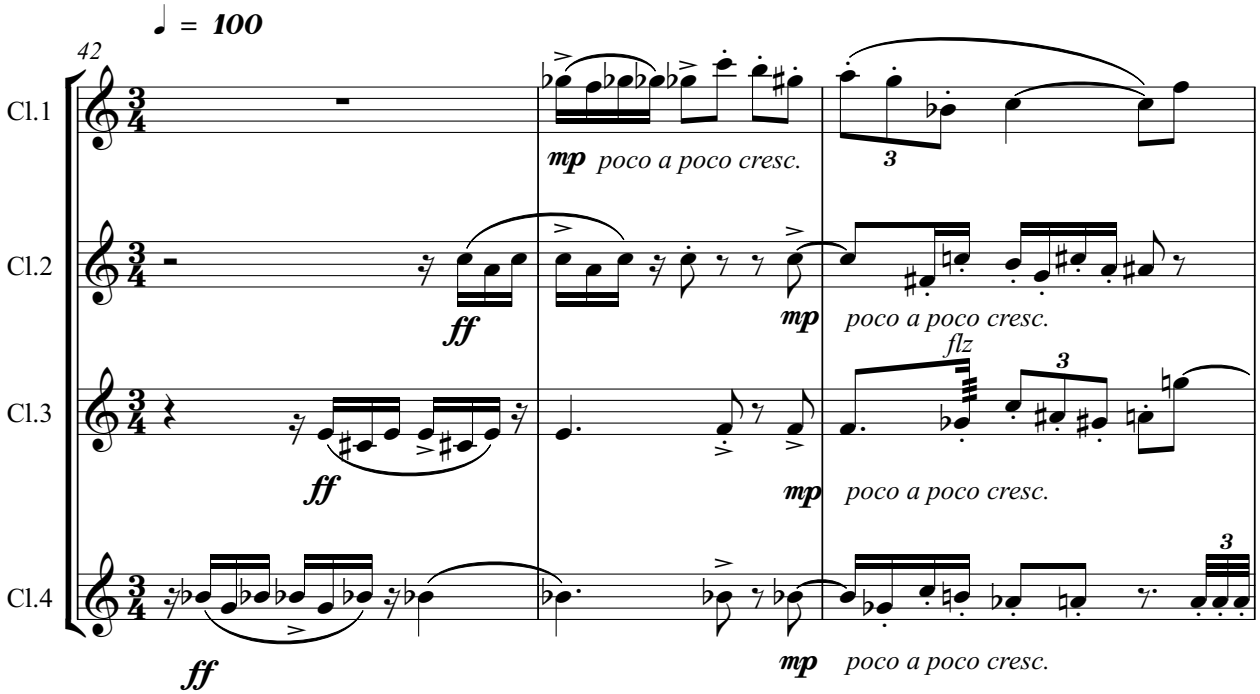

♩ = 65
27
Cl.1
Cl.2
Cl.3
Cl.4
3
mf
mp
f
p
tr

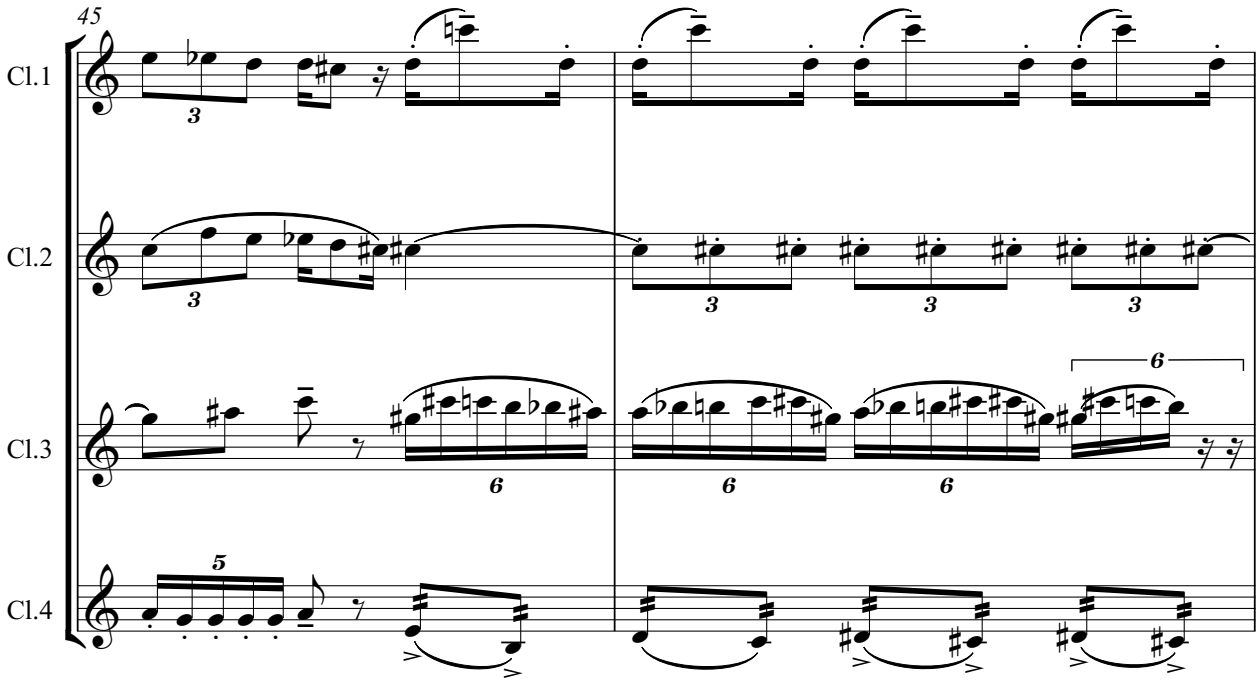

31
Ad libitum with accel
flz
Intense (molto) vibrato
Cl.1
Cl.2
Cl.3
Cl.4
f
p
sffz
(tr)
tr

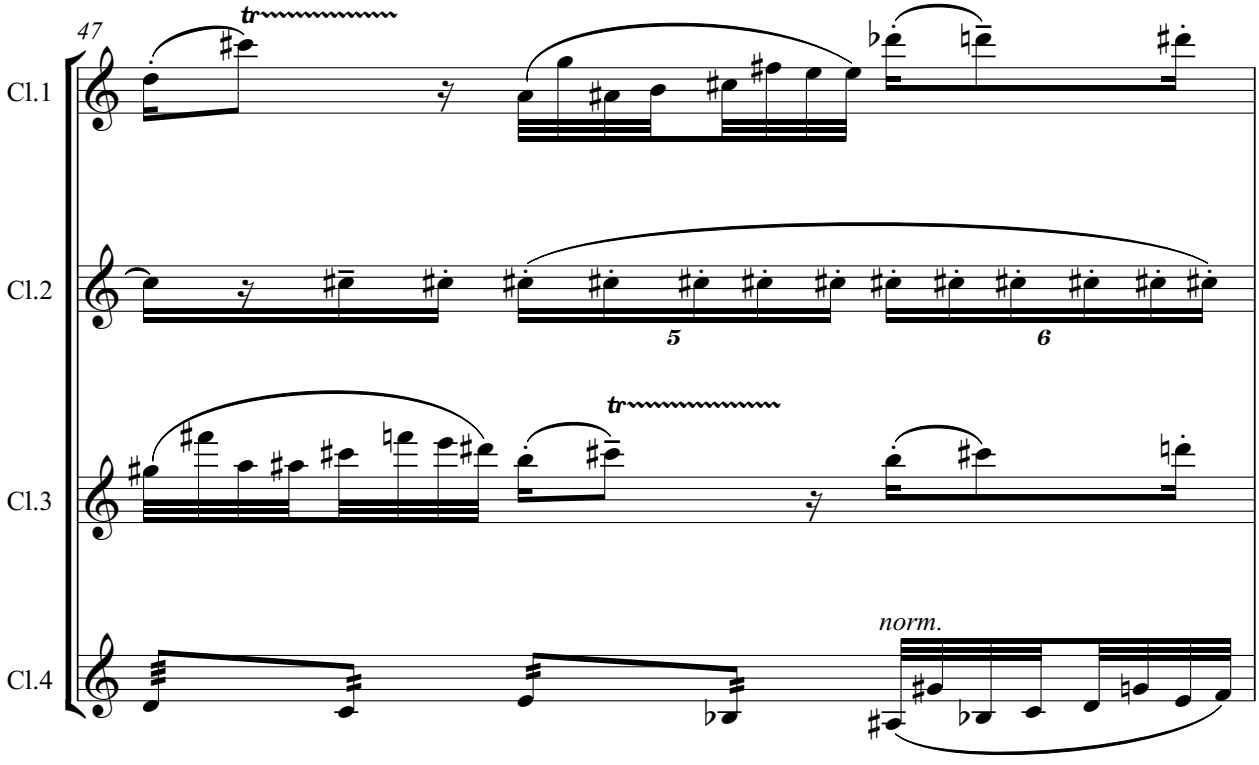

34
Cl.1
Cl.2
Cl.3
Cl.4
Key clicks freely

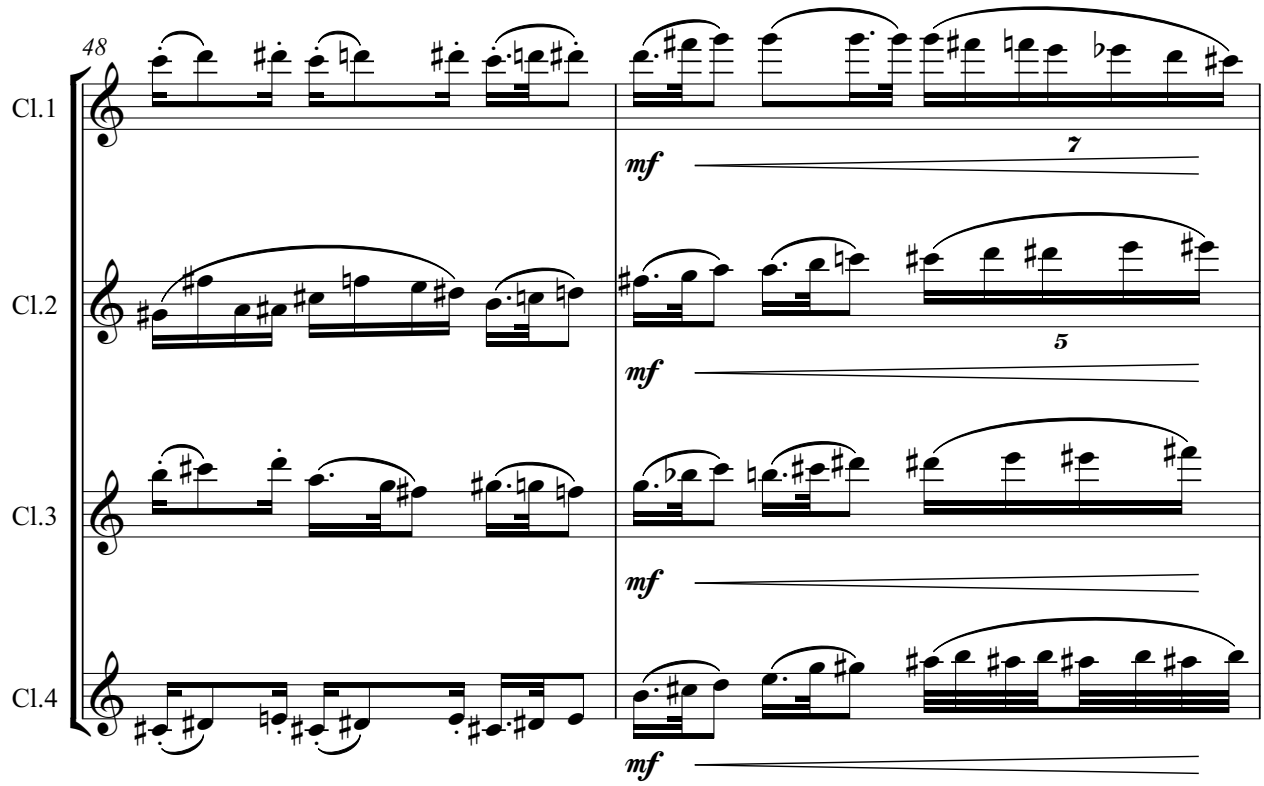

37
Cl.1
Cl.2
Cl.3
Cl.4
slap
slap
Key clicks and air
in the specific pitches

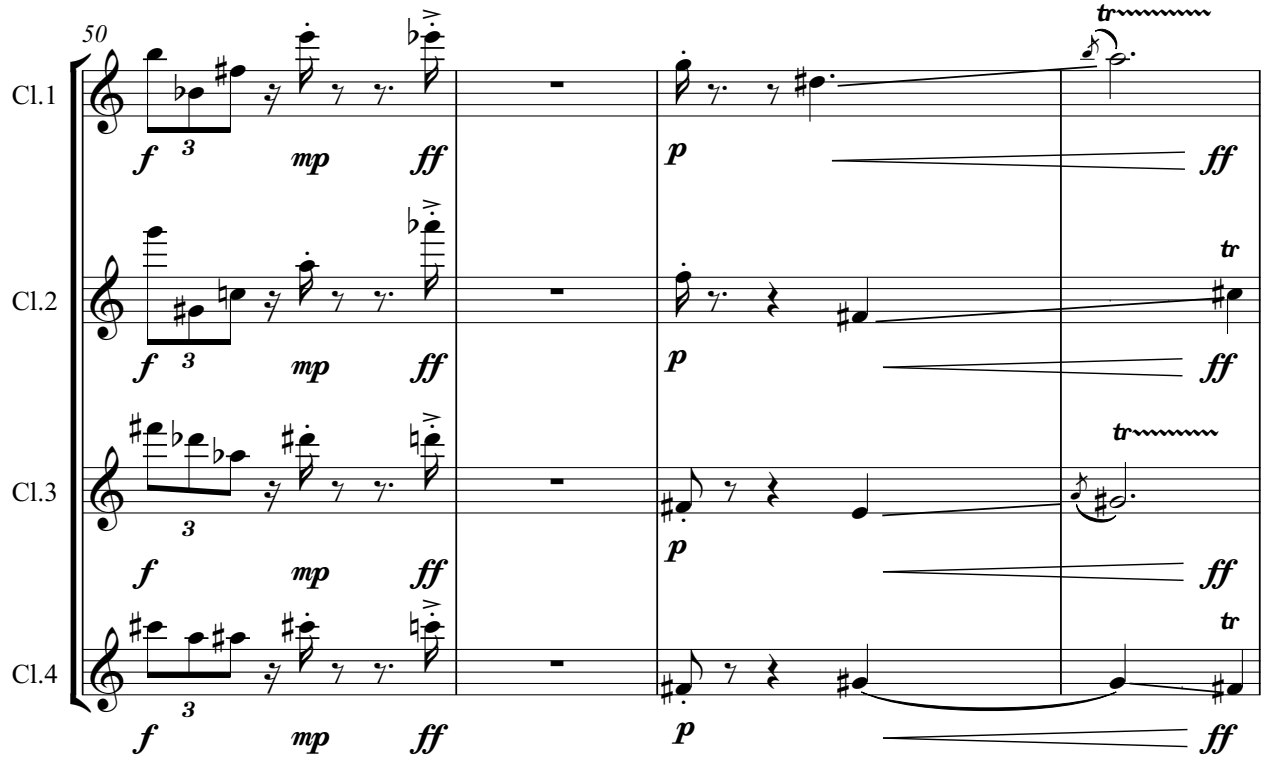

40
rit.
flz.
♩ = 40
5″
trill accel
Cl.1
Cl.2
Cl.3
Cl.4
p
f
ppp

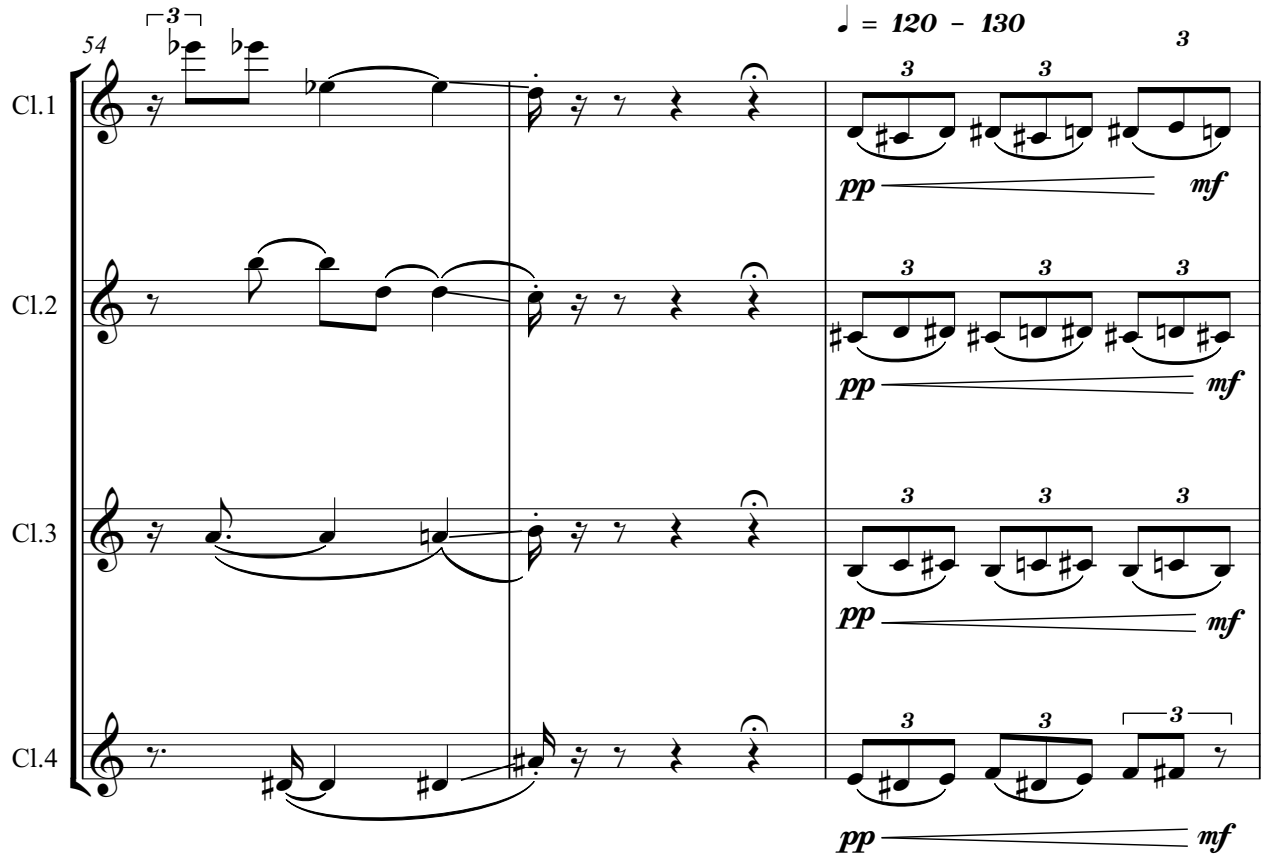

42
♩ = 100
Cl.1
Cl.2
Cl.3
Cl.4
mp poco a poco cresc.
ff
mp
flz
3

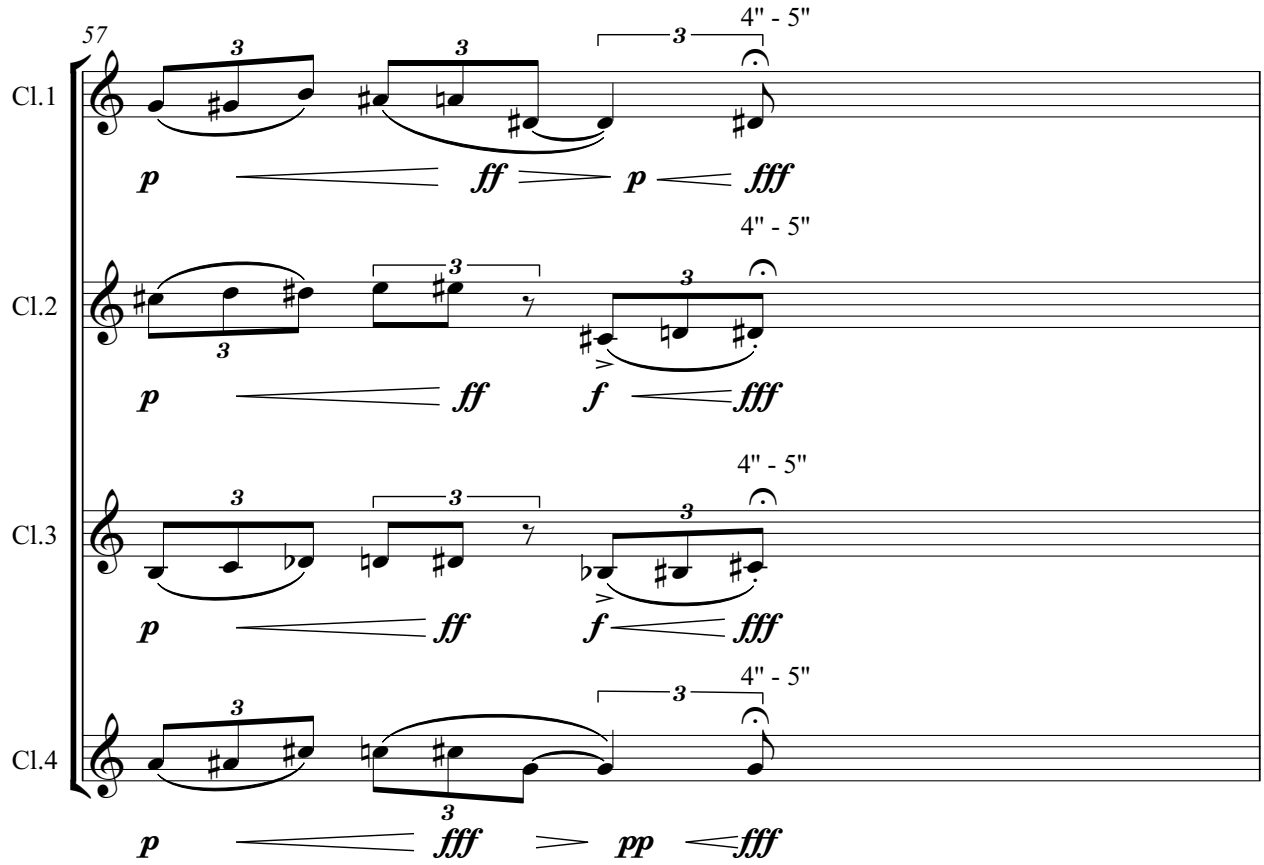

45
Cl.1
Cl.2
Cl.3
Cl.4

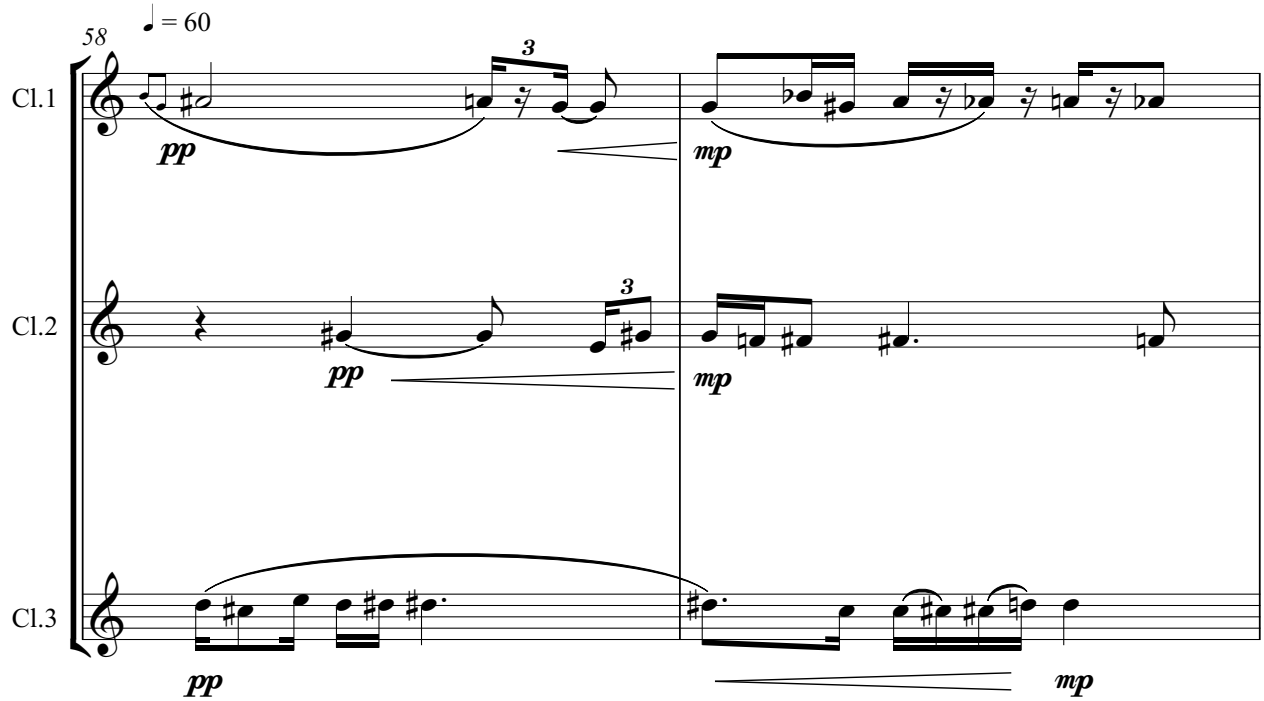

47
Cl.1
Cl.2
Cl.3
Cl.4
norm.

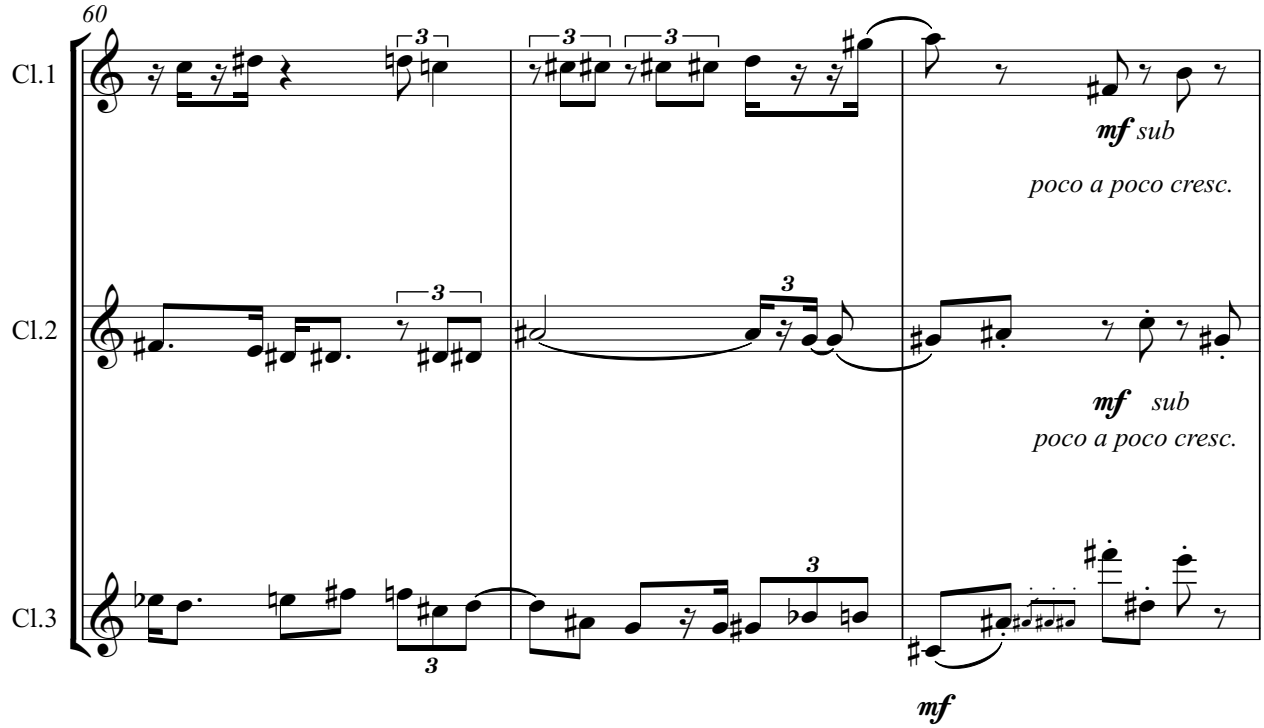

48
Cl.1
Cl.2
Cl.3
Cl.4
mf
7
5

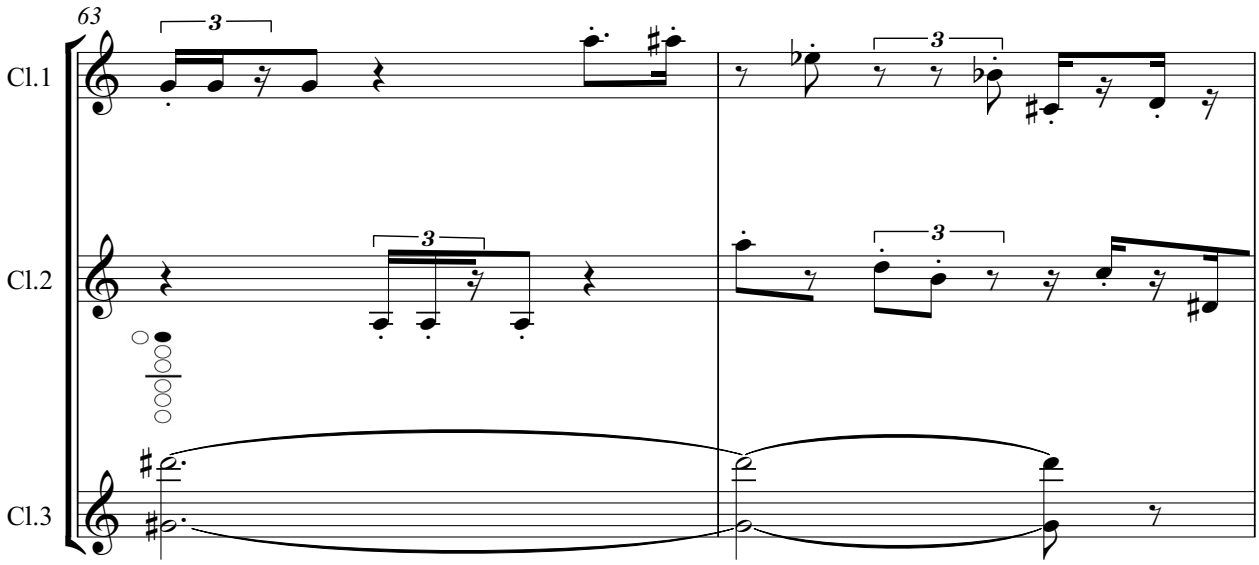

50
Cl.1
Cl.2
Cl.3
Cl.4
f
mp
ff
p
tr

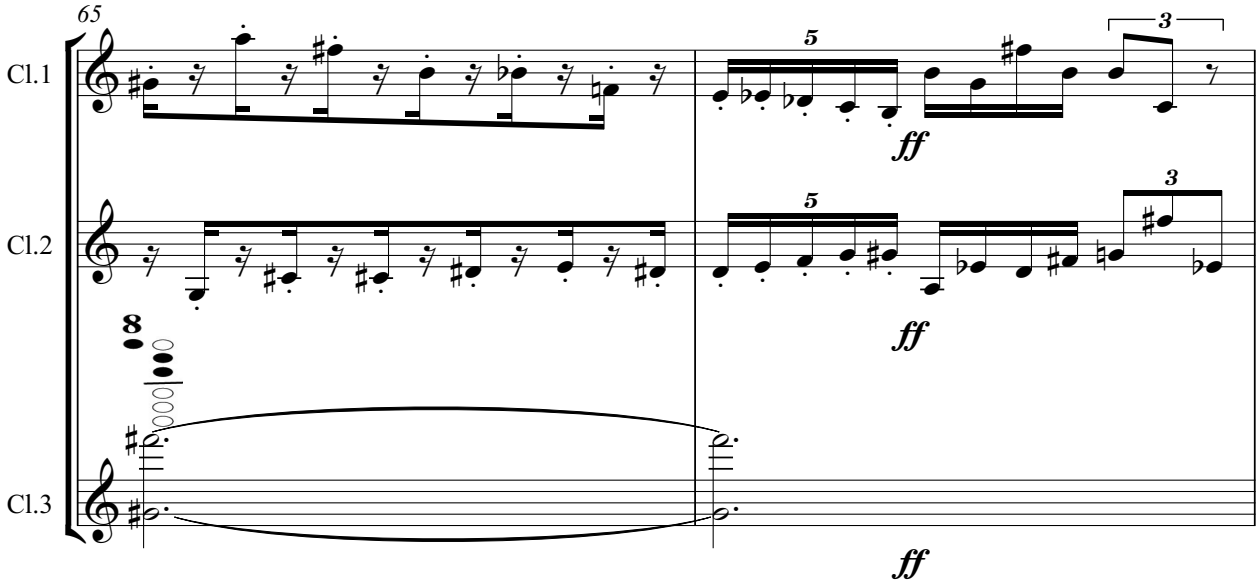

54
♩ = 120 – 130
Cl.1
Cl.2
Cl.3
Cl.4
pp
mf

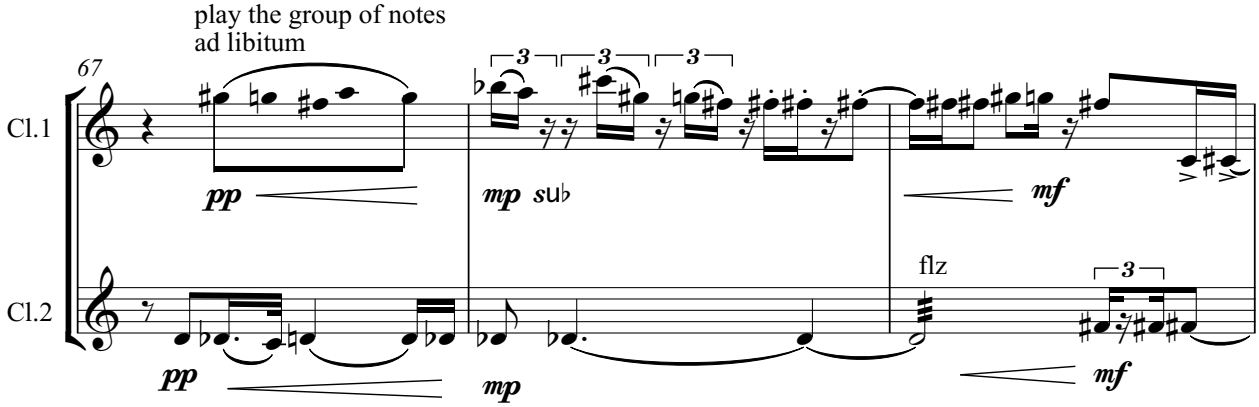

57
4" - 5"
Cl.1
Cl.2
Cl.3
Cl.4
p
ff
f
fff
pp

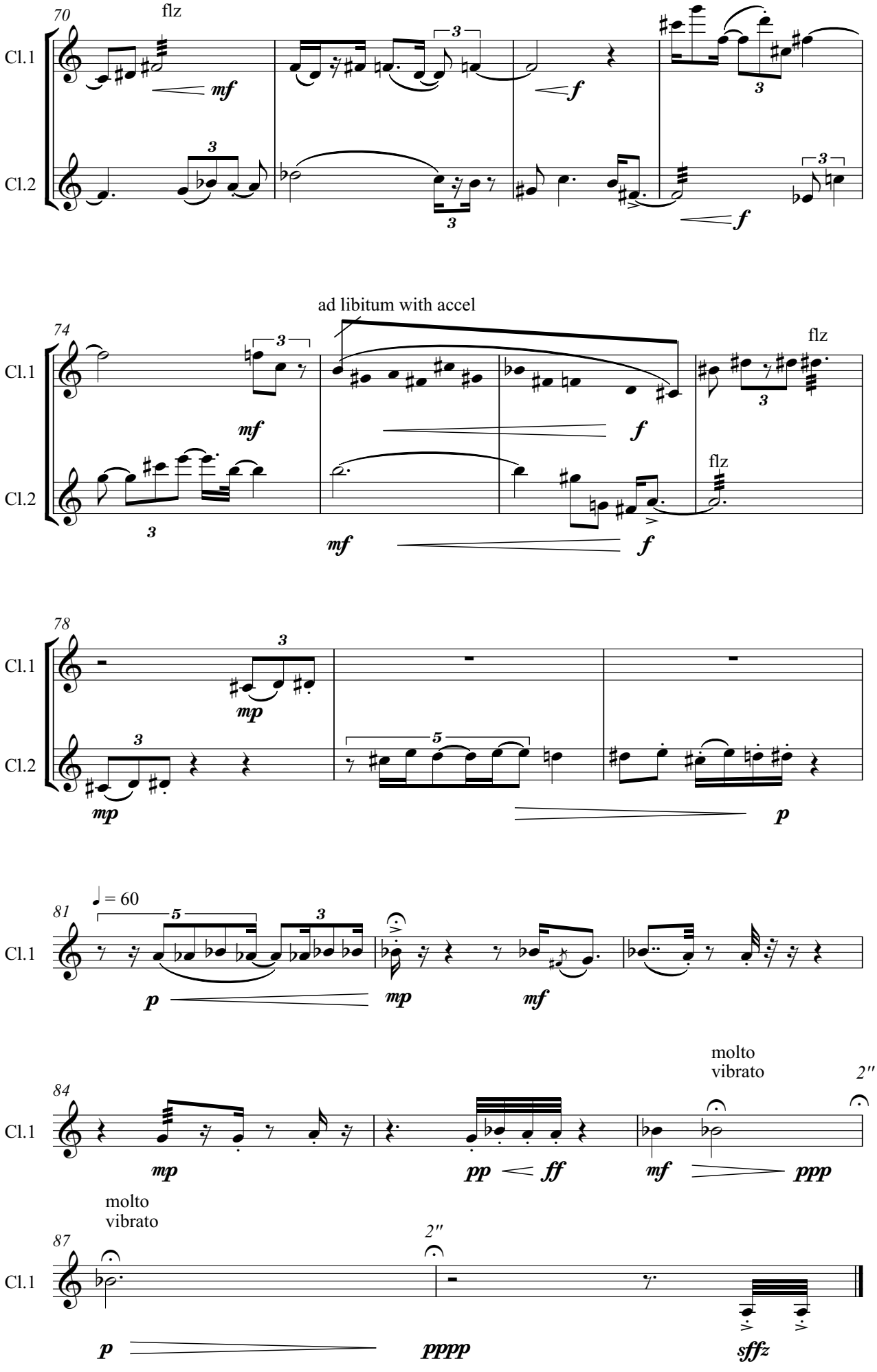

58
♩ = 60
Cl.1
Cl.2
Cl.3
pp
mp
pp
mp
pp
mp


60
Cl.1
Cl.2
Cl.3
mf sub
poco a poco cresc.
mf sub
poco a poco cresc.
mf


63
Cl.1
Cl.2
Cl.3


65
Cl.1
Cl.2
Cl.3
ff
ff
ff


play the group of notes
ad libitum
67
Cl.1
Cl.2
pp
mp sub
mf
flz
pp
mp
mf


70
flz
Cl.1
Cl.2
mf
f
3
74
ad libitum with accel
flz
mf
f
mf
f
78
mp
p
5
81
= 60
p
mp
mf
84
molto
vibrato
2″
mp
pp
ff
mf
ppp
87
molto
vibrato
2″
p
pppp
sffz

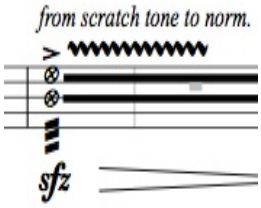
Nos dec

for string quartet

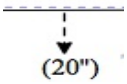
2011-2012

Total Duration : c. 10' 15"

Episodes are to be perfomed without metre.
The duration of each episode is shown in seconds.



Add bow pressure to produce a scratch tone,
in which the audible pitch is totally replaced by noise.

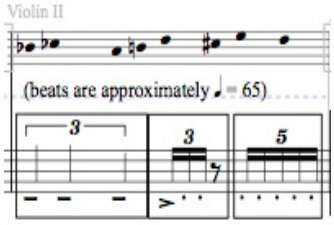


The vertical broken arrows indicate the time of entry.

Note duration are indicated with note- head extensions:
The longer the extensions, the longer the note.
Interruption (gaps between extensions) indicate silences (rests).

Where one duration is shown over 2 types of material, the performer can freely choose the length of each type within the total duration (see bars 6, 7 for example).

Where bowings articulation is absent play ad libitum.

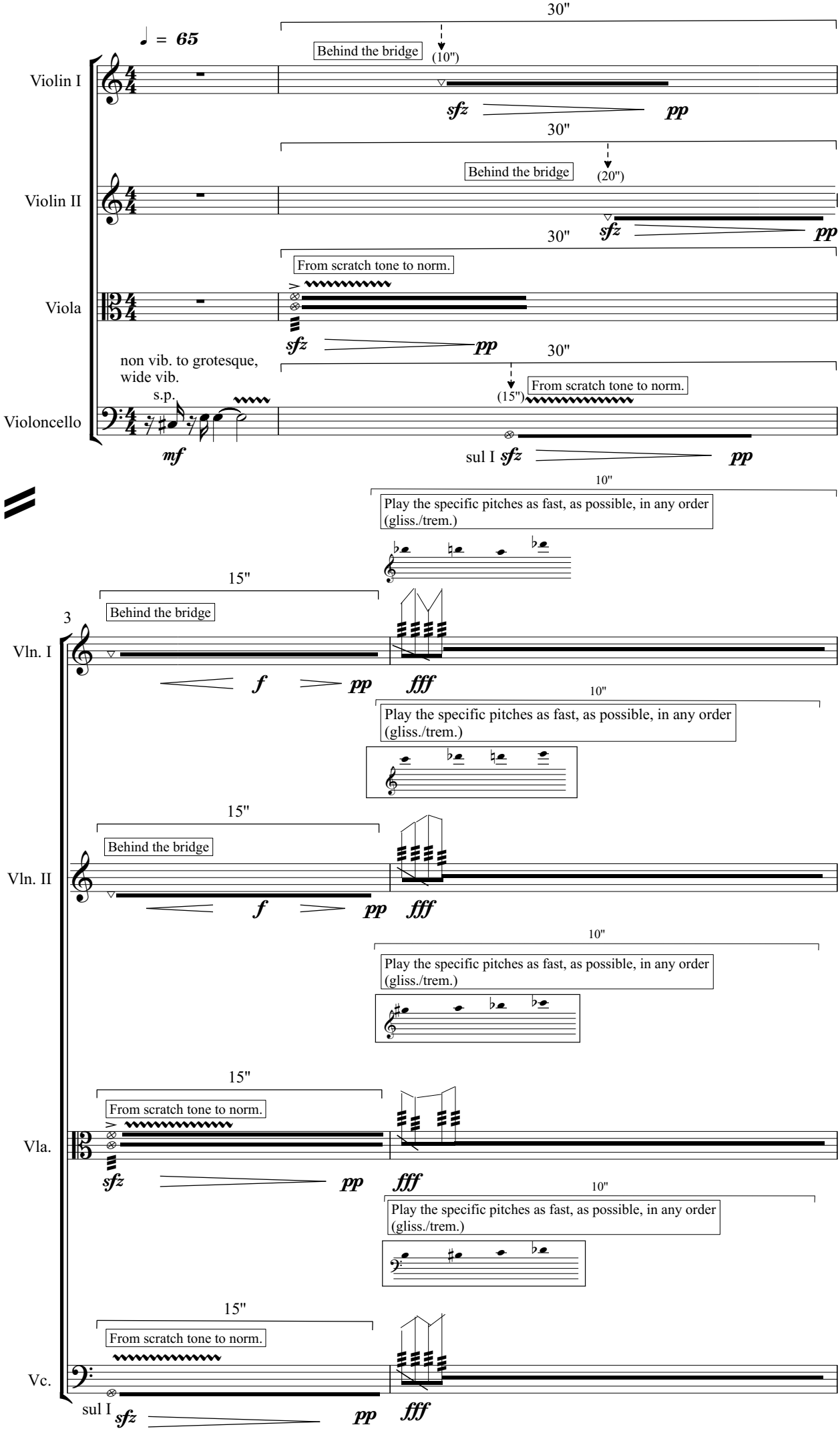


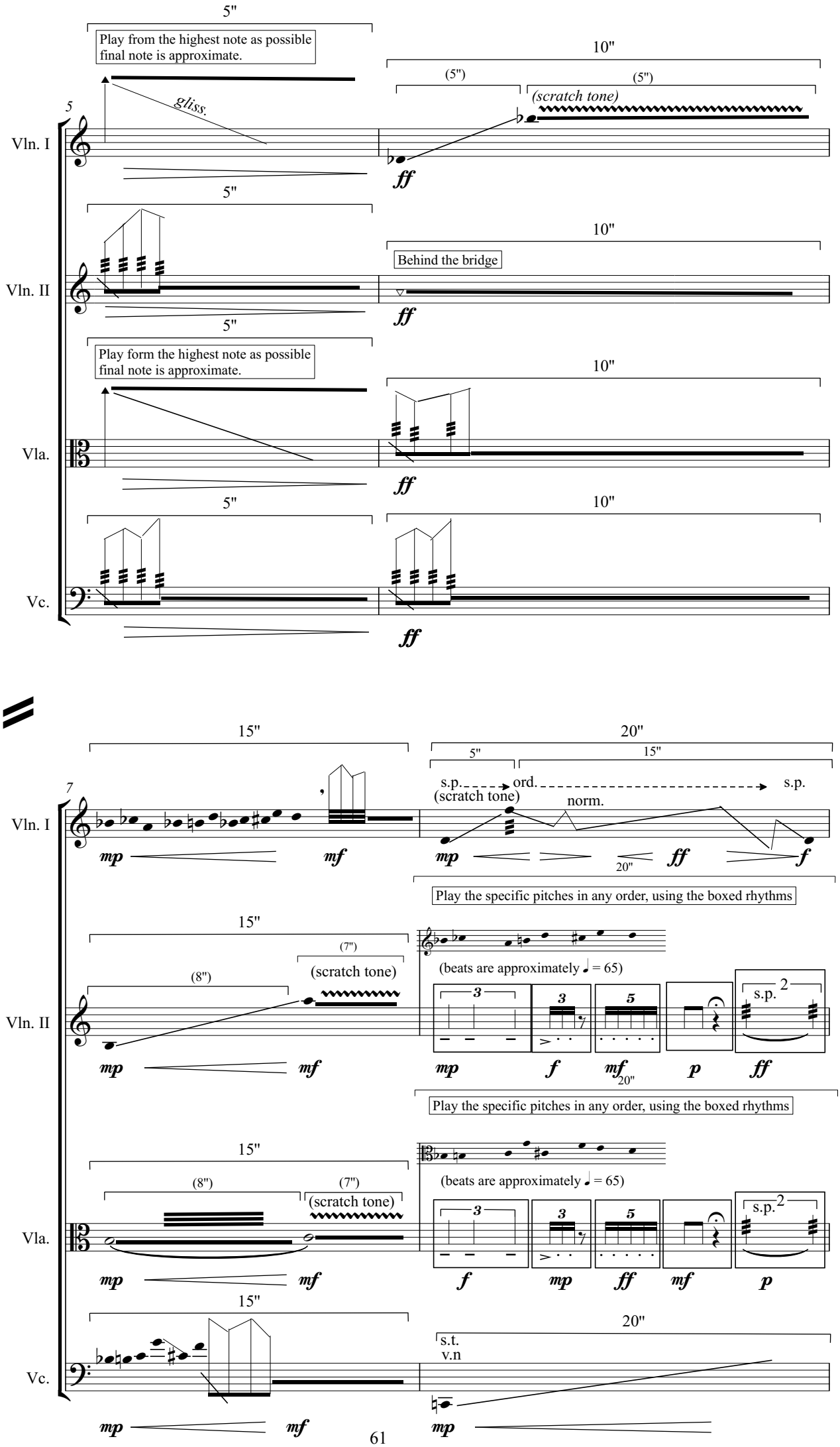
Play the specific pitches in any order, combining the specific rhythm (within the boxes) in any order. Notes may be repeated ad lib.

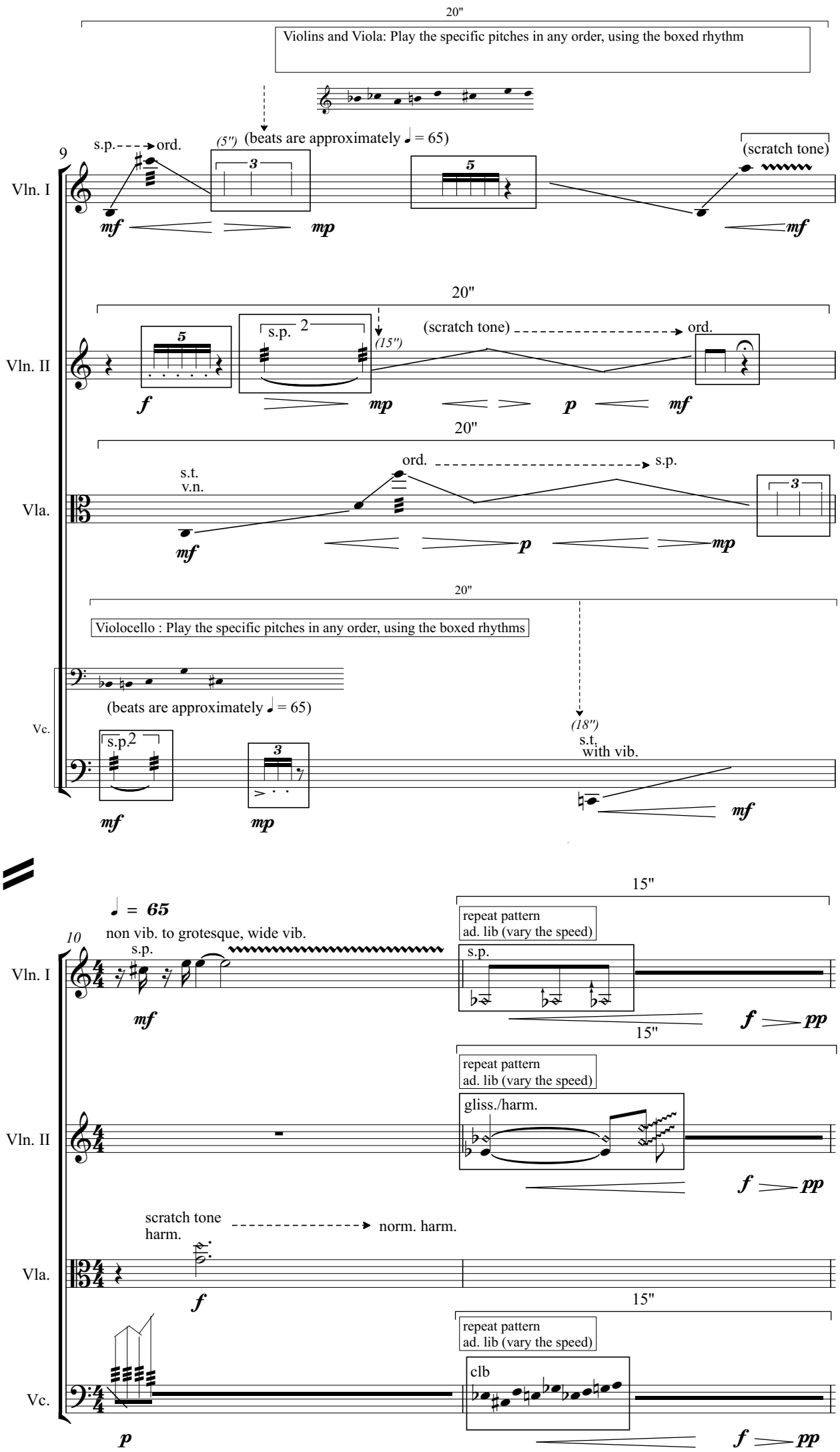
ABBREVIATIONS

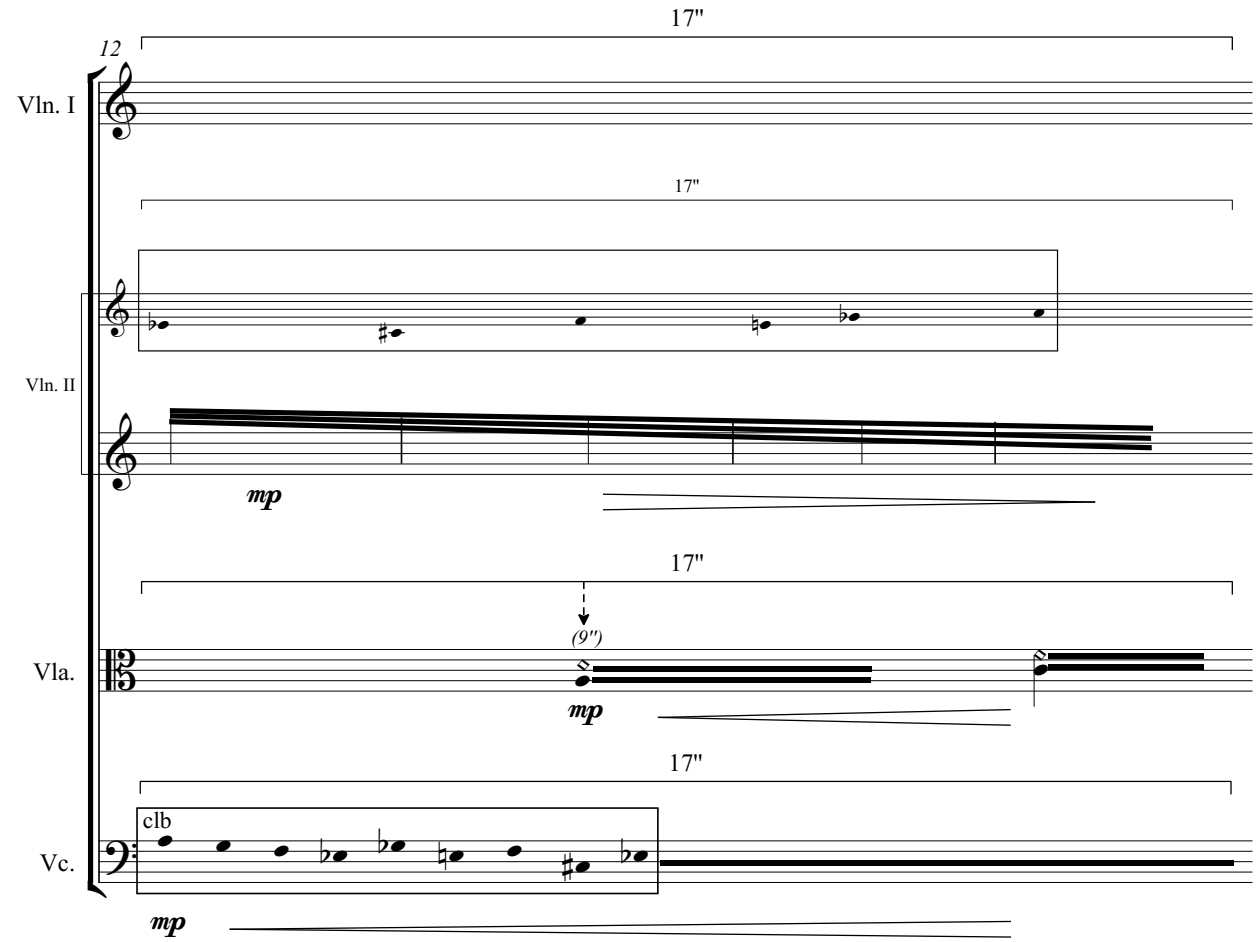
s.p = sul ponticello
clb = col legno battuto
s.t. = sul tasto
ord. = ordinatio
v.n.= vibrato normale
m.v = molto vibrato
norm. = normal
gliss./harm. = harmonics glissando

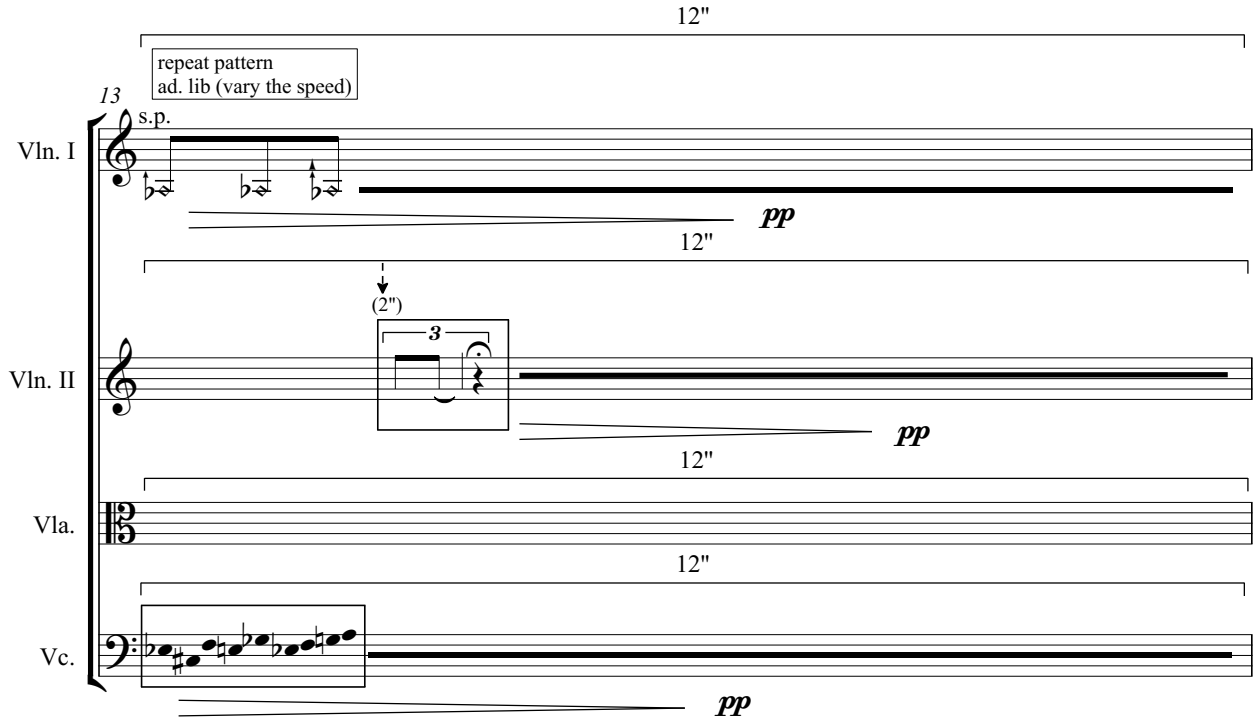
All other symbols are expained on the score.

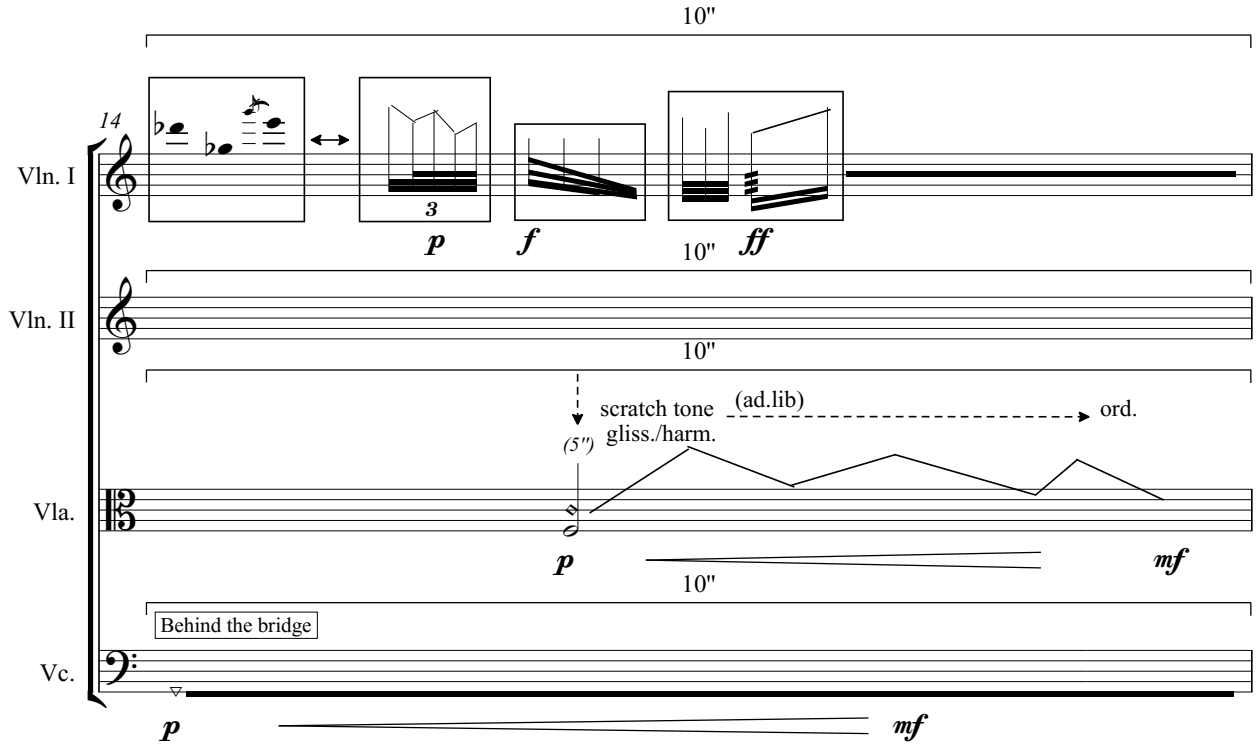

30"
♩ = 65
Behind the bridge
(10")
Violin I
sfz
pp
30"
Behind the bridge
(20")
Violin II
sfz
pp
30"
From scratch tone to norm.
Viola
sfz
pp
30"
non vib. to grotesque,
wide vib.
s.p.
(15")
From scratch tone to norm.
Violoncello
mf
sul I sfz
pp
10"
Play the specific pitches as fast, as possible, in any order
(gliss./trem.)
15"
Behind the bridge
3
Vln. I
f
pp
fff
10"
Play the specific pitches as fast, as possible, in any order
(gliss./trem.)
15"
Behind the bridge
Vln. II
f
pp
fff
10"
Play the specific pitches as fast, as possible, in any order
(gliss./trem.)
15"
From scratch tone to norm.
Vla.
sfz
pp
fff
10"
Play the specific pitches as fast, as possible, in any order
(gliss./trem.)
15"
From scratch tone to norm.
Vc.
sul I
sfz
pp
fff

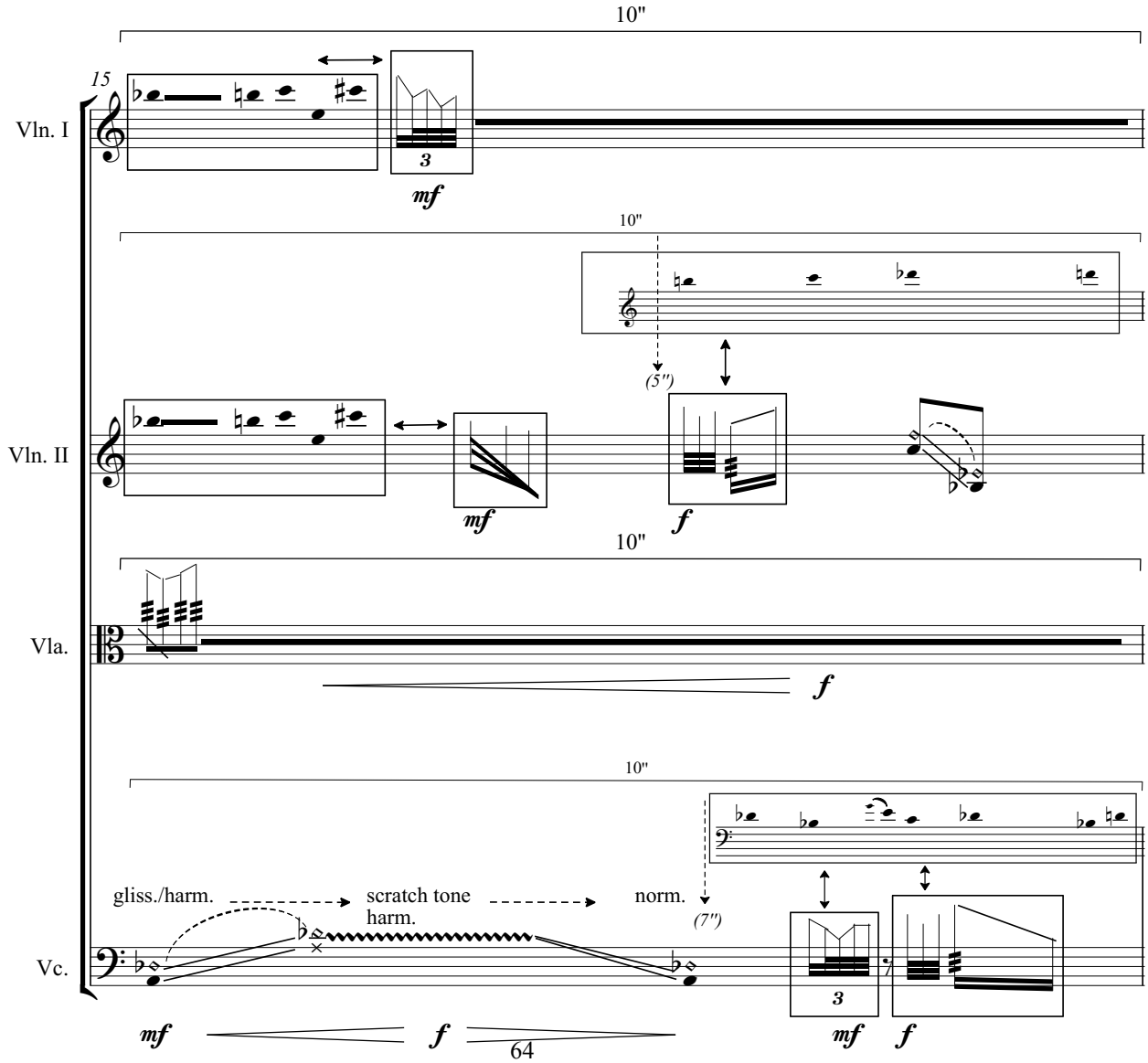

5"
Play from the highest note as possible
final note is approximate.
10"
(5")
(5")
(scratch tone)
5
gliss.
Vln. I
ff
5"
10"
Behind the bridge
Vln. II
ff
5"
Play form the highest note as possible
final note is approximate.
10"
Vla.
ff
5"
10"
Vc.
ff
15"
20"
5"
15"
7
s.p.
ord.
s.p.
(scratch tone)
norm.
Vln. I
mp
mf
mp
20"
ff
f
Play the specific pitches in any order, using the boxed rhythms
15"
(7")
(8")
(scratch tone)
(beats are approximately ♩ = 65)
Vln. II
mp
mf
mp
f
mf
20"
p
ff
s.p.
2
Play the specific pitches in any order, using the boxed rhythms
15"
(8")
(7")
(scratch tone)
(beats are approximately ♩ = 65)
Vla.
mp
mf
f
mp
ff
mf
p
s.p.
2
15"
20"
s.t.
v.n
Vc.
mp
mf
mp

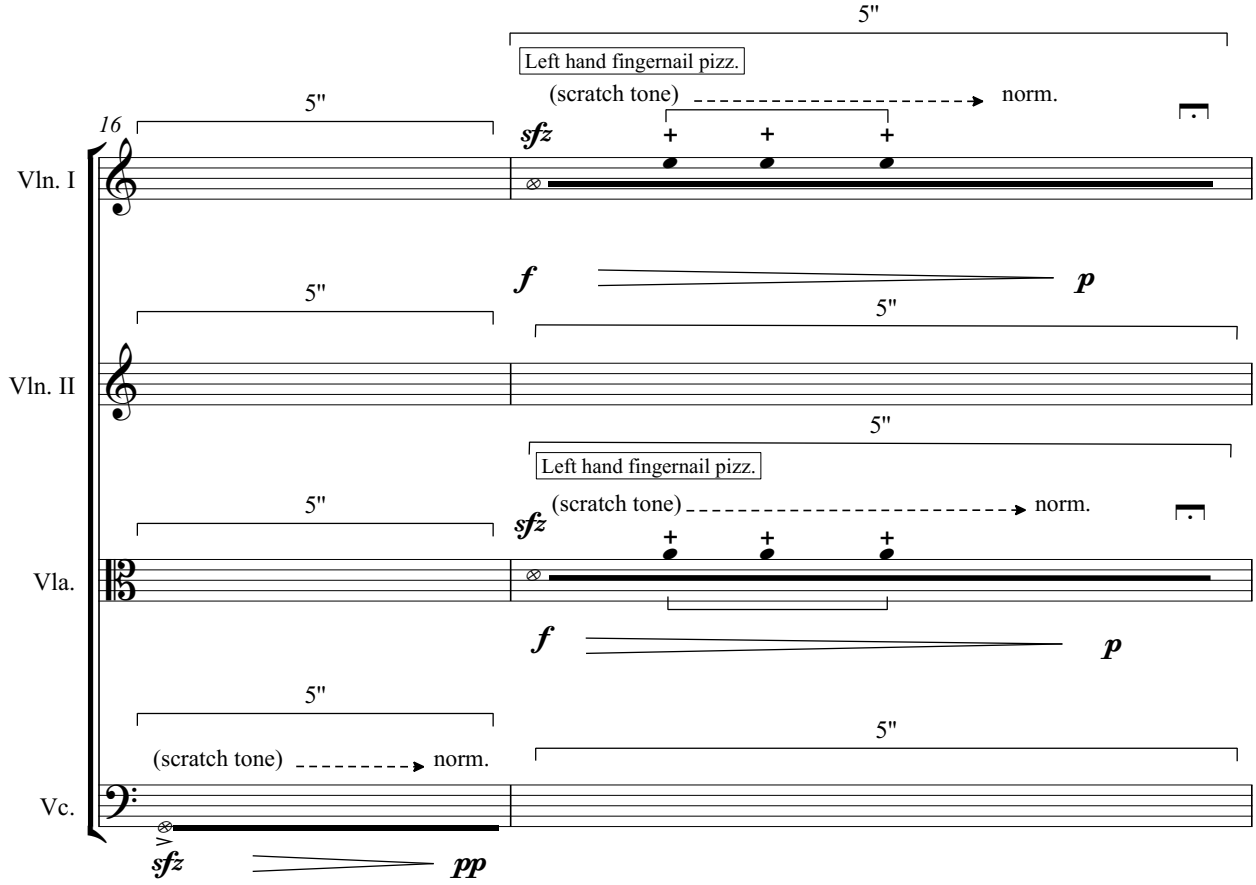

20"
Violins and Viola: Play the specific pitches in any order, using the boxed rhythm
(beats are approximately ♩ = 65)
9
Vln. I
s.p.
ord.
(5")
(scratch tone)
mf
mp
mf
20"
Vln. II
s.p.
(15")
(scratch tone)
ord.
f
mp
p
mf
20"
Vla.
s.t.
v.n.
ord.
s.p.
mf
p
mp
20"
Violocello : Play the specific pitches in any order, using the boxed rhythms
(beats are approximately ♩ = 65)
Vc.
s.p.
(18")
s.t.
with vib.
mf
mp
mf
15"
♩ = 65
10
non vib. to grotesque, wide vib.
repeat pattern
ad. lib (vary the speed)
Vln. I
s.p.
mf
15"
f pp
repeat pattern
ad. lib (vary the speed)
Vln. II
gliss./harm.
f pp
scratch tone
harm.
norm. harm.
Vla.
f
15"
repeat pattern
ad. lib (vary the speed)
Vc.
clb
p
f pp

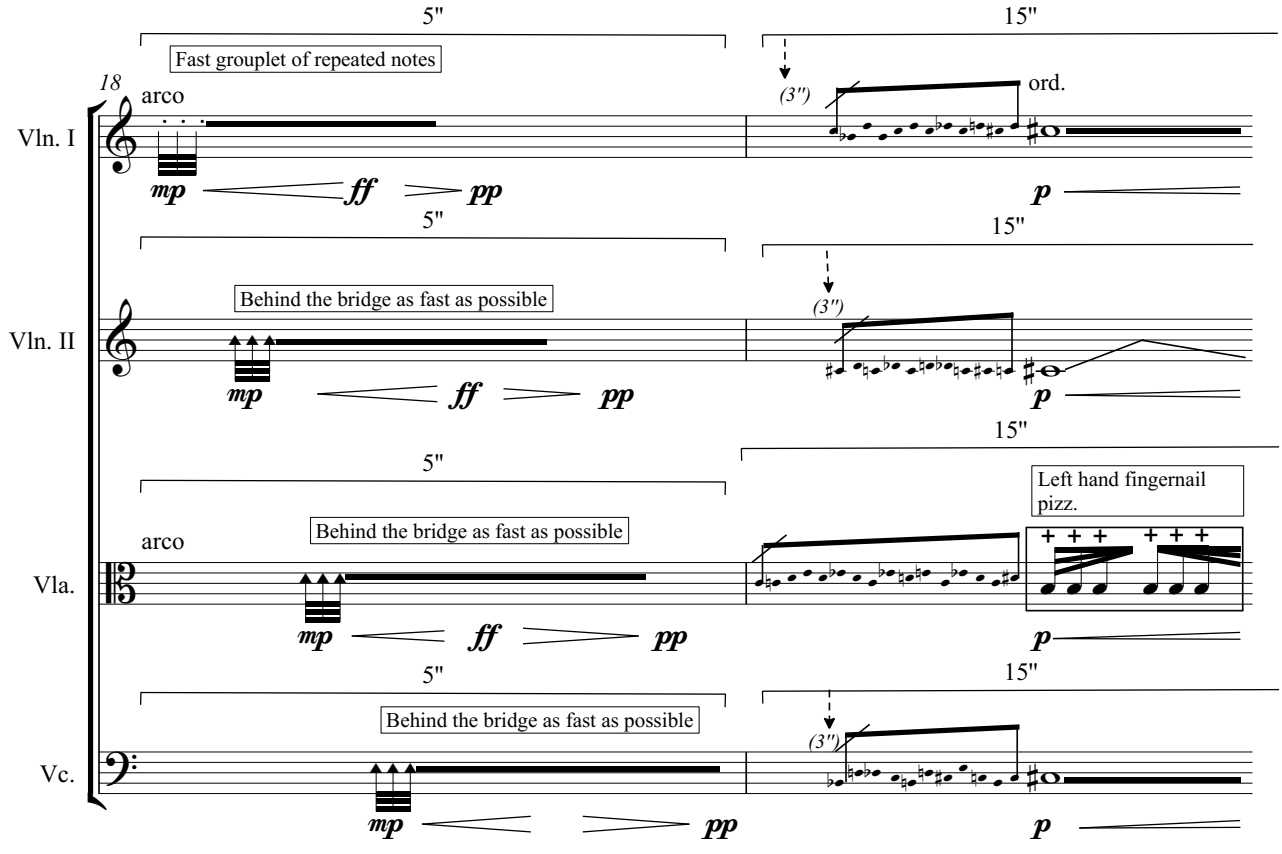

17"
12
Vln. I
17"
Vln. II
mp
17"
(9")
Vla.
mp
17"
clb
Vc.
mp

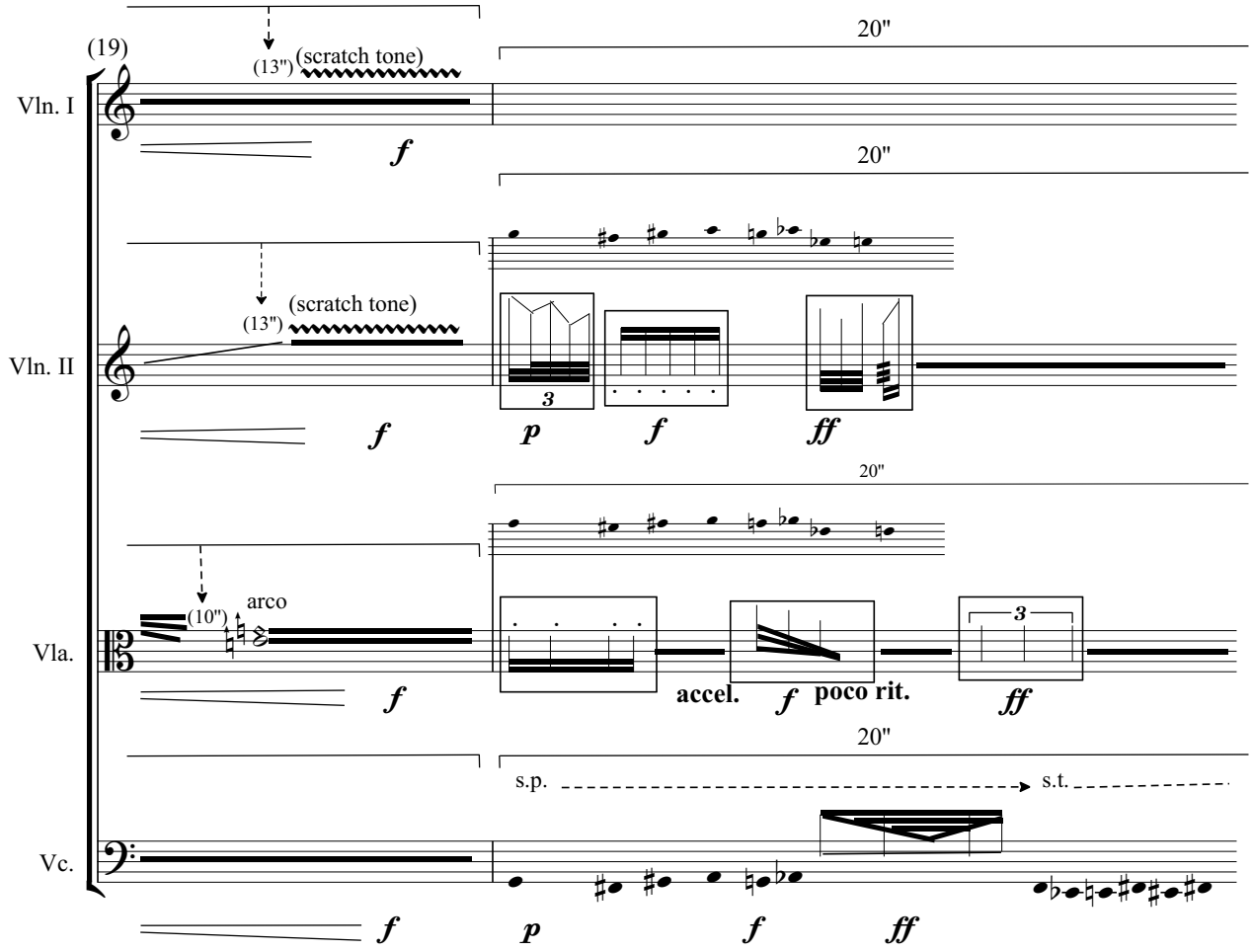

12"
repeat pattern
ad. lib (vary the speed)
13
s.p.
Vln. I
pp
12"
(2")
3
Vln. II
pp
12"
Vla.
12"
Vc.
pp

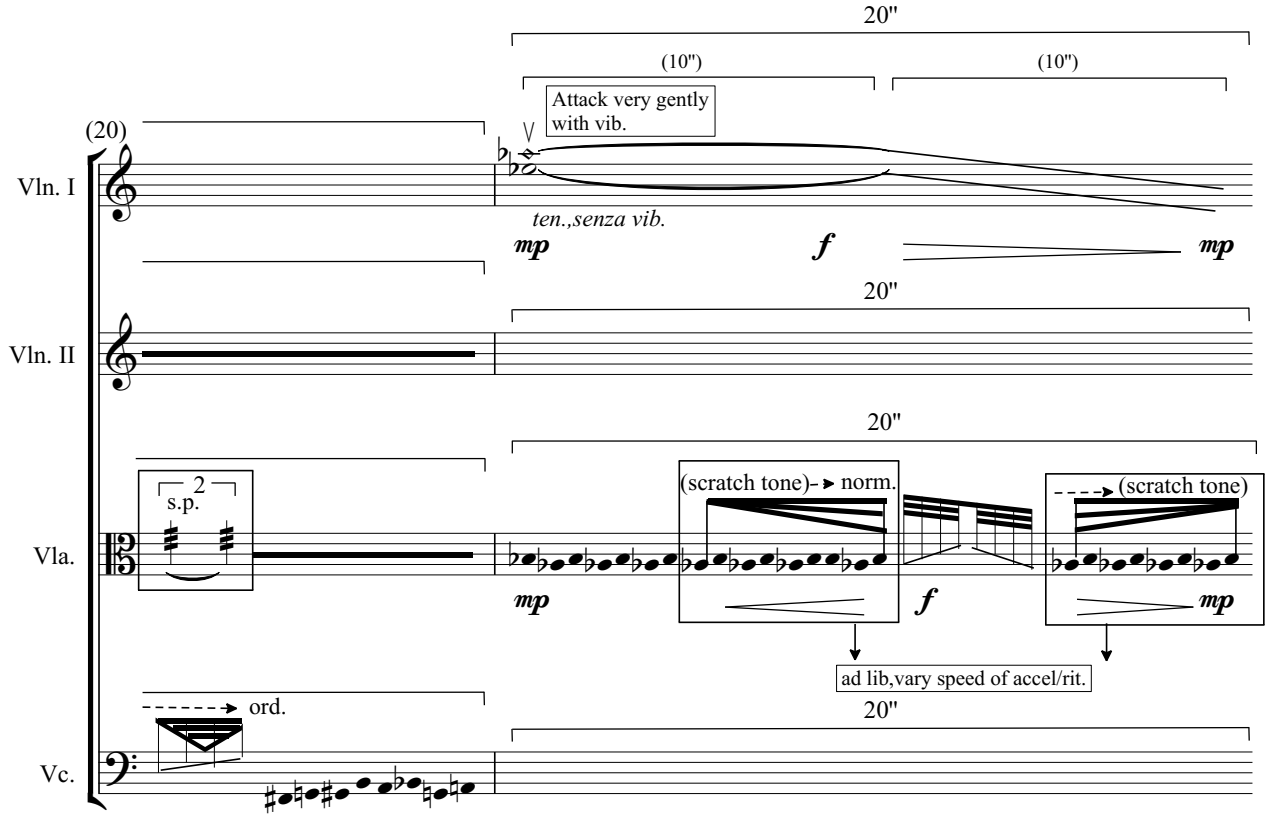

10"
14
Vln. I
3
p
f
10"
ff
Vln. II
10"
scratch tone
(ad.lib)
ord.
gliss./harm.
(5")
Vla.
p
mf
10"
Behind the bridge
Vc.
p
mf

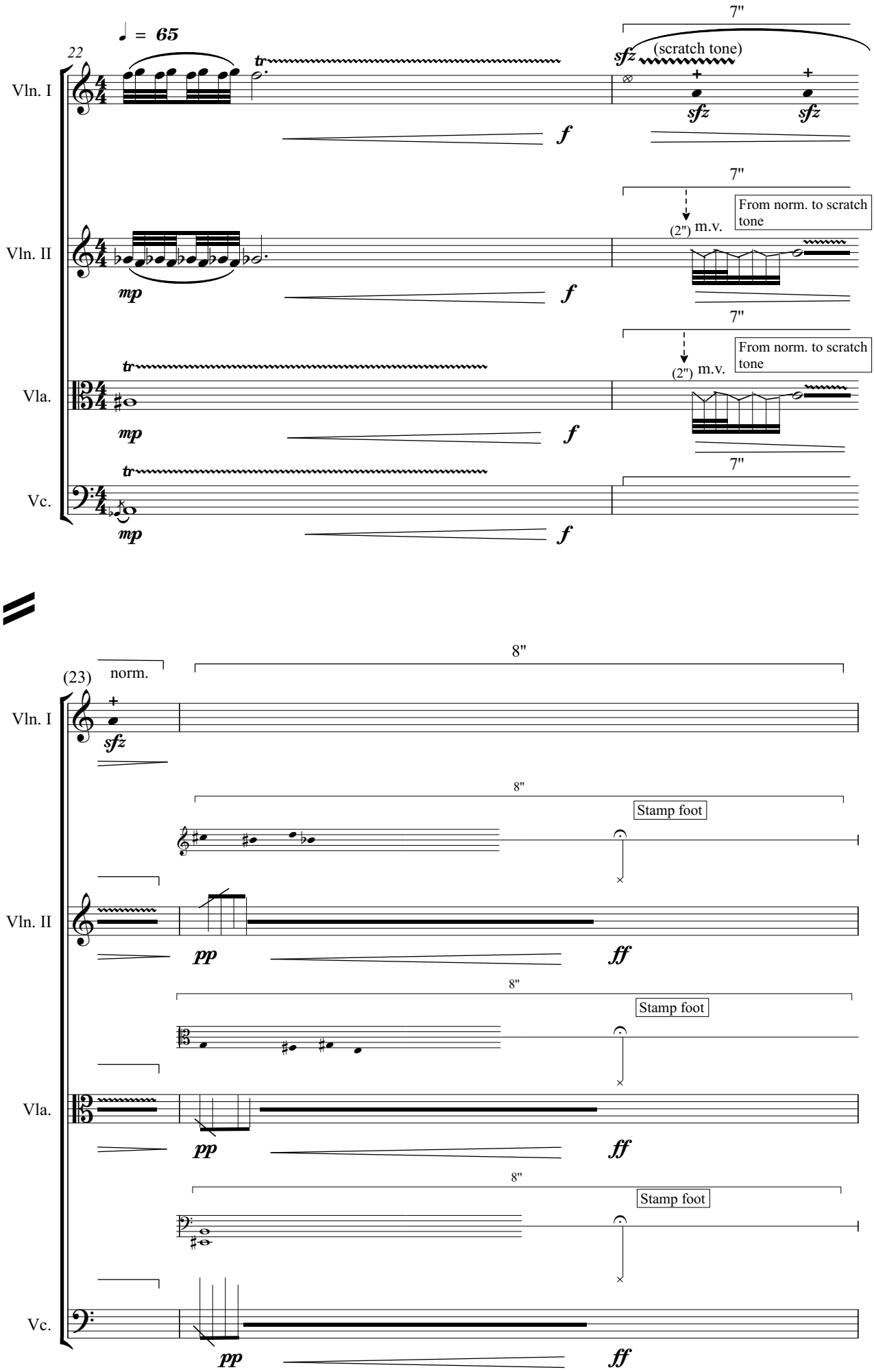

10"
15
Vln. I
3
mf
10"
(5")
Vln. II
mf
f
10"
Vla.
f
10"
gliss./harm.
scratch tone
harm.
norm.
(7")
Vc.
3
mf
f
mf
f

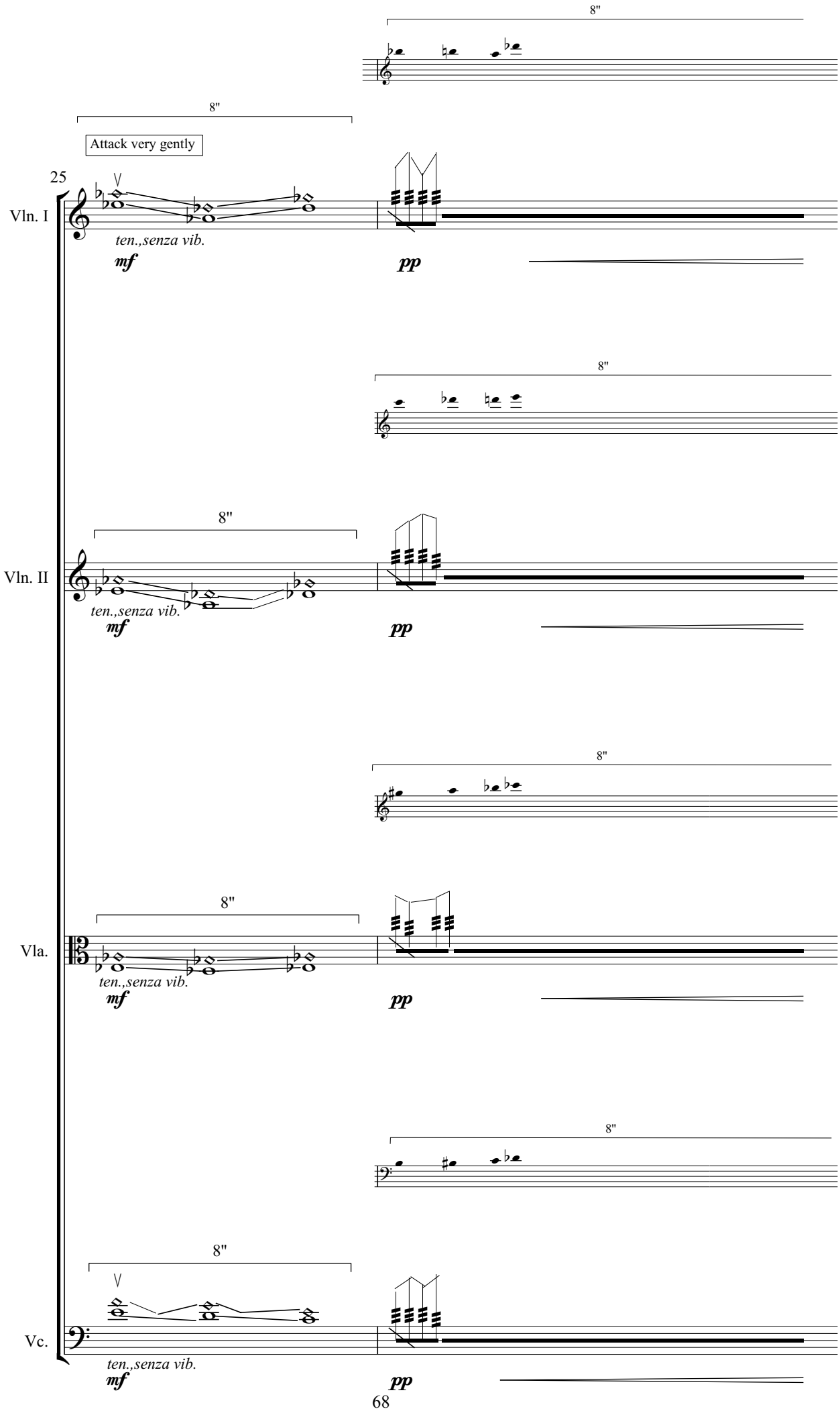

16
Vln. I
Vln. II
Vla.
Vc.
5"
Left hand fingernail pizz.
(scratch tone)
norm.
sfz
f
p
pp
(scratch tone) norm.

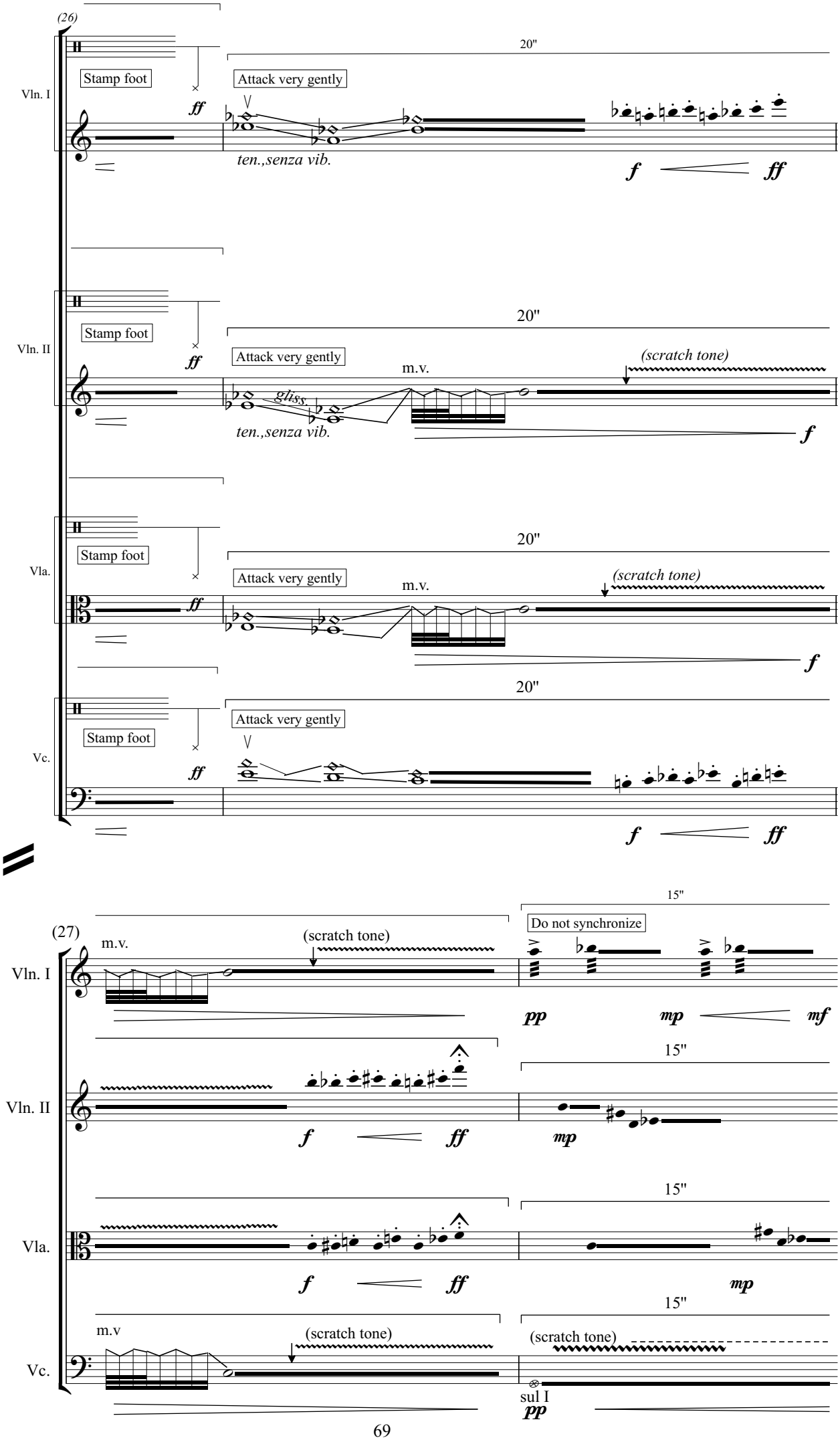

18
Vln. I
Vln. II
Vla.
Vc.
5"
15"
Fast grouplet of repeated notes
arco
ord.
(3")
mp
ff
pp
p
Behind the bridge as fast as possible
Left hand fingernail pizz.

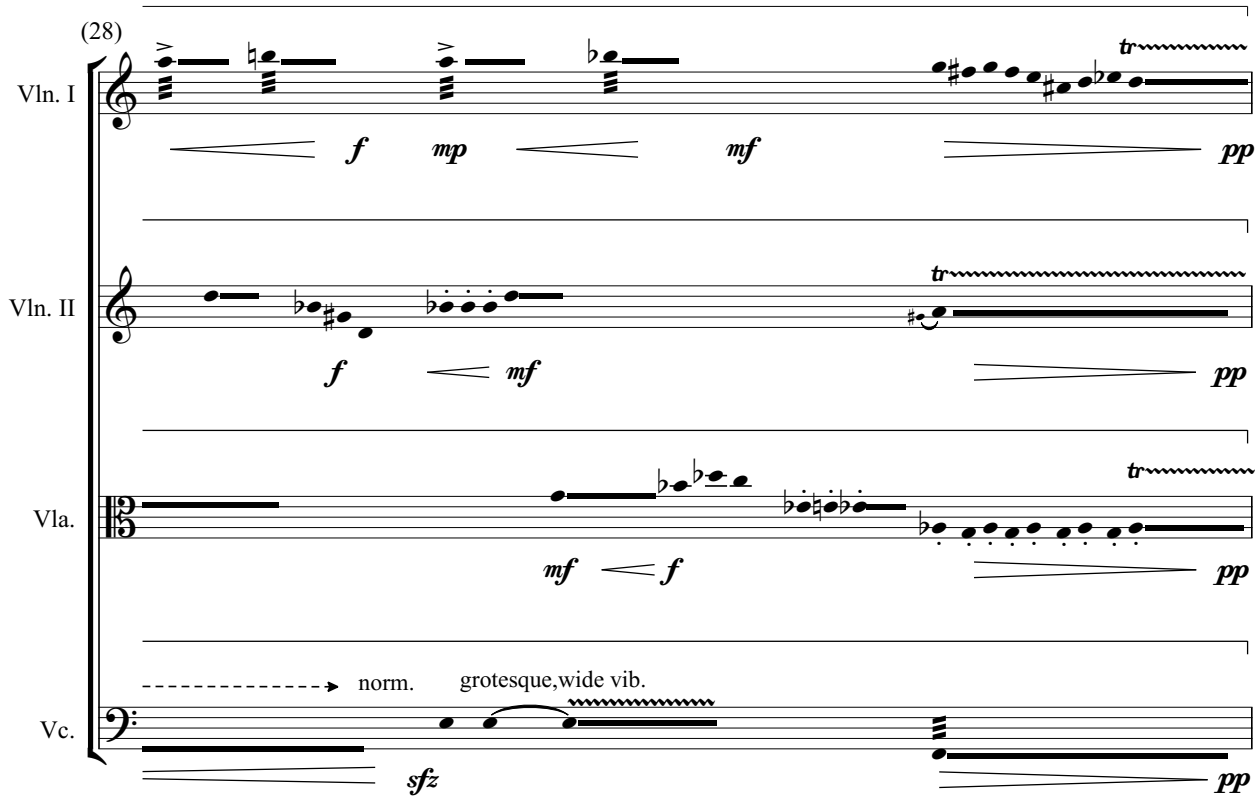

(19)
Vln. I
(13")
(scratch tone)
20"
f
Vln. II
(13")
(scratch tone)
3
p
f
ff
Vla.
(10")
arco
accel.
poco rit.
s.p.
s.t.
Vc.

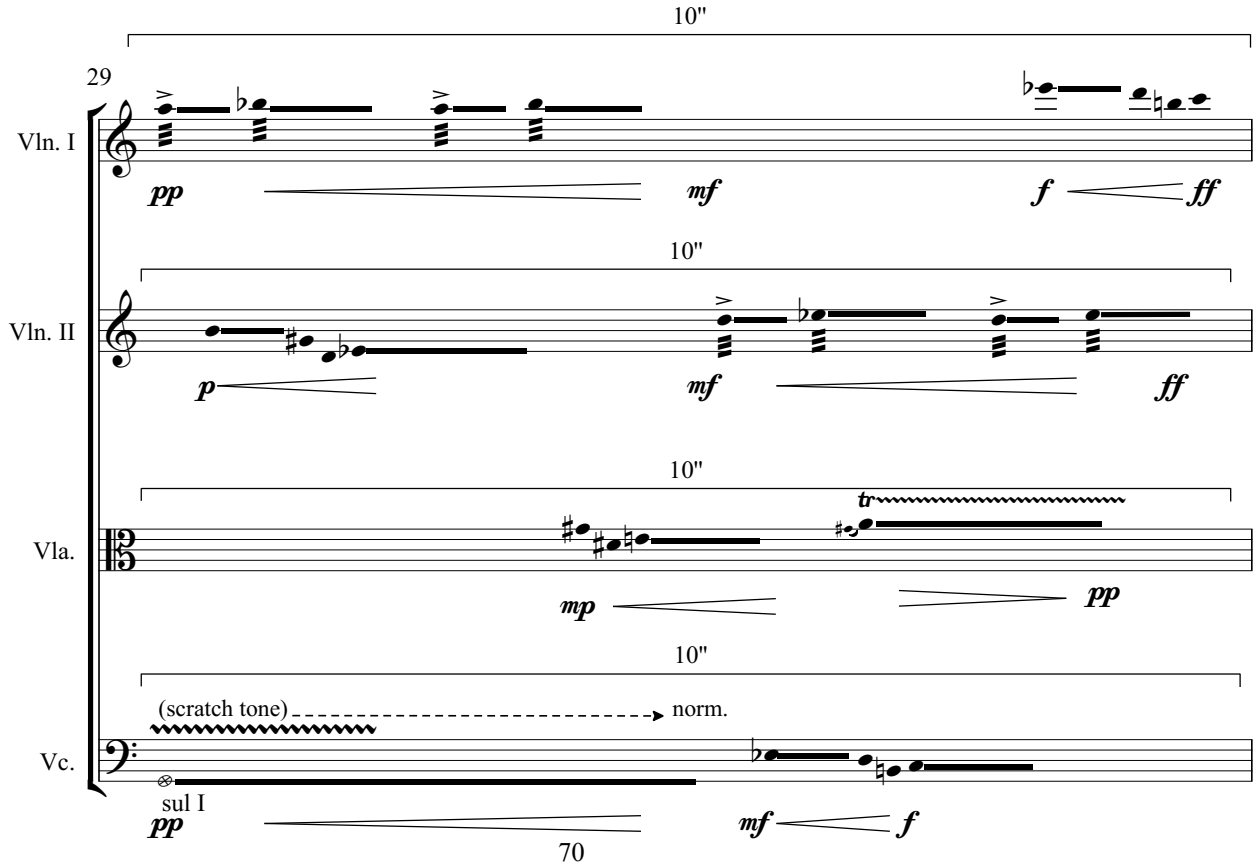

(20)
Vln. I
(10")
(10")
Attack very gently
with vib.
ten.,senza vib.
mp
f
Vln. II
Vla.
2
s.p.
(scratch tone)- ► norm.
(scratch tone)
ad lib,vary speed of accel/rit.
ord.
Vc.

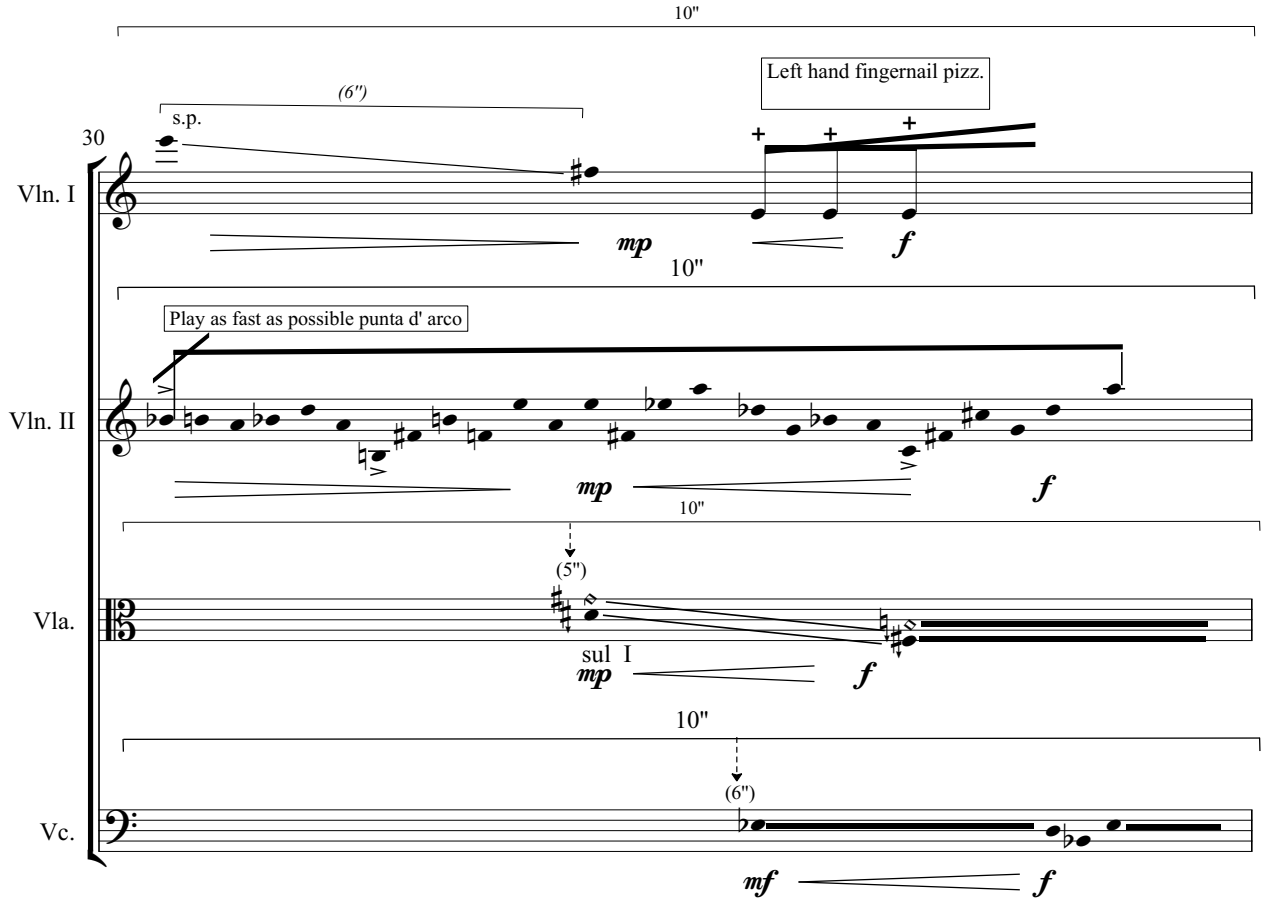

22
♩ = 65
Vln. I
Vln. II
Vla.
Vc.
tr
mp
f
sfz
(scratch tone)
7"
From norm. to scratch tone
(2") m.v.
(23)
norm.
8"
Stamp foot
pp
ff

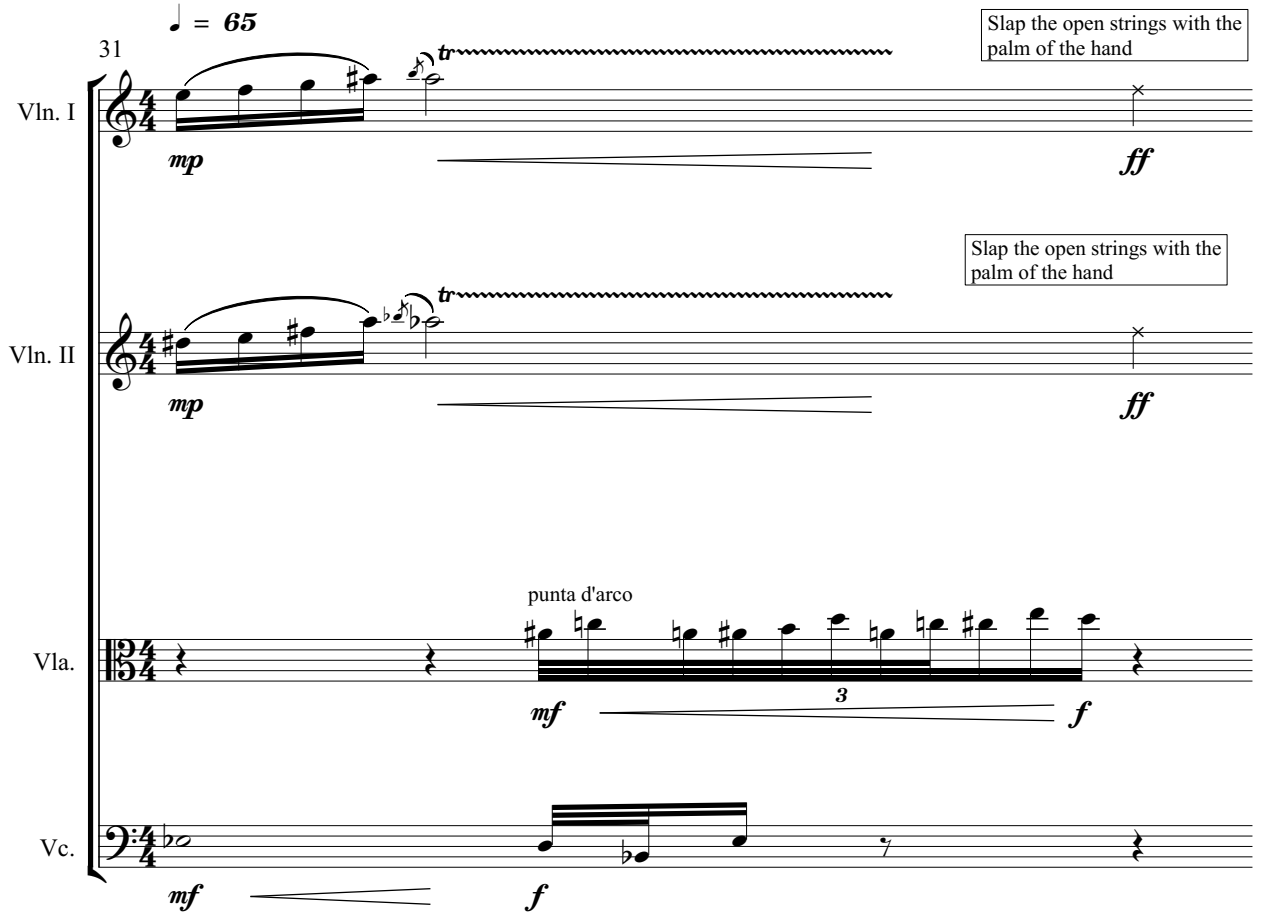

8"
8"
Attack very gently
25
Vln. I
ten.,senza vib.
mf
pp
8"
8"
Vln. II
ten.,senza vib.
mf
pp
8"
8"
Vla.
ten.,senza vib.
mf
pp
8"
8"
Vc.
ten.,senza vib.
mf
pp

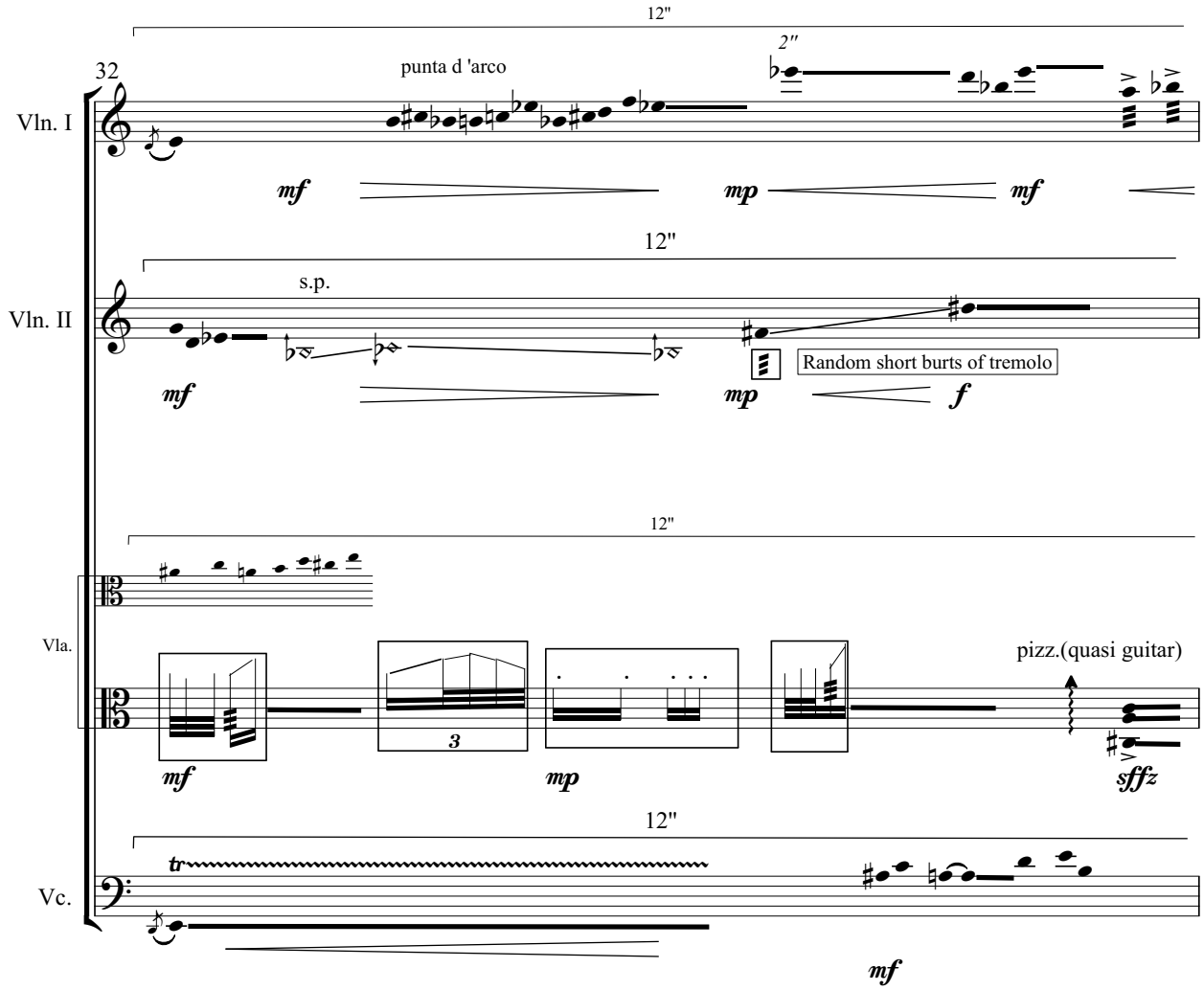

(26)
Vln. I
Stamp foot
Attack very gently
20"
ff
ten.,senza vib.
f
ff
Vln. II
Stamp foot
Attack very gently
20"
m.v.
(scratch tone)
gliss.
ten.,senza vib.
f
Vla.
Stamp foot
Attack very gently
20"
m.v.
(scratch tone)
f
Vc.
Stamp foot
Attack very gently
20"
ff
f
ff
(27)
Vln. I
m.v.
(scratch tone)
Do not synchronize
15"
pp
mp
mf
Vln. II
15"
f
ff
mp
Vla.
15"
f
ff
mp
Vc.
m.v
(scratch tone)
15"
(scratch tone)
sul I
pp

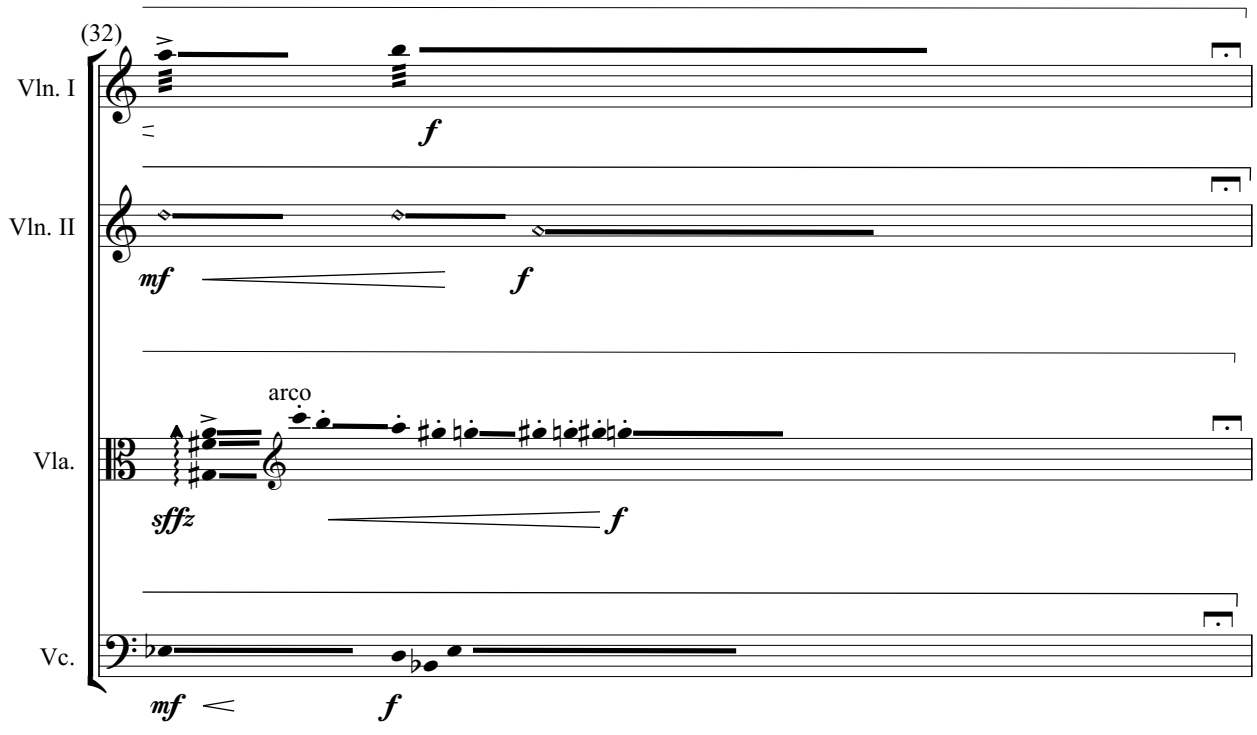

(28)
Vln. I
Vln. II
Vla.
Vc.
norm.
grotesque,wide vib.


10"
29
Vln. I
Vln. II
Vla.
Vc.
(scratch tone)
norm.
sul I

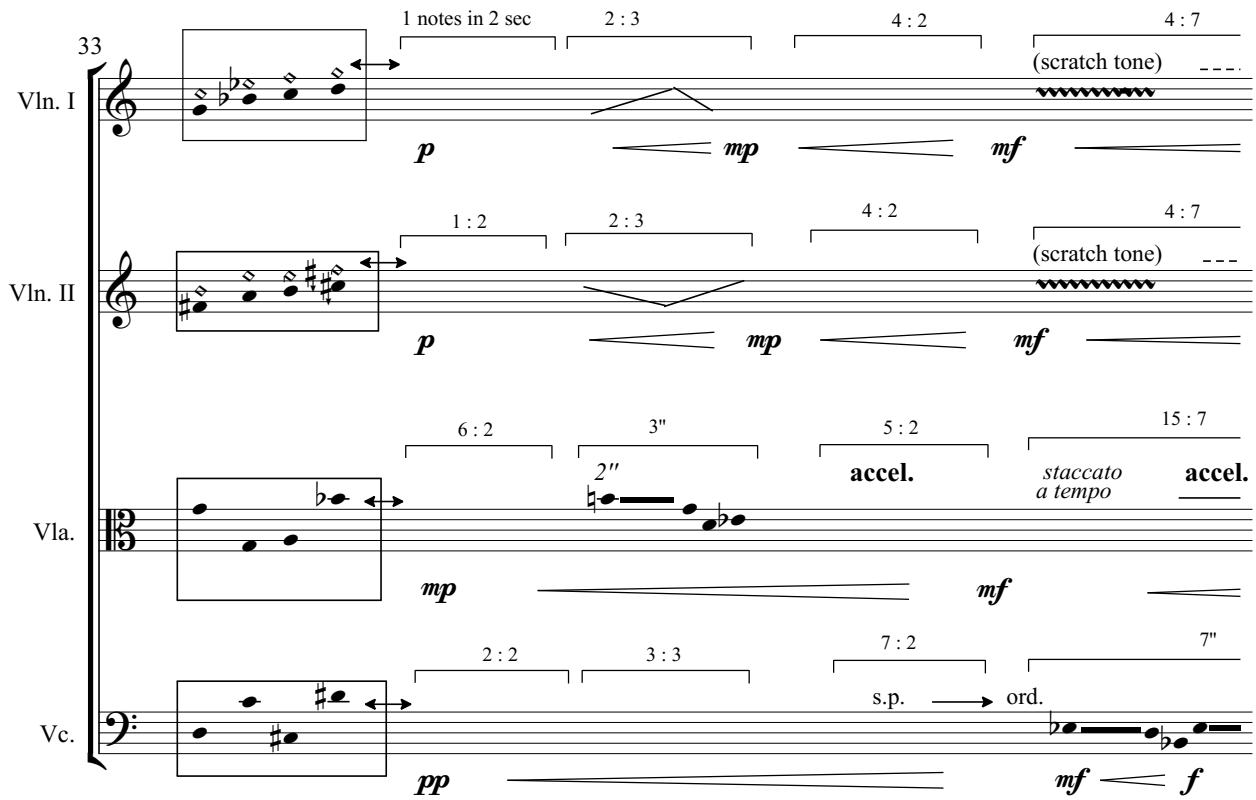

10"
Left hand fingernail pizz.
(6")
s.p.
30
Vln. I
mp
f
10"
Play as fast as possible punta d' arco
Vln. II
mp
f
10"
(5")
Vla.
sul I
mp
f
10"
(6")
Vc.
mf
f

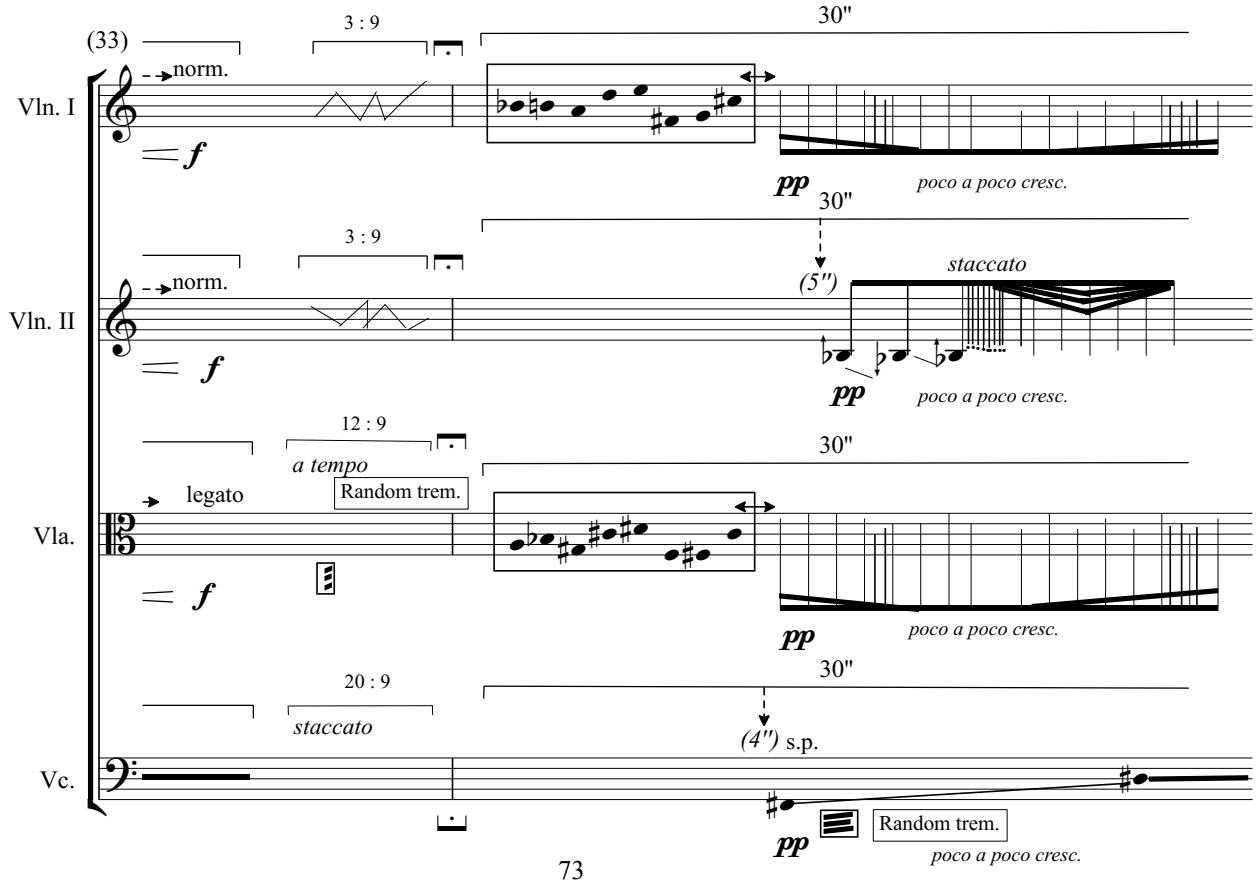

♩ = 65
31
Slap the open strings with the palm of the hand
Vln. I
tr
mp
ff
Slap the open strings with the palm of the hand
Vln. II
tr
mp
ff
punta d'arco
Vla.
3
mf
f
Vc.
mf
f

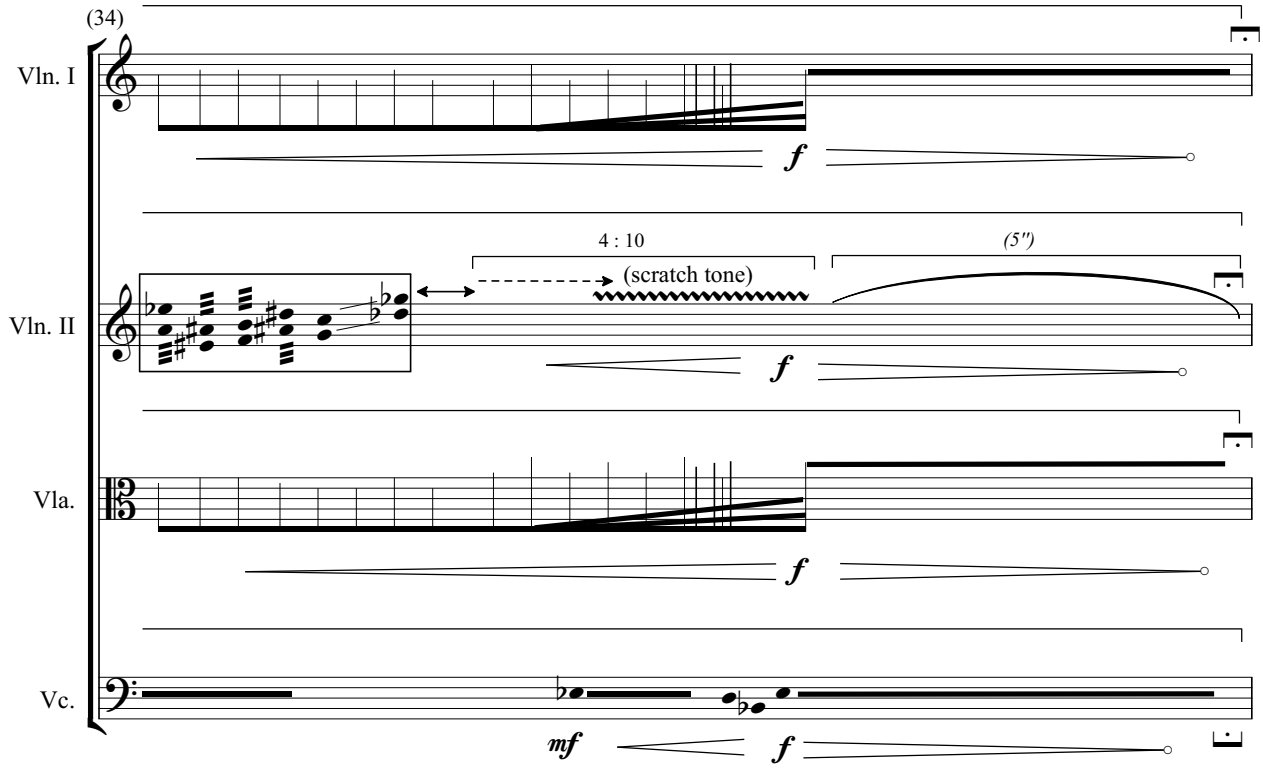

12"
2"
32
punta d 'arco
Vln. I
mf
mp
mf
12"
s.p.
Vln. II
Random short burts of tremolo
mf
mp
f
12"
Vla.
pizz.(quasi guitar)
3
mf
mp
sffz
12"
tr
Vc.
mf

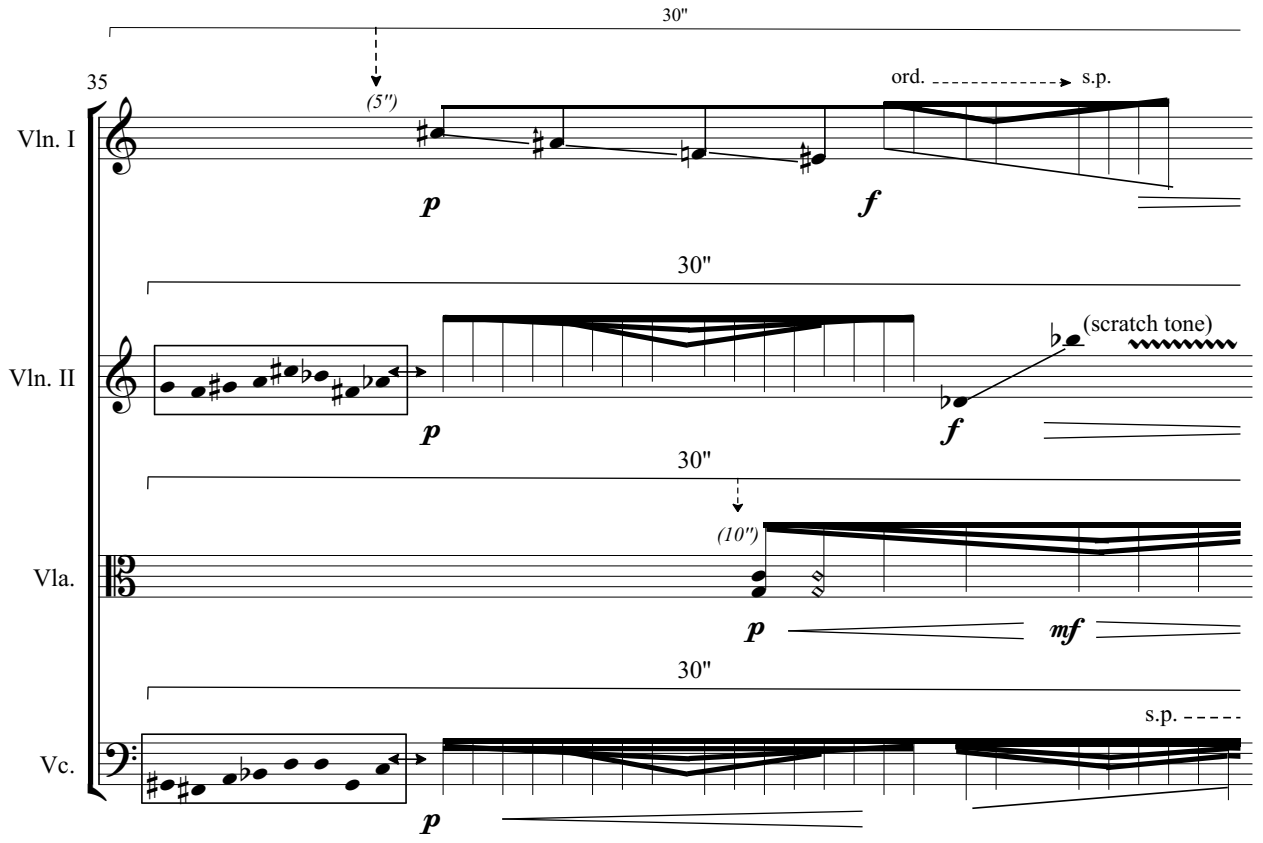

(32)
Vln. I
f
Vln. II
mf
f
arco
Vla.
sffz
f
Vc.
mf
f

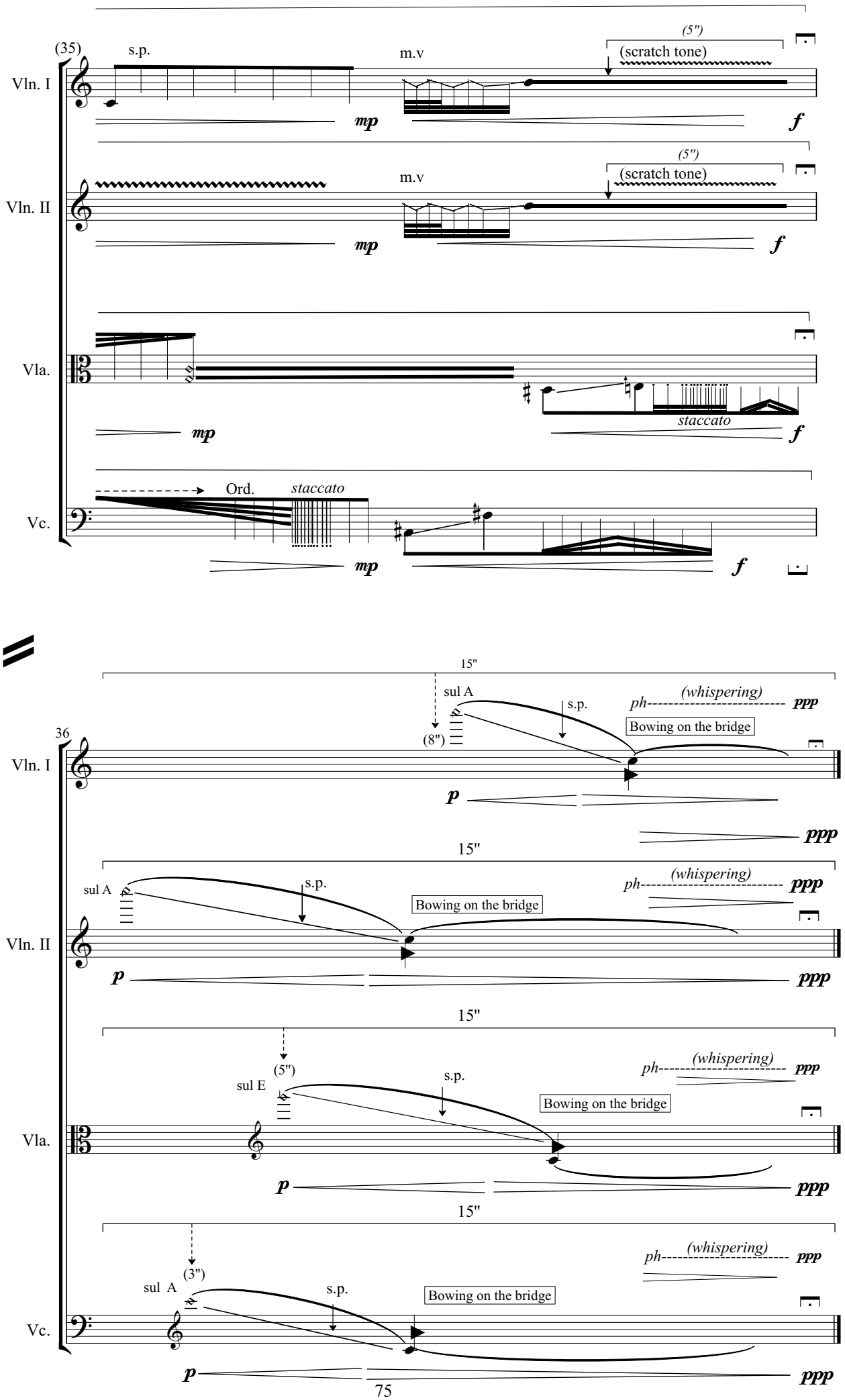
Notes chosen from boxes. The first number shows the number of the notes that the perfomer must play, and the second number shows the time in seconds






(34)
Vln. I
Vln. II
Vla.
Vc.
4 : 10
(5")
(scratch tone)
f
mf


30"
35
(5")
ord.
s.p.
Vln. I
Vln. II
Vla.
Vc.
(scratch tone)
(10")
p
f
mf


(35)
Vln. I
Vln. II
Vla.
Vc.
s.p.
m.v
(5")
(scratch tone)
mp
f
staccato
Ord.
36
15"
sul A
(8")
(whispering)
ph
ppp
Bowing on the bridge
p
sul E
(5")
(3")

Εξέλιξις

(Exelixis)

for chamber orchestra
and solo voice

2012

Instrumentation

Flute (fl.)
Cor Anglais (c.a.)
Clarinet in Bb (Cl. B*b*)
Horn in F (hn.)
Trumpet in C (tpt.)
Trombone (tbn.)
3 Percussions (perc.)
Piano (pno)
Soprano (sop.)
4 Violins I (vln. I)
4 Violins II (vln. II)
3 Violas (vla.)
Violocello (vc.)
Contrabass (cb.)

Percussion (First player)	
	Bass Drum
	Vibraphone
	Xylophone

Percussion (Second player)	
	Tam- Tam
	Snare Drum
	Piccolo Snare Drums without snare

Percussion (Third player)	
	Thunder Sheet
	Tom- toms
	Woodblocks

Sticks	
	Soft bass drum sticks
	Medium bass drum sticks
	Hard bass drum sticks
	Soft sticks
	Medium sticks
	Hard sticks

Total Duration : c. 10' 26"

Accidentals apply to one note only
(Ties are considered to be one note).

Episodes are to be performed without metre.
The duration of each episode is shown in seconds.

Note durations are indicated with note-head extension:
The longer the extension, the longer the note.
Interruptions (gaps between extensions) indicate silences (rests).

The vertical broken arrows indicates the time of entry.

The highest note possible.

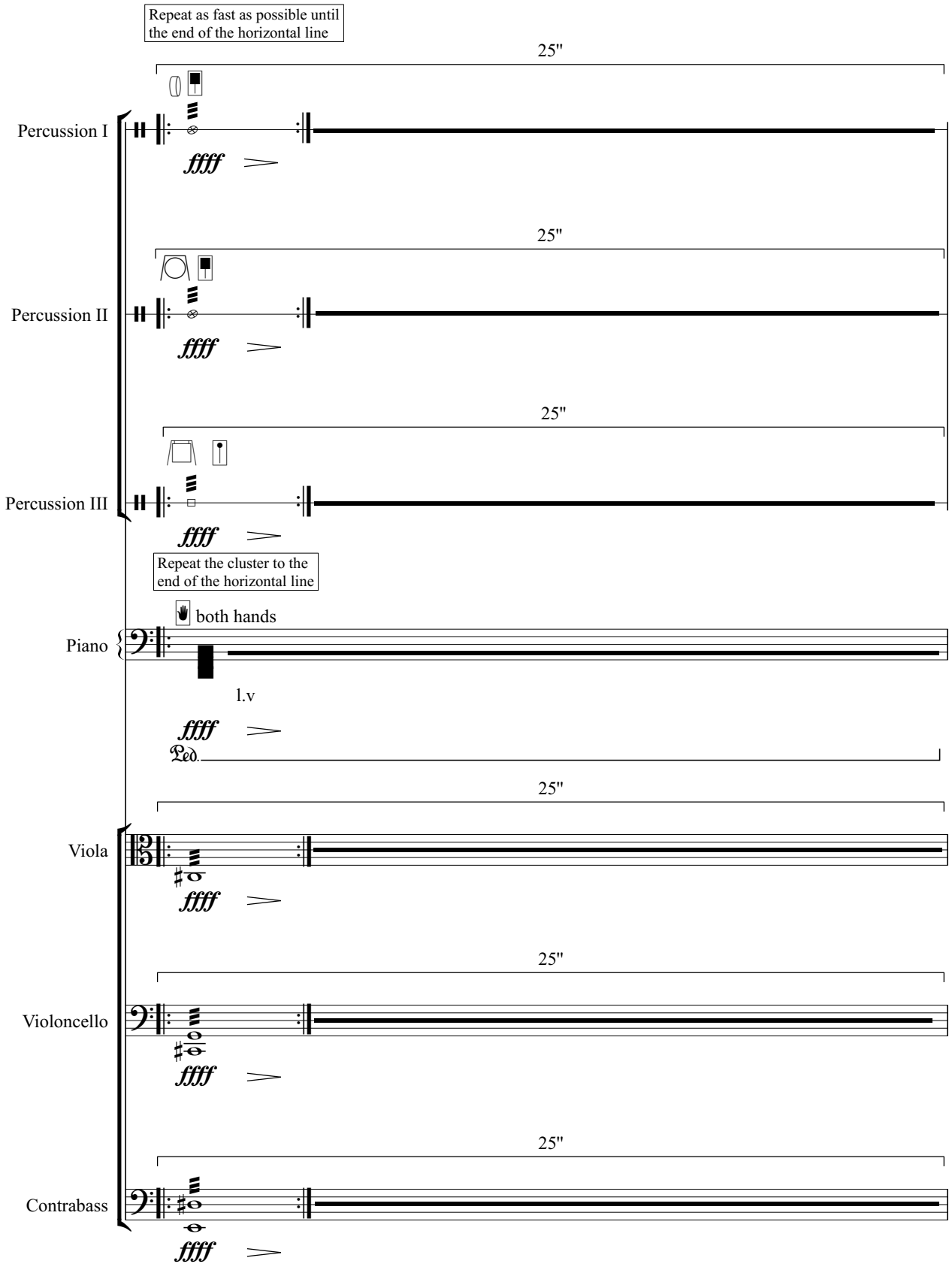
Phonetic alphabet

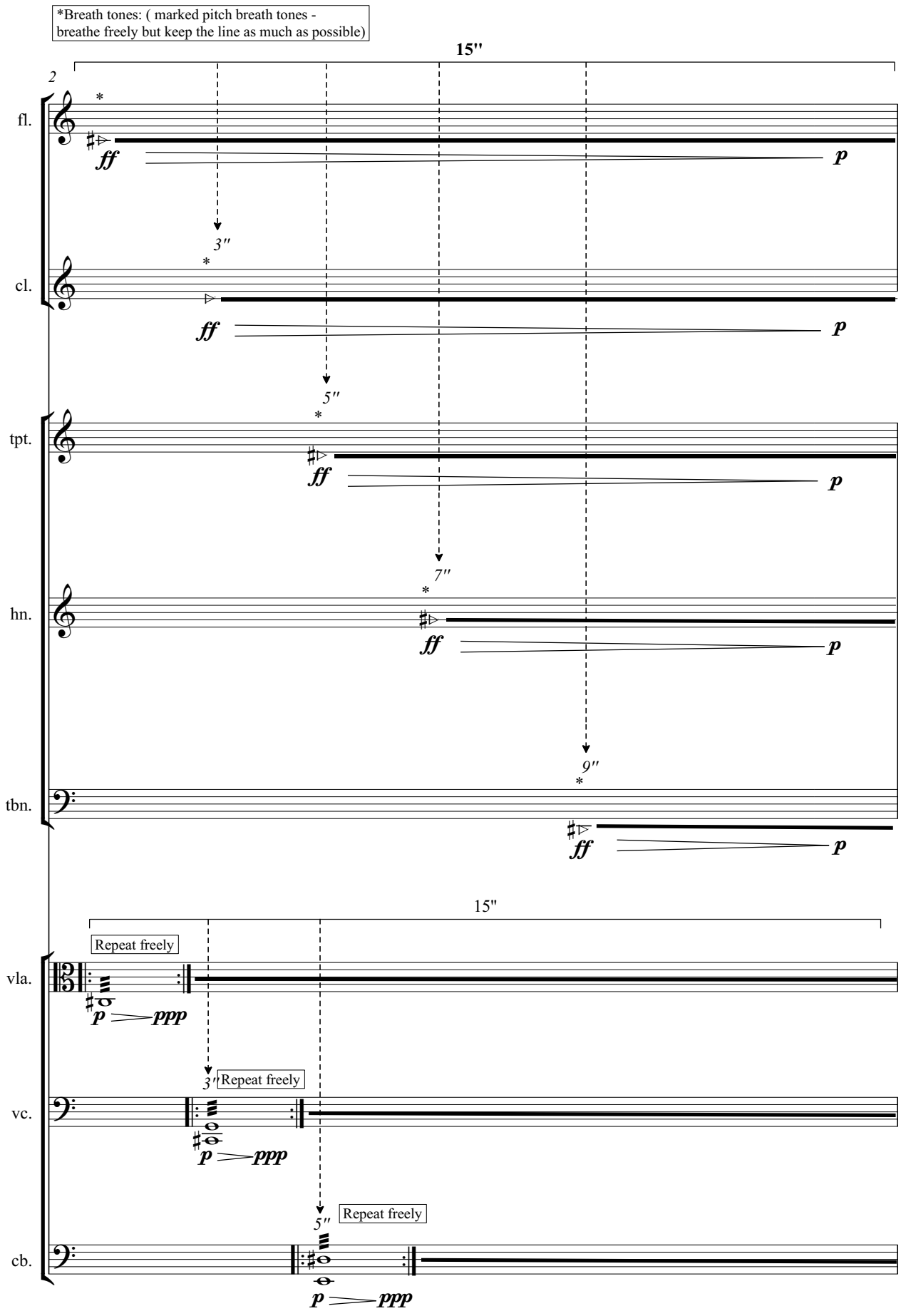
'e' as in pen
'i' as in hit
'u' as in blue

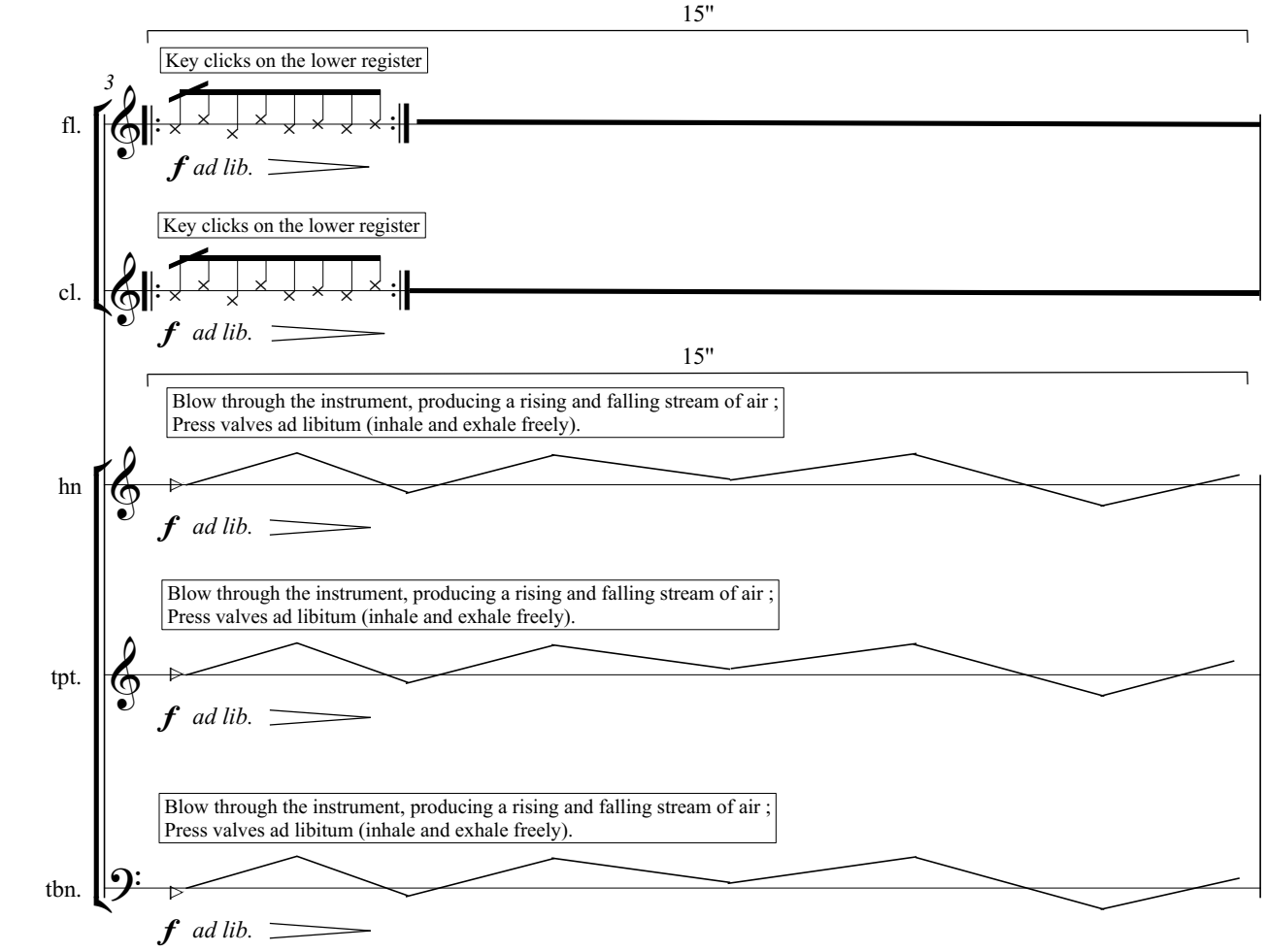
All other symbols are explained in the score.

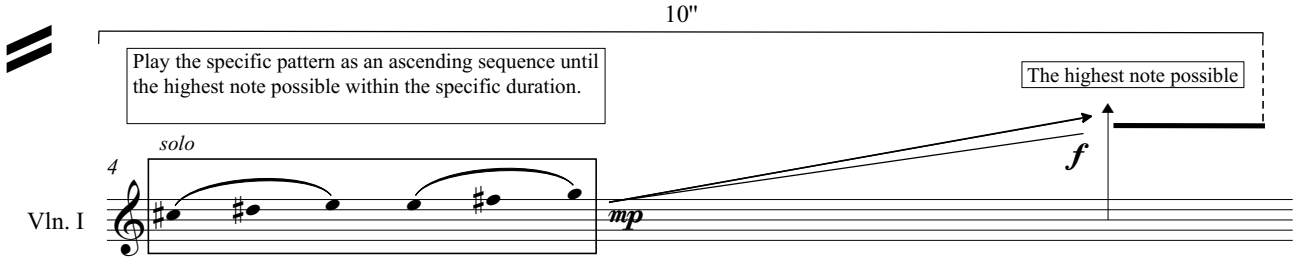
Εξέλιξις

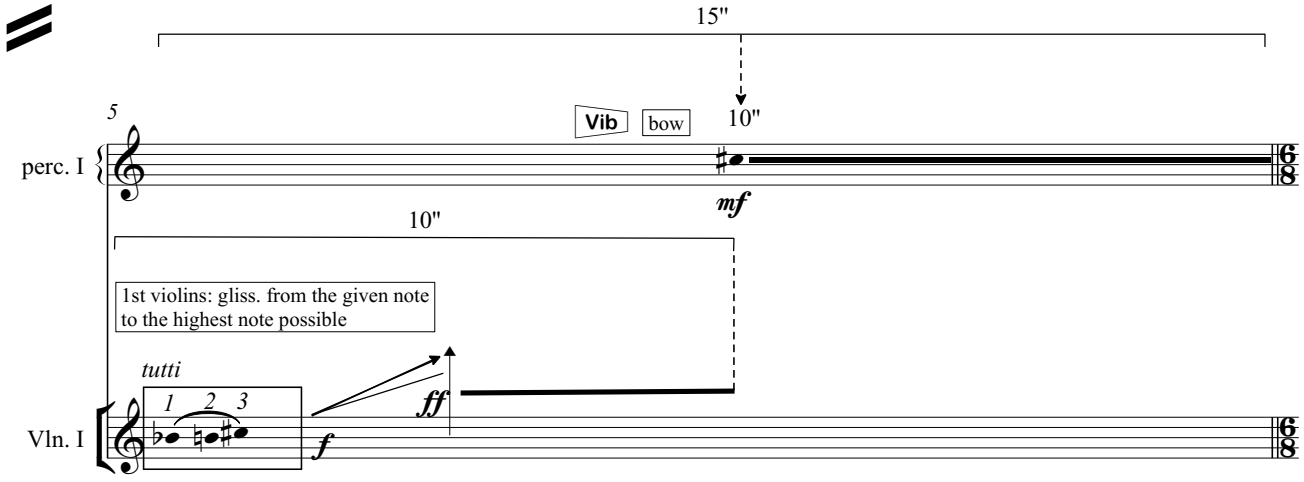
For chamber orchestra and solo voice

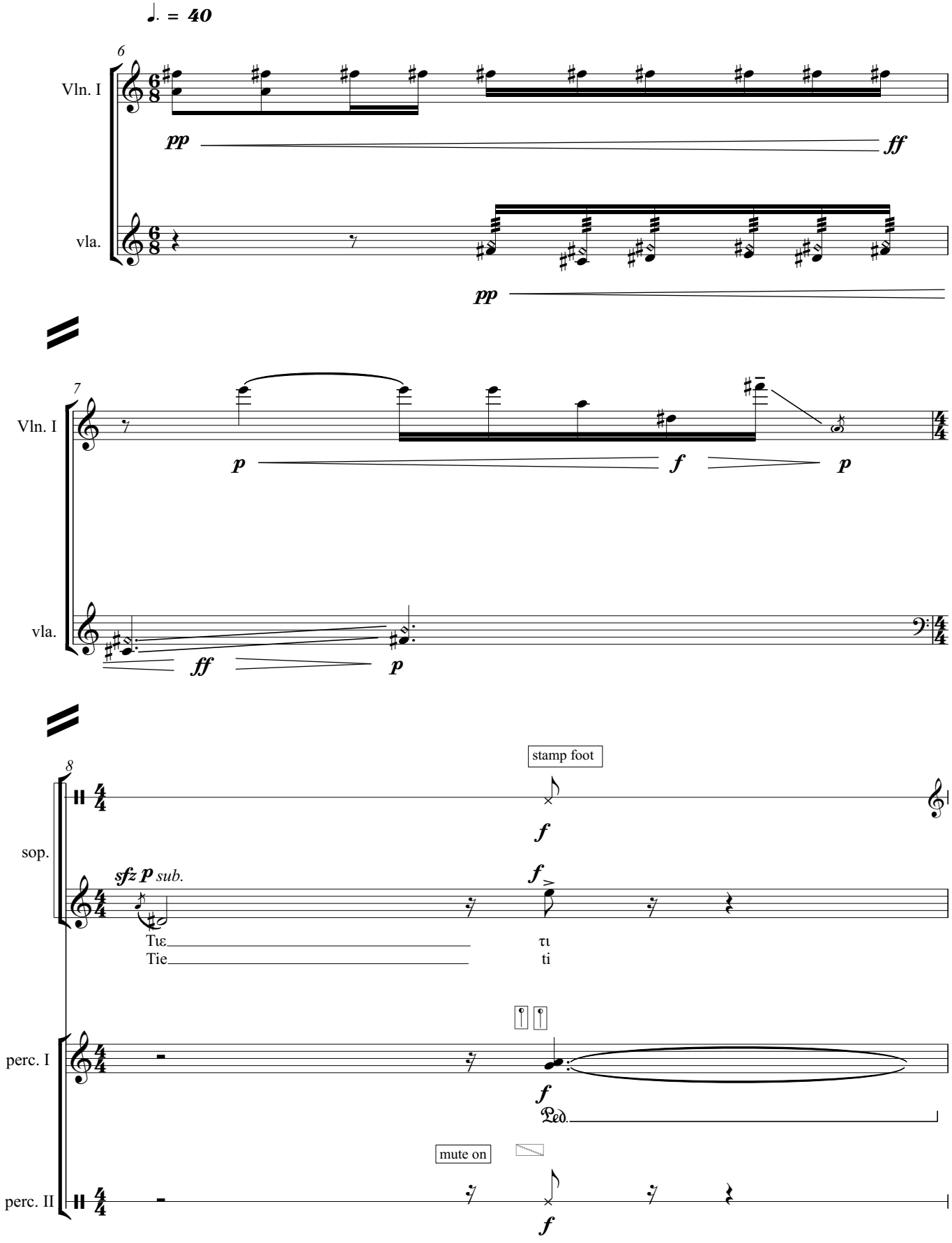


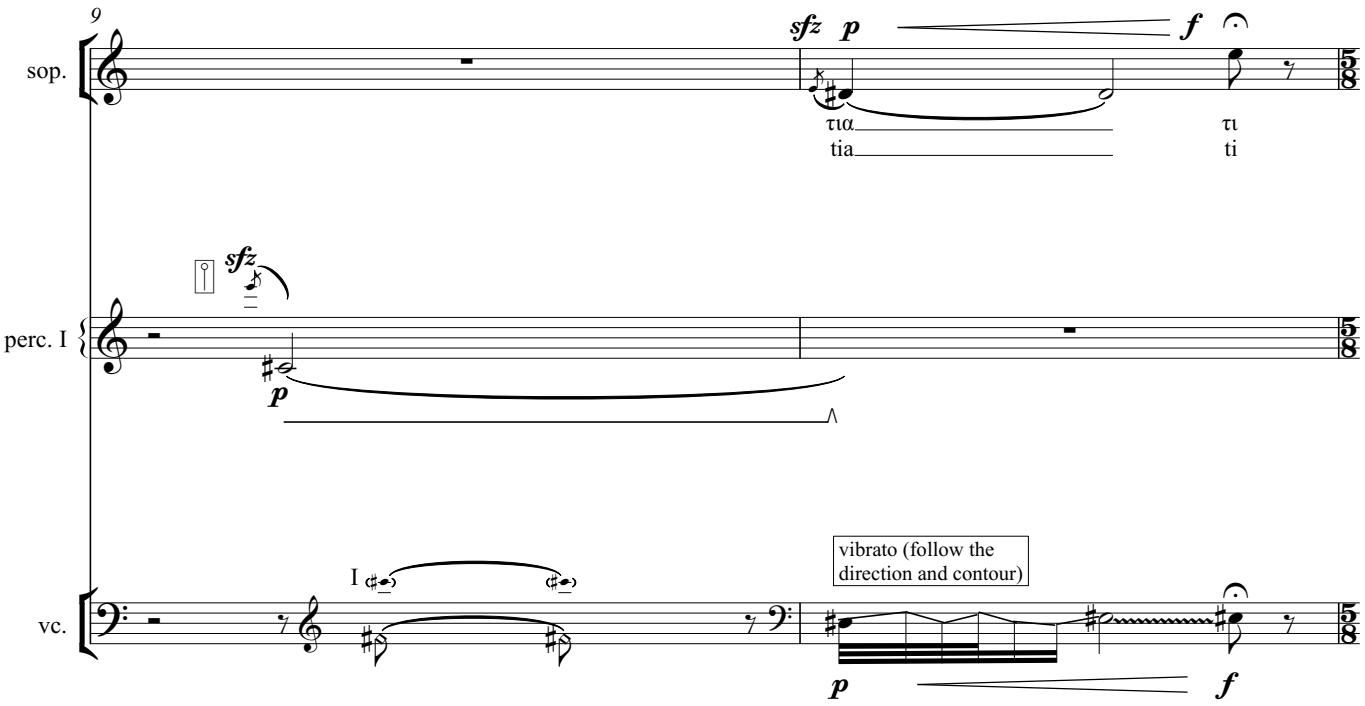

*Breath tones: (marked pitch breath tones -
breathe freely but keep the line as much as possible)
15"
2
fl.
cl.
tpt.
hn.
tbn.
ff
p
3"
5"
7"
9"
15"
Repeat freely
vla.
vc.
cb.
ppp

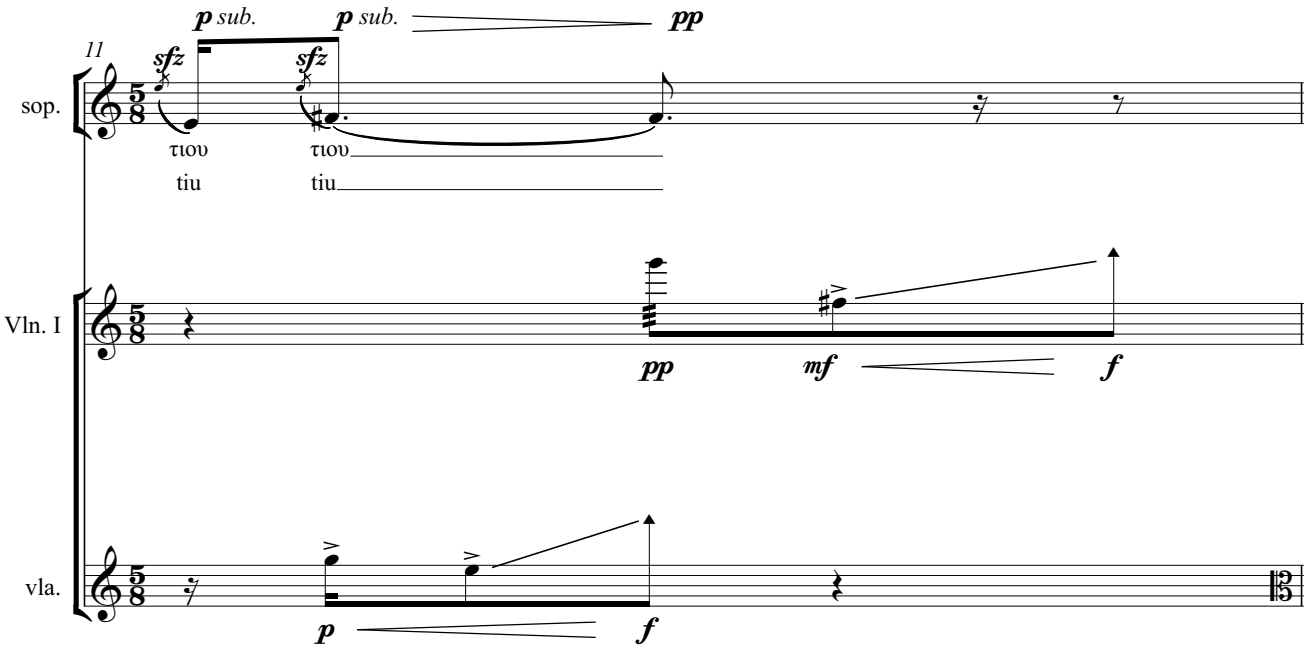

15"
Key clicks on the lower register
3
fl.
f ad lib.
Key clicks on the lower register
cl.
f ad lib.
15"
Blow through the instrument, producing a rising and falling stream of air ;
Press valves ad libitum (inhale and exhale freely).
hn
f ad lib.
Blow through the instrument, producing a rising and falling stream of air ;
Press valves ad libitum (inhale and exhale freely).
tpt.
f ad lib.
Blow through the instrument, producing a rising and falling stream of air ;
Press valves ad libitum (inhale and exhale freely).
tbn.
f ad lib.

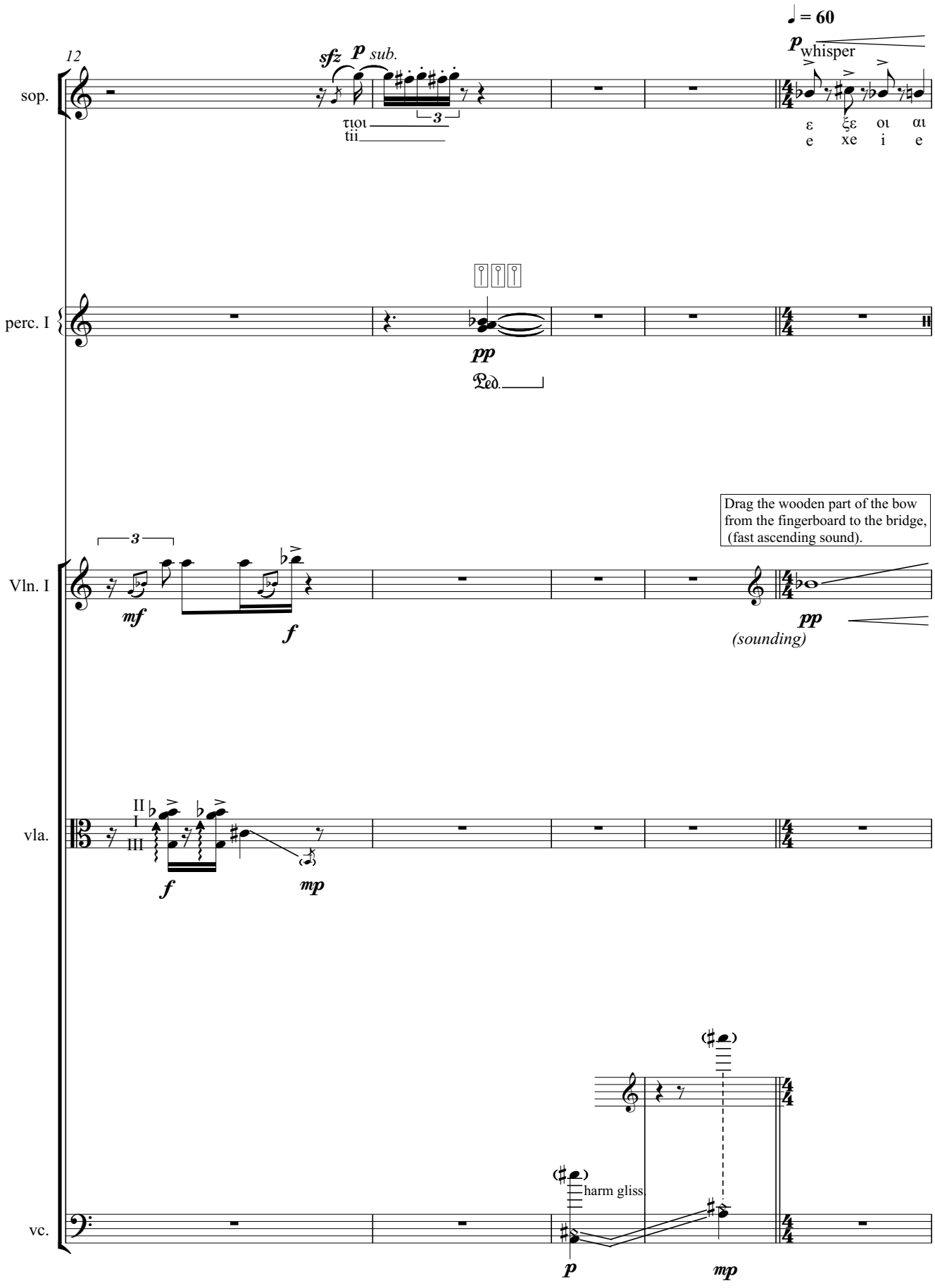

10"
Play the specific pattern as an ascending sequence until
the highest note possible within the specific duration.
The highest note possible
solo
4
Vln. I
mp
f

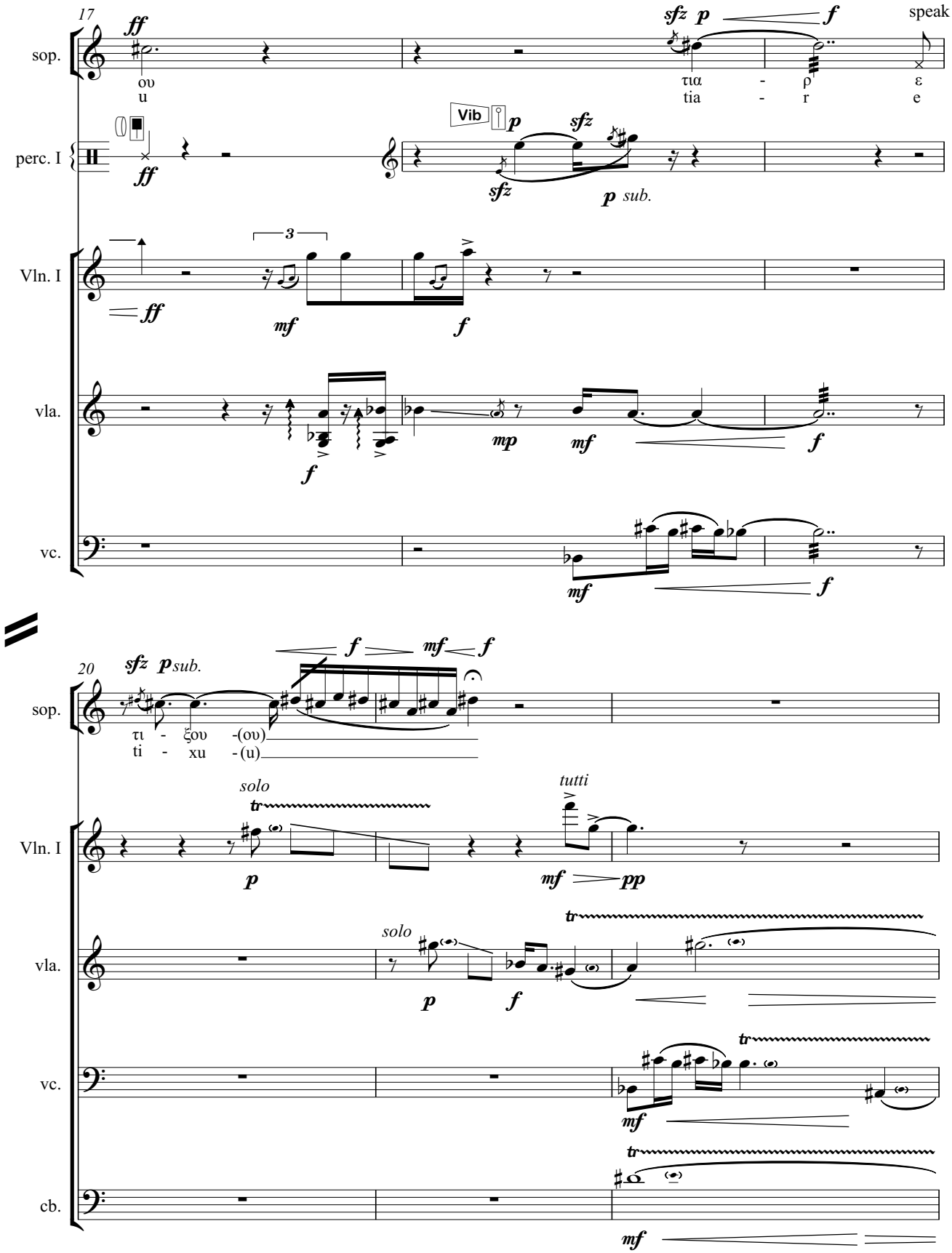

15"
5
Vib
bow
10"
perc. I
mf
10"
1st violins: gliss. from the given note
to the highest note possible
tutti
1 2 3
Vln. I
ff
f

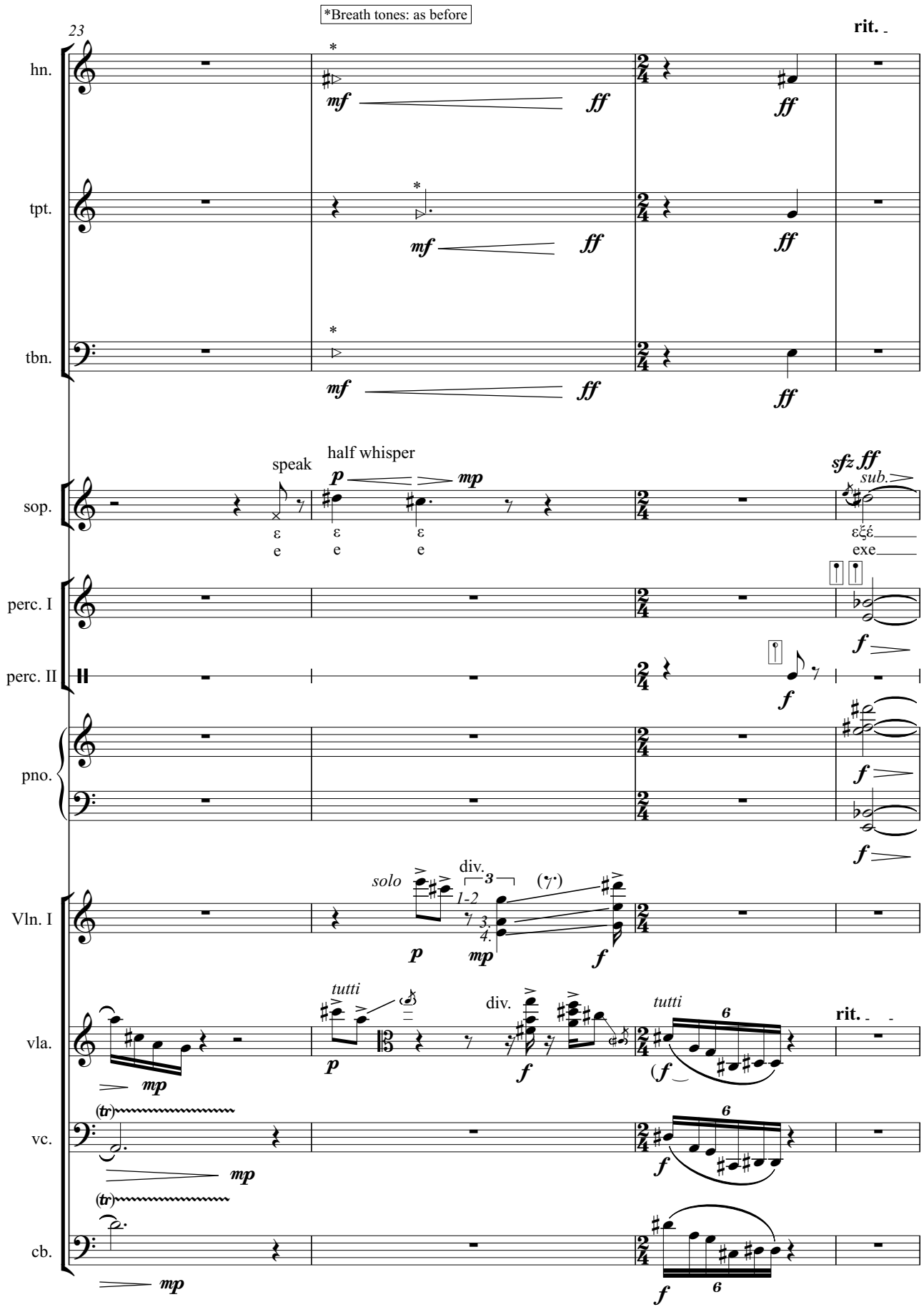

♩. = 40
6
Vln. I
pp
ff
vla.
pp
7
Vln. I
p
f
p
vla.
ff
p
8
stamp foot
f
sop.
sfz p sub.
f
Tιε
Tie
τι
ti
perc. I
f
Ped.
mute on
perc. II
f

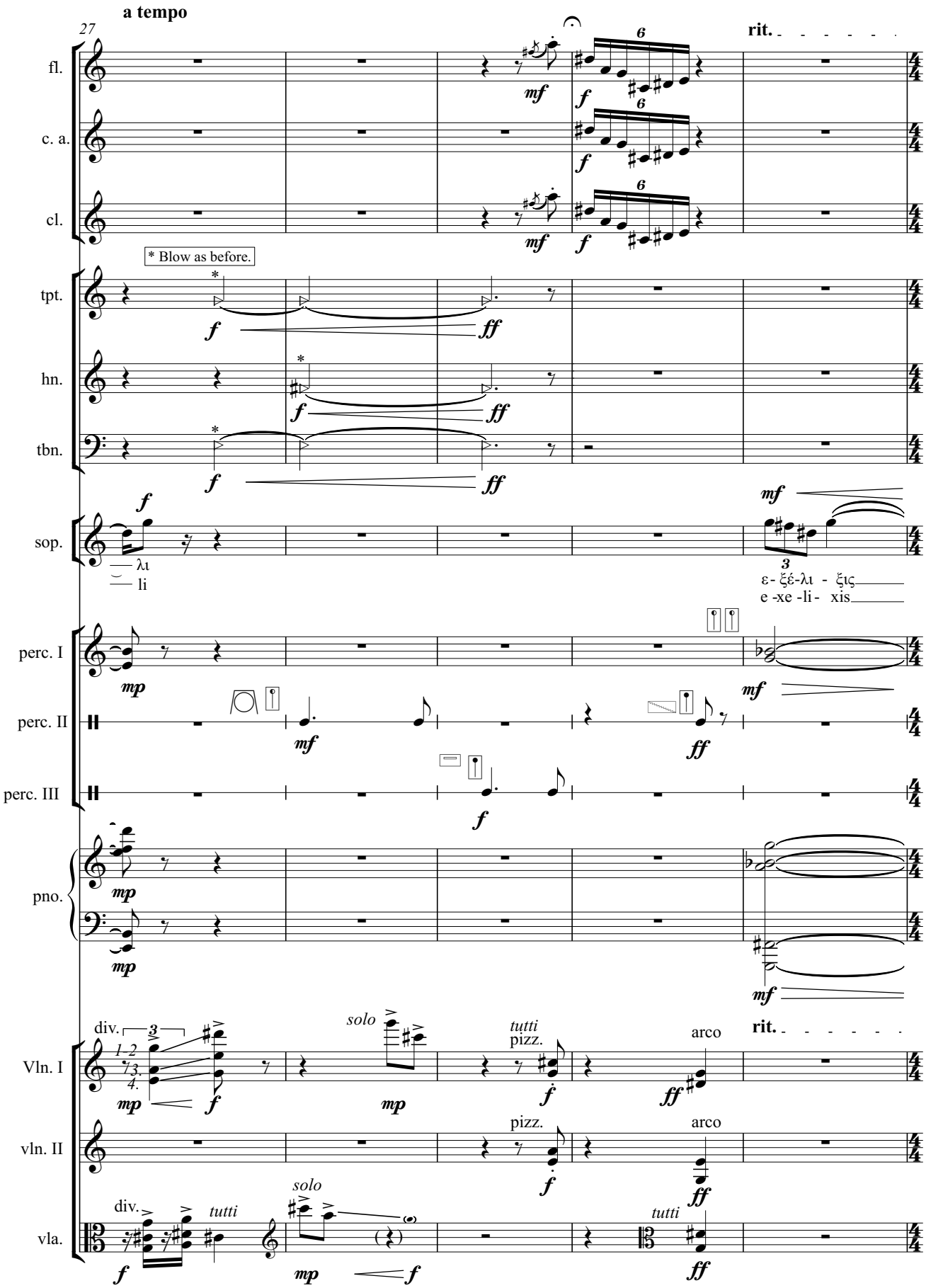

9
sop.
sfz p f
τια
tia
τι
ti
perc. I
sfz
p
vc.
I
vibrato (follow the direction and contour)
p f

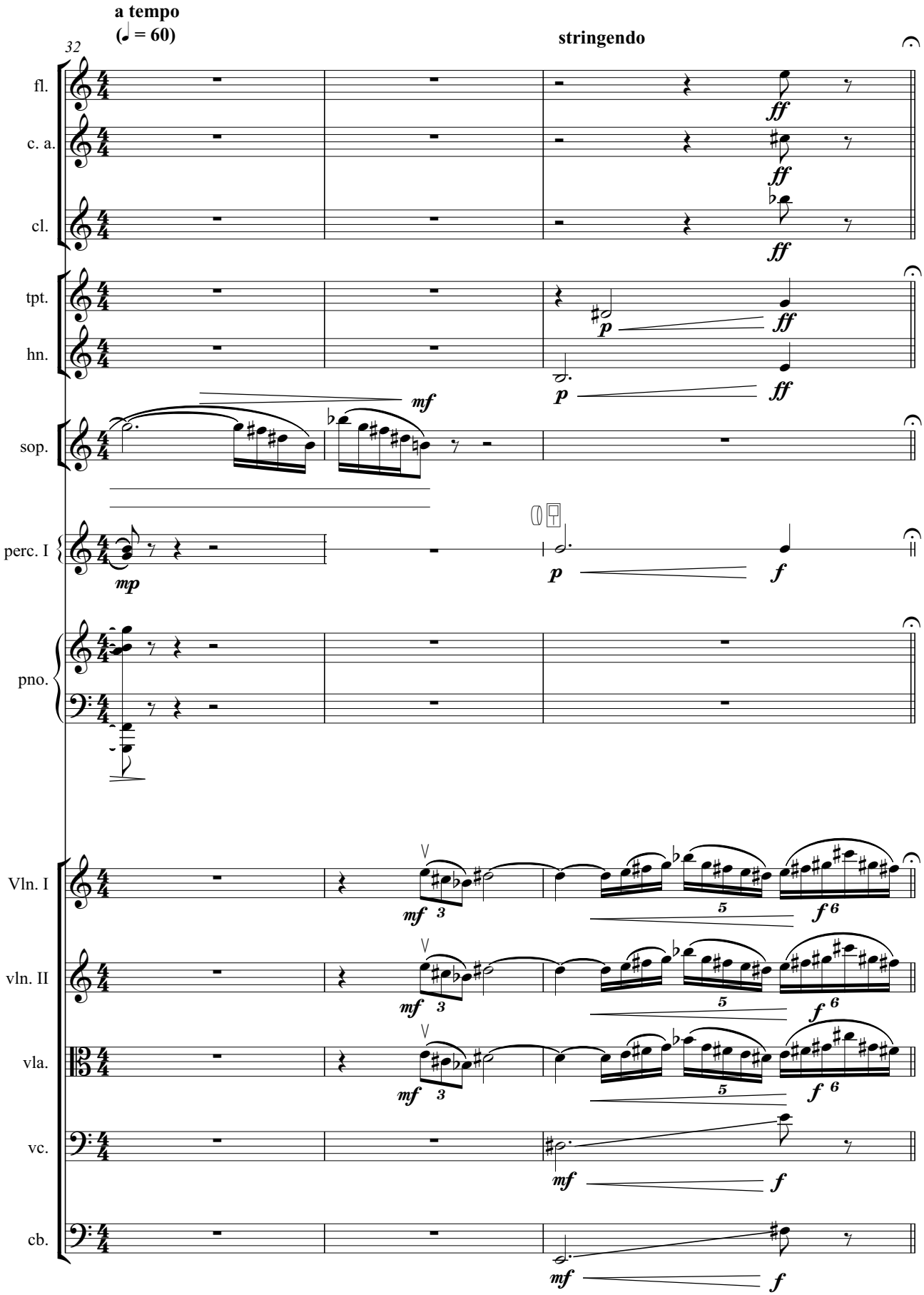

11
sop.
p sub. p sub. pp
sfz sfz
τιου τιου
tiu tiu
Vln. I
pp mf f
vla.
p f

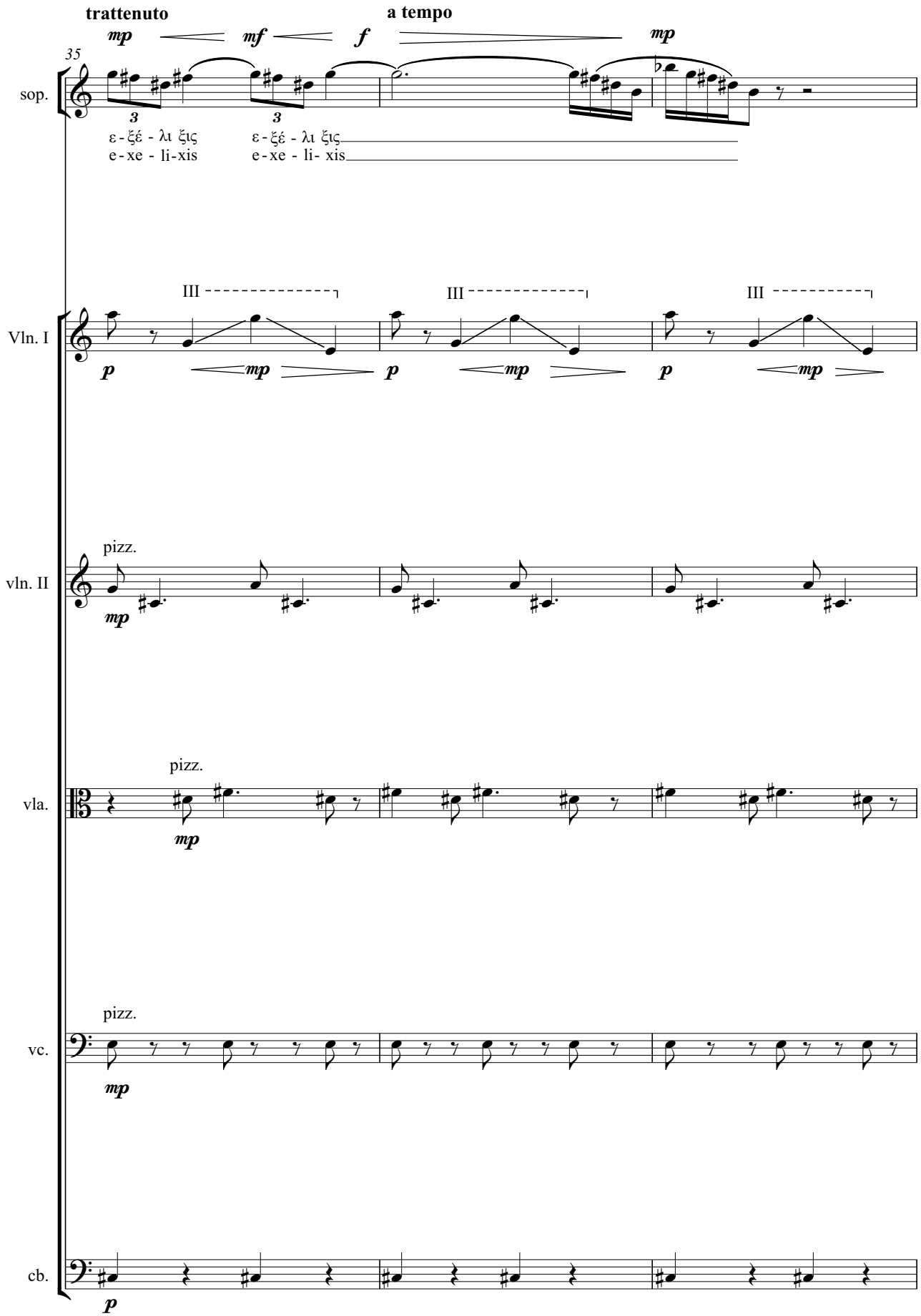

12
sop.
sfz
p sub.
τιοι
tii
3
♩ = 60
p whisper
ε ξε οι αι
e xe i e
perc. I
pp
Ped.
Drag the wooden part of the bow from the fingerboard to the bridge, (fast ascending sound).
Vln. I
3
mf
f
pp
(sounding)
vla.
II
I
III
f
mp
vc.
harm gliss.
p
mp

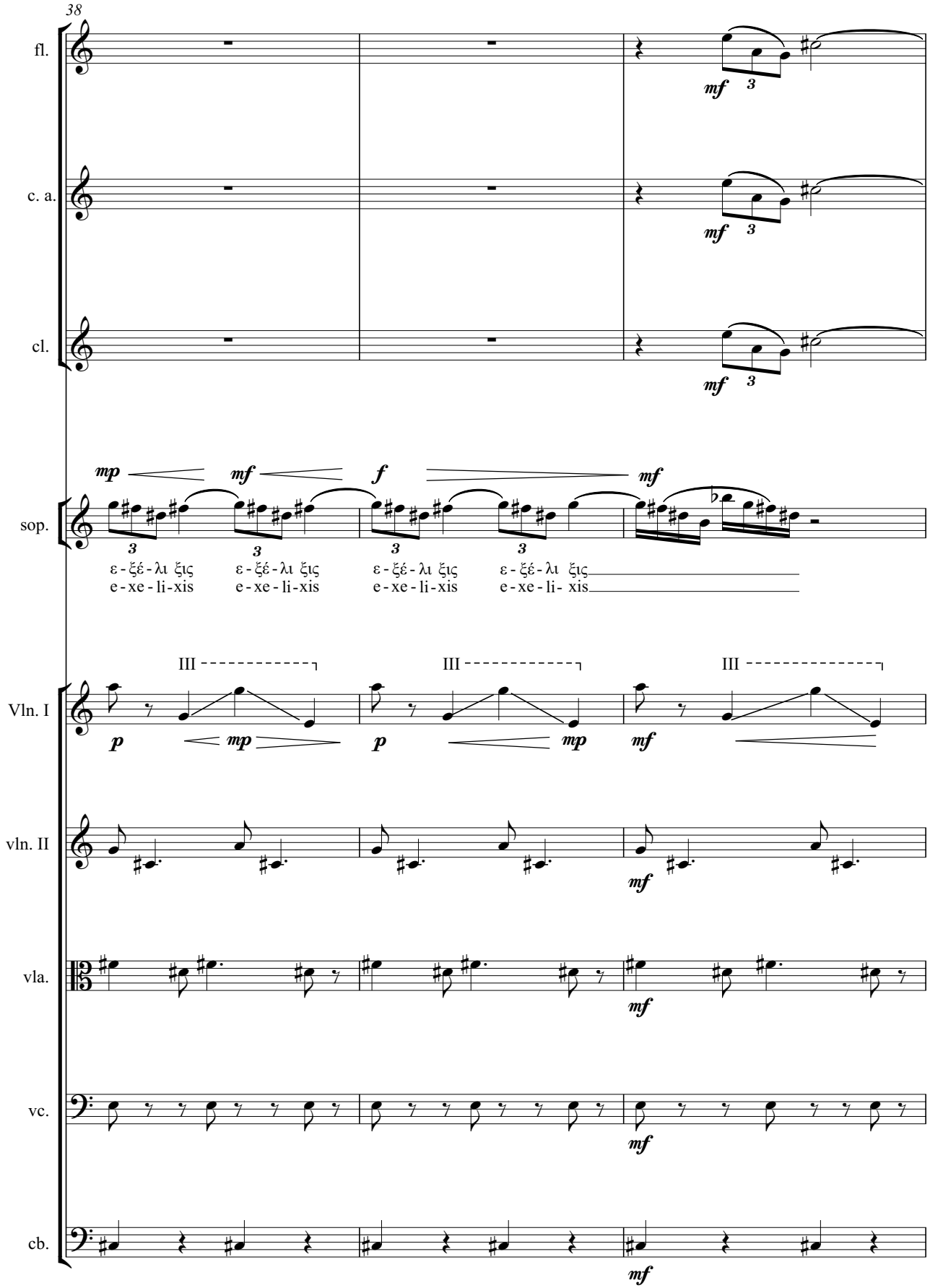

17
sop.
perc. I
Vln. I
vla.
vc.
ff
ου
u
sfz p f
speak
τια - ρ ε
tia - r e
Vib
p
sfz
p sub.
3
mf
mp
20
sfz p sub.
τι - ξου -(ου)
ti - xu -(u)
solo
tutti
pp
cb.

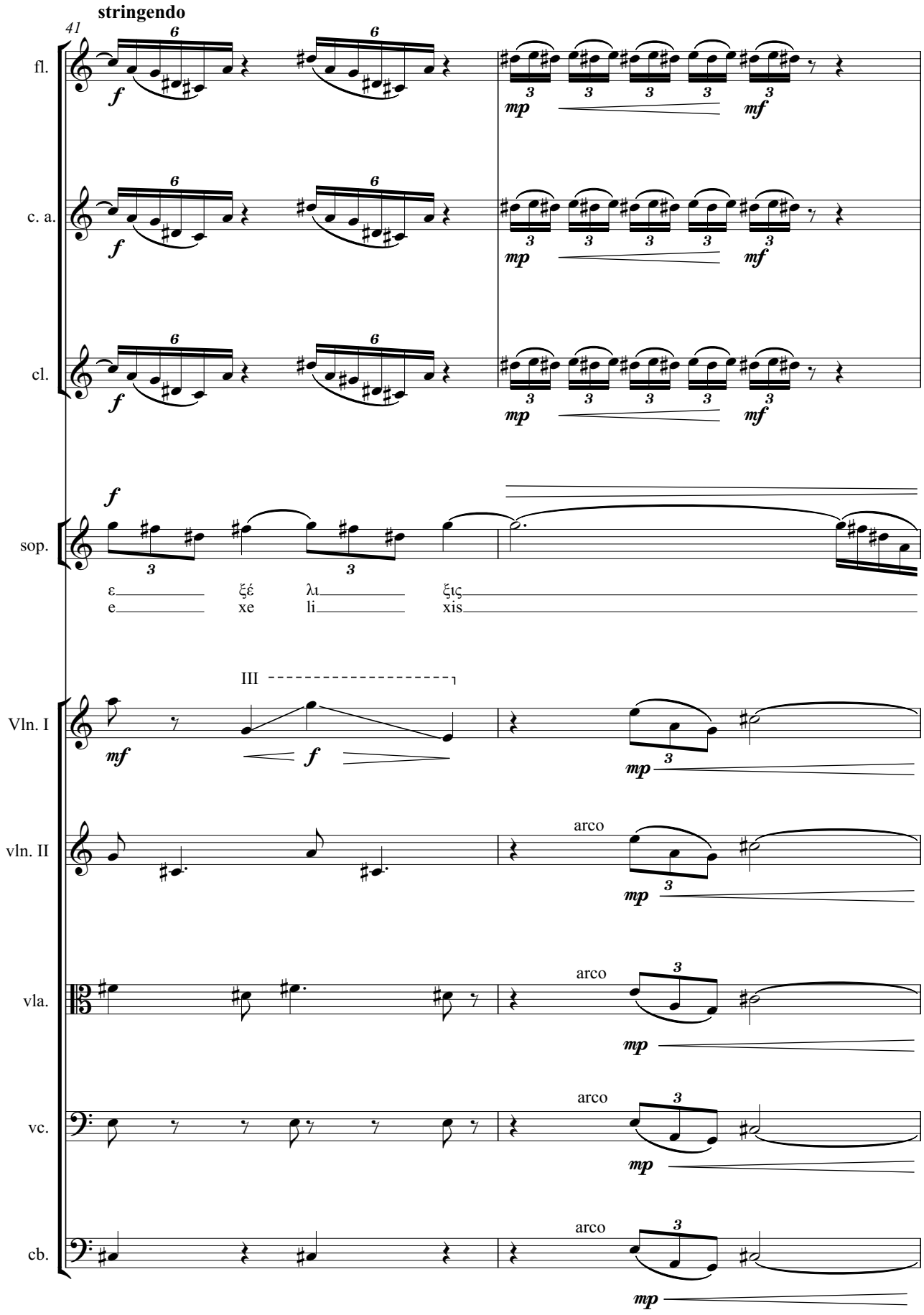

*Breath tones: as before
23
rit.
hn.
tpt.
tbn.
mf
ff
sop.
speak
half whisper
p
mp
sfz ff
sub.
ε
e
exe
perc. I
perc. II
f
pno.
Vln. I
solo
div.
1-2
3
3.
4.
tutti
vla.
rit.
vc.
cb.
(tr)
6

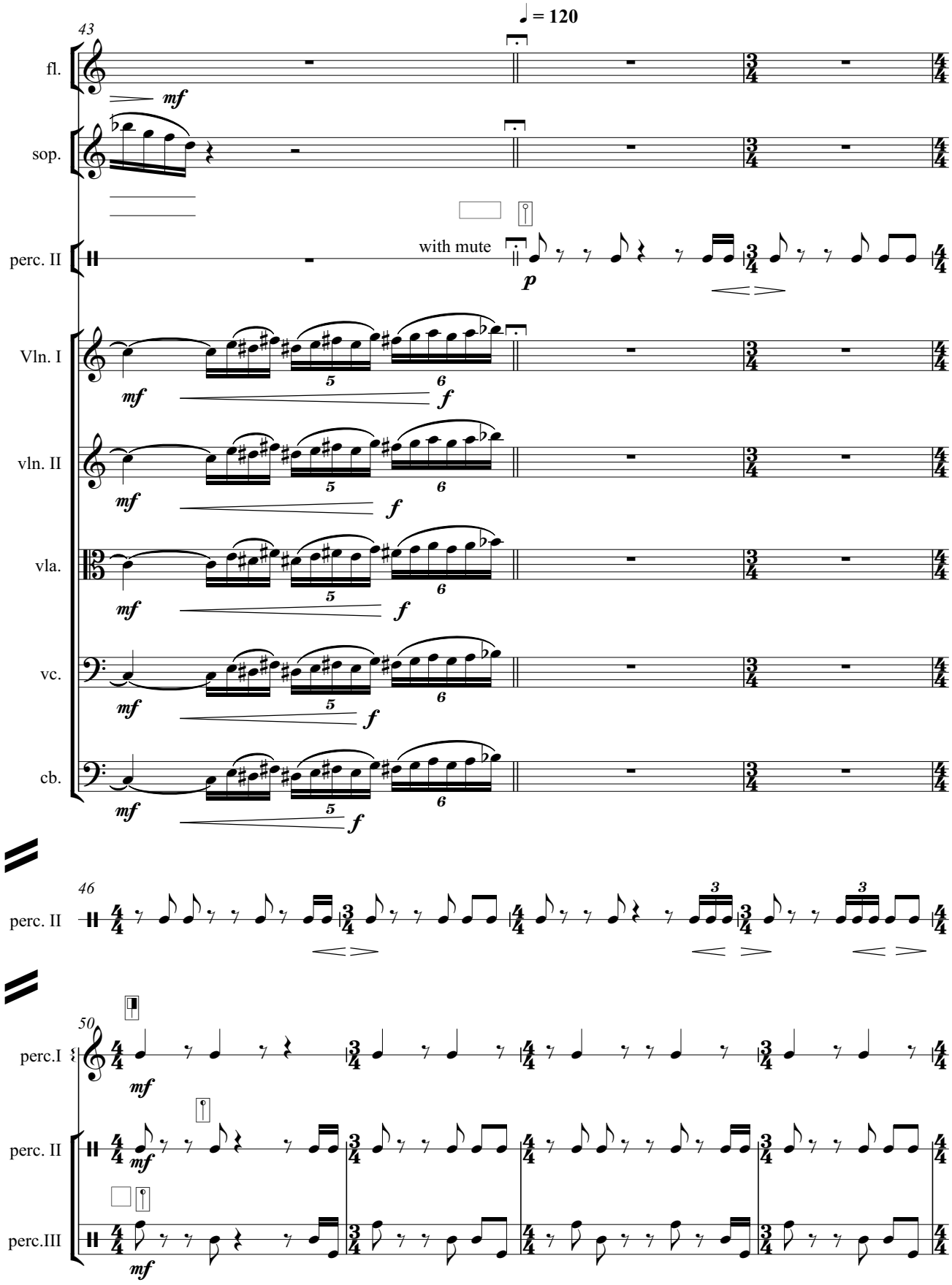

a tempo
27
rit.
fl.
c. a.
cl.
* Blow as before.
tpt.
hn.
tbn.
sop.
λι
li
ε - ξέ - λι - ξις
e - xe - li - xis
perc. I
perc. II
perc. III
pno.
Vln. I
div.
1-2
3.
4.
solo
tutti
pizz.
arco
vln. II
vla.

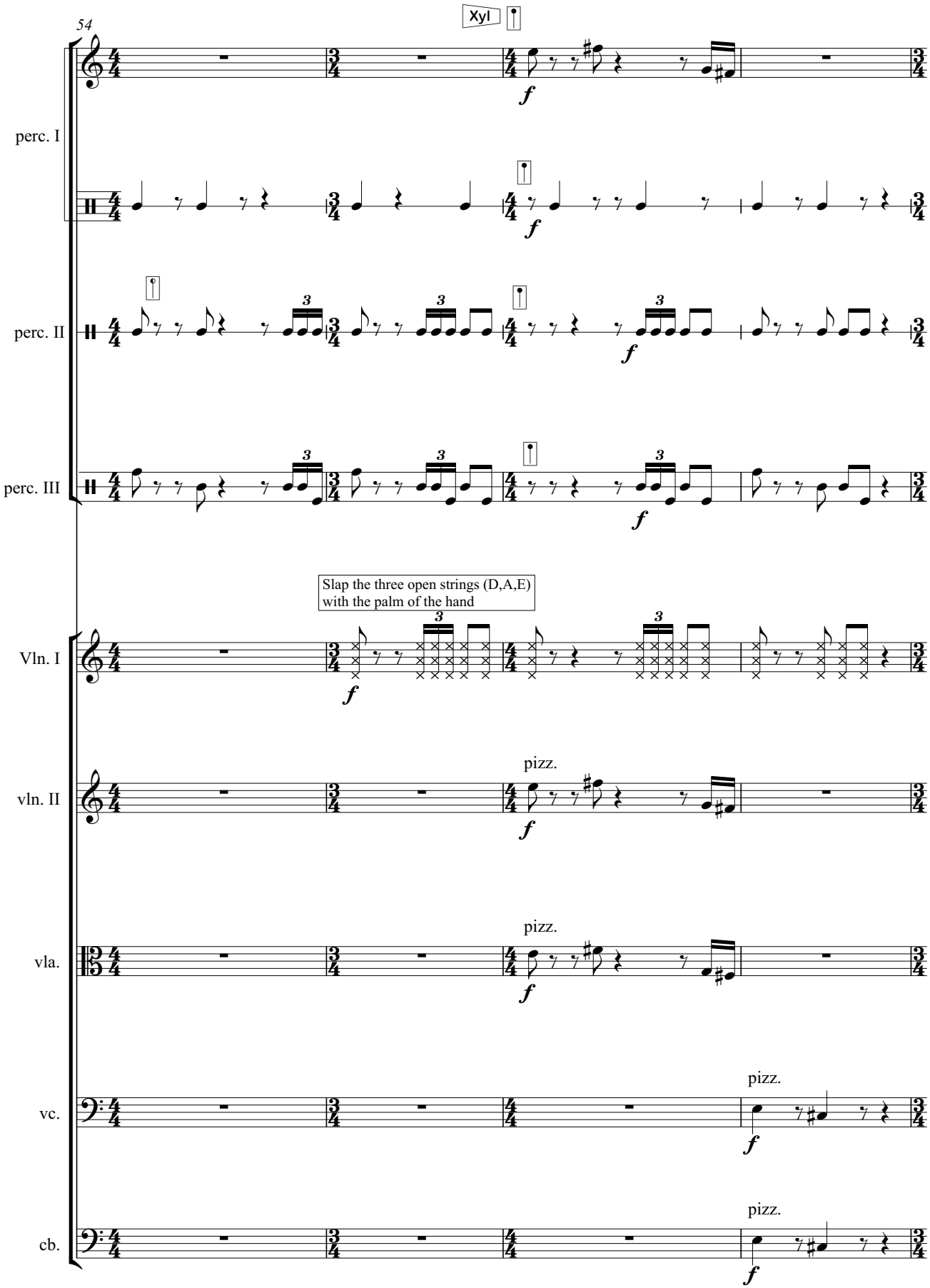

a tempo
(♩ = 60)
32
stringendo
fl.
c. a.
cl.
tpt.
hn.
sop.
perc. I
pno.
Vln. I
vln. II
vla.
vc.
cb.

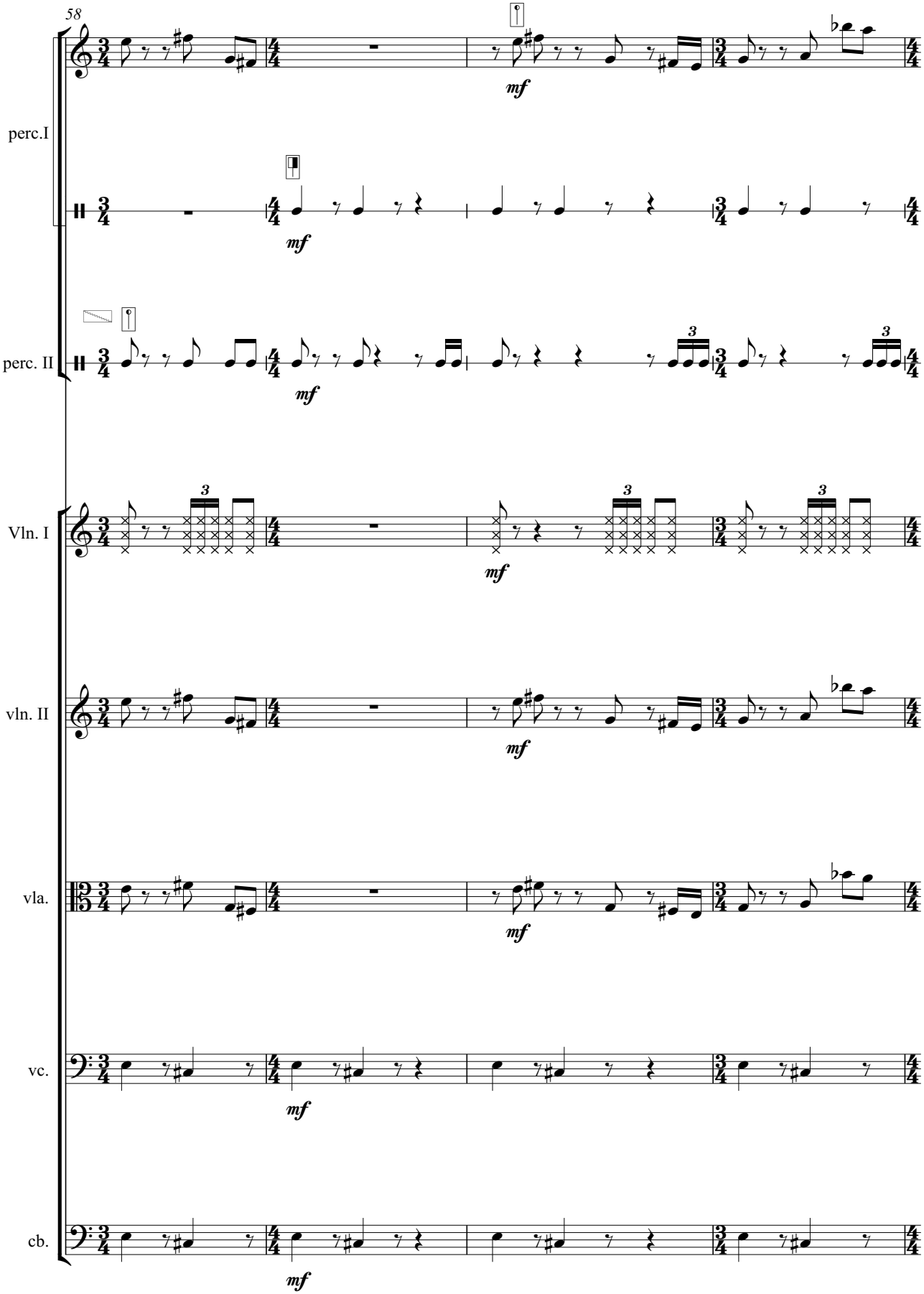

trattenuto
mp
mf
f
a tempo
mp
35
sop.
3
3
ε - ξέ - λι ξις
e - xe - li-xis
ε - ξέ - λι ξις
e - xe - li- xis
III
III
III
Vln. I
p
mp
p
mp
p
mp
pizz.
vln. II
mp
pizz.
vla.
mp
pizz.
vc.
mp
cb.
p

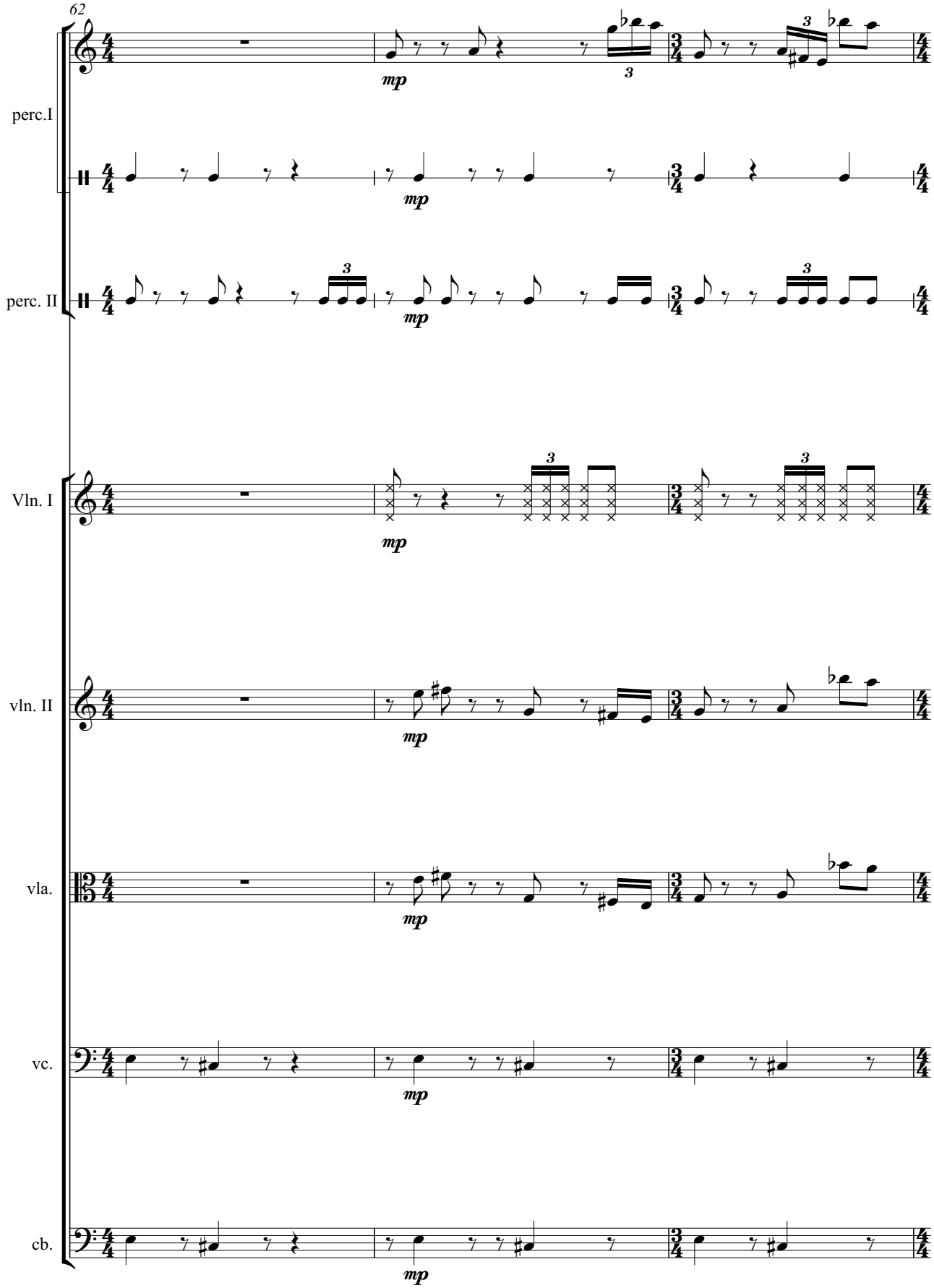

38
fl.
c. a.
cl.
sop.
Vln. I
vln. II
vla.
vc.
cb.
mp
mf
f
p
3
III
ε - ξέ - λι ξις
e - xe - li - xis
ε - ξέ - λι ξις
e - xe - li - xis
ε - ξέ - λι ξις
e - xe - li - xis
ε - ξέ - λι ξις
e - xe - li - xis

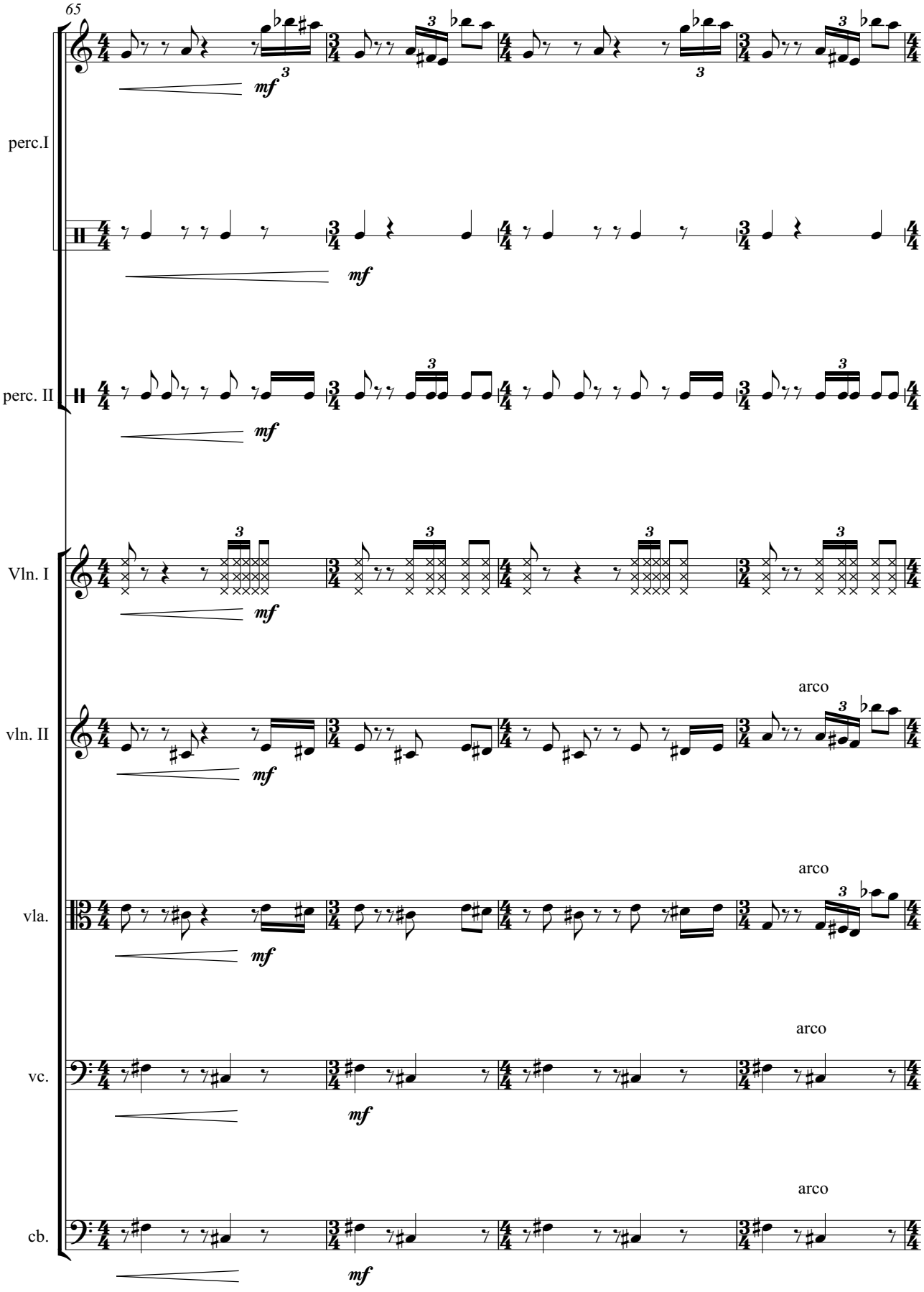

stringendo
41
fl.
c. a.
cl.
sop.
ε ξέ λι ξις
e xe li xis
Vln. I
vln. II
vla.
vc.
cb.
III
arco

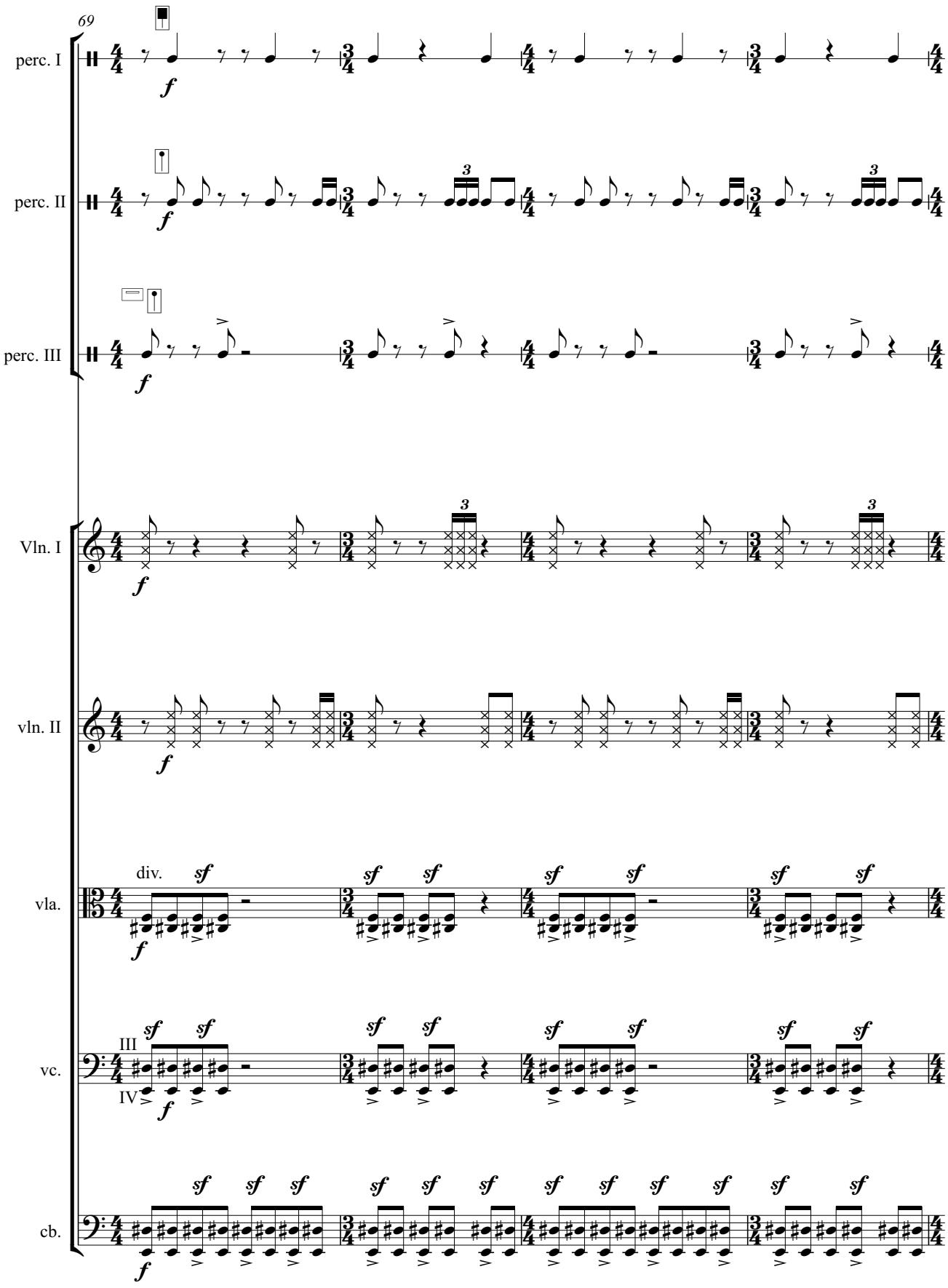

♩ = 120
43
fl.
mf
sop.
perc. II
with mute
p
Vln. I
mf
f
vln. II
vla.
vc.
cb.
46
perc. II
50
perc.I
perc. II
perc.III

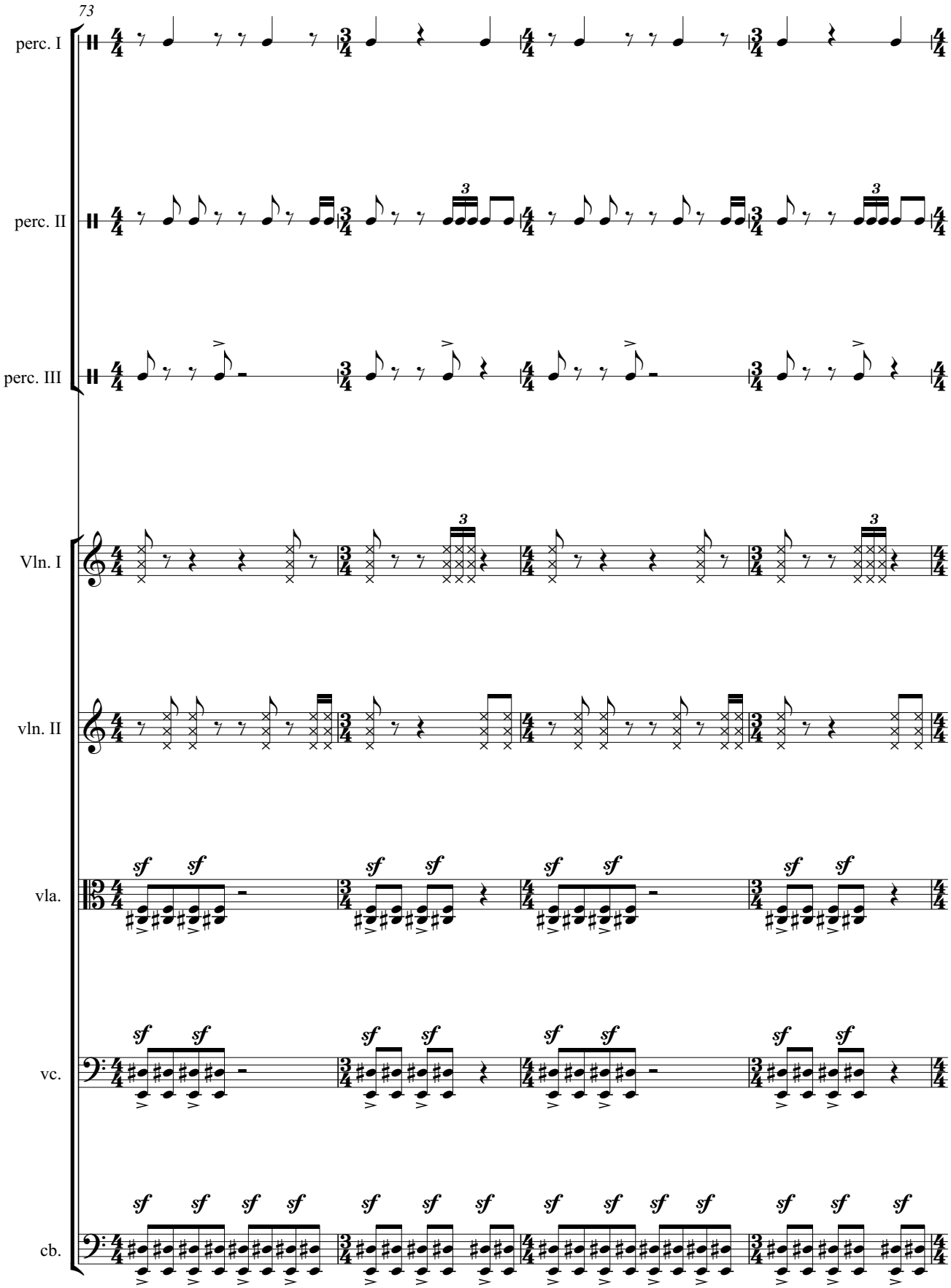

54
Xyl
perc. I
perc. II
perc. III
Slap the three open strings (D,A,E)
with the palm of the hand
Vln. I
vln. II
pizz.
vla.
pizz.
vc.
pizz.
cb.
pizz.

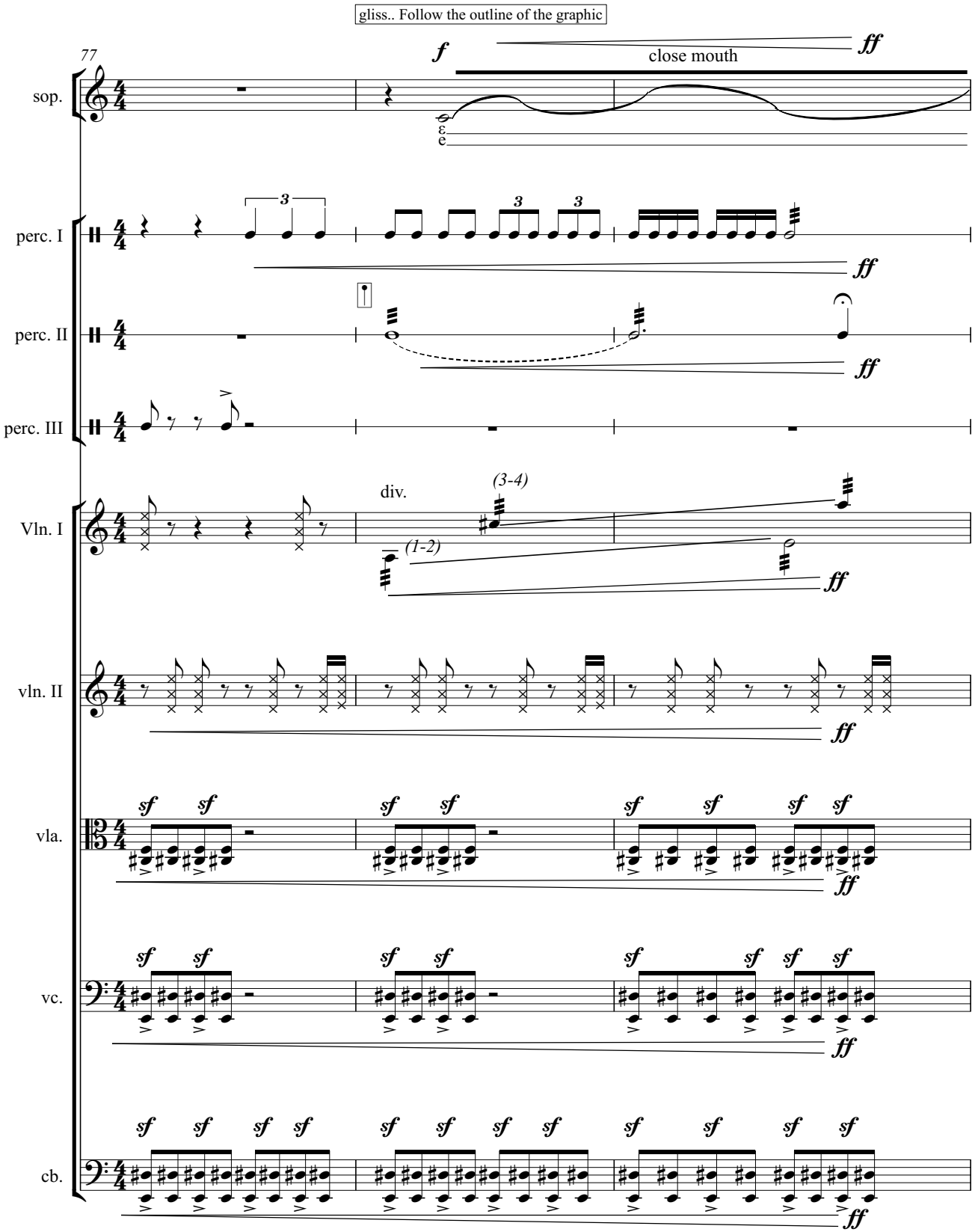

58
perc.I
perc. II
Vln. I
vln. II
vla.
vc.
cb.
mf

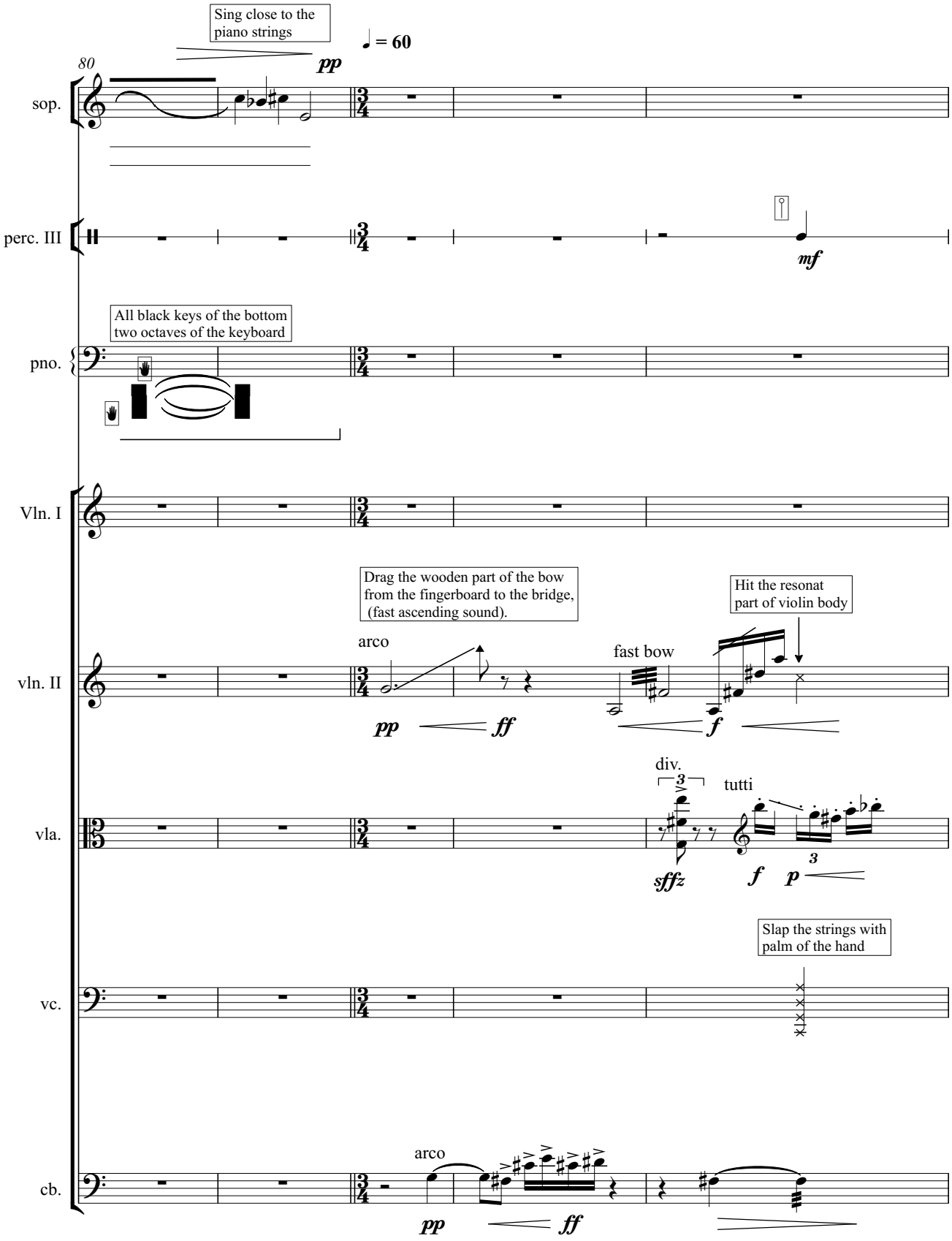

62
perc.I
perc. II
Vln. I
vln. II
vla.
vc.
cb.
mp

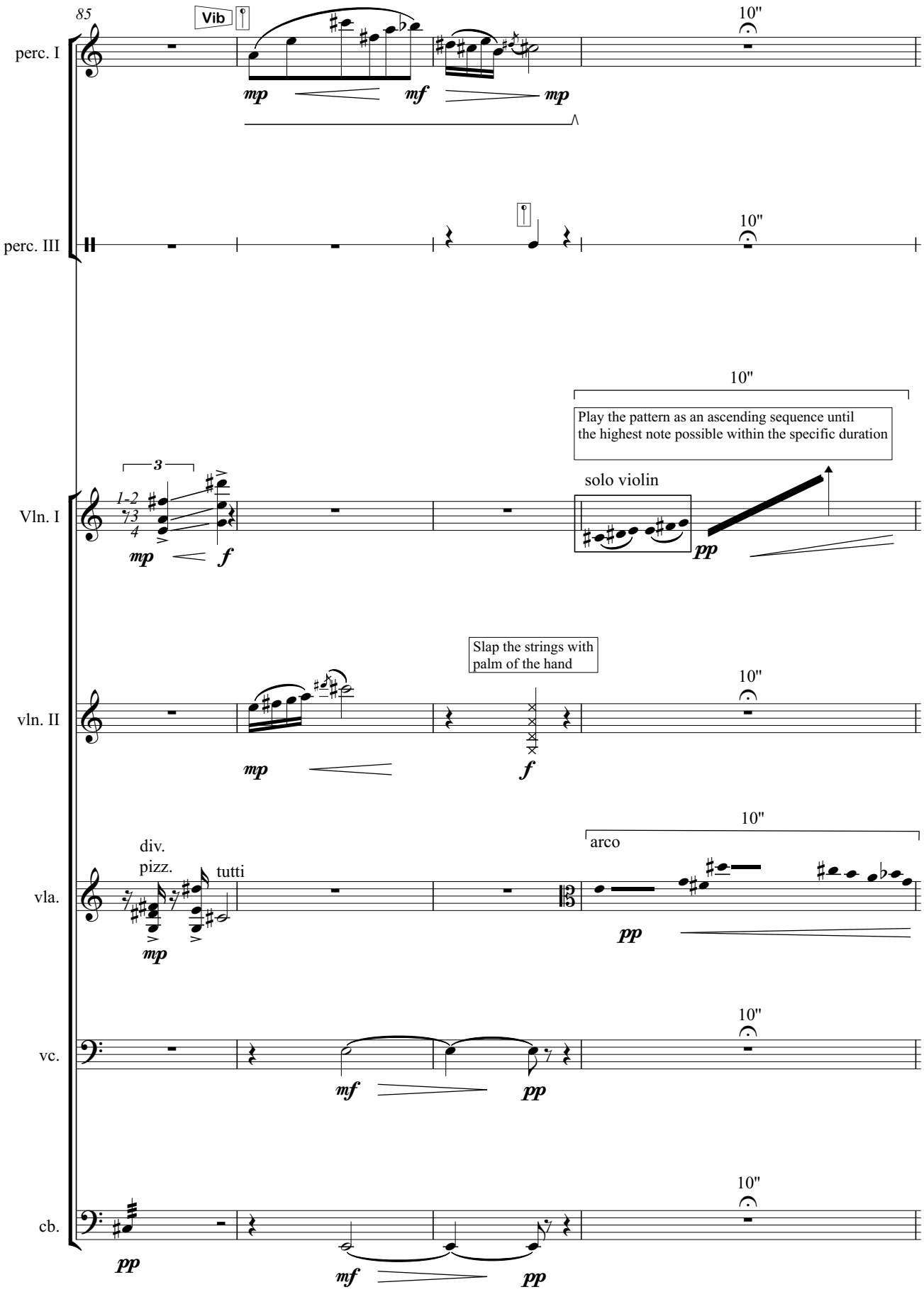

65
perc.I
perc. II
Vln. I
vln. II
arco
vla.
arco
vc.
arco
cb.
arco
mf

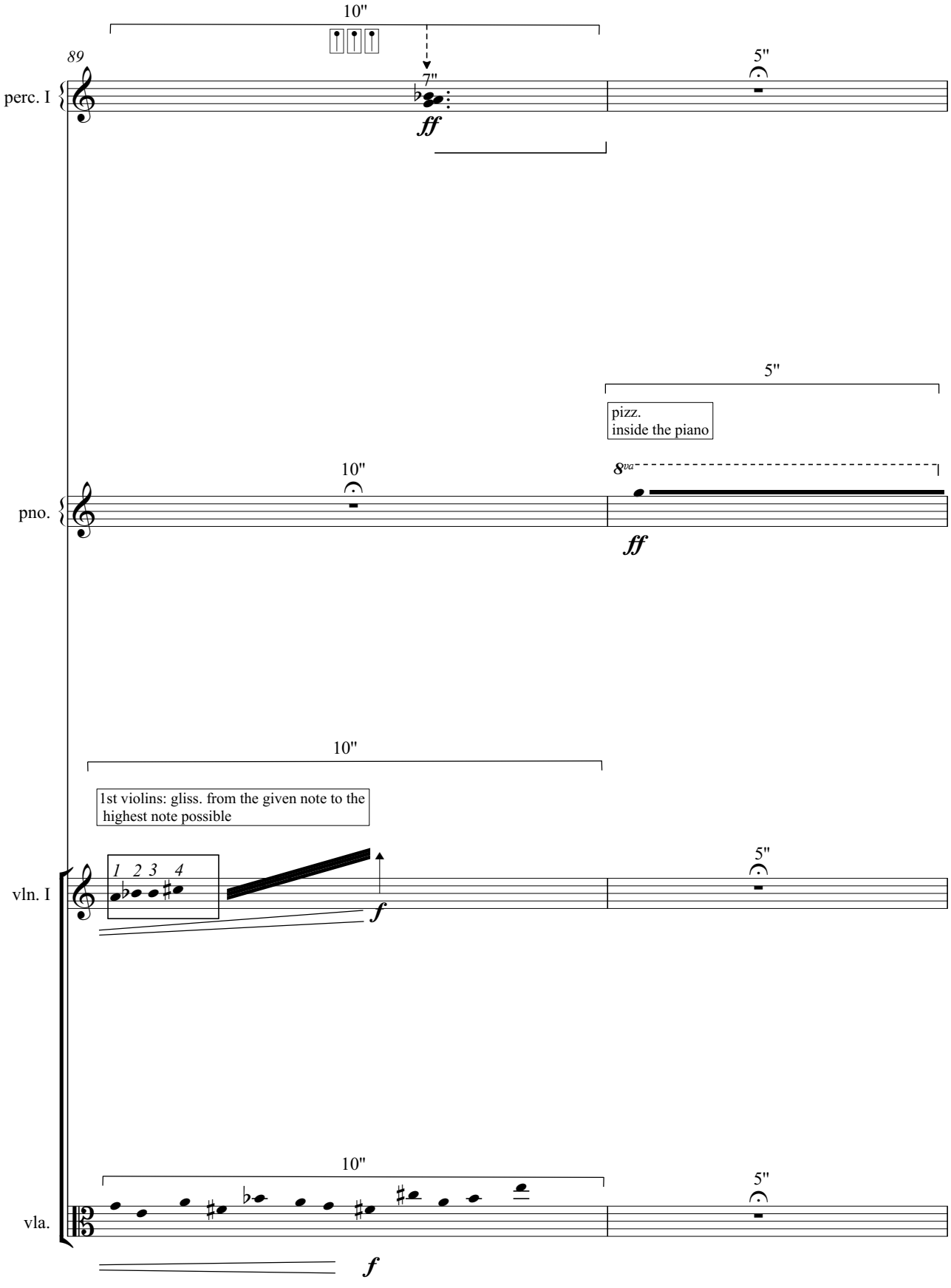

69
perc. I
perc. II
perc. III
Vln. I
vln. II
vla.
div.
vc.
III
IV
cb.

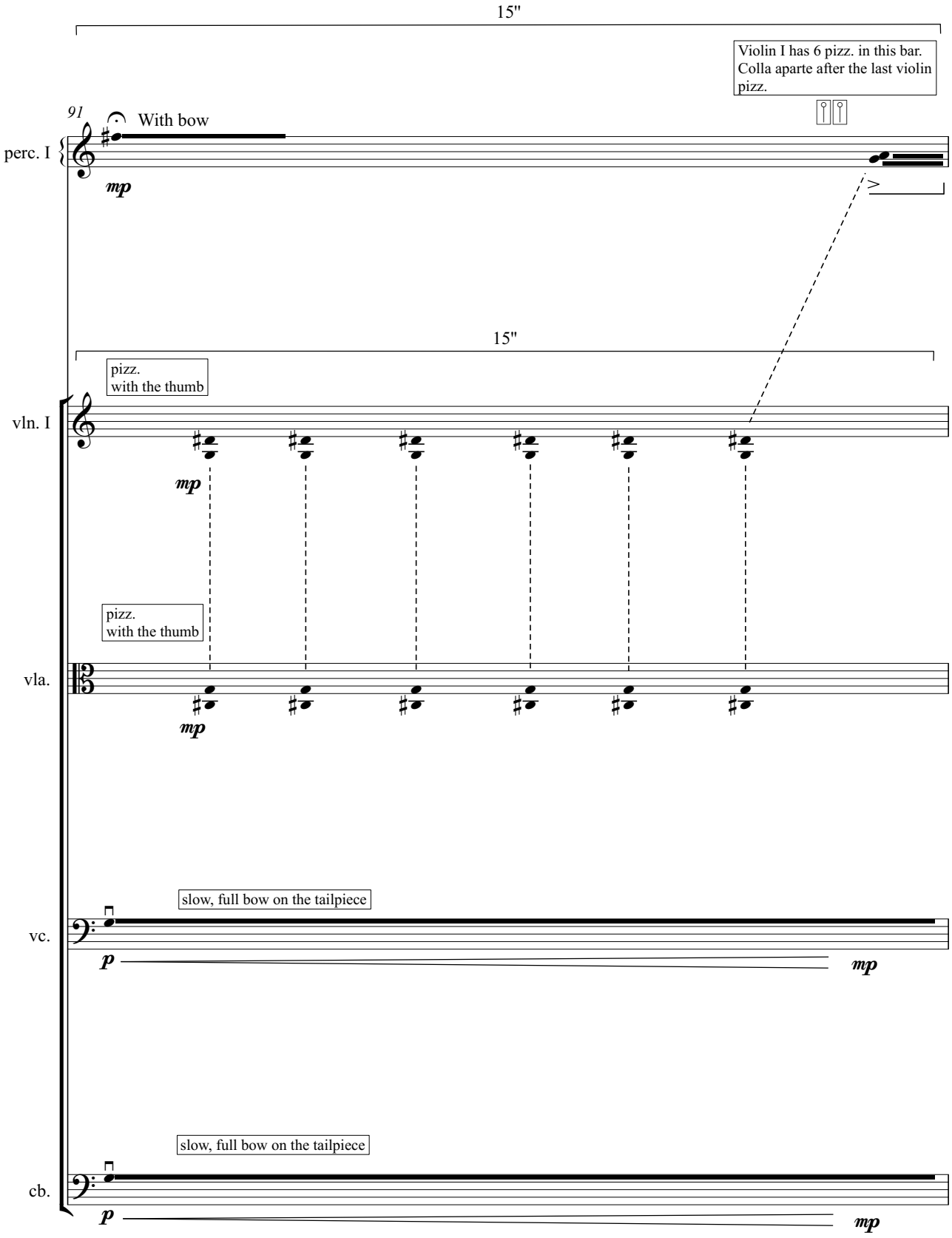

73
perc. I
perc. II
perc. III
Vln. I
vln. II
vla.
vc.
cb.

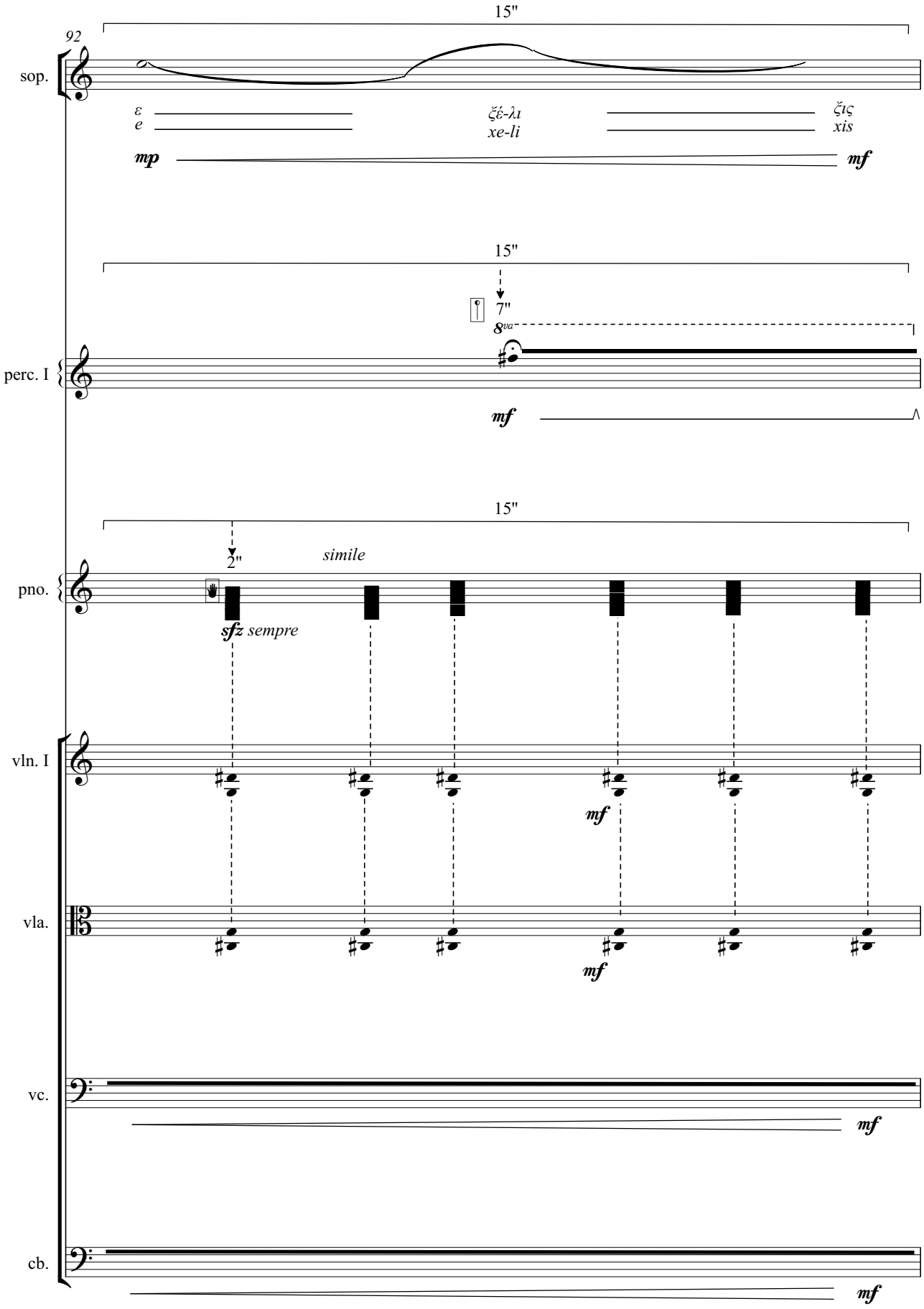

gliss.. Follow the outline of the graphic
77
f
close mouth
ff
sop.
perc. I
perc. II
perc. III
Vln. I
div.
(3-4)
(1-2)
vln. II
vla.
vc.
cb.
sf

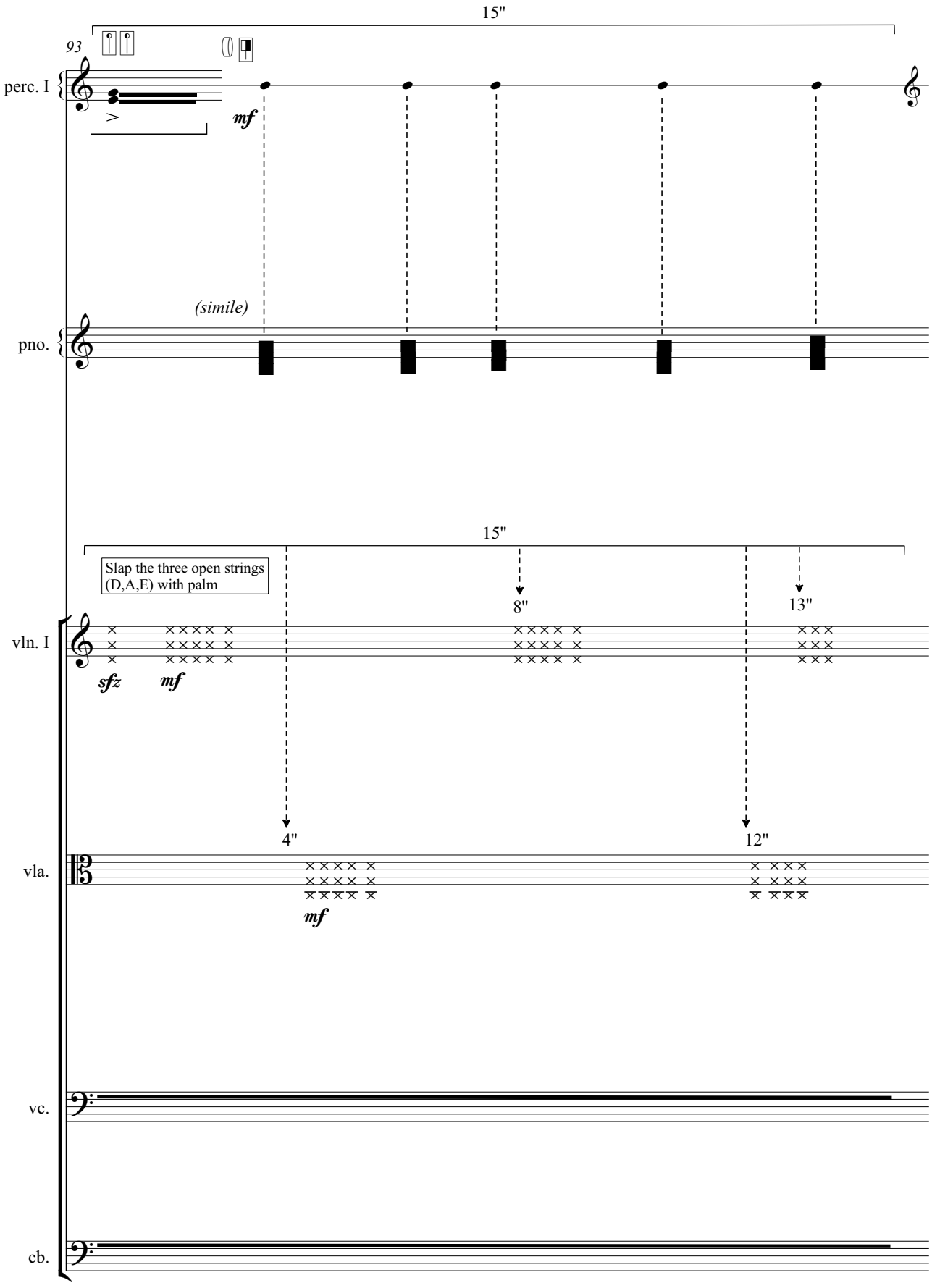

Sing close to the piano strings
80
♩ = 60
pp
sop.
perc. III
mf
All black keys of the bottom two octaves of the keyboard
pno.
Vln. I
Drag the wooden part of the bow from the fingerboard to the bridge, (fast ascending sound).
Hit the resonat part of violin body
arco
fast bow
vln. II
pp
ff
f
div.
tutti
vla.
sffz
f
p
Slap the strings with palm of the hand
vc.
arco
cb.
pp
ff

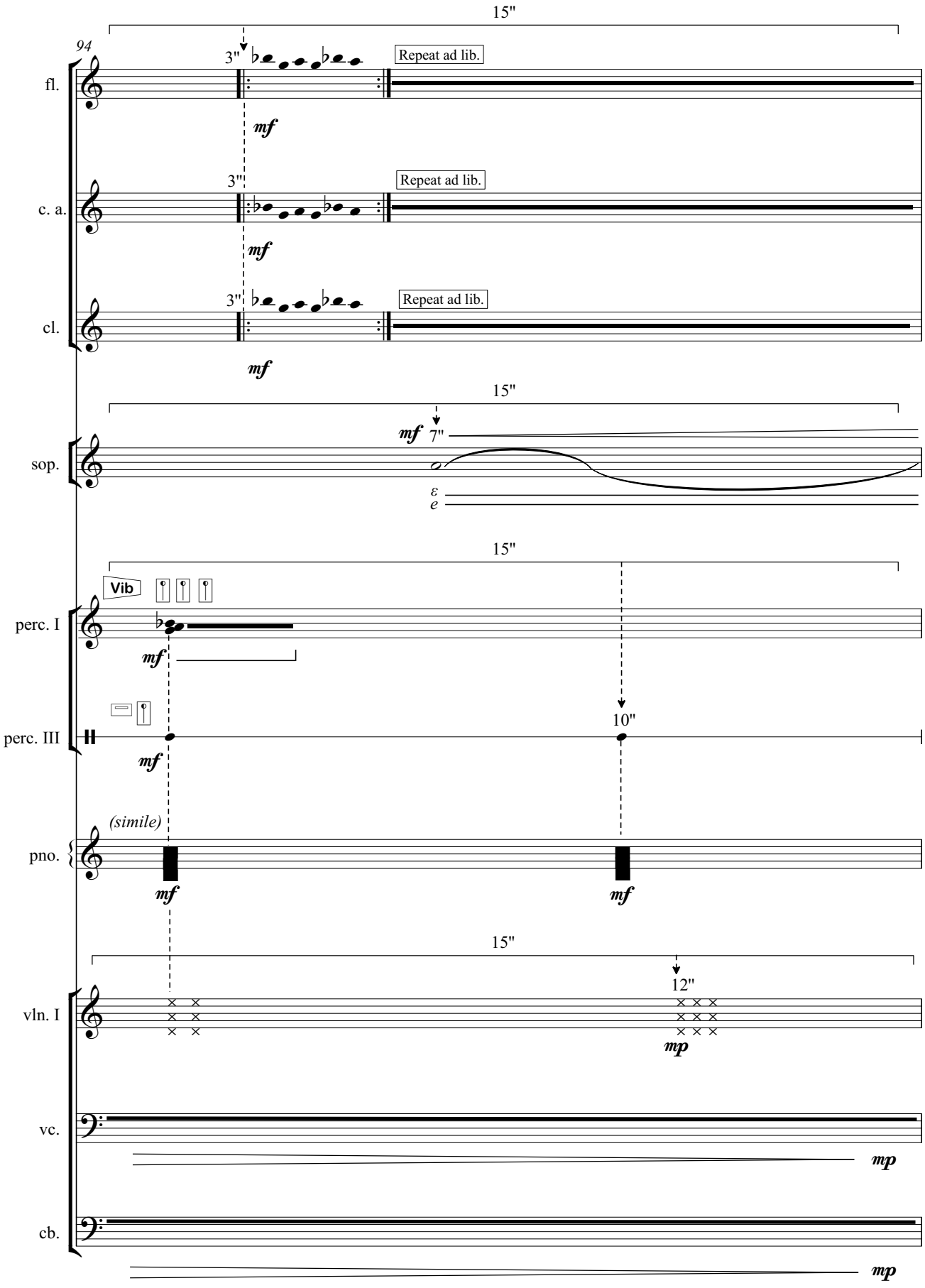

85
Vib
perc. I
mp
mf
mp
10"
perc. III
10"
10"
Play the pattern as an ascending sequence until
the highest note possible within the specific duration
3
1-2
3
4
Vln. I
mp
f
solo violin
pp
Slap the strings with
palm of the hand
vln. II
mp
f
10"
10"
arco
div.
pizz.
tutti
vla.
mp
pp
10"
vc.
mf
pp
10"
cb.
pp
mf
pp

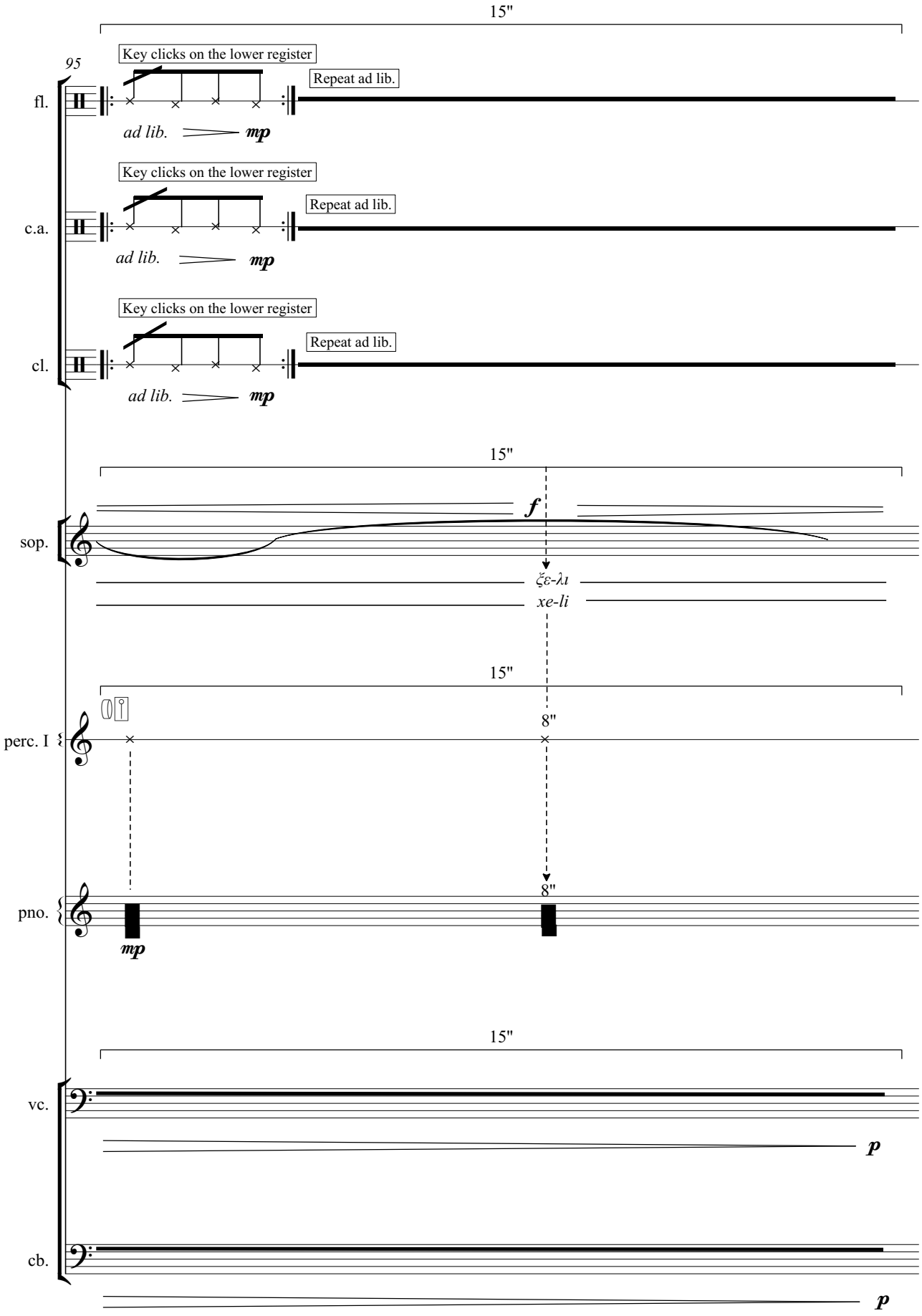

10"
89
5"
perc. I
7"
ff
5"
pizz.
inside the piano
10"
8va
pno.
ff
10"
1st violins: gliss. from the given note to the highest note possible
1 2 3 4
5"
vln. I
f
10"
5"
vla.
f

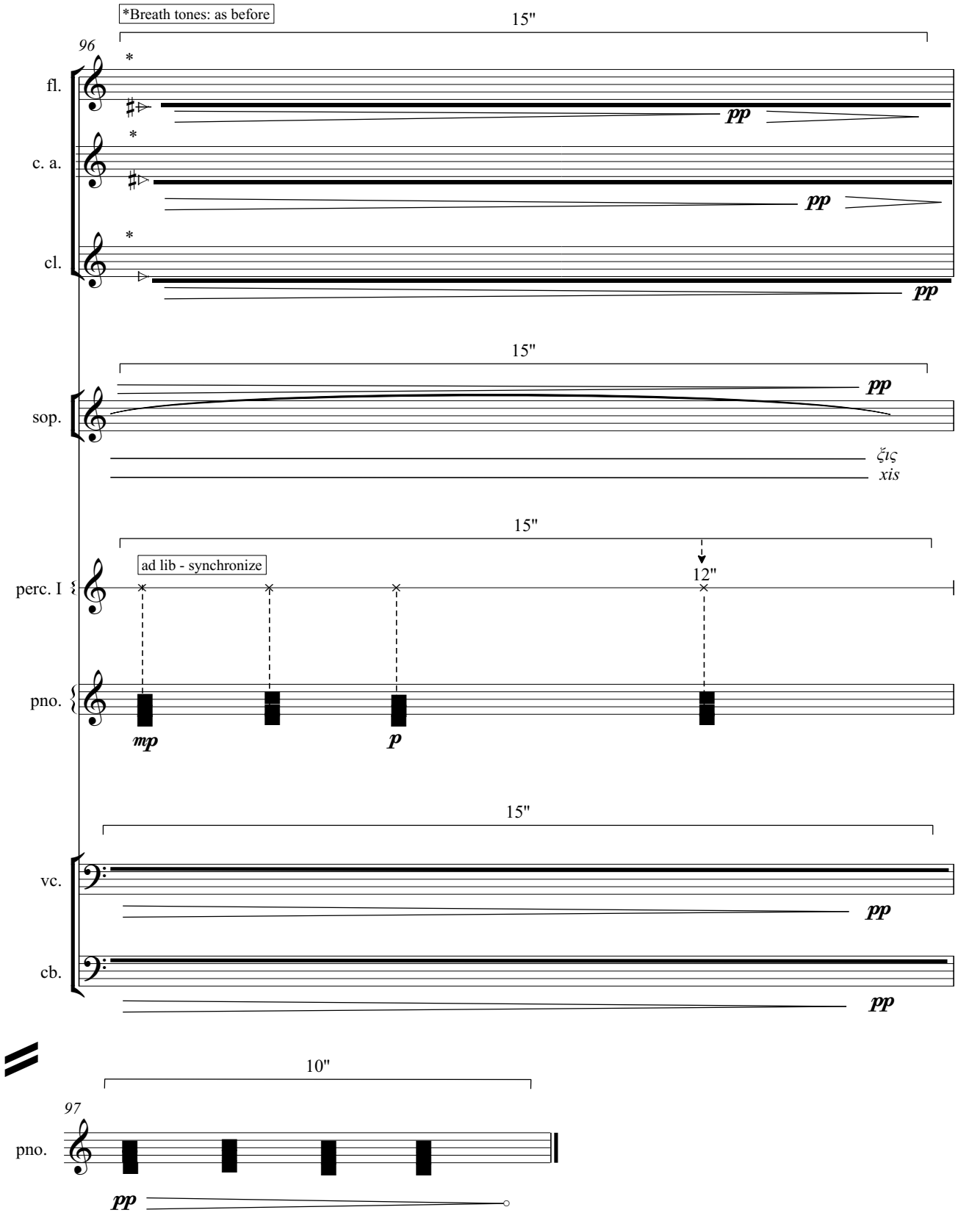

15"
Violin I has 6 pizz. in this bar.
Colla aparte after the last violin pizz.
91
With bow
perc. I
mp
15"
pizz.
with the thumb
vln. I
mp
pizz.
with the thumb
vla.
mp
slow, full bow on the tailpiece
vc.
p
mp
slow, full bow on the tailpiece
cb.
p
mp


92
15"
sop.
ε
e
ξέ-λι
xe-li
ξις
xis
mp
mf
15"
7"
8va
perc. I
mf
15"
2"
simile
pno.
sfz sempre
vln. I
mf
vla.
mf
vc.
mf
cb.
mf


15"
93
perc. I
mf
(simile)
pno.
15"
Slap the three open strings
(D,A,E) with palm
8"
13"
vln. I
sfz
mf
4"
12"
vla.
mf
vc.
cb.


15"
94
3"
Repeat ad lib.
fl.
mf
3"
Repeat ad lib.
c. a.
mf
3"
Repeat ad lib.
cl.
mf
15"
mf
7"
sop.
ε
e
15"
Vib
perc. I
mf
10"
perc. III
mf
(simile)
pno.
mf
mf
15"
12"
vln. I
mp
vc.
mp
cb.
mp


15"
95
Key clicks on the lower register
Repeat ad lib.
fl.
ad lib.
mp
Key clicks on the lower register
Repeat ad lib.
c.a.
ad lib.
mp
Key clicks on the lower register
Repeat ad lib.
cl.
ad lib.
mp
15"
sop.
f
ξε-λι
xe-li
15"
perc. I
8"
8"
pno.
mp
15"
vc.
p
cb.
p


*Breath tones: as before
15"
96
fl.
c. a.
cl.
pp
15"
sop.
pp
ξιϛ
xis
15"
ad lib - synchronize
12"
perc. I
pno.
mp
p
15"
vc.
pp
cb.
pp
10"
97
pno.
pp

PORTFOLIO OF MUSIC COMPOSITIONS

Vol. III of III

DEMETRIS EFSTATHIOU

Ph.D Thesis **2014**

PORTFOLIO OF MUSIC COMPOSITIONS

DEMETRIS EFSTATHIOU

Vol III of III

School of Media, Music and Performance

University of Salford, Salford, UK

Submitted in Partial Fulfillment of the Requirements

the degree of Doctor of Philosophy, January 2014

Quantum

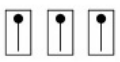
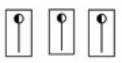
For full Orchestra

2013

Instrumentation

2 Flutes (1st flute doubling piccolo)
2 Oboes
2 Clarinets in Bb (2nd doubling bass clarinet)
2 Horns in F
1 Tenor Trombone
Percussion (see below)
Piano
12 Violin 1
10 Violin 2
8 Violas
6 Cellos
4 Double Basses

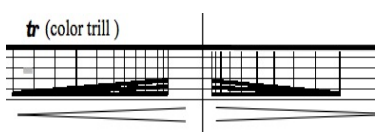
Percussion (First player)		Sticks
	3 Timpani	 Medium mallets
	Sus. Cymbal	

Percussion (second player)		Sticks
	Vibraphone	 Hard mallets
	Bass Drum	 Medium mallets
	Sus. Cymbal	 Medium B.D mallets
	Medium Gong	 Hard Yarn Mallets
		 Violin bow
		 Triangle beater

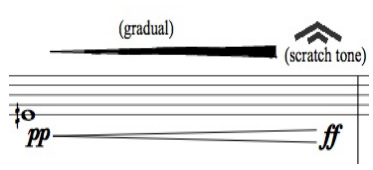
Percussion (Third player)		Sticks
	Crotales	 Hard plastic mallets
	Temple Blocks	 Medium mallets
	Triangle	 Gong beater
		 Triangle beater
	Gong	 Violin bow

Total duration: c. 25' 30''

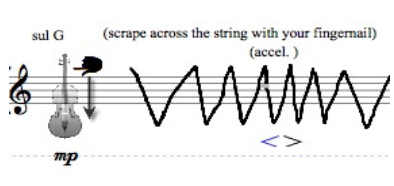
The composition is performed with no vibrato throughout. Vibrato is required occasionally (Extremely slow, quarter-tone wide vibrato).



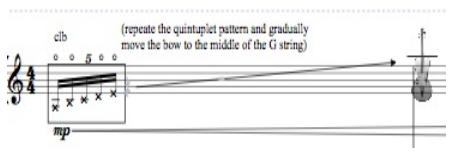
Colour trill: choose two alternative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm.



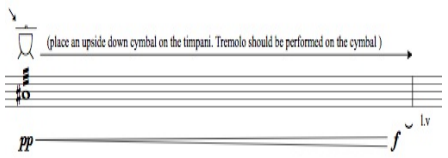
On strings: vary the bow pressure gradually until a clear scratch tone is heard



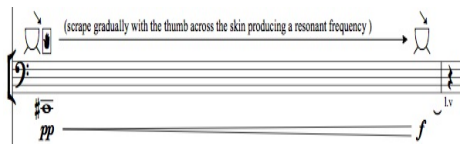
On strings: scrape across the string with your fingernail. Alternatively, you can use a guitar plectrum.



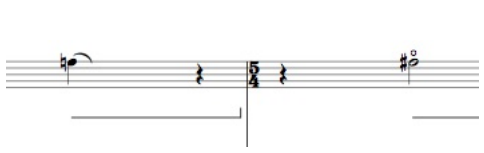
On strings: gradually move the bow to the middle of the string while sustaining the given rhythmic motive in the square (In this example a quintuplet harmonic col legno battuto motive is repeated).



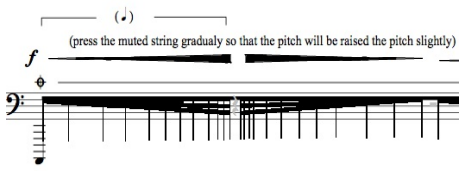
On timpani: place a cymbal on the timpani membrane. Tremolo should be performed on the cymbal.



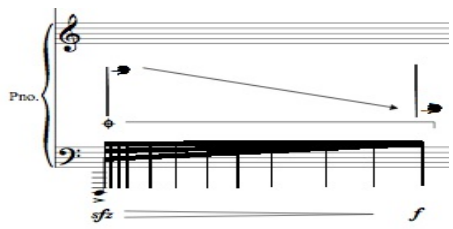
On timpani: scrape the membrane of the timpani with your thumb producing a resonant frequency.



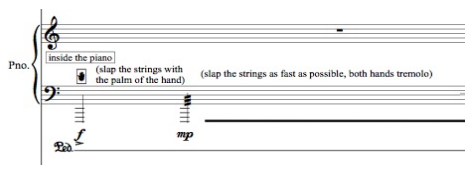
On percussion (vibraphone and crotales): an occasional up and down bow is required (using a violin bow) with some instances on the vibraphone asking for a harmonic up and down bow (touching the middle of vibraphone bar with your finger while bowing it). Furthermore, on the vibraphone, a downward glissando is asked for, produced by hitting the bar first with a medium mallet followed by a lengthwise 'touch and drag' technique with a hard mallet.



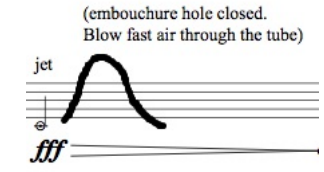
On piano: apply gradual pressure with your index finger on the muted string inside the piano so that it raises the pitch slightly.



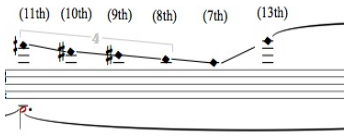
On piano: change the position of the index finger on the muted string so that it produces an amalgam of muted sounds and harmonics.



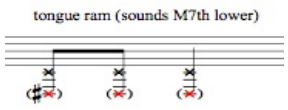
On piano: palm slap or palm tremolo inside the piano strings.



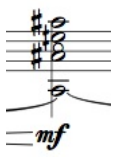
On flute: close the embouchure hole completely and blow fast air through the tube producing a 'jet whisle'.



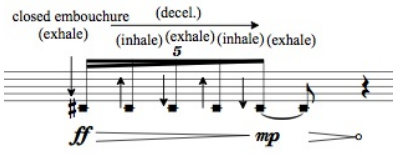
On flute: with the same low fingering (B3) try to produce faint whistle tone (the partials of the B3 harmonic series are given). Try to be as stable and accurate as possible.



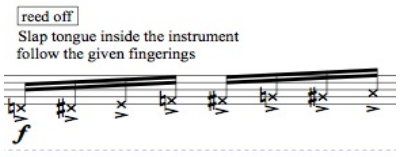
Flute tongue ram: with a closed embouchure, make a rapid movement of the tongue striking the teeth producing a HT! sound. The resultant sound is a Maj 7th below the written pitch.



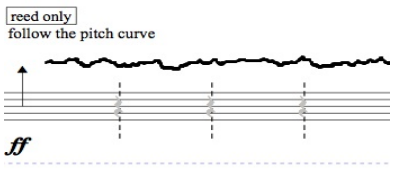
On woodwinds: various multiphonic fingerings are given. For example, on the bassoon, a hollow round pitch (E3) means that this finger will be omitted (from the regular C2 fingering) in order to produce the given multiphonic.



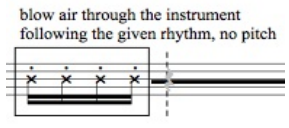
On woodwinds: a square note indicates that only air must be inhaled and exhaled into the instrument with no sounding pitch (a choice between reed or no reed or closed embouchure is given).



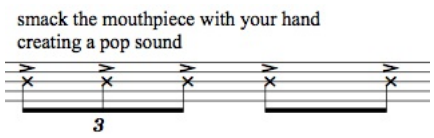
On woodwinds: take of the reed of and slap tongue inside the instrument.



On woodwinds: there is an indication of playing on the reed only without the body of the instrument creating a high pitched note.



On brass: an x type note indicates blowing air through the instrument or smacking the mouthpiece with your hand creating a pop sound.



On brass: 'smack sound'.

All other symbols are explained in the scoce

Quantum 1

♩ = 60

Piccolo
(no vib.)
(Breath ad libitum)
sfp

Flute 2
(no vib.)
(Breath ad libitum)
(Color trill: choose two altenative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm)
tr
sfp

Oboe 1
(no vib.)
(Breath ad libitum)
(Color trill: choose two altenative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm)
tr
sfp

Oboe 2
(no vib.)
(Breath ad libitum)
(Color trill: choose two altenative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm)
tr
sfp

Clarinet in B♭ 1
(no vib.)
(Breath ad libitum)
(Color trill: choose two altenative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm)
tr
sfp

Clarinet in B♭ 2
(no vib.)
(Breath ad libitum)
(Color trill: choose two altenative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm)
tr
sfp

Bassoon 1
(no vib.)
(Breath ad libitum)
sfp

Bassoon 2
(no vib.)
(Breath ad libitum)
(Color trill: choose two altenative fingerings to produce a timbral change (bisbigliando) or slight microtonal deviations. Follow the given rhythm)
tr
sfp

Horn in F 1
(no vib.)
(Breath ad libitum)
(Extremely slow vibrato that actually produces a quartet-tone pitch)
(non vib.)
sfp

Horn in F 2
(no vib.)
(Breath ad libitum)
(Extremely slow vibrato that actually produces a quartet-tone pitch)
(non vib.)
sfp

Trumpet in B♭ 1
(no vib.)
(Breath ad libitum)
(Extremely slow vibrato that actually produces a quartet-tone pitch)
(non vib.)
sfp

Trumpet in B♭ 2
(no vib.)
(Breath ad libitum)
(Extremely slow vibrato that actually produces a quartet-tone pitch)
(non vib.)
sfp

Trombone
(no vib.)
(Breath ad libitum)
(Extremely slow vibrato that actually produces a quartet-tone pitch)
(non vib.)
sfp

♩ = 60

Percussion 1
Timpani
32"= C
(Medium timpani mallets)
gliss.
sfpp

Percussion 2
Vib
(Vibraphone / hard mallets)
sf
3
Ped
(l.v.)
mf

Percussion 3
(Crotales / hard mallets)
sf

Piano
Inside the piano
sf
5
(pluck string with the fingernail)
mf
Ped

Violin I
fp

Violin II
fp

Viola
fp
(overpressure/scratch tone)
(gradual)
Ord.

Violoncello
(no vib.)
sfp
mf
(overpressure/scratch tone)
(gradual)
Ord.

Contrabass
(no vib.)
sfp
mf

6

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc.2
Perc.3
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

sfp
tr (color trill)
mp
p
(no vib.)
(scrape gradually with the thumb across the skin producing a resonant frequency)
(simile)
l.v
pp
f
mf
sf
(mute the string with the palm of the hand ,inside the piano)
fp
(gradual)
(overpressure)
Ord.

11

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc.2
Perc.3
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

(random flutter tonguing)
(color trill)
(no vib.)
(ommit B3 from the standard D2 fingering in order to produce the multiphonic)
gliss.
29"= C#
(place an upside down cymbal on the timpani. Tremolo should be performed on the cymbal)
(simile)
l.v
(Medium mallets)
(random tremolo)
(gradual)
(overpressure)
Ord.

16

Picc.

(random flutter tonguing)

Fl. 2

(no vib.)

tr (color trill)

Ob. 1

(no vib.)

Ob. 2

Cl. 1

(no vib.)

Cl. 2

. (as fast as possible)

Bsn. 1

(as fast as possible)

Bsn. 2

(release embouchure pressure and change lip position to produce a multiphonic sonority)

Hn. 1

gliss.

Hn. 2

(tenuto)

(staccato)

Tpt.1

(as fast as possible)

(no vib.)

Tpt. 2

(random flutter tonguing)

Tbn.

(random flutter tonguing)

Perc.1

(irregular pedal gliss.)

l.v

Perc.2

(staccato)

Perc.3

l.v

Pno.

Vln. I

(gradual)

(alternate timbre between the artificial harmonic and regular pitch)

Vln. II

(Rapid irregular tremolo glissando in the highest range of the instrument)

Vla.

(Rapid irregular tremolo glissando in the highest range of the instrument)

Vc.

(overpressure)

(gradual)

+ SP (sul pont.)

Ord.

(rapid irregular tremolo glissando in the highest range of the instrument)

Cb.

(overpressure)

(gradual)

+ SP (sul pont.)

Ord.

(tenuto)

(staccato)

♩=120

20

Picc.
(random flutter tonguing)
sfp
mf
(as loud as possible)

Fl. 2
(Play the pitches inside the box in any order and rhythmic variation at a medium tempo)
(jet whistle)
pp < ff

Ob. 1
(no vib.)
sfp
mf
(as loud as possible)

Ob. 2
(Play the boxed pitches in any order and rhythmic variation at a medium tempo. Use staccato sparingly)

Cl. 1
(random flutter tonguing)
(no vib.)
sfp
mf
(as loud as possible)

Cl. 2
(Play the pitches inside the box in any order and rhythmic variation at a medium tempo)

Bsn. 1
(no vib.)
sfp
fp
fff

Bsn. 2
(Play the boxed pitches in any order and rhythmic variation at a slow tempo. Use staccato sparingly)

Hn. 1
. (staccato)
(no vib.)
sfp
fp
ff

Hn. 2
(Play the boxed pitches in any order and rhythmic variation at a slow tempo)
ff

Tpt.1
. (staccato)
(no vib.)
sfp
fp
ff

Tpt. 2
(Play the boxed pitches in any order and rhythmic variation at a slow tempo.Use staccato sparingly)

Tbn.
(no vib.)
sfp

♩=120

Perc.1
fpp

Perc.2
mf
(l.v) hold pedal
(Bass Drum / medium B.D mallets)
pp
f
(l.v)

Perc.3
(Medium mallets)
(Temple Blocks / medium mallets)
mf
f
ff
(Triangle / triangle beater)

Pno.
(Repeat the group of notes inside the box in any order and duration until the end of the horizontal line, free accel and rit.)
mp
inside the piano
pp ff
(hand tremolo on the lowest strings)
(l.v)

Vln. I
fp
(gradual)
(scratch tone)
pp ff

Vln. II
fp
(gradual)
(scratch tone)
pp ff

Vla.
fp
(gradual)
(scratch tone)
pp ff

Vc.
fp
(gradual)
(scratch tone)
pp ff

Cb.
fp
(gradual)
(scratch tone)
pp ff

24

♩=60

Picc.

Fl. 2

slap tongue /pizz on low register

mp f ppp

Ob. 1

Rolling tone (extreme lip pressure to make a beating or rolling quality)

mp mf ppp

Ob. 2

Cl. 1

(a) (i) (repeat the 8th note pattern)

(accel.)

(air through reed)

mp

(Blow air through the reed while changing pronunciation from 'a' to 'i'.Whispering sound.)

Cl. 2

(irregular molto vib.)

mp f mp

Bsn. 1

Bsn. 2

(irregular molto vib.)

mp f mp

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

♩=60

Perc.1

mf

Perc.2

(Vibraphone / medium mallets)

mf ppp mp

Perc.3

(Temple Blocks / medium mallets)

mf

Pno.

(mute the string with hand)

3

mp f p

Vln. I

(Play the boxed pitches in any order and rhythmic variation at a slow tempo.Use staccato and accents sparingly)

mf p

Vln. II

(Play the boxed pitches in any order and rhythmic variation at a slow tempo.Use staccato and accents sparingly)

mf p

Vla.

clb

(repeat the quaver notes pattern and gradually make a glizz. towards to the middle of the C string)

mf mp ff mp

Vc.

clb

(repeat the quaver notes pattern and gradually make a glizz. towards to the middle of the C string)

mf mp ff mp

Cb.

mf mp ff mp

27

Picc.

(Play the boxed pitches in any order and rhythmic variation at a fast tempo and legato)

p

Fl. 2

(irregular molto vib.)

mf

Ob. 1

(Play the boxed pitches in any order and rhythmic variation at a fast tempo and legato)

p

Ob. 2

(irregular molto vib.)

mf

Cl. 1

(Play the boxed pitches in any order and rhythmic variation at a fast tempo and legato)

p

Cl. 2

(irregular molto vib.)

mf

Bsn. 1

(Play the boxed pitches in any order and rhythmic variation at a fast tempo and legato)

p

Bsn. 2

(irregular molto vib.)

mf

Hn. 1

stopped — *mp*

open — 5

stopped — *mp*

Hn. 2

stopped — *mp*

open — 5

stopped — *mp*

Tpt.1

cup mute — *mp*

without mute — 5 — *mp*

Tpt. 2

cup mute — *mp*

without mute — 5 — *mp*

Tbn.

(irregular molto vib.)

mf

Perc.1

mf

Perc 2.

Vib

mf

Perc 3.

mf

Pno.

ppp

Vln. I

fp

Vln. II

fp

Vla.

fp

Vc.

(no vib.)

sfp

Cb.

(no vib.)

sfp

30

Picc.

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc 2.

Perc 3.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

(Play the boxed pitches in any order and rhythmic variation at a fast tempo and legato)

(irregular molto vib.)

(as loud as possible)

(ommit C3 from the regular B1 fingering to produce the given multiphonic)

stopped

open

cup mute

(rip. ad lib.)

(no vib.)

ord.

s.p

33

(pitch bend)

Picc.

mp

Fl. 2

take reed out

Ob. 1

take reed out

Ob. 2

Cl. 1

Cl. 2

take reed out

Bsn. 1

Bsn. 2

p

Hn. 1

Hn. 2

p

without mute

Tpt.1

without mute

Tpt. 2

Tbn.

Perc.1

pp

Perc 2.

mf

ppp *mf*

(Crotales / medium mallets)

Perc 3.

mp

Pno.

inside the piano

(slap the strings with the palm of the hand)

(slap the strings as fast as possible, both hands tremolo)

(slap the strings with the palm of the hand)

(slap the strings as fast as possible, both hands tremolo)

f *mp* *f* *mp*

Ped.

Vln. I

fmp

Vln. I

fmp

Vln. II

fmp

Vln. II

fmp

Vla.

fmp

ord.

Vc.

fmp

Sul G

ord.

Cb.

fmp

36

Picc.

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc 2.

Perc 3.

Pno.

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Cb.

(pitch bend)

mp

(in) (breathing in and out through the instrument)

(staccato)

(out)

tr (color trill)

(breathing in and out through the instrument / no reed)

(breathing in and out through the embuchure)

(blow air through the mouthpiece into the instrument)

(mouthpiece pop) (hit the mouthpiece with your palm of your hand, so it produces a 'poping' sound; free rhythm inside the mesure)

(follow the given rhythm)

(hit the mouthpiece with your palm of your hand, so it produces a 'poping' sound)

pp

(finger gliss.)

l.v

(very slow gliss.)

Sul D

39

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

(pitch bend)
(color trill)
(color trill)
(f.t)
(f.t)
(f.t)
(f.t)
stopped
hand stopped
(flz)
take sus cymbal off the 29" timpani
l.v
l.v
(palm slap inside the piano strings and let vibrate)
Sul E

42

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

mf pp mf ff f mp ff

(tone color trill) (fingering)

put reed in

stopped

ppp p

ord. mp

Inside the piano

(finger gliss.) l.v

(random tremolo)

(gradually) (scratch tone) s.p

s.p ord. gliss.

46

♩ = 120

♩ = 60

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc.2
Perc 3.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

mf ff
subito p
(embouchure hole closed. Blow fast air through the tube)
jet
fff
(breathing in and through the instrument)
↓ (in)
mp
tr
open
(no vib.)
(very slow vib.)
(tenuto)
f p
harmon mute (stem in)
pp
(Sus. Cymbal)
(Temple Blocks / medium mallets)
(Vibraphone / medium mallets)
Vib
pizz.
l.v
(finger gliss.)
(Unstable gliss. with medium vibrato. No more than a half-step deviation in both directions)
vib.
(ord./ no vib. no gliss.)
s.p
(ord.)
(random left hand pizz.)

49

Picc.
(lip gliss.)
p
(irregular molto vib.)

Fl. 2
(lip gliss.)
p
(irregular molto vib.)

Ob. 1
p

Ob. 2
p

Cl. 1
mf
3

Cl. 2

Bsn. 1
mf
p
(irregular molto vib.)

Bsn. 2
4
p

Hn. 1
p

Hn. 2
p

Tpt.1
harmon mute (stem in)
5
mf
3

Tpt. 2
harmon mute (stem in)
5
mf
3

Tbn.
mf
(irregular molto vib.)
p

Perc.1

Perc 2.
5
p
4
p

Perc 3.
mf
3
4
p
4

Pno.
ord.
mf
7
6
3

Vln. I
(no vib.)
p
(left hand pizz.)

Vln. II
(no vib.)
p

Vla.
(no vib.)
p

Vc.
(no vib.)
p

Cb.
(keep playing the left hand pizz. while glissing on the E string)
(no vib.)

52

Picc.

Fl. 2

Ob. 1

p

Ob. 2

mf

(change reed position / also light lip pressure)

Cl. 1

mf

Cl. 2

p

gliss.

(release E3 to produce the given multiphonic)

Bsn. 1

p *mf* *p* *p* *mf*

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc 2.

Perc 3.

mp

Pno.

mp

Vln. I

Vln. II

Vla.

(left hand pizz.)

Vc.

Cb.

55

Picc.

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc 2.

Perc 3.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

(change reed position / also light lip pressure)
(slow vib.)

(release E3 to produce the given multiphonic)

plunger mute

plunger mute

(fingering)

To Tri.

(left hand pizz.)

sul E

sul A

(as loud as possible)

(gradually)

(scratch tone)

s.p

58

Picc.

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

open

Tpt. 2

open

Tbn.

Perc.1

Perc 2.

Perc 3.

(Triangle / triangle beater)

Pno.

Vln. I

clb

(repeat the quaver note pattern and gradually move the bow to the middle of the G string)

(touch A on the G string)

Vln. I

clb

(repeat the quaver note pattern and gradually move the bow to the middle of the G string)

(touch A on the G string)

(gradually accelerate the quaver note pattern)

Vln. II

clb

(repeat the pattern as fast as possible on the G string, and gradually make a gliss. towards to the bridge)

(touch A on the G string)

Vln. II

clb

(repeat the quaver note pattern)

(touch A on the G string)

(gradually accelerate and deacceleratе the rhythm pattern)

Vla.

clb

(play behind the bridge)

(repeat the quaver note pattern)

(Play random clb patterns behind the bridge.Follow any accel. deccel. changes)

Vc.

Cb.

62

Picc.

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc 2.

Perc 3.

Pno.

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Cb.

↓(in) (air tone: blow through the instrument)

(repeat the quavers note pattern)

(touch A on the G string)

(play behind the bridge)

(repeat the quaver notes pattern and gradually play a glizz. towards to the middle of the G string)

Inside the piano

(finger gliss.)

ord.

snap pizz.

(regular pizz.)

arco

l.v

65

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

(play behind the bridge)
Col legno battuto

(repeat the quavers note pattern)

(gradually)
(scratch tone)

68

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

(no vib.)
harmon mute (stem in)
(Bass Drum / medium B.D mallet)

75

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

(Medium Gong / hard mallet)
(Bass Drum / medium B.D mallets)
l.v

78

Picc.

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc 2.

Perc 3.

Pno.

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Cb.

(lip.)

(lip.)

(lip.)

32"=D2, 29"= A2, 23" = G3#

extreme hand overpressure on the membrane

81

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

(change reed position / also light lip pressure)

(as soft as possible)

(release E3 to produce the given multiphonic)

Inside the piano

(finger gliss.)

l.v

(random tremolo disturbances)

84

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

mf f p mp

(lip.)

(half valve gliss.)

ord.

Ped.

(Hard yarn beater)

(Temple Blocks / hard plastic mallets)

87

Picc.
(very short pause of breathing)
p

Fl. 2
(very short pause of breathing)
p

Ob. 1
(very short pause of breathing)
p

Ob. 2
(very short pause of breathing)
p

Cl. 1
(very short pause of breathing)
p

Cl. 2
(very short pause of breathing)
p

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1
32"=D2, 29"= A2, 23" = G#3
mf
p

Perc 2.
mf
p

Perc 3.
mf
p

Pno.

Vln. I
s.p
p

Vln. I
s.p
p

Vln. II
s.p (very slow gliss.)
p

Vln. II
s.p (very slow gliss.)
p

Vla.
s.p (very slow gliss.)
p

Vc.
(very slow gliss.)
p

Cb.
(very slow gliss.)
mp

91

Picc.
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc 2.
Perc 3.
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

(lip)
(re-finger)
(very slow key gliss.)
32"=D2, 29"= A2, 23" = G#3
(very slow gliss.)
(gradually scatch tone)
(gradually scratch tone)

♩=42

95

(as few breathing points as possible)

Picc.

subito ***p***

(senza tempo, within the bar)

(as few breathing points as possible)

8va

(11th) (10th) (9th) (8th) (7th) (13th)

(14th)

Fl. 2

(Whistle tone / 12th partial)

(fingering)

mp

Perc.1

l.v

p

Vibraphone

Vib

Left hand = hard rubber mallet (for pitch bend)

Right hand = standard mallet plus Double Bass bow (both on the same hand)

(hard rubber mallet)

(standard mallet)

(standard mallet)

(bow the bar and touch the bar in the middle producing a note two octaves higher)

Perc 2.

mp

(pitch bend)

(For pitch bending, play the given notes normally with the standard mallet and then rapidly use the hard rubber mallet to press against the vibraphone bar at its nodal point and move or slide the mallet away)

(Suspend the triangle on your hand. For triangle vibrato, hit the triangle and wiggle your hand/palm in order to produce vibrato)

Triangle

(fast vib.)

Perc.3

f

mp

pizz.

l.v

Pno.

Inside the piano

mf

solo

Vln. I

subito ***p***

sul D

solo

Vc.

Cb.

mp

99

Picc.

(random whistle tone gliss)

8va

(11th) (10th) (9th) (8th) (7th) (13th)

Fl. 2

Perc.1

p

Perc 2.

Perc.3

Pno.

mp

mf

Vln. I

Vln. II

Vc.

Cb.

103

Picc.

Fl. 2

(Whistle tone / 16th partial)

Perc.1

Perc 2.

To Gong

Triangle beater / left hand

Perc.3

(damp the string inside the piano with your index finger)

Pno.

clb

(repeat the quintuplet pattern and move the bow gradually to the middle of the G string)

Vln. I

Sul E

Vln. II

(seagull effect / keep the distance between the fingers the same while sliding)

Vc.

Cb.

107

(re-finger)

Legato

(Gong)

(Scrape with triangle beater)

l.v

(Vibraphone)

Vib

Left hand = hard rubber mallet (for pitch bend)

(lightly damp with fingers)

111

Picc.

Fl. 2

Perc.1

Perc.2

Perc.3

Pno.

Vln. I

Vln. II

Vc.

Cb.

p

mp

8va

(11th partial)

(13th)

(7th)

(mute all strings with palm)

(clb / play behind the bridge)

(repeat the semiquaver note pattern)

mf

115

(re-finger)

(8th)

f

ff

mp

rotor on /slow vibrato

Bass Clarinet
in B♭

119

B. Cl.
(breath freely)
(multiphonics using the specific fingering, and make a gliss. on the bending line)
mp

Bsn. 1
(no vib.)
(ommit C3 fingering to produce the multiphonic)
(in sync with the clarinet)
mp

Hn. 1
(no vib.)(as few breathing points as possible)
(sung notes)
mp

Tbn.
IV (pedal tone)
T IV (momentarily, press the F attachment to get D2)
(breath freely)
mp

Perc.1
mp

Perc.2
mp

Pno.
(mute string with index finger)
(press the muted string gradualy so that the pitch will be raised the pitch slightly)
mp
Ped.

Vln. I
sul G
(scrape across the string with your fingernail)
(accel.) (rit.)
mp

Vln. II
(scrape across the string with your fingernail)
sul G
(accel.) (rit.)
mp

Cb.
(no vib.)
mp

123

Picc.
p
mp

B. Cl.
mp

Bsn. 1
(no vib.)
(in sync with the clarinet)
mp

Hn. 1
(no vib.)(as few breathing points as possible)
(sung notes)
mp

Tbn.
IV (pedal tone)
T IV (momentarily, press the F attachment to get D2)
(as few breathing points as possible)

Perc.2
Motor ON
mp

Pno.
(press the muted string gradualy so that the pitch will be raised the pitch slightly)

Vln. I
sul G
(accel.) (rit.)
mp
p

Vln. II
sul G
(accel.) (rit.)

Cb.
(no vib.)
sul E
(scrape across the string with your fingernail)
(accel.) (rit.)
mp
p

127

B. Cl.

Bsn. 1

Hn. 1

IV (pedal tone)

Tbn.

Perc.1

Perc.2

Motor OFF

Pno.

Ord.

Vc.

(gradual string pressure)

(scratch tone)

Cb.

130

(no vib.)

Picc.

Fl. 2

(harmonic series gliss)

(strike the timpani shell with medium mallet)

(gradually)

Motor ON

Perc.3

Temple Blocks / medium mallets

To T. Bl.

(l.v)

alto s.p

Vln. I

Vln. II

s.p

clb

ord.

136

Picc.

Fl. 2

B. Cl.

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

Perc.1

Perc.2

Perc.3

Pno.

Vln. I

Vln. II

Vc.

Cb.

mf

pp

f

(strike the timpani shell)

(measured tremolo)

pizz.

138

Picc.

Fl. 2

B. Cl.

Bsn. 1

Hn. 1

Hn. 2

Tpt.1

Tpt. 2

Tbn.

(slow pedal tone gliss)

Perc.1

Perc.3

Pno.

(press the muted string gradualy so that the pitch will be raised the pitch slightly)

Vln. I

Vln. II

Vla.

Vc.

Cb.

ord.

s.p
(scratch tone)

140

Più mosso

Picc.

Fl. 2

B. Cl.

Bsn. 1

Hn. 1

Hn. 2

Tpt.1

(lip)

Tpt. 2

Tbn.

Più mosso

Perc.1

Pno.

(press the muted string gradualy so that the pitch will be raised the pitch slightly)

s.p (highest notes possible, but try to vary the pitch by following the pitch curve)

Vln. I

s.p
(highest notes possible but try to vary the pitch by following the pitch curve)
(staccato ricochet on every note)

Vln. II

(try to be as sync as possible with the cello)

Vla.

(try to be as sync as possible with the viola)

Vc.

Cb.

143

A tempo

Picc.

B. Cl.

Bsn. 1

Tbn.

A tempo

Perc.1

Perc.2

Perc.3

Pno.

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Cb.

(no vib.)

(no vib.)

(no vib.)

(ommit B2 from the A2 normal fingering to produce the multiphonic. Random beating occurs)

rotor on /slow vibrato

(Gong / gong beater)

(Triangle / triangle beater)

(Temple Blocks / medium mallets)

(Triangle / triangle beater)

(on keys)

pizz.

pizz.

s.t

ord.

Meno mosso

148

(play on the rim)

(gradually)

(gradually)

(apply gradual pressure on the muted string so that it raises the pitch slightly)

s.p

(legato)

(slow)

(repeat the boxed pitches in any order and follow instructions)

(staccato)

(slow)

(legato)

(fast)

(staccato)

(fast)

(legato)

(slow)

(staccato)

(fast)

(medium tempo)

SP (random sul pont. tremolo)

simile

150

Picc.

Tbn.

VI with (F attachment)

I with (F attachment)

Perc.1

Pno.

(ending result is an alternation between indeterminate and determinate resultant harmonics and noise like textures)

sul A alto s.p

Vln. I

(slow) (fast) (fast) (slow) (fast)

(random tremolo)

(legato) (slow)

(staccato) (slow) (legato) (fast) (staccato) (fast) (legato) (slow) (staccato) (ast)

(ending result is an alternation between indeterminate and determinate resultant harmonics and noiselike textures)

sul D alto s.p

Vln. I

(fast) (slow) (fast) (fast) (fast)

(random tremolo)

(legato) (slow)

(staccato) (fast) (legato) (slow) (legato) (fast) (legato) (fast) (staccato) (fast)

(ending result is an alternation between indeterminate and determinate resultant harmonics and noiselike textures)

sul G alto sul pont.

Vln. II

(medium tempo) (fast) (slow) (fast) (fast)

(random tremolo)

(legato) (slow)

(staccato) (medium tempo) (staccato) (fast) (legato) (slow) (staccato) (fast) (staccato) (fast)

(ending result is an alternation between indeterminate and determinate resultant harmonics and noiselike textures)

sul G alto sul pont.

Vln. II

(medium tempo) (fast) (slow) (fast) (fast)

(random tremolo)

(legato) (slow)

(staccato) (medium tempo) (staccato) (fast) (legato) (slow) (staccato) (fast) (staccato) (fast)

Cb.

152

Ob. 1

Ob. 2

Tbn.

(slightly mute the skin with hand)

(no mute)

Perc.1

Pno.

(mute string with hand)

(no mute)

pizz.

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vc.

pizz.

(mute string with hand)

Cb.

154

Picc.

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Fl. 2

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Ob. 1

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Ob. 2

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

B. Cl.

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Cl. 2

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Bsn. 1

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Bsn. 2

(free duration sensa tempo within the duration of a crotchet)
(the broken barlines are borderlines of crotchets)

(fast) (slow) gradually (fast) (very fast) (slow)

f *mp* *f* *mf*

Tbn.

f

Perc.1

mf

Pno.

f

155

Picc.
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Fl. 2
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Ob. 1
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Ob. 2
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

B. Cl.
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Cl. 2
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Bsn. 1
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Bsn. 2
(fast) (slow) gradually (fast) (very fast) (slow)
f mp f mf

Hn. 1
p

Hn. 2
p

Tpt.1
p

Tpt. 2
p

Tbn.
f

Perc.1
mf

Pno.
f

(Place the palm of your hand on the timpani skin. Muffled muted sound)

156

Perc.1
f (finger gliss on the highest strings)

Pno.
Inside the piano
(move the muted point on the string gradually inwards so that it produces an alternation between muted sounds and various harmonics)
fff ff

(Use your index finger. Move the pressure point on the skin gradually inwards as well as creating more pressure while doing it so that it produces an upwards pitch shift)

157

Perc.1
f

Pno.
sfz f

158

Picc.

f

3

(Use your index finger. Move the pressure point on the skin gradually inwards as well as creating more pressure while doing it so that it produces an upwards pitch shift)

Perc.1

sfz *pp* *f*

motor off (slow)

(repeat the boxed pitches in any order and rhythm and follow instructions)

(fast) (very fast) gradually (slow) To Sus. Cym.

Perc.2

f

Perc.3

f

Pno.

sfz *f*

arco

Vln. I

f

gradually faster

159

Picc.

f

Ob. 1

f

B. Cl.

f

(ommit B2 from the A2 normal fingering to produce the multiphonic. Random beating occurs)

Bsn. 1

f

Tbn.

f *mf*

Perc.1

ff *mf* *ff* *mf* *ff* *mf*

scrape across

Sus. Cymbal / triangle beater

Perc.2

f

Perc.3

f

Pno.

ff *mf* *ff* *mf* *ff* *mf* *ff* *mf* *ff* *mf* *ff* *mf*

160

Picc.

(no vib)

mf

8va

f

Fl. 2

(Whistle tone / 12th partial)

(fingering)

mf

f

Perc.2

scrape across

mf

circular sustained scrape

mp

f

Perc.3

(muted)

mf

Pno.

(finger gliss on the highest strings)

mf

(left hand)

(right hand)

(left hand)

(right hand)

ff

Vln. I

sul D

mf

s.p

ff

Vln. II

mf

ff

161

Ob. 1

c

f

B. Cl.

(retrigger multiphonic)

mf

Bsn. 1

(ommit B2 from the A2 normal fingering to produce the multiphonic. Random beating occurs)

mf

Hn. 1

f

Tbn.

f

Perc.1

ff

mf

ff

mf

ff

mf

Pno.

sfz

f

Cb.

arco

(scratch tone)

sfz

mf

(scratch tone)

sfz

mf

162

Picc.

(no vib)

mf

f

Fl. 2

(random gliss on the whistle tone partials)

(Whistle tone / 12th partial)

(fingering)

mf

f

tr

mf

pp

Perc.2

scrape across

circular sustained scrape

mf

mp

f

Perc.3

(muted)

mf

Pno.

(finger gliss on the highest strings inside the piano)

mf

f

5

mf

p

Vln. I

sul D

mf

s.p

pizz.

ff

pp

Vln. II

mf

pizz.

ff

pp

Cb.

mf

pp

164

Picc.

(unfocused sound, almost breathlike)

mf

f

mf

f

mf

f

Ob. 1

tr

mf

5

B. Cl.

5

f

(make a irregular gliss. from the low partial to high and vice versa)

(high harmonic region partials)

(low harmonic region partials)

Bsn. 1

f

Tbn.

3

mf

f

Pno.

Ord.

pp

mp

f

Vln. I

arco

mf

Vln. II

arco

mf

165

Picc.
(unfocused sound, almost breathlike)
mf f mf f mf f

Fl. 2
(unfocused sound, almost breathlike)
mf f mf f mf f

Ob. 1
mf f

Ob. 2
mf f

B. Cl.
(make an irregular gliss. from the low partial to high and vice versa)
(high harmonic region partials)
(low harmonic region partials)
f ff

Cl. 2
(make a irregular gliss. from the low partial to high and vice versa)
(high harmonic region partials)
(low harmonic region partials)
f ff

Bsn. 1
f

Bsn. 2
f

Hn. 1
quasi gliss.
mf f

Hn. 2
quasi gliss.
mf f

Tpt.1
mf f

Tpt. 2
mf f

Tbn.
mf f

(Use your index finger. Move the pressure point on the skin gradually inwards as well as creating more pressure while doing it so that it produces an upwards pitch shift)

Perc.1
mf p f

Perc.2
Crash cymbals
p f

Perc.3
p f
To Crot.

Pno.
mp ff

Vln. I
arco
mf

Vln. II
arco
mf

Vla.
arco
mf

Vc.
arco
(scratch tone)
fff

Cb.
arco
(scratch tone)
fff

166

32"= E

(scrape your thumb across the skin producing resonant high frequencies)

(vary bow placement, pressure and speed of the bow. Try to get different timbres with every repeat)

(Sus. cymbal / violin bow)

(Crotales / violin bow)

171

(Vibraphone /motor off/ violin bow)

(Sus. Cymbal)

(Vibraphone)

175

Flute

colian sounds/ residual tones (light, more windy sound. Almost no pitch is heard)

jet whistle (exhale)

jet whistle (cover embouchure hole completely)

slap tongue

jet whistle (inhale)

air only, no pitch

(Crotales)

Col legno circular bowing

(eerie almost non-pitch. Randomly vary the speed and dynamics of the gesture)

(faster/ louder)

178

closed embouchure (exhale)

(decel.)

(inhale) (exhale) (inhale) (exhale)

tongue ram (sounds M7th lower)

jet whistle (exhale)

Slap Tongue

Blow air through the instrument. Alternate between normal Bb and F attachment

Flap Tongue (flap the tongue into the mouthpiece)

(on the shell of the timpani)

180

tongue ram (sounds M7th lower)

Fl.

closed embouchure
(air through instrument)
(inhale) (exhale)

Fl. 2

Take reed off

Slap tongue inside the instrument
follow the given fingerings

Ob. 1

Slap Tongue

B. Cl.

blow air through the instrument
following the given rhythm, no pitch

slightly accelerate and deccelerate
the 16th note pattern

Hn. 1

blow air through the instrument
following the given rhythm, no pitch

slightly accelerate and deccelerate
the 16th note pattern

Hn. 2

smack the mouthpiece with your hand
creating a pop sound

Tbn.

Perc.1

Perc.2

l.v

Perc.3

To T. Bl.

Vln. I

Vln. II

Col legno circular bowing
(eerie almost non-pitch. Randomly vary the speed and dynamics of the gesture)
(faster/ louder)

Vc.

184

reed off
Slap tongue inside the instrument
follow the given fingerings

reed only
follow the pitch curve

Slap tongue inside the instrument

Ob. 1

Slap Tongue

air only

Slap Tongue

B. Cl.

reed only
follow the pitch curve

slap tongue with the reed off
Take reed off

slap tongue with the reed off

Bsn. 1

smack the mouthpiece with your hand
creating a pop sound

air only

smack the mouthpiece with your hand
creating a pop sound

Tbn.

(on the shell of the timpani)

(on the shell of the timpani)

Perc.1

Perc.2

(hand mute)

(Temple Blocks / medium mallets)

Perc.3

fluctuate the pitch of the artificial harmonic.Follow the pitch curve

Vln. I

187

Fl.

Fl. 2

closed embouchure
(inhale) (exhale)

Ob. 1

reed off
Slap tongue inside the instrument

B. Cl.

Slap Tongue

Bsn. 1

reed off
slap tongue

Tbn.

smack the mouthpiece with your hand
creating a pop sound

Perc.1

(hand mute/ muffled sound)

Perc.2

(hand mute)

Perc.3

189

To Picc.
To Fl.

Fl.

Fl. 2

Ob. 1

B. Cl.

Bsn. 1

Tbn.

Perc.1

(hand mute/ muffled sound)

Perc.2

(hand mute/ muffled sound)

Perc.3

Vln. I

clb

(repeat the quintuplet pattern and gradually
move the bow to the middle of the G string)

Vln. II

Sul E

clb

(repeat the quintuplet pattern and gradually
move the bow to the middle of the E string)

Vla.

sul C

(scrape across the string with your fingernail)

(accel.)

(rit.)

Vc.

Cb.

(repeat the pattern and gradually
move the bow from the middle of the C string
to normal position and back)

193

Ob. 1

reed only (as few breath points as possible)
follow the pitch curve (more or less pressure on the reed to change the resultant pitch)
(with your finger, slightly cover the end of the reed in order to produce a muted downwards pitch gliss)
mf
(dynamic accents)

Ob. 2

reed only (as few breath points as possible)
follow the pitch curve (more or less pressure on the reed to change the resultant pitch)
(with your finger, slightly cover the end of the reed in order to produce a muted downwards pitch gliss)
mf
(dynamic accents)

B. Cl.

mouthpiece plus neck only
follow the pitch curve (more or less pressure on the reed to change the resultant pitch)
(use your hand to block the mouthpiece so it produces a downward glissando)
mf
(dynamic accents)

Cl. 2

mouthpiece only
follow the pitch curve (more or less pressure on the reed to change the resultant pitch)
(use your hand to block the mouthpiece so it produces a downward glissando)
mf
(dynamic accents)

Bsn. 1

reed only
follow the pitch curve (more or less pressure on the reed to change the resultant pitch)
mf
(dynamic accents)

Bsn. 2

reed only
follow the pitch curve (more or less pressure on the reed to change the resultant pitch)
(with your finger, slightly cover the end of the reed in order to produce a muted downwards pitch gliss)
mf
(dynamic accents)

Vln. I

ord. s.p ord.
harmonic disturbance by increasing bow pressure and position
(alternate between up and down bows)
pp mf

Vln. I

ord. s.p ord.
harmonic disturbance by increasing bow pressure and position
(alternate between up and down bows)
pp mf

Vln. II

ord. s.p ord.
harmonic disturbance by increasing bow pressure and position
(alternate between up and down bows)
pp mf

Vln. II

ord. s.p ord.
harmonic disturbance by increasing bow pressure and position
(alternate between up and down bows)
pp mf

Vla.

ord. s.p ord.
harmonic disturbance by increasing bow pressure and position
(alternate between up and down bows)
pp mf

Vc.

ord. s.p ord.
harmonic disturbance by increasing bow pressure and position
(alternate between up and down bows)
pp mf

Cb.

pp mf

196

Ob. 1

Ob. 2

B. Cl.

Cl. 2

Bsn. 1

Bsn. 2

Tbn.

Perc.1

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Cb.

199

Ob. 1

Ob. 2

Perc.2

Perc.3

202

Picc.
Fl. 2
Ob. 1
Ob. 2
B. Cl.
Cl. 2
Bsn. 1
Bsn. 2
Hn. 1
Hn. 2
Tpt.1
Tpt. 2
Tbn.
Perc.1
Perc.2
Perc.3
Pno.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
Cb.

mf *ppp*

left hand = rubber mallet

l.v

p

(Temple Blocks / medium mallets)