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Musical 'translations' of experience

through the interpretation of extra-musical form and patterns

by

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The subject of this dissertation is:

Musical ‘translations’ of experience

through the interpretation of extra-musical form and patterns

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Ana Sokolovic, directeur de recherche
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Résumé en français

Ce mémoire présentera formellement neuf pièces sur lesquelles j'ai travaillé tout au long de ma maîtrise en composition instrumentale sous le thème *Traductions de l'expérience par l'interprétation de la forme et des motifs extra-musicaux*. À des fins de développement contextuel et thématique, je ferai également brièvement référence à deux pièces supplémentaires mais sans les analyser formellement car elles ont été complétées dans un séminaire ou ne sont pas terminées. Bien que toutes les œuvres fassent partie de cette même exploration thématique très large, j'ai organisé et ramifié les pièces en trois séries. Elles ne seront donc pas présentées dans leur ordre chronologique d'origine, mais chronologiquement au sein de leur propre série.

1. series I : *conversations*
   reconciliation, any port in the storm, falling's just like flying*
2. series II : *emergence*
   murmuration, volée, ere, les étourneaux*
3. series III : *transparency*
   redaction, sépulcre, f o r e s t f o r t h e t r e e s, let(in)

Dans chacune de ces séries, l'accent mis sur le découpage analytique variera légèrement à mesure que le processus et le contenu se concentrent sur différents aspects plus spécifiques à l'influence formelle de chaque série. De manière générale, j'aborderai les points suivants :

1. Les aspects du matériel extra-musical que j'ai choisi de « traduire » ou d'interpréter, et pourquoi ;
2. Comment chaque pièce s'inscrit dans sa propre série et comment l'exploration s'est développée tout au long ;
3. La forme et la structure de la pièce et leur lien avec la forme extra-musicale;
4. Les comportements rythmique et tonal, et leur lien avec des règles / comportements extra-musicaux.

Mots-clés en français

Émergence, Traduction, Transparence, Prosodie, Contagion émotionelle, Extramusical, Communications et les arts – Musique

Abstract in English

This dissertation will present formally six pieces I worked on throughout my Master's in instrumental composition under the subject of *Translations of experience through the interpretation of extra-musical form and patterns.* I will reference briefly, but not formally analyze, for context and thematic development purposes, two additional pieces*, as they were either completed within a seminar or remain unfinished. Although all the works fall under this same thematic exploration, as it is very broad in scope, I have organized and branched the pieces into three series. The compositions will therefore not be presented strictly chronologically, but chronologically within their proper series.

1. series I: *conversations*
   (*reconciliation, any port in the storm*, falling's just like flying*)
2. series II*: emergence*
   (*murmuration*, volée, ere, les étourneaux*)
3. series III*: transparency*
   (*redaction, sépulcre, f o r e s t f o r t h e t r e e s, let(in))*

In each of these series the focus of the analytical breakdown will vary slightly as the process and content shifts to zoom in on different aspects more relevant to each series' formal influence. In general the points I will touch on will be:

1. What aspects in the extra-musical material I chose to 'translate' or interpret, and why?
2. How each piece fits into its proper series, and how the exploration developed as the series continued.

3. How the form and structure of the piece link to the extra-musical source;
4. How the rhythmic and pitch behavior link to the extra-musical rules and behavior.

Keywords in English

Emergence, Translation, Transparency, Prosody, Emotional contagion, Extramusical, Communications and the Arts – Music

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Thanks / Remerciements

I have had the immense privilege of working with incredible musicians, conductors, directors, and various collaborators during my two-year Master's studies. These opportunities and experiences are incalculable to me. The relationships that I build with conductors and musicians influence and inspire my voice as composer. I extend sincere gratitude to Véronique Lacroix whom I worked with at the Orford Arts Academy. Her commitment to my compositional ideas humbled me. I extend my sincere thanks to Nadeges Foofat and the musicians of l'Orchestre de Université de Montréal for the passion and work they put into *les étourneaux*. I would also like to thank Dina Gilbert and *L'Ensemble Arkea*, for giving such a beautiful voice to my piece *forest for the trees*, and for welcoming me to work with them again this season. I would especially like to thank Normand Forget, Lorraine Vaillancourt, and *Le Nouvel Ensemble Moderne* for the generous opportunity to work on a creation and design a program of music with them for the 2018 season. I also want to express immense gratitude and thanks to Maestro Salvatore Sciarrino, Matteo Cesari, and the Quartetto Prometeo with whom I feel so privileged to have worked with during the end of my Master's studies.

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Introduction

Musical 'translations' of experience through the interpretation of extra-musical form and patterns

The compositional process has always fascinated me, and how, by varying our methods of creation and exploration, we can influence and alter the outcome. Having spent a great deal of time before university composing in collectives of musicians with our instrument in hand, I am very aware of my strongly embedded habits and mannerisms. As a composer I react to a given instrumentation, commission, collaboration and impose on myself restrictions in my method of creation to encourage myself to grow and expand my palette as a composer. Using extra-musical material as my restriction and/or inspiration permits me a certain poetic liberty when interpreting their forms. The reference to "experience" in my title is important, as, my structural "translations" often interpret temporal events. Throughout my Master's I completed 10 pieces, and one unfinished work. I have organized these compositions under three main sub series of themes:

Series I: ***conversations***

1.*conversation I: reconciliation*

2. *conversation II: any port in the storm (unfinished)*

3. conversation III: falling's just like flying

Series II: ***emergence***

[*murmuration;* not analyzed, but referred to]

4. *volée*

5. les étourneaux

6. *ere*

Series III: ***transparencies***

7. *redaction*

8. *sépulcre*

9. *f o r e s t f o r t h e t r e e s*

10. *let (in)*

In each series my choice of compositional exploration directly confronts an obstacle in my compositional pathway. The themes therefore always directly relate to a goal I am trying to obtain and/or a habit that I am trying to break. Equally it was important for me to explore each series with multiple pieces to develop, deepen, and learn from this new theme and process before embarking on a new one. Reflecting back on a series of pieces is very informative to see what musical elements remained consistent within each thematic exploration despite the change in their individual source material. It allowed me to see how these thematic translations acted to filter or highlight my original existing compositional voice. Each series drew from its own over-arching extra-musical inspiration, and each composition individually responded to the results from the previous piece within its series allowing the process to be refined as I went along.

As I introduce each sub-theme in more detail later, I will explore the concrete specifics of the source material, my compositional process, and how they evolved and adapted. For now I will simply introduce the theme of each series and its extra-musical source material. I will also touch on how the source material links to the goal I have set out and briefly introduce the process I used.

The first series is titled *conversations* as all three pieces are 'translations' of cinematic conversations that have emotional impact one me. I say 'translations' but as you will see later when I go into more detail, it is more a combination of transcribing certain materials and interpreting other elements. The goal I was trying to achieve was the creation of silence. However the insertion of silence into music for the sake of silence never arrived naturally for me so I studied other disciplines that used silence in creative ways. In a well crafted cinematic scene the silence, although absent of dialogue, often holds the most impact in terms of what it communicates. The duration, and entry and exit into the silence all served as elements that set the scene for this voiceless 'voice.' As well, in the transcription of these dialogues I created musical forms and rhythmic motifs that were

new and irregular to me as a composer. Simultaneously to this exploration of silence, rhythm, and form I also desired to develop more detailed gestures within each instrument. I wanted to zoom in and explore more contemporary and extended techniques that, at the beginning of my Master's, were still fairly new territory to me. Taking inspiration from the phenomena of emotional prosody and emotional contagion I was able to map the emotion within these conversations and use these dynamic secondary characters as a way to develop more depth in each instrument's individual voice. In this series I explored three works, *conversation I: reconciliation*, *conversation II: any port in the storm, and conversation III: falling's just like flying.* As I moved through the series I gradually spent less time in the analysis and 'transcription' of the form, and rhythm of the dialogue, and spent more time interpreting the arc of the emotional energy and transformation of the characters throughout the scene.

The second series, *emergence,* takes its inspiration from the very vast phenomenon of the complex patterns and entities that arise from smaller and simpler forms. I however, in these four works chose to focus on the very small branch of auto-organization in this phenomenon. More specifically, in the case of these works, I used the flocking behavior in starlings. My motivation for this extra-musical inspiration was my search for complexity in my compositional style. Virtuosic gestures never arose naturally in my style of writing, and although I wasn't looking to create virtuosity for virtuosity sake, I was attracted to the simplicity that exists in complexity, and was curious to 'translate' these extra-musical patterns to musical gestures in the effort to push myself out of my sparse and minimalist comfort zone. My further research of auto-organization led to the study of not just birds, but fish, insects, and other emergence systems. Seeing these patterns allowed me to imagine more complex forms by simply adjusting how I fit the smaller entities together. This series encouraged the further development of graphic sketches and scores as well and global structural mapping before even writing a single note. It also taught me how to zoom in and out of a piece as it progresses to maintain a more bird's eye view, which I found to become increasingly important. When one's style of writing becomes denser we tend to easily lose perspective. In addition to my search for complexity, I was also looking to break another bad habit I had developed as a composer:

if I can't hear/play it, I can't write it. Writing pieces always using my voice, or my hands on the piano meant that I restricted myself to my own capabilities as a performer. Considering smaller and simpler motifs that worked together to create a complex gesture, allowed me to write these simple gestures using my inner ear and physical body, and then organize them around each other using my imagination and curiosity to create the more sonically unforeseeable. In my *conversations* series the vertical meeting points between instruments were a more significant concentration as I was creating a dynamic dialogue between individuals that remained separate. In my emergence series the contrast between a constant polyphonic independence and the texturally blending into homogenous more complex forms, allowed me the liberty to develop the parts more horizontally while reacting and adjusting to their vertical results. The main principles I used in writing these pieces were; the global mapping of overall complex structures the ensemble needed to create as a whole, and the designation of rules each instrument needed to follow in relationship to their neighbor. Again, I will elaborate on these more concretely within the *emergence* section.

The third series *transparency* encompasses several explorations, but arose from a compositional block that I had working with voice, and more particularly the integration of text within my music. My aversion to text seems ironic as I had based a whole series exploring the musicality of language, and with the concept of 'translation' within the over-arching title. However, I had avoided working with voice, as I was not sure how to personally manage the literal significations that come with these texts. During my summer studies at Orford Arts Center I was given the instrumentation soprano, violin, clarinet, cello, and piano. I began reflecting on the voice as an instrument ways to overcome this block. I realized that often, when one uses voice in combination with instruments, it becomes the focal point and main communicator. I then thought of ways I could create a role for the voice in a small chamber work that integrated its sound and timbre more seamlessly within the other instruments. Thus arose *redaction* a piece that explores the redacting of text, and in the case of this piece, the instruments act to redact and mask the singer's voice. During this same period of time I started working on *sépulcre,* an ever-evolving composition that uses the voice to mask the transitions, or

'seams,' between the phrases of the instrument. I titled this theme *transparencies* because in both previous works, I was working with the figurative and literal ideas of "masking," I started approaching my sketches and construction of the piece using the ideas of layers, as one would in electroacoustic composition, or in the visual arts. It took my focus away from the temporal development and pointed it towards the timbre and orchestration of blending instruments together to create more depth in each moment of the piece. My process went from linear to imagining working in layers and how and when to unveil and or hide layers that were there "all along". It raised questions of "how does unveiling masked sounds or parts inform the behavior of the piece," and "how can this play a role in audience deception and perception,?" I then brought this idea of *transparencies* out of the extra-musical world and directly into an exploration of sonic masking itself and the study of formal perception. In the second half of this series I began superimposing two musical structures of contrasting genres: one from a more popular genre and the other from my current more contemporary and textural explorations of instruments. I was curious, as a composer who regularly listens to multiple genres of music, to challenge myself to embrace together certain more popular musical structures and harmonic and melodic tendencies while continuing my textural and timbre explorations in the contemporary world.

I will also discuss influences these different series had on each other, as although organized into individual thematic investigations, they inevitably fed into each other as they overlapped chronologically. This fusion will be discussed more in my reflections in the conclusion.

series I: *conversations*

In the first series ***conversations***, I had been searching to create silence in my works. My background in piano performance in various popular music groups, rock, progressive, folk, jazz, etc., had created a natural tendency toward minimalist, (repeated motifs), behavior, and rhythmic motors. In addition to wanting to break this habit I also wanted to obtain more detail and intimacy in the individual instruments. I aimed to further develop my contemporary techniques and allow myself to be more playful in my approach to the character of each individual instrument. The idea of transcribing and interpreting classic cinematic conversations fit the search for these two goals perfectly. The pacing of speech between two characters, in a well-crafted movie or play can sometimes surpass the actual verbal content. As someone who loves classic cinema, and is fascinated by the musicality of language, I was eager to explore the possibilities of translating these rhythmic dialogues to instruments. My desire to develop the depth and detail of character in each instrument encouraged me to work on a series of small duets and chamber works to leave each voice more exposed. Transcribing a conversation between two people meant that, unless they were speaking over each other, there was an enforced pattern of silence and length of phrase in each gesture. However, it was important to me to maintain a stronger subjective voice in this process so I divided these 'translations' into several steps. As the process moves from one step to the next, the original source material becomes further away and simply serves as a departing point to explore these new forms and rhythms.

The first step, being the most concrete and restrictive, is the rhythmic transcription of dialogue. Depending on the mood of the conversation I would choose a tempo and meter, and literally transcribe the rhythm of all spoken dialogue throughout the scene; with each instrument representing one character. Tempos and meters vary throughout the same scene depending on the mood.

Secondly, in my search for more 'character' within each instrument's range I begin my second step of the process, which is more of an 'interpretation' than 'translation.' Using a color coded system, (red=agitated/mad, blue=calm, etc.), I then map out overtop of the

rhythm of the dialogue the implicit and explicit emotion expressed. Then drawing inspiration even further from the emotional communication in these conversations I took inspiration from the study of **emotional prosody**.

> "Prosody is the gestural dimension of the voice, its 'grain' (Barthes): it comprises all the vocal dynamics often referred to simply as 'tone,' or 'tone of voice,' namely the phrasing, the intonation, the musicality, the rhythm, the volume, and emphasis, the rise and fall of pitch, the fallings away and accelerations, the pauses, gaps, hesitations, the anticipations, elisions, silences, elongations, repetitions, and contractions that the word-strings of an utterance are subject to[1]."

These are changes that we as humans perceive when interacting with others, and I was curious to see how they would map out musically within a transcription of a dynamic emotional exchange. I developed my own set of 'acoustic profiles' for each type of emotional vocal expression that shaped the amplitude, range, speed, and timbre of the expressions. For example, excited and joyful would be at a higher pitch versus sadness that would remain in a low register. When someone was explicitly angry or agitated it would also affect the volume and style of attack, whereas in a more calm passage, the articulations would soften and the volume lower.

Further within this exploration of emotion, I also looked to **emotional contagion**, which is the simple "catching" of another's emotions. I mapped the emotional development in three parts, one for each character in the duet, and a third that represented the emotion passed between the two, whether received, 'caught,' or simply ignored.

> "Emotional contagion can be regarded as imitative in nature. As I use the term, imitation is a process by which one organism comes to exhibit a state of behavior by another organism through perceiving the other organism exhibit that state or behavior[2]."

The last step in this process of 'translating' these conversations was to take into consideration important **non-verbal, visual, and sonic events** that contributed to my general experience. This last step, in addition to the implicit emotional mapping, was crucial as these were translations about the experience of these scenes and not just the rhythmic and vocal prosodic patterns in the dialogue. Of these events I included, any

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[1] Rotman Brian, *Becoming Beside Ourselves: The Alphabet, Ghosts, and Distributed Human Being*, Durham, Duke University Press, 2008, p. 23-24

[2] Susan Hurley and Nick Chater, "Perspectives on Imitaiton: From Neuroscience to Social Science," *Imitation, Human Development, and Culture*, vol. 2, 2005, p. 276 - 277

vocal sound that was non verbal, eye contact, and the occasional marked dramatic event, (ticking of a clock, placing down a teacup), that acted as punctuation in the scene.

Within the theme of *conversations* I wrote three pieces : *reconciliation*, *any port in the storm*, and *falling's just like flying*. *Any port in the storm* remains an unfinished piece however as I mapped out the form, rhythmic dialogue, and emotional identity to this piece in the most detail I will analyze some if its sketches within this section. Of my explored themes within my *translations of experience*, *conversations* was the one where I placed the most importance on process, and the final result was more of an experiment. Therefore some of the figures I will show will be the graphs and or sketches I made along the way instead of just the finished excerpts. Each of these pieces takes a slightly different approach, and evolved as my experience in the process evolved. It was important for me to use, as my extra musical material, fairly contrasting in tone, and dynamically emotional scenes.

The scene I chose for *reconciliation*, a duet for piano and violin, is a conversation where the two characters remain rather guarded emotionally in the first part and both undergo emotional transformations releasing and opening by the end. As well, there are two significant moments in the scene where both speak at length as in I monologue, and the other role is more focused on reaction. This scene allows for very dynamic instrumental development both individually and in terms of how active each instrument is in relation to the other. In the process of writing this first piece I spent a great length of time accurately transcribing the rhythmic dialogue. However after I went through the following, more subjective, interpretive steps I ended up 'blurring' and simplifying a lot of these rhythmic gestures. I found the instruments sounded too literally as if they were mimicking speech in a theatrical way.

For my second piece *any port in the storm*, a duet for cello and bass clarinet, I chose three scenes between the same two characters. In this particular film, the general story arc of these two characters hinges on these three scenes, their similarities, and more importantly, their evolution. Therefore, this second work in this series is structured as

one composition in three parts. As I did for the first piece, I chose emotionally dynamic scenes that demonstrated emotional exchange and transformation. However, the main difference is that, in tone, these two characters are much more extroverted and combative in nature which allowed me create musical gestures very contrasting to the previous piece. In reaction to the sometimes overly literal mimicry of speech patterns in the first piece, I put much more emphasis on the interpretive translations of emotion, other non-verbal communicative actions/sounds, and even interpretations of film-editing techniques. Therefore my process for this piece was much more fleshed out and detailed before I even wrote a single pitch.

The last in this series, *falling's just like flying*, is a quartet for flute, alto saxophone, cello, and double bass. By the end of my second piece I had stepped further away from my initial starting point of dialogue transcription. The idea of interpreting a two-person conversation for four instruments intrigued me. By this point I had established a clear system and order of what elements to interpret and how they were communicated musically. By having four voices it allowed me to have two voices constantly acting as the physically concrete representation of dialogue, and utilize the other two voices to represent the more highly interpretive emotional and subjective experiential representations I included in the piece. For this piece I also chose a scene with high tension and emotion within each character. However, in contrast to the two previous pieces, where there is a release and or explosion of emotion at some point, in this scene it is expressed with a dramatic "anti-climax" or "false peak." The emotion is much more implicit in the acting than explicit in the speech, which, as I will explain in detail later, is translated musically in a different manner. Both characters are guarded and emotionally reticent which led to a nice contrast in tone in comparison to the two previous.

This series, although partially unfinished, served as a strong pedagogical study on form and gesture. These three emotionally dynamic, yet very contrasting emotional dialogues offered me a template in which to express myself musically more freely, intimately and emotionally.

conversation I : reconciliation (2015)

violin and piano
8m20s

(note de programme)

conversation I : réconciliation *est une commande du duo Wapiti (Geneviève Liboiron, violon, Daniel Añez, piano). La contagion émotionnelle est une thématique que j'ai voulu explorer à travers une composition. Par contagion émotionnelle, j'entends la tendance humaine d'imiter et de se synchroniser avec les gens autour de nous, en effet « d'attraper » les émotions des autres. Ces émotions peuvent être soit implicites, soit explicites et peuvent se manifester par les mots, la prosodie vocale, ou le langage corporel. Cette pièce emploie deux techniques : la contagion émotionnelle définit la grande forme et la dynamique générale entre les deux musiciens, tandis que la prosodie vocale est utilisée comme point de départ pour la palette de sons gestuels qu'emploient ceux-ci. Comme les interactions émotives possibles entre deux personnages sont pratiquement sans limite, j'ai décidé de tirer mon inspiration d'une œuvre de cinéma. Lorsqu'on « brouille » délibérément sa vision, rendant flous tous les objets dans notre champ de vision, le paysage perd son information détaillée et devient une abstraction de formes, de couleurs et de lumière. La beauté ainsi révélée ne s'offre pas à celui qui regarde en fixant un objet précis. De la même façon, lors de mes recherches sur la prosodie émotionnelle j'ai regardé des films étrangers tournés dans des langues que je ne comprends pas, « brouillant » mon écoute afin de m'exposer au paysage sonore dépourvu de toute figure précise.*

J'ai choisi une de mes scènes préférées au cinéma comme point de départ pour cette conversation. J'ai tracé la ligne de dialogue des deux personnages ainsi que d'autres sons vocaux significatifs : la respiration, les soupirs, grognements, rires et sanglots. J'ai ensuite superposé à cette représentation audible de la conversation, un tracé de la prosodie vocale. Enfin, j'ai ajouté mon interprétation de la dynamique émotionnelle de la

conversation, tant explicite qu'implicite : les expressions faciales, les frémissements, les regards lourds de sens. Une attention particulière au contenu émotionnel plus subjectif tel que lu dans les subtilités du jeu des acteurs m'a permis de construire une composition contrapuntique plus fidèle à l'échange émotionnel que si je m'étais limitée aux seuls échanges verbaux. Au début de l'arc formel de la conversation, l'un des personnages (représenté par le piano) établit la direction émotionnelle pendant que l'autre (violon) compatit, résonne, rassure. Ce fragment est suivi par une montée abrupte d'énergie de la part du personnage du violon, s'affranchissant de la domination de son vis-à-vis et introduisant un virage radical du ton émotionnel.

Dans cette mise en musique d'un échange émotionnel, j'établis quelques conventions pour distinguer entre des mots réellement parlés, des sons de bouche non linguistiques ou des expressions faciales. Par exemple, je choisis un harmonique au piano pour signaler une aspiration rapide du comédien, tandis que des mots parlés sont représentés par une ligne mélodique au clavier. De façon générale, le dialogue parlé est symbolisé à travers les éléments rythmés de la pièce, les émotions étant indiquées par des sons longs et résonnants: utilisation de la pédale forte au piano, longues notes tenues aux deux instruments. Je suis très intéressée à poursuivre mon exploration de ces thèmes en composant pour d'autres duos et même des formations plus larges. Je suis très séduite par la cadence organique que dicte la structure d'une conversation, et le fait de créer des motifs et gestes musicaux à partir de mon interprétation essentiellement subjective de l'émotion m'a poussée à sortir de mon esthétique compositionnelle précédente et d'introduire une grande part d'espace et de dynamique à mon écriture.

conversation I: reconciliation was a commission from the duo *Ensemble Wapiti*, a duo consisting of violinist Geneviève Liboiron, and pianist, Daniel Áñez García. It was commissioned to be performed at Sala Rossa in Montréal within an evening of works written by, or inspired from Morton Feldman. It just so happened that I was at the time currently embarking on this new process to find more space and silence in my writing. As previously mentioned this work is based off of a conversation between two characters in a movie. I will mention now that I never tell the performers, in any of these pieces, the

scene for my inspiration. As it is my quasi-experiment into how effectively I could translate these 'experiences' musically, I didn't want the performers to have the context of the scene in their head when performing as it might influence their interpretation. Some may argue that letting the performers in on the extra-musical inspiration would only benefit the end performance, and while I agree, I was more curious to see how effectively I would be able to musically translate it, that I chose to keep these 'compositional experiments' in a more controlled environment.

Form and rhythmic dialogue

As I mentioned in my introduction, *reconciliation,* being the first in the series, meant that it adhered most strictly to my self-imposed rules, and procedures in these translations: the first being the transcription of form and rhythmic dialogue. I started very simply by placing the video into *Logic*, and delimiting my sections, meter, and tempo. Cinema is fascinating in the way it can illustrate small micro movements within one scene by just the change of camera angle, emphasis of an important piece of dialogue, addition or subtraction of music, and or revelation of information. The global form of the piece breaks down into nine micro sections with the determining element that defines them the shifts in emotion and/or speaker.

Figure 1: *reconciliation*, table of form, tempo, and nuance

1. **A**	m. 1-7	60 bpm	***p***	*tense*
2. **B**	m. 8 -29	40 bpm	***p , mp***	*delicate, warm,*
				nervously
3. **C**	m. 30 – 39	60 bpm	***p , mp***	*tense, nervous*
4. **D**	m. 40 – 55	-	***mf, f***	*emotional,*
				agitated
5. **E**	m. 56 – 65	50 bpm	***pp, p***	*calm, relaxing*
6. **A'**	m. 66 – 69	60 bpm	*più **p** possible*	*anxious*
7. **F**	m. 70 – 80	-	***pp, p, mp***	*calm*
8. **G**	m. 81 – 91	50 bpm	***pp, p***	*lyrical, compassionate*
				soft, sad
9. **H**	m. 92 – 101	-	*più **p** possible*	*gentle,*

				deliberate *meditative*

After demarcating the sections, their mood, and tempo, I would start with a literal transcription of the verbal dialogue. Tempo, as you can see from the above chart, fluctuates throughout. Reflecting a slow resting heart rate I used 60bpm as a neutral starting point and lowered or raised it by 10bpm depending on the predominant emotion in that section. Upon a second pass, I would add other remarkable vocalizations as heavy breathing, sharp inhales, sighs, gasps, sobbing, laughing etc. These would be distinguished immediately within the rhythmic transcription with the temporary use of an x note head. At this point, no pitches or range are determined. Before beginning the next more interpretative translations I would take note of any heavily accented beats, and exaggerated lifts and or falls in the pitch of the voice.

Emotional Prosody

Second in the process, and overtop of the rhythmic transcription, I would apply the mapping of explicit emotional narrative. By explicit I mean, the emotion that is expressed in the voice and or in any other manner by the character, which I have referred to previously as emotional prosody. I organized my color-coding system for emotions into the following categories of: sad, tense/agitated, neutral, calm, content, angry/defensive, and loving/empathetic. These would start to determine: the general register of the voice, the nature of the dialogue's articulation, and the speed and nuance of each phrase and/or section. These moods would then apply to the dialogue's rhythmic motifs. I transcribed either alleviating or placing more important on certain aspects of them. In more agitated, excited, and angry sections, the rhythmic articulation was often preserved to underline the higher energy expressed with these emotions. During calmer, and sad expressions, the transcribed articulation of every syllable held less importance, and sometimes I preserved simply the entrance and exit of the phrase using a more continuous gesture. The two figures below give two contrasting examples of these two extremes. Figure 2 shows the violin responding with a quiet held harmonic that respected

precisely the verbal entrance of the dialogue spoken, but instead of keeping all the quiet, whispered articulations that were initially there, I just let the note sustain.

Figure 2: *conversation I: reconciliation*, m.57-59, violin, and piano

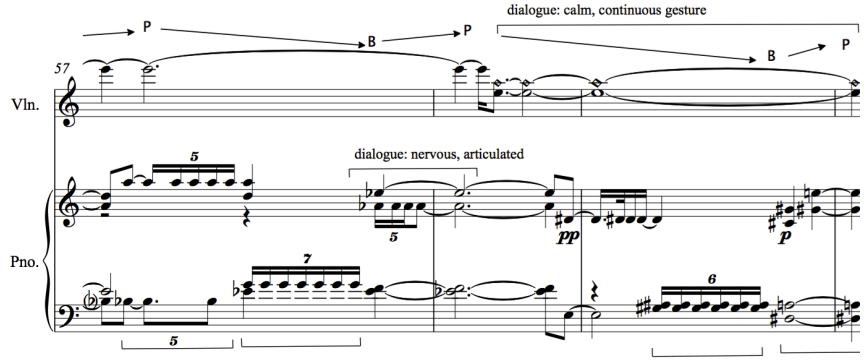
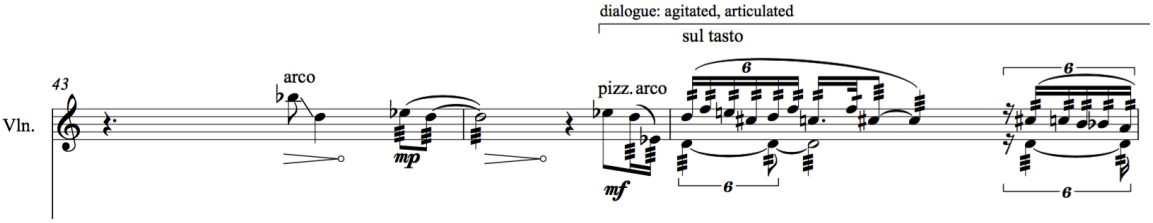


Figure 3 shows the violin articulating the original specific rhythm taken from the dialogue's transcription. I added a tremolo to give it a nervous effect.

Figure 3: *conversation I: reconciliation*, m.43/44, violin



Emotional Contagion: empathy/mirroring/mimicking

Simultaneous to the mapping of the explicit emotion expressed in the dialogue, it was also important to me to map out the implicit emotion: the emotion implied and understood by the audience. These scenes express the exchange of not just dialogue, but emotion, and how we receive and empathize in our exchanges with others. This is where the idea, mentioned above, of emotional contagion comes in. As one can have a loving or heated dialogue with another and empathize the whole time, it was important for me to pick and choose more significant moments where it was exaggerated to give a more dynamic depth to the counterpoint between the two instruments. In general, the more intense the emotion, the more 'contagious' it is. I chose to express the catching of emotion by musical mimicry. I also used musical mimicry to illustrate the behavior of

mirroring where we often subconsciously match others actions and/or speech patterns. The rule I applied to give more nuance to this phenomenon was: the more intense the emotion, the more precise the mimicry was. Thirdly within this same theme of "responding to the other person musically" I wanted to find a way to express empathy. There is a bit of overlap here, as we can feel empathy when experiencing emotional contagion and certainly when mirroring another. However, for the common moments in these exchanges where we see in the body language, and facial expression that one person is really sharing the emotion expressed by the other, I decided to use held notes, sustain, and resonance. This worked on two levels. Primarily as empathy expresses understanding and therefore listening, the musical gesture, needed to be soft, supportive, and in the background. Secondly, it gave voice to more continuous musical figures among the very rhythmically active dialogue. Below are two figures, (4 and 5), that illustrate some of these behaviours.

Figure 4: ***conversation I: reconciliation*****, m. 26, violin and piano**

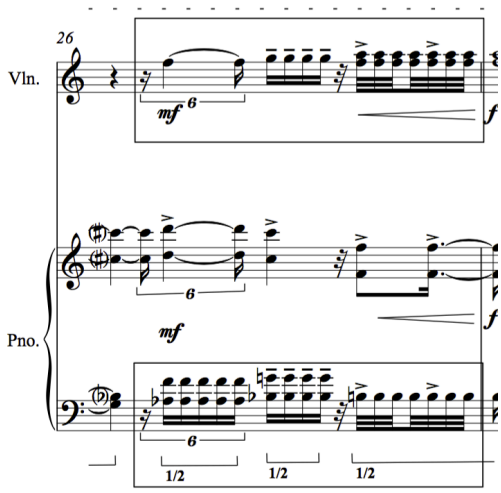
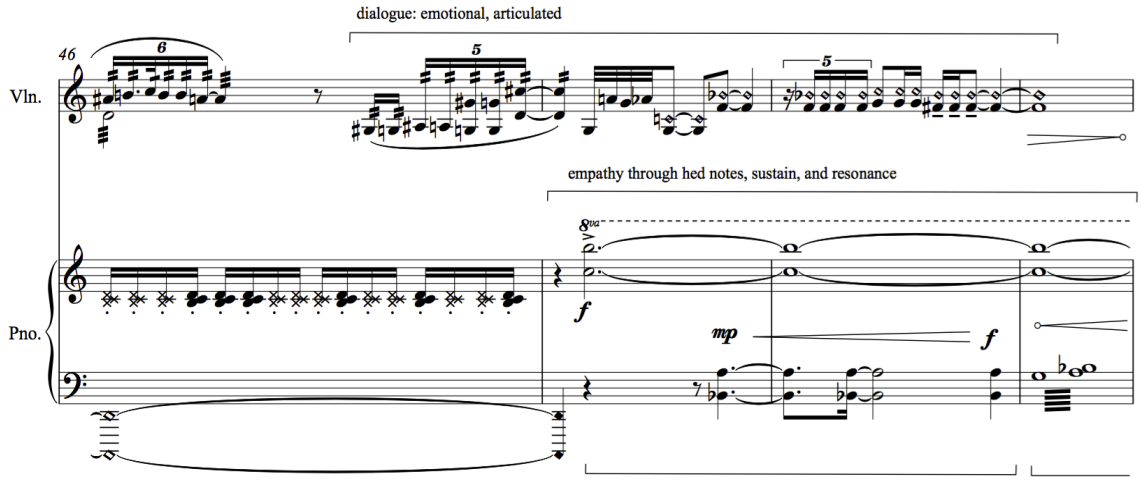


Figure 4 (above) shows an example of the violin player mimicking the rhythm of the piano player's left hand beginning on beat three. Figure 5 (below) shows an example of the piano player reacting strongly on beat 2 of measure 47 to the violin player.

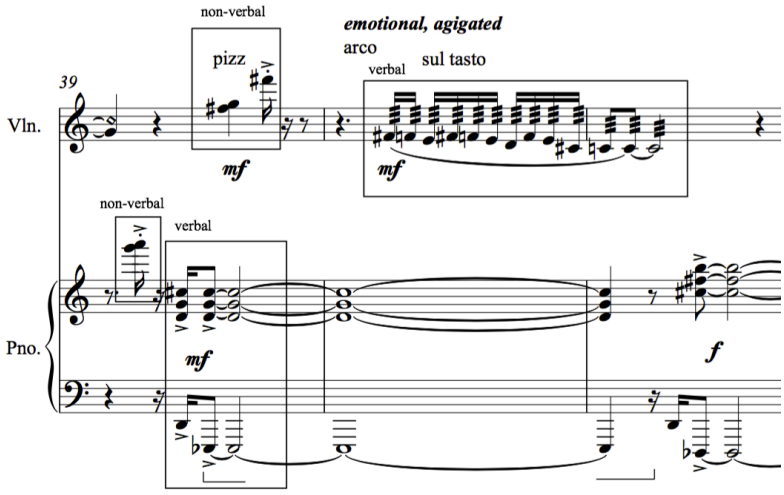
Figure 5: ***conversation I: reconciliation*** **m. 47/48**



Non-verbal expression

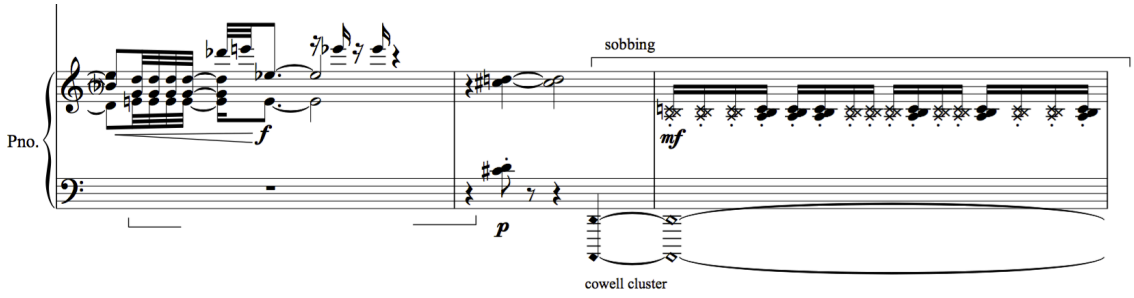
In this process I also divided my musical gestures into vocalized communication, and 'other.' The actual dialogue is almost always expressed in a more traditional way on the instrument for example, a line of bowed notes on the violin. Whereas a sharp inhale would be expressed not only in a much different register, but often using a contrasting technique as well to help differentiate it within the phrase. In figure 6, (below), you will see both instruments each expressing one verbal motif, and one non-verbal motif. The piano begins with a high major second pizzicato to express a sharp inhale and then quickly drops to a two-beat punctuated spoken remark. The violin echoes this by its own minor second pizzicato followed by a high staccato note, both expressing sharp inhales, and then dropping back down to dialogue with a low range and melodic phrase in tremolos.

Figure 6: *conversation I: reconciliation*, m. 39-41, violin and piano



While sighs, gasps, and other vocal sounds punctuated and permeated the spoken dialogue, there were occasional vocal sounds that had a more repetitive or continuous nature. Figure 7 (below) shows the piano holding a Cowell[3] inspired cluster while very lightly, and sometimes almost inaudibly, (marked by x note-head), playing a small cluster of notes. This irregular but constant texture represented this character's soft sobbing.

Figure 7: *conversation I: reconciliation* m. 43-45



[3] Kurt Stone, *Music Notation in the Twentieth Century*, New York, W.W Norton & Company, 1980

Theatrical representation

Finally, I felt it important to include key elements of the scene that either have no sound, but hold weight in the communication, or play no role in the communication but act as sonic punctuation in the evolution of the scene.

The two elements I implemented into this scene were the ticking of the clock, and eye-communication. Section A and A' are actual moments in the scene where the clock plays a dominant visual and sonic role. The clock builds the tension for the beginning of the conversation and re-establishes the focus on waiting and time-passing. This ticking is represented by barely audible and 'ghosted' staccato notes in the piano with the violin slowly bowing very quietly on the bridge. Figures 8 and 9 represent this theme introduced at the beginning, and then re-introduced later in the piece.

Figure 8: *conversation I: reconciliation*, m. 1-2, violin and piano

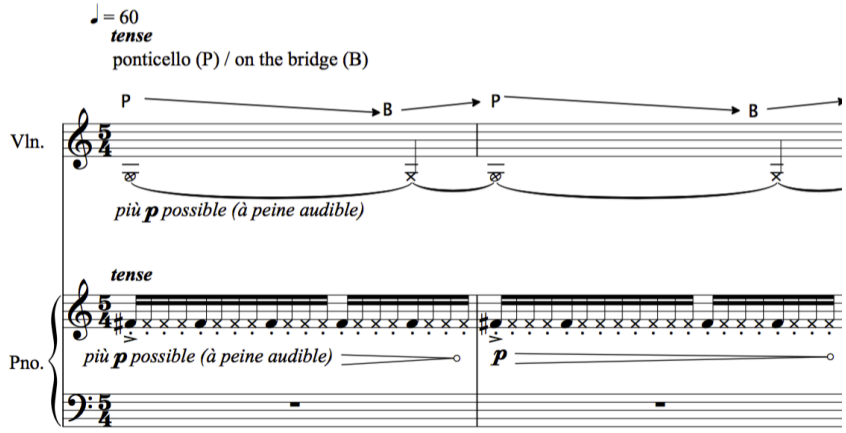
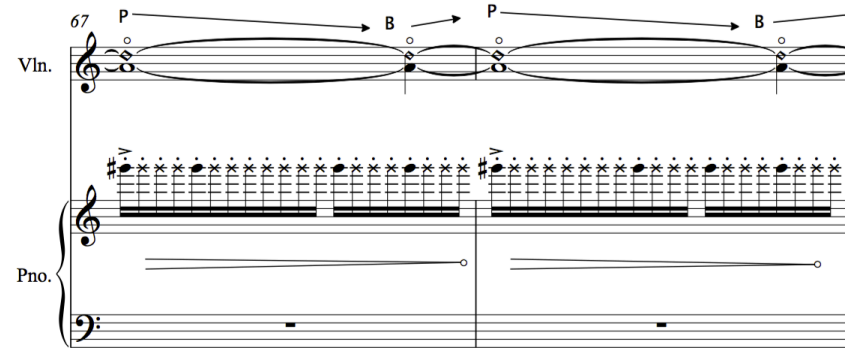
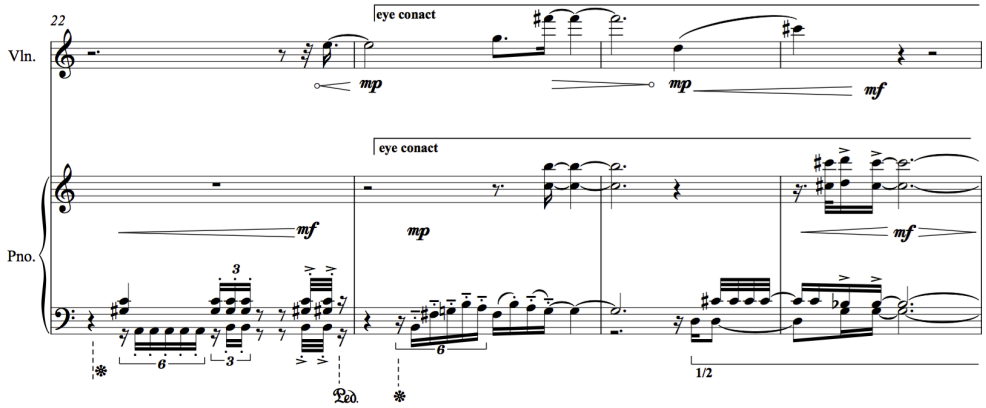


Figure 9: *conversation I: reconciliation,* m. 67-68, violin and piano



The element of eye contact played a particularly strong role within the dialogue and emotions exchanged in this scene. As this scene depicts remorse and confession, for the majority of the scene, the characters are not looking at each other. When the dramatic narrative had them looking at each other it was often when there was a great deal of empathy being exchanged. In this piece I simply asked that the players hold each other's gaze during the passage.

Figure 10: ***conversation I: reconciliation,*** **m. 22-25, violin and piano**



This figure arrives three times throughout the piece. During the last section, H, of the piece the character portrayed by the piano player closes his eyes while he is listening intently, and right near the end he opens them and looks up at the violinist's character. I also included this theatrical gesture in the score, which demanded that the piano player memorize a small passage.

Figure 11: ***conversation I: reconciliation, m. 91/92***

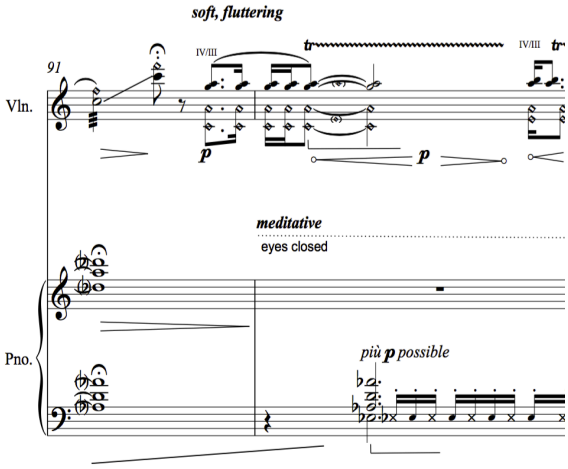
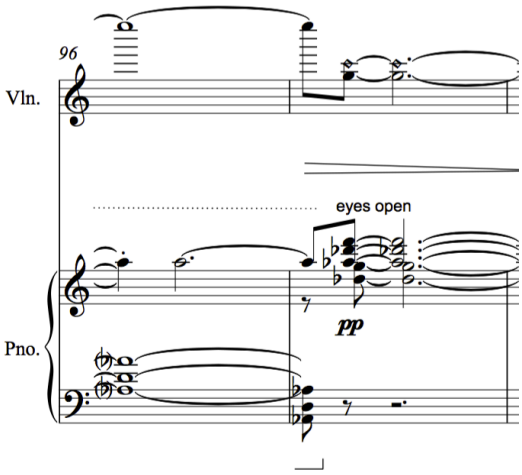


Figure 12: ***reconciliation, m. 96/97***



conversation I: reconciliation being the first piece in the series remained most faithful in form and rhythmic transcription to the extra-musical source material. My immediate reflection upon completion, was that I needed to place more consideration on the emotional and non-verbal aspects of these cinematic conversations to create a complete picture and translation. There I spring-boarded into *conversation II*: *any port in the storm*, and *conversation III: falling's just like flying*, which both, in their own right, found ways to push beyond the rhythmic transcription of the dialogue to place more emphasis on the musicality and dramatic narrative of these conversations.

conversation II : any port in the storm

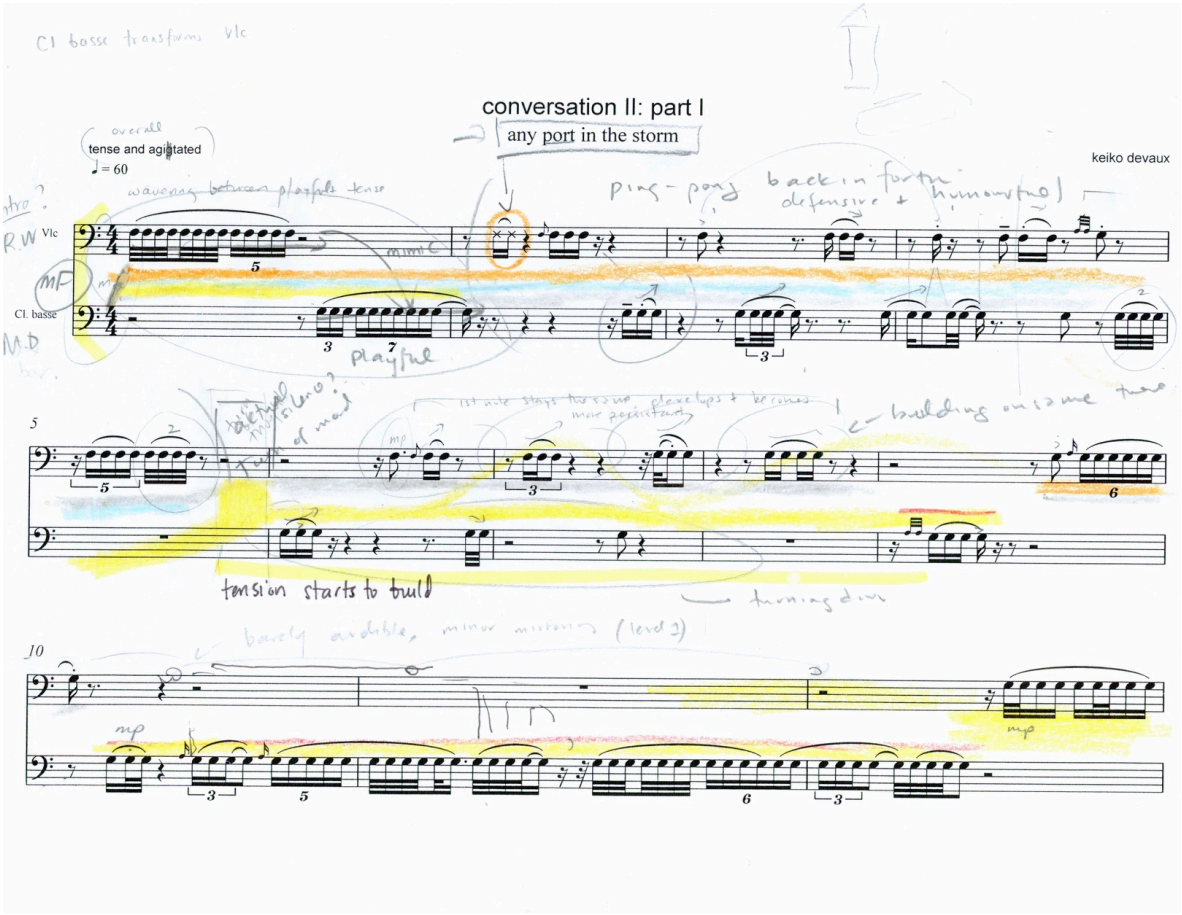
As I mentioned earlier, this piece remains unfinished, but it is the one where the sketches depicting the process were well preserved. Therefore I am including it for the sole purpose of showing more clearly the process of how I map out the dialogue, and emotions.

After having completed *conversation I: reconciliation* I was eager to further develop the idea, but with more exaggerated expressions, and interpretations less literal to dialogue and more musically expressive. As I mentioned in the introduction to this series, I chose to use three different scenes, in the same film, between the same two characters. I wrote it for bass clarinet and cello. These two instruments are very expressive and have a wide range that I felt would be very effective in expressing the emotions in these scenes. Whereas *reconciliation* focused much more on the fragility and nuance of dialogue, and the silences in between phrases, these three scenes were much more overt in their explicit emotion. The dialogue is very expressive, the characters more mobile, and usage of repetition in language plays a more important role. As I did in my first conversation I transcribed the rhythmic dialogue, and then emotionally mapped it. This piece is substantially longer and more dynamic and complex, so in addition, I made a separate, more condensed, map of the emotional prosody and contagion to give me a more global view of the three movements. Figure 13 below shows the emotional colour-coding system. Figure 14 (next page) shows measures 1-12 of the rhythmic transcription of dialogue for part I of *any port in the storm.*

Figure 13: emotional colour-coding system

Yellow	content	Grey	neutral
Orange	humorous	Blue	sad
Red	agitated, angry, nervous	Pink	loving, empathetic

Figure 14: ***any port in the storm, part I,*** **m. 1-12, rhythmic transcription**



The normal note heads depict spoken dialogue, whereas the x note heads are for any non-verbal breath, exclaim etc. The emotional color-coding system, (see figure 13) follows the same rules as the previous, and circled rhythmic motifs indicate words and/or phrases that are repeated.

Figure 15 shows the condensed emotional map of *any port in the storm: part I* in its entirety. Each cell represents one measure, and the dashed line between it demarcates the separation of the two instruments. When the color moves between those two lines it is to express emotional contagion.

Figure 16 shows the beginning fragment of the first sketch of pitch and gestural ideas for the final realization of the first movement.

Figure 15: ***any port in the storm, part I,*** **reduction**

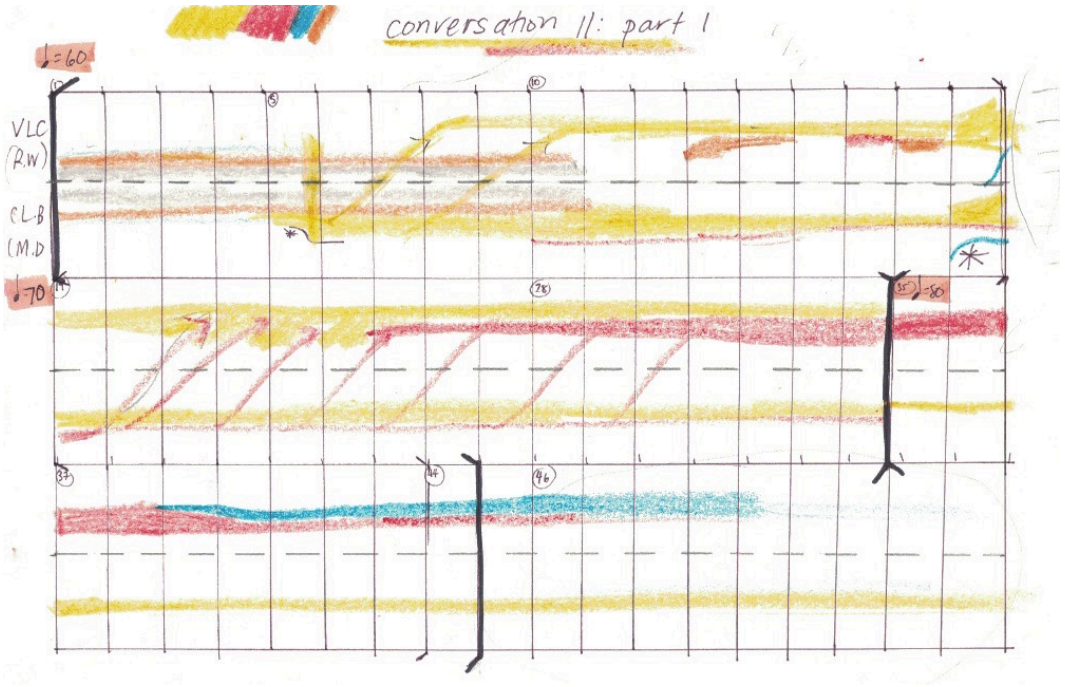
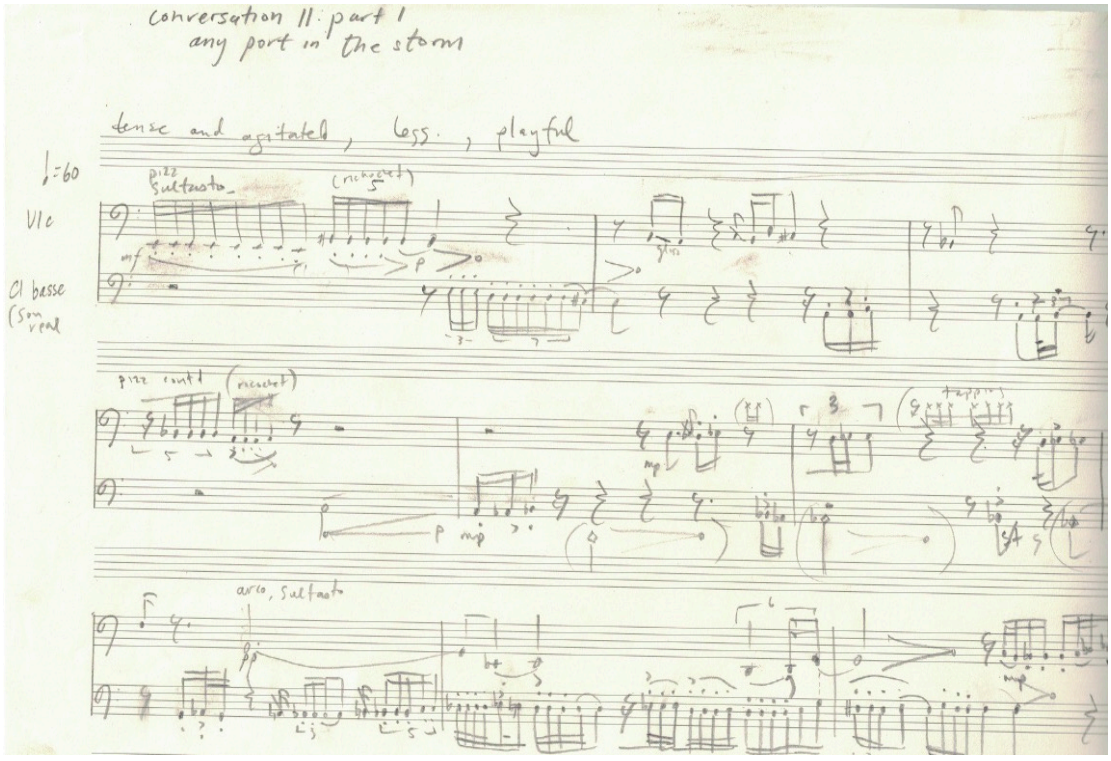


Figure 16: ***any port in the storm, part I,*** **sketch fragment**



The main development in this piece was the shift of focus from the rhythmic transcription of dialogue to the mapping of emotions, and non-verbal sounds and actions.

conversation III: falling's just like flying (2016)

flute, tenor saxophone, cello, and double bass
8m39s

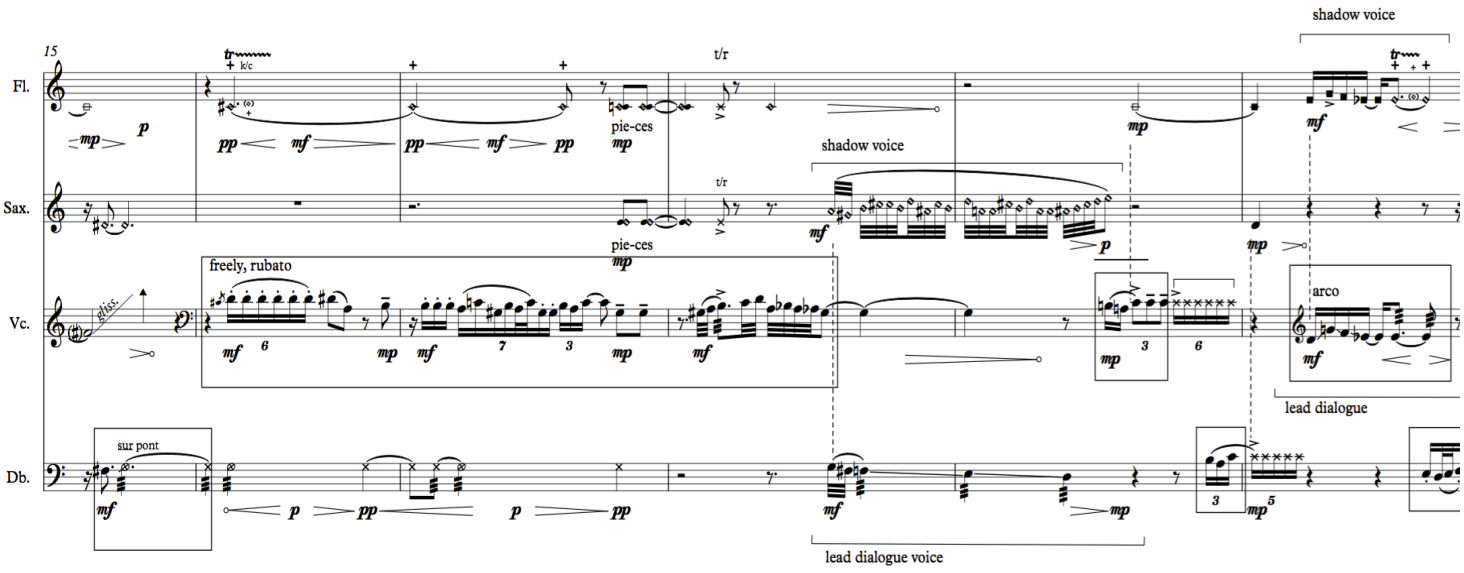
falling's just like flying was written for the *Montréal Contemporary Music Lab* (MCML) workshop in the spring of 2017. I was assigned a quartet with the instrumentation c flute, tenor saxophone, cello, and double bass. I was in the middle of writing the second piece in this series and wanted to keep exploring the theatricality and dynamic forms and gestures these conversation presented me with. By this point the more concrete transcription element of these pieces had given way to more subjective experiential interpretations. Although I used the same process, my transcription of form and rhythmic dialogue was done in a more rudimentary sketch manner. I listened to each phrase several times, and then wrote it down by memory, without using musical notation, but on blank paper using dots, lines, and dashes to mark the approximate rhythm and duration. I would do a second pass highlighting each phrase with different colors overtop for the emotion, and then a third pass to add certain notes regarding pauses, a specific word, or symbols representing an important sonic or theatrical event. All this to say, I had, in the last two pieces, spent more than half my time on this slow meditative process of analyzing the extra-musical source and felt too constricted by it at this point. In addition, I also found that I had easily memorized all the dialogue, important silences, breath marks, and general dramatic arc of each scene well enough that I was curious to see how it would evolve if I documented it more abstractly, and let it evolve and mutate in my memory of the experience. The retelling of events from memory plays a thematic role in another capacity within this piece that I will explain shortly.

Form / Instrument roles

I explained in the introduction, when introducing the order of pieces written in the series and their overall arc, that the main difference and interest with this piece is that it is a quartet depicting a conversation between two people. I decided to begin by pairing them within their families of wind, (flute and sax), and strings, (cello and double bass). Then after having established the form and

finding the main 'turning points' in the scene, I assigned them their roles in the piece. For the majority of the piece the cello and double bass act as the leading duet in the conversation and the flute and saxophone as their shadow. The lead pair begins, **Section A/B**, by representing the rhythmic dialogue, and explicit emotion in the conversation. The secondary pair would create the ambient mood, and other non-dialogue events. The flute and saxophone, acting as 'accompaniment' to the primary duo would, within their own gestures, 'stick' to them rhythmically like a shadow, or eventually more loosely as 'extensions' of the primary voice. Between the divisions within the quartet I matched the flute as the shadow to the cello, and the saxophone as the shadow to the double bass. In **Section C** the secondary pair would slowly start to detach from their lead and although often still respond to them, their phrases would develop in independence and character. **Section D** marks the only section where all four voices are independent from each other. Lastly, **Section E** we have an exchange where the secondary instruments take the primary dialogue and the primary become their shadow. Figure 17 below shows two examples of the lead dialogue, cello and double bass, and the shadow, flute and saxophone.

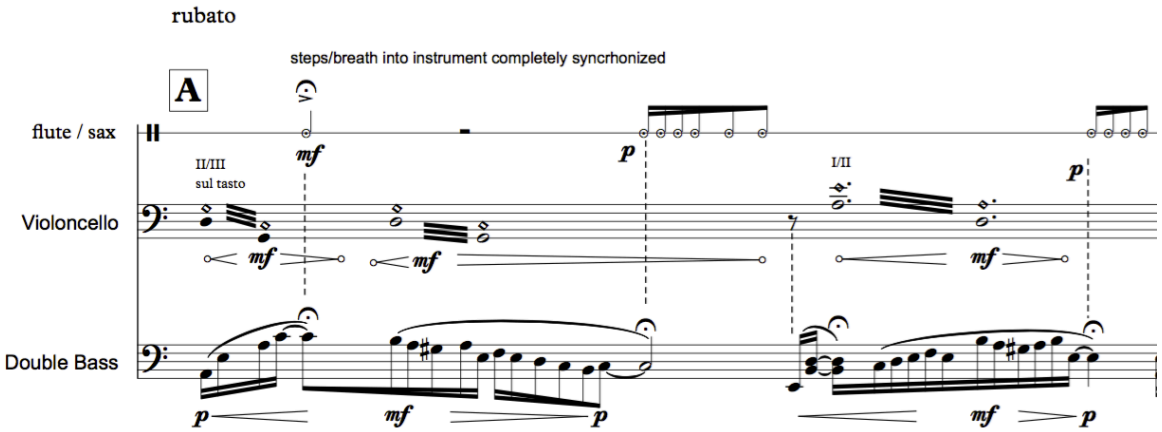
Figure 17: ***falling's just like flying*****, m. 15-20, flute, sax, cello, double bass**



Diegetic music and Foley

Diegetic music, where the sound source is visible and/or implied visually within the scene, was typically an element I avoided when sourcing scenes for this series of conversation pieces. However I was particularly attached to the lead-in into the scene where the two characters are not yet in the same room and the camera cuts back and forth between one character slowly walking up the stairs, and the other playing a solo violin sonata by J. S. Bach. As these are translations of an experience I decided to find a way to include it. This marks the first time I incorporate a reference to an actual musical source within these extra-musical representations. You will see in **Section A**, the double bass represents the diegetic music performed by the character 1. This very idiomatic baroque I-V alternation eventually dissolves into more contemporary techniques at the beginning of **Section B**. In 'dialogue' with these melodic passages that have fermatas clearly marking the alternation of harmony, the flute and saxophone represent the movement and arrival of character 2 into the room. This isn't the first time I've taken inspiration from the Foley in my interpretations of cinematic scenes, but it is the first time I've had it represented so literally. The flutist and saxophonist breathe into their instrument in tandem with stepping towards and onto the stage. It is timed so their arrival happens just before the beginning of **Section B**. Figure 18 below shows both the reference to diegetic music in the double bass, as well as the figures of steps and breath in the wind duet.

Figure 18: *falling's just like flying*, introduction, flute, sax, cello, double bass



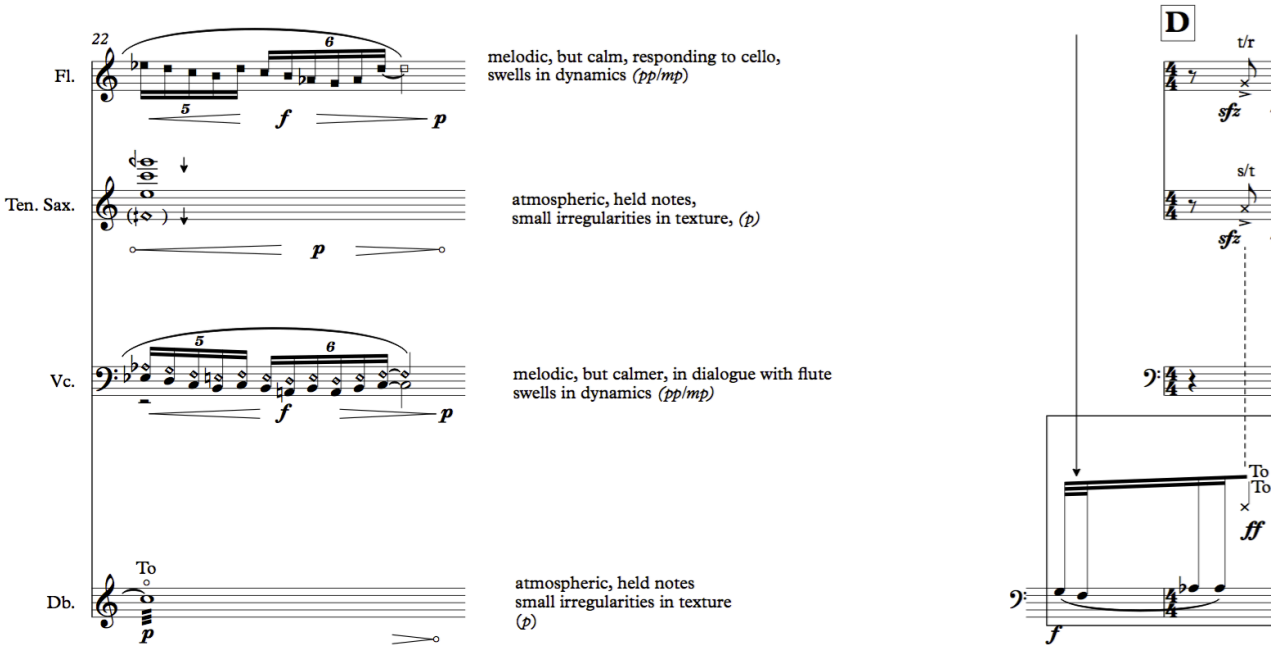
Improvisation by memory: opening of gestures

As this piece was developed to be worked on during the MCML, which advocates a spirit of experimentation and direct collaboration with the performers, I decided to embark on a little experiment within this piece. I have three versions of this score that were developed during this period, and am including the most recent as the reference score. When I was put in contact with the four individual performers a couple of months before the lab, I had asked them about their interest and/or experience with improvisation. It was a mixed result of half the quartet being very experienced, the other two less, but all four very eager to incorporate it in their interpretation and performance. At the time I was principally curious with how improvisation could be embedded more seamlessly into a very detailed contemporary score. I was not interested in having a graphic score, nor complete sections where they improvised. I sent them all a completely finished score with no room for improvisation, and all gestures written out and explained in full detail. We worked on this score for the first two rehearsals becoming intimate with its sound, balance, and synchronizations. Then we sat down as a group and discussed the parts that we were interested in 'opening up.' This idea of 'opening up' a gesture is something I think about a lot when writing music. Sometimes when I am creating an auditory image[4] of a sonic moment I am not always able to accurately represent the amount of time I want it to occupy. Therefore upon the first reading with musicians, there are moments I just want to 'stretch' and give them more space to breathe, loop, and or linger in their textural and sonic quality. These are not typically the kind of adjustments composers are allowed to make within a few days before the final performance. However, within the spirit of this intensive lab I decided this would be the perfect opportunity to experiment with what I refer to as 'improvisation by memory.' Very simply I take these moments that I want to open up, and after the musicians have been given time to become intimate with the piece, I redact them. In *falling's just like flying* I chose five separate written moments, all between 1-3 measures, and I deleted them. On the third rehearsal I handed them new scores with missing information. I simply asked that they all try and recreate by memory what they thought they had played before. Because I was trying to stretch out these moments, the amount of time they were recreating was left open, and each improvisation was eventually interrupted by one of the four who would cue them back in with their notated pick-up into the next written passage. I would impose general time restraints as these

[4] Hubbard, Timothy. L, "*Auditory Imagery: Empirical findings"* Psychological bulletin, 2010, Vol. 136, No.2, 302-329

moments were meant to be fleeting. I also added a few text instructions within the final score that explained the nuance as well as the general textural ambiance and role of each instrument. Figure 19 below shows the first improvised section. All notated music before and after are played precisely, and once they are in the blank section it is left to the double bassist to break them out of it. His pick-up cue into section D is boxed and marked by a conductor's arrow.

Figure 19: *falling's just like flying*, m. 22-28, flute, sax, cello, and double bass -

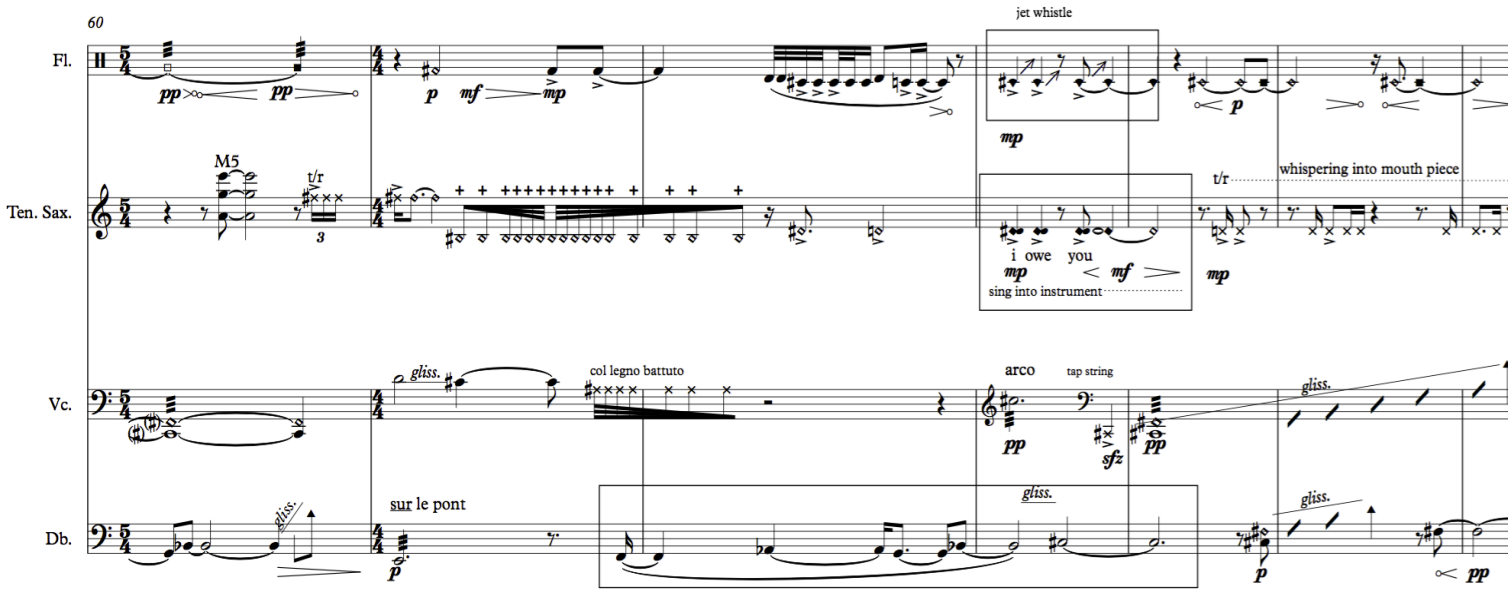


Use of text from the source conversation

Finally, in my third and final piece in this series I decided to integrate the use of some of the spoken dialogue. Near the end of the scene one of the characters very emphatically delivers his last line. In fact this actor, due to the nature of the character he was portraying, often spoke in a high theatrical and exaggerated manner. This line is drawn out and very breathy in its delivery. Initially I had just written the jet whistle and soft multiphonics in the saxophone to represent this. The line delivered "*I owe you"* is very literally a phrase homonym to the string of three syllables *"IOU."* I had been opposed to having performers speak or sing text before in these pieces as I didn't want to include the associative meanings text brings within these interpretations. However, these three syllables delivered within a musical context take on a stronger musical quality. Figure 20 shows where this

text is added into the multiphonic gestures of the saxophonist's part. This is accompanied by jet whistles in the flute, which give each vowel a stronger attack, as well as simultaneously hide the signification slightly. This 'phrase' is followed by almost inaudible whispering into and around the instrument of the saxophone. I felt introducing these two gestures at the end of the piece and within the last piece in this series offered a sort of poetic momentary unveiling of the original source material.

Figure 20: *falling's just like flying*, m. 60-65, flute, sax, cello, double bass



The conversation series served as my first, and therefore most rigorous, musical experiment of imposing non-musical influence on my form, rhythmic motifs, pitch choices, and manner of the relationship between the two instruments in the duo. It was highly successful in creating silence in my form, as well as influencing new and more nuanced technical gestures in my instrumental writing. As I mentioned in my introduction, the focus of this series was centered on creating new processes of writing and therefore expanding my compositional palette. The first piece in the conversation series adhered most literally to the initial transcription of the rhythm of the dialogue. Upon reflection when this piece was completed, I decided that I needed to push the emotional, and more highly 'interpretive' steps of the 'translation' into the foreground as the emotional narrative and exchange was equally as important as the form of the dialogue hence the more highly interpretative approaches to the second two pieces.

series II: *emergence*

Immersed in the intimate world of interpreting conversations I found myself hitting a new compositional roadblock that I encountered within a collaboration with pianist Guillaume Levy who, for the *Concours d'Orléans* in France, was seeking a composer interested in writing a solo piano piece that integrated tape. This meant composing, not only for my own instrument of training, but a solo piece, that, given the nature of the performance, needed to be somewhat virtuosic in nature. It is important to touch upon the piece *murmuration* as it was the piece that led to the series *emergence*. I will discuss to it briefly in the introduction to give context to the evolution of this series, but as it was completed within a seminar, will not analyze the piece itself.

Murmuration, as the title suggests, takes its inspiration from the flocking behavior of starlings. Flocking behavior is one of the many auto-organizational branches off of the overall study of emergence, which began with my simple awe and appreciation for this visual phenomenon. The need to create a virtuosic character in a solo piano piece fit perfectly with my musical search for more complex gestures formed from simplistic motifs and patterns. In exploring mixed composition, I was interested in how to create an interaction between a performer's part and the tape in such that the pre-recorded sounds and their treatments, act not as an accompaniment, nor secondary voice, but as an extension of the instrument itself. From studying several contrasting, yet somewhat typical global formations of groups of starling in their flocks, I detracted generalities from these visualizations in terms of density, direction, speed, and flock shape to then reconstruct in a graphic score. From the graphic scores, I then notated melodic-rhythmic motifs that I developed on the score over a temporal grid of time. Parallel to working on the instrumental score, I also started constructing the sound material for the tape. Having assigned tone centers to each of the four movements of the piece I then recorded these four pitches from the lowest octave of the piano, and using *Audiosculpt* and *Ableton Live,* I created the tape part as "extensions" of the solo piano part. These were my entry points into illustrating emergent, and flocking behavior that allowed me to abstractly construct musical gestures that reflected the movements of both singular birds, and whole flocks. The additional use of tape allowed me work with the duplicity of multiple flocks, moving in counterpoint, both in tempo, direction, and density.

"Emergence……refers to the arising of novel and coherent structures, patterns, and properties during the process of self-organization in complex systems[5]*."* I chose the title *emergence* for this series as I quickly realized during my preliminary research into flocking behavior that this was a lone branch in a very broad research that reaches into philosophy, science, economics, and sociology, to name just a few. In the emergence series, the three pieces of which I will discuss two in detail, I focused on self-organization systems, particularly that of flocking behavior. As mentioned above, I was searching for 'virtuosic' gestures, and my fascination with the complex patterns of starlings seemed like an appropriate entry point as a choice of extra-musical 'translation.'

> "Since these nonlinear interactions involve amplification or co-operativity complex behaviours may emerge even though the system components may be similar and follow simple rules. Complexity in a system does not require complicated components or numerous complicated rules of interactions[6]."

Flocking behavior, or more broadly, auto-organizational behavior in starlings are highly complex systems that scientists are still actively exploring and struggling to understand. Whereas, other swarm behaviors such as schooling in fish, or swarming in bees are much easier case studies to monitor and control and are therefore easier to make more conclusive statements from. In my preliminary explorations of interpreting and 'translating' their behaviour to music I wasn't concerned with using the concrete science and math behind these patterns, but more with creating generalized rule-systems of my own, for the form and rhythmic behavior of the piece, based on general facts and findings about starling murmurations. Drawing inspiration from some principal characteristics of emergent and self-organizing systems explored by Steven Johnson in *Emergence*: *The connected lives of ants, brains, cities, and software*[7], and by Scott Camazine et al. in *Self-Organization in Biological Systems*[8], I concentrated on these six basic rules:

1. They are dynamic systems and require continual interactions.
2. They posses a quality of bifurcation that distinguishes them from other patterns.
3. They exist multiple stable states.

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5 Goldstein, Jeffrey, "Emergence as a Construct: History and Issues", *Research Gate*, November 19, 2016, http://www.tandfonline.com/doi/abs/10.1207/s15327000em0101_4, 49-27, August 15, 2016

6 Camazine et. cal, *Self-Organization in Biological Systems*, New Jersey, Princeton University Press, 2003.

7 Johnson, Steven, *Emergence: The Connected lives of ants, brains, cities, and software*, New York, Scribner, 2001.

8 Camazine, *Self-Organization in Biological Systems*

4. Environmental factors play a role.
5. The individual is not complex.
6. Everybody listens to their neighbour.

In this section I will analyze in detail the different translation approaches and challenges met with my three pieces in this series: ***volée, les étourneaux,*** and ***ere***. As well I will discuss later where I am planning on taking this series, not only with a piece I am currently working on for *Le Nouvel Ensemble Moderne,* but also in terms of breaking out of the completely premeditated score and particularly the use of conductor. I say this, because the irony of composing a set of pieces that are meant to reflect auto-organizational behavior was not lost on me. My next step therefore is to create pieces with improvisational elements and, in general, give more agency to the performers to actually interact with each other more literally as animals, insects, cells do in these complex systems, therefore resulting in variable and complex results. In *volée*, *les étourneaux* and *ere*, I will touch on four main points of interest:

1. What elements of this extra-musical content did I choose to 'translate' and how did I express them in music;
2. The form and harmony of the piece, and how much is affected by the initial content material, and how much is subjectively and/or intuitively imposed.
3. The importance of extreme nuance and contrasting textural groups.
4. My after reflections and how my approach to 'translating' the material transforms as the series evolves.

volée (2015)

for 15 instruments

7m21s

My second exploration within the series of emergence was for 15 instruments and composed to be read by *Le Nouvel Ensemble Moderne*. I was eager to explore with more voices these same pianistic and tape gestures I had worked on in *murmuration*. The idea of auto-organization of multiple individuals came to life very naturally with this change of instrumentation. Here, in an ensemble of 15 musicians the same flocking gestures needed to be articulated using the combined movement of the ensemble, and thus I was able imitate the flocking behavior with a more literal 'translation.'

Form and rhythmic behavior

Intro (m. 1 – 6)

A (m. 7 – 14)

A' (m. 15 – 22) transition, entry of harmonic theme

B (m. 23 – 27) reverse of A

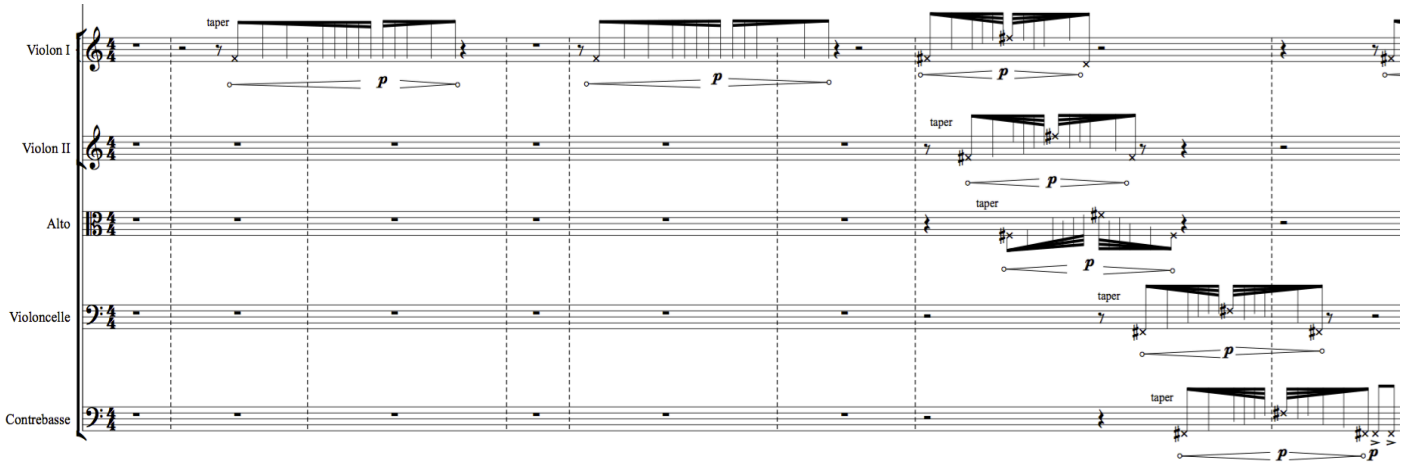
B' (m. 28 – 35) transition, blending of voices

C (m. 36 – 60) swell section

D (m. 61 – 78) release into the beginning of a new section

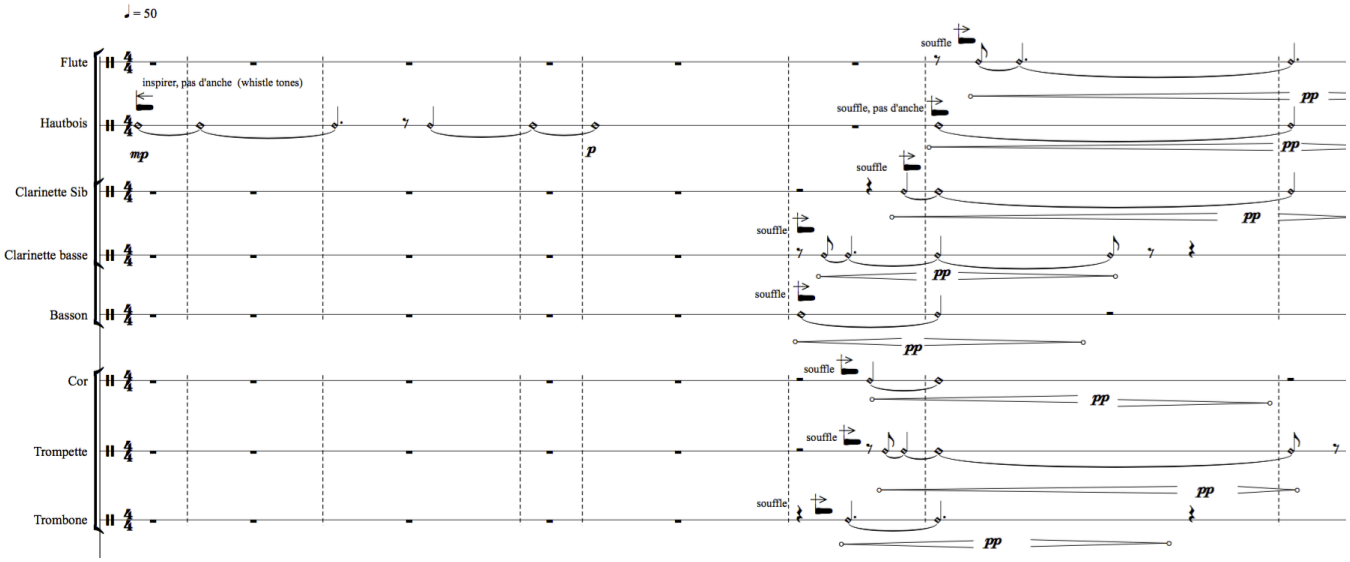
I divided the ensemble into two principal groups, or flocks, with the piano and percussion acting as solo exterior voices triggering events, and occasionally moving into foreground within one of the two ensembles to highlight and accentuate their countermovement. The form of the piece very simply sets the stage for two highly distinct flocks moving in the same space but expressing contrasting speeds of movements, and textural identities. In section A and A' the string section cascade in with individual swelling crescendos of lightly articulated tapping on the fingerboard that grow until audible and then fade out. Each performer is offset by an eighth note and the overall structure moves from a high to low in register. (Figure 21, next page)

Figure 21: *volée*: m. 1-7, string section



As the ensemble of strings continue to swell in and out with their dynamics gradually building and their offset entrances contract, the entire wind section moves itself, (figure 22), in offset entrances creating waves of more continuous aeolian sound in an collective movement that, although begins vaguely synchronized with the strings, dilate slightly in size to further distinguish themselves as a separate ensemble and entity.

Figure 22: *volée*: m. 1-7, wind section



In section A', the transition section from A to B, the two flocks begin to 'catch' the rhythmic motifs from each other slowly, an individual at a time. This behavior hearkens back to the idea of emotional contagion explored earlier in my conversation series. I found it very interesting to apply

it here in a group behavior setting between two distinct flocks. As we enter into section B the previous motif of accelerated and decelerated tapping in the strings is replaced by breath attacks, (figure 23), in the wind section mimicking the same rhythmic figure, but more contracted in time. The string section's rhythmic motifs dissolve into bowed tremolos on the bridge, and eventually held harmonics, mimicking the sound of breath from the winds. (figure 24)

Figure 23: *volée*: m. 21-24, string section transition

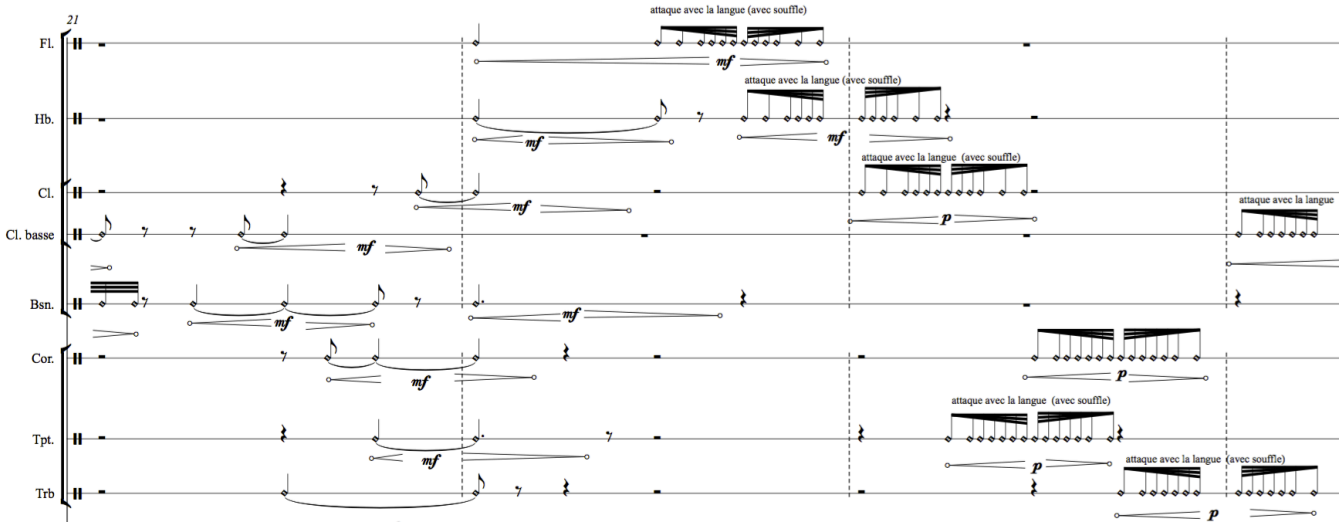
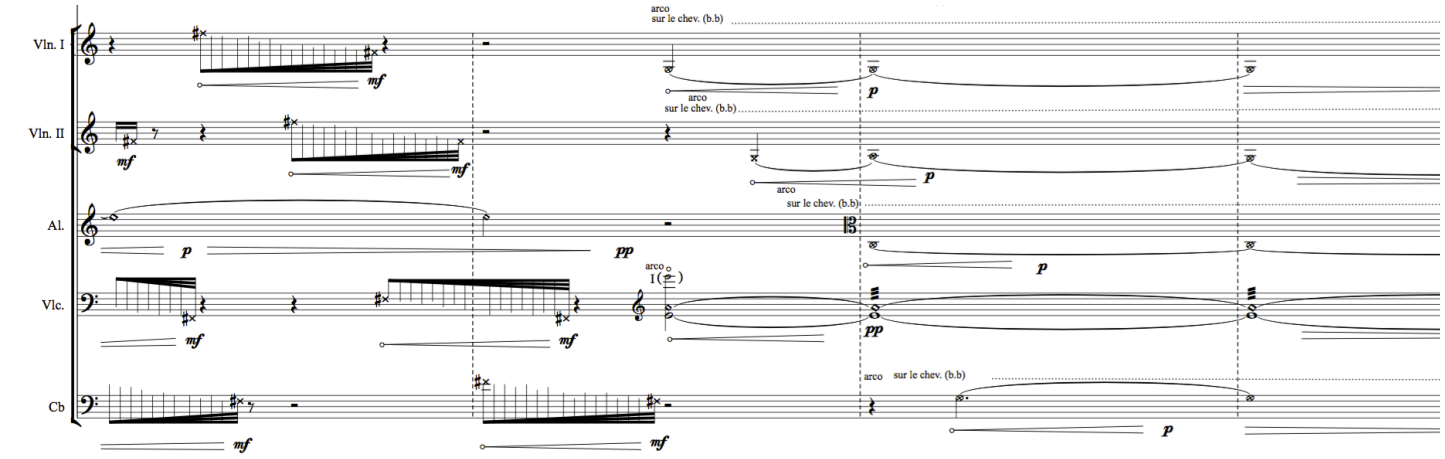


Figure 24: *volée*: m. 21-24, wind section transition



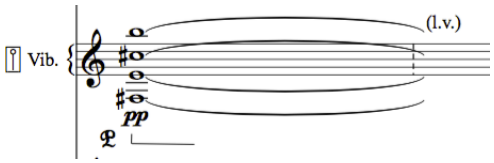
Briefly after this transition settles and they have exchanged roles, we quickly move into the next transition section, B', which has both ensembles moving towards each other to create a more homogenous sound. With wind attacks and sustained breath in the winds, combined with harmonic

tremolos in the strings, the ensemble finally begins to take a singular identity. Section C is the 'calm before the storm.' Continuing the homogenous nature and sound of one singular flock with the percussion acting as triggers for these momentary waves, the two flocks move together creating crescendos that gradually grow in size until the final swell into Section D. This last section for me is in truth more of a preview of a complete second movement to this piece that I further developed later in *les étourneau*x. Just as the two ensembles (flocks) have come together and created a certain calmness they erupt outwards and separate into two distinct flocks again, this time, not just with rhythmic and textural motifs moving around a static harmony, but with melodic-rhythmic characters of their own. Again, similar to the exchange of roles between sections A and B, in section D we see a more accelerated exchange of voices and melodic-rhythmic motifs between the two ensembles. This culminates in a climatic ending together with the piano, barely audible throughout the entire piece, entering briefly with a dreamy impressionistic chord movement and then disappears again.

Harmony

One of the principal characters of the piece is its ambiguous and static identity. My interest in exploring the timbral qualities of breath in the wind section, and tapping both in the strings and inside the piano allowed for a very slow introduction into the first marked harmonic entrance. The beginning of this transition section A' is marked with the static harmonic theme of the work which is an ambiguous and open 4 note chord in the vibraphone (*f#/e/c#/b*).

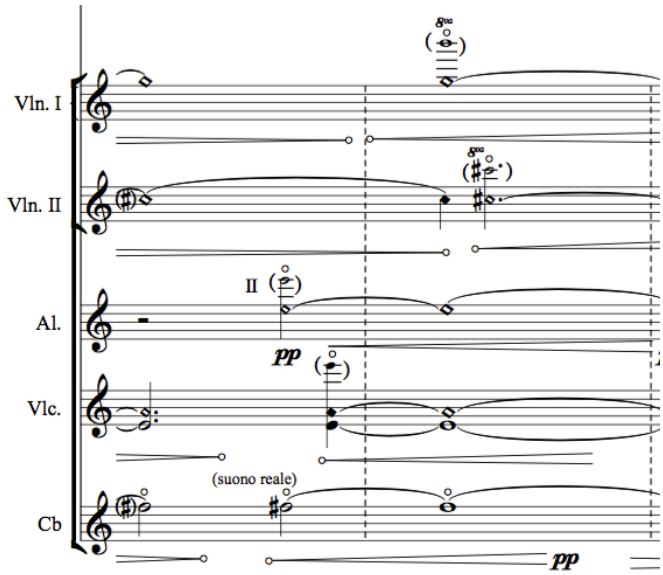
Figure 25: *volée*, m. 15, vibraphone



These four notes act as the four principle pole notes and harmonic identity for the entire piece, as they appear gradually in the strings, winds, and percussion, progressively growing in presence. Between measures 25 and 44 as the strings transition from their texturally rhythmic tapping character into a more continuous background role they each switch from tremolo on the bridge (white noise) to a tremolo harmonic. The cello enters on an *e* in (m. 22), the double bass enters on

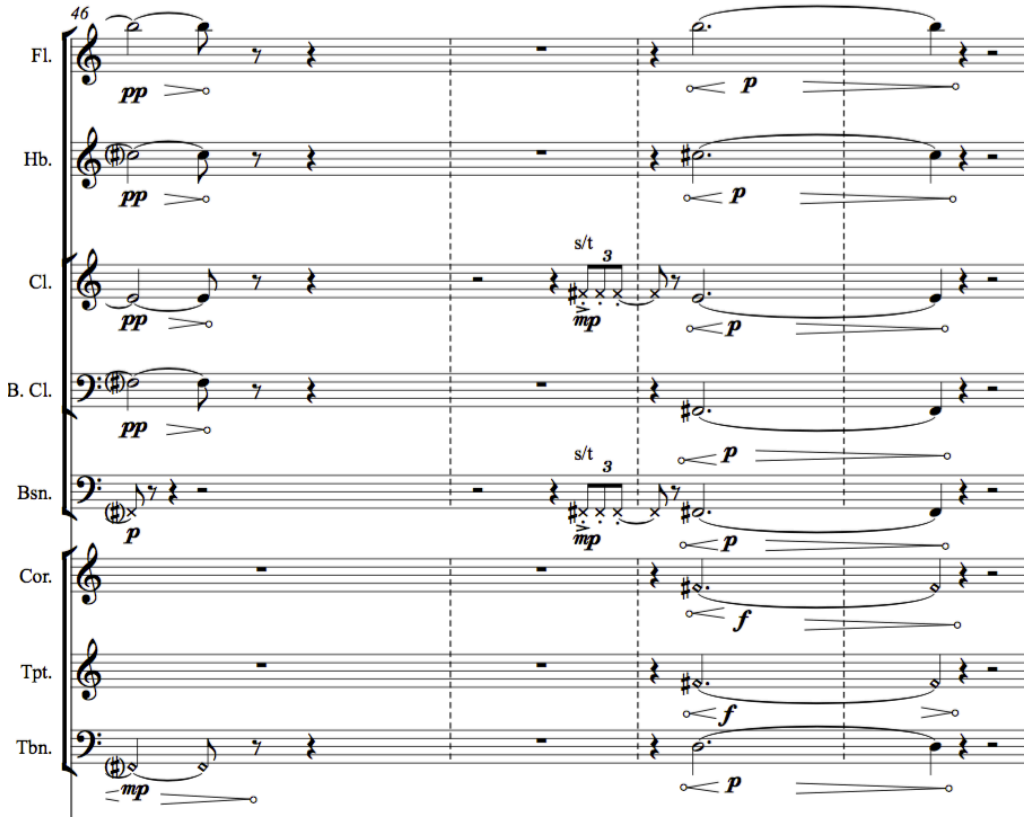
an *f#* in (m. 25), the first violin with a *b* (m. 27), the second violin with a *c#* (m.30), and finally the viola with an ***e*** (m. 32). All of these notes are marked with the same 4-note chord in the vibraphone, and together construct and resonate the same harmony.

Figure 26: *volée*, m. 32/33, thematic 4-note chord in the string section



As the strings are slowly unveiling the harmonic foundation of the piece, the winds are progressively transitioning between breath and pitch as well. Beginning at measure 28, with ½ air and ½ pitch the winds gradually begin to sound these same pitches eventually using full sound on all four notes.

Figure 27: *volée*, m. 46-49, thematic 4-note chord in the wind section



Volée served as a very successful first ensemble exploration of this flocking behavior that I soon afterwards developed further into my orchestration piece *les étourneaux*.

les étourneaux (2016)

3* 2 3* 2, 4331, T+2, pno, strings
7m48s

(program note)

les étourneaux *is the French word for 'starlings', which are a species of bird famously known for their large and impressive flocking behavior. This is the third piece in my series emergence, where I began exploring the flocking behavior of birds.*

This piece has several different narrative characters in it, and the form of the piece is inspired directly from common movements and accumulations found in starling flocking behavior. The string section represents one flock, the wind section represents a second flock, and the piano and percussion present both the static harmonic theme that is maintained through 2/3 of the piece and acts as the instigator of changes and waves of movement in the flocks. As well, as the piece develops, they also interact as solo birds of the flock, sharper in image, and in the foreground.

The two general textures explored in the first section of the piece are 1) continuous sound, as air through the instrument's body, held string harmonics, or tremolo bowing on the bridge and 2) discrete sound, as tapping on the strings fingerboard, pizzicato, col legno battuto, and strong air attacks, and slap tongue, and tongue rams in the winds. In the first section of the piece, these textures are used to both unify the sonic identity as well as differentiate the two flocks as they are initially presented. They then, with contagions of motifs entering from the other flock, begin to exchange textural roles. Momentarily the two flocks move together, rising and falling in momentum, until at the end where they bifurcate back into their separate flocks. Harmony, barely present, throughout the majority of the piece, comes in during this very last section, ambiguous and shifting, as they motifs scatter in their entrances and build.

Les étourneaux is a standalone 8m piece for orchestra that I wrote after being chosen the laureate for the *l'Orchestre de L'Université de Montréal's* competition. It became clear during the

development of my two previous pieces *murmuration* and *volée* that the ideal instrumentation for properly expressing the flocking behavior of starlings would be an orchestra. I had even already begun sketching out rough formal and motivic ideas for a longer orchestral work, divided into three movements before receiving this opportunity and therefore, I decided when composing this piece, I would write the first movement, of the three I had already started mapping out. I had spent a great deal of time watching video documentation of this phenomenon when I first began studying flocking behavior mapping them out in graphic scores. I maintain the same visual narrative that I used in *volée*;

-Birds static on electric wires
-Gradual development and counterpoint of two flocks
-Exchange of motifs between the two flocks
-Partial cohesion into one flock
-Bifurcation into two distinct flocks (but at a faster pace)
-Abrupt end, as they cease movement.

Having recently finished my test ensemble piece *volée* and wanting to explore and improve upon the general theme and structure of that piece, I maintained several of the same rhythmic material motifs between these two pieces. As *les étourneaux* is an orchestral arrangement and development of the principal ideas in *volée* I will approach my analysis slightly differently to avoid redundancies. I will center the majority of my explanations and analysis exclusively on the adaptation and new and/or the developed material in *les étourneaux*.

Form

As the principal rhythmic character and behavior in the first several sections of both these pieces are represented by staggered entrances, rearranging from a 15-piece ensemble to a full orchestra, while keeping the same independence of each line, meant that each global phrase naturally dilated. As each over arching wave is built from these individual offset entrances and exits the addition of voices elongated these global forms. In *les étourneaux* I maintained the independence of each individual wind instrument, which grew from 8 to 11 voices, and in the strings each section is *divisi*

transforming from 5 voices to 10. I welcomed this change as I wasn't fully satisfied with its realization in *volée* and I decided to profit from the elongation of this section by developing further the detail and character of their textural progressions as they grow and transform. As each section expanded, my formal analysis changed as below :

Figure 28. *les étourneaux*, form transformation from *volée*

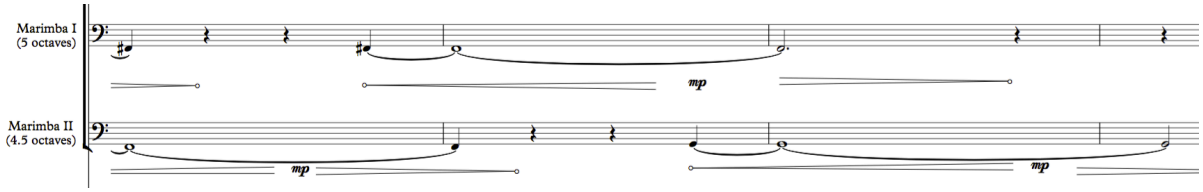
volée	***les étourneaux***	**Theme/mvt.**
intro	intro	'calm before the storm'
A	A	Theme 1- strings, 'flocks' offset
A'	B, C	Transition; texture exchange
B	D	Theme 2- winds, 'flocks' offset
B' and C	E	Transition; moving together
D	F	Theme 3; 'flocks' offset

From this point onwards I will refer to the sections using only the letters pertaining to *les étourneaux*. In general the principal changes in form are the expansions and development of the first theme/texture, (A,B,C), and the more direct and cohesive transition, (E), between the second theme and third theme.

Harmony

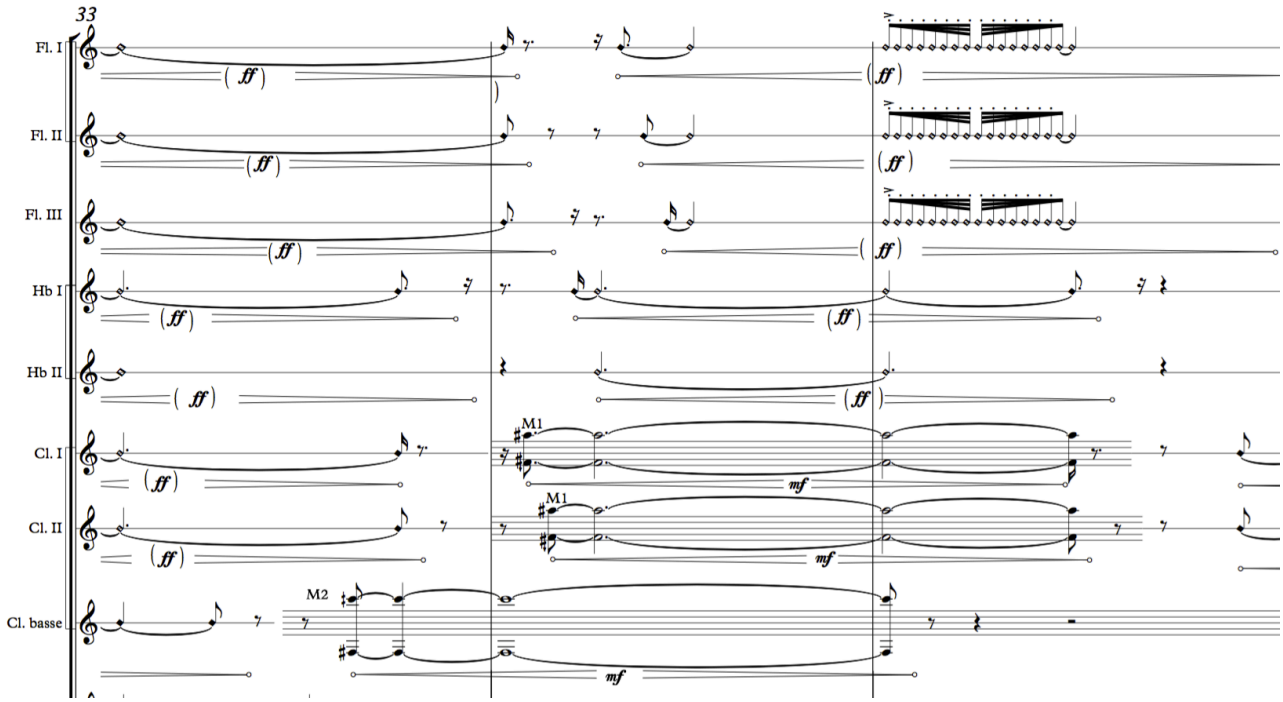
With the addition of two marimbas and timpani I decided to give the percussion section an even larger thematic role throughout the work. Whereas in *volée*, the first presentation of clear harmonic pitch is the 4-note chord presented in the vibraphone, *les étourneaux* presents a low drone with a bowed and eventually rolled 'f#' and 'e' in the marimba. It begins with just the 'f#', and then the 'e' enters halfway through the phase, and they continue overlapping each other playing with tension an release underneath all the un-pitched textural waves in the rest of the orchestra and piano.

Figure 29: *les étourneaux*, m.17-19, marimbas I and II



The timpani then join in with a quiet roll on the *f#* to further deepen and enhance this tonic note, with occasional dissonant *g* with a super ball. Marimba I, then using a denser voicing of the original 4-note chord, tremolos between *f#/c#* and *e/b.* Marimba II enters overtop on a higher and completely new set of notes *g/b* and *b/c*. This slow harmonic build up throughout the B section culminates in the familiar 4-note chord in the vibraphone that here represents the static 4 electric wires from which these flocks departed. A new harmonic addition in the winds is the use of multiphonic tremolos in the bass clarinet as I wanted to create more fragility and depth within the wind section precluding the original first presentation of pitch.

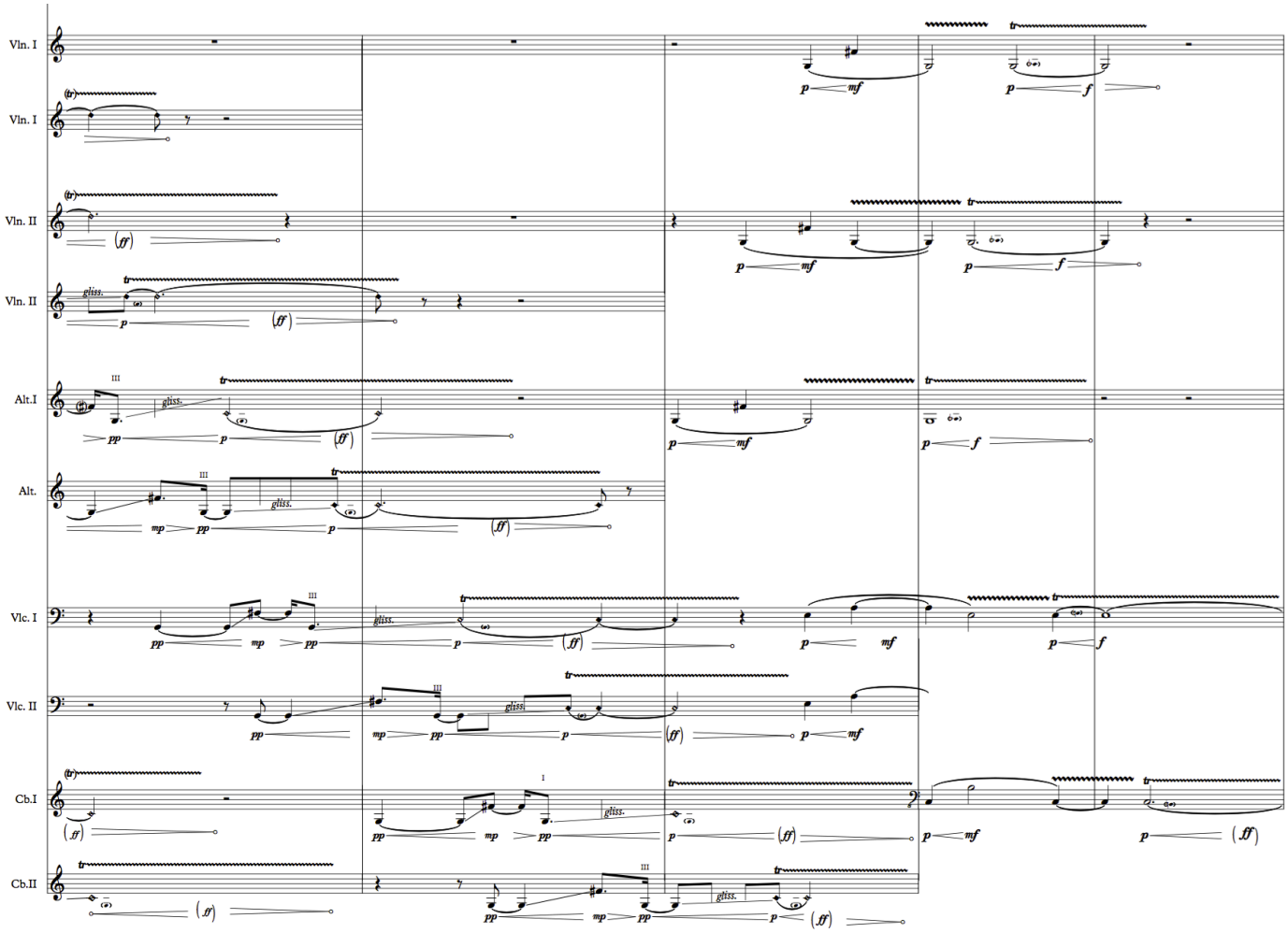
Figure 30: *les étourneaux*, m.33-35, see clarinet I, II, and bass clarinet



Similar to *volée*, the 4-notes, first voiced in the vibraphone, gradually become revealed in the winds and the high harmonics of the strings. The most significant change and development in terms of harmony is the last section (F). Both melodic and rhythmic motifs have been completely replaced with new material. More importantly, instead of having both the wind and string section play clear contrapuntal melodic motifs, I kept the string section more thematically linked to the textural world that had been developing throughout the piece while presenting new harmonic movements in the wind. Beginning in the five measures leading up to the F section, the strings re-enter their *divisi*

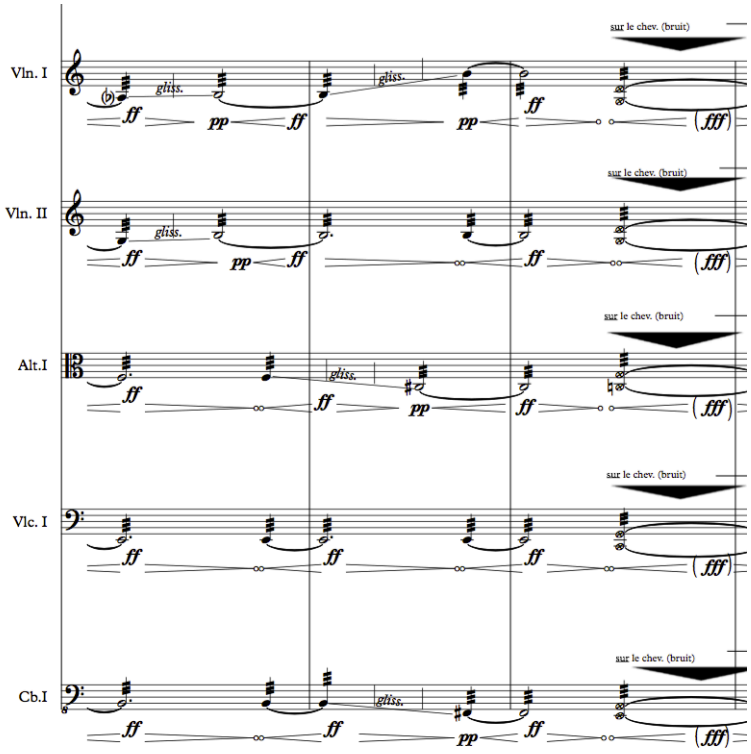
mode as almost to signal the return of their previous rhythmic behavior in sections A to C. However instead of returning to their initial staggered textures of tapping, pizzicato, and *col legno battuto*, they combine their second theme, (static held harmonics), with the cascading behavior of the first section as a quasi hybridization of theme one and two. They move through six distinct motifs that develop from static held harmonics outlining ambiguously shifting harmonies to combinations of textural white noise that transforms into a single pitched 'g' moving between a normal stopped note to a timbral trill. As these motifs develop with slight transformations from one to the next we find ourselves landing on the motif *g– f#-g*, which is a reference to a fragment of the original melodic motif in the wind section from *volée*.

Figure 31: *les étourneaux*, m.90-94, string section



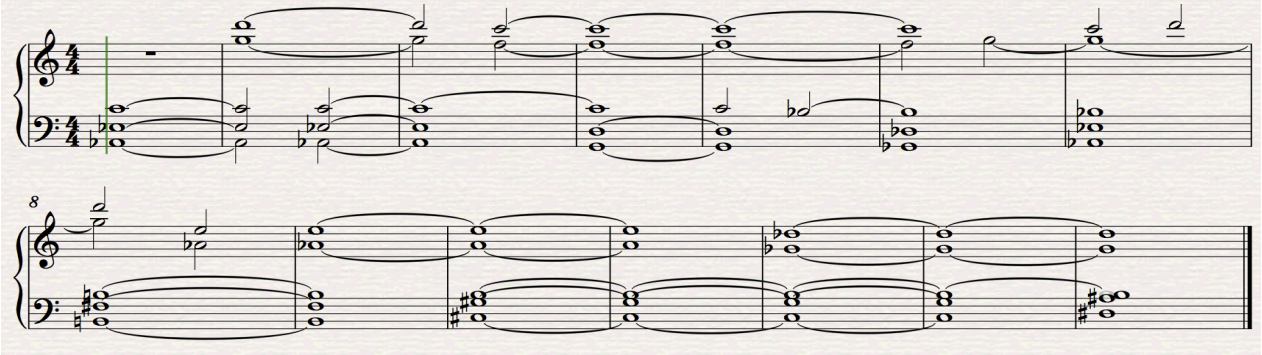
These ambiguous harmonic movements in the strings, that are the vertical result of the transfer, offset and slight transformation of the same melodic-rhythmic motif, finally fall into a familiar vertical identity near the end of the F section as they progressively glissando towards the original 4-note chord, (*f#/e/c#/b*), introduced in the vibraphone. Here in the strings this harmony pulses one last time together before dissolving into white noise on the bridge.

Figure 32: *les étourneaux*, m. 100-102, string section



In stark counterpoint are the winds emulating a slower, static, net of birds that slowly cross behind the active foreground and action of the string sections with harmonies that shift between major and minor triads to ambiguous clusters of intervals. As you'll see in the harmonic reduction below, the harmonies result from slow and broad moving overlapping fifths, with a third voice in the center, often a third or a sixth away, grounding us in a more triadic harmonic world. These overlapping and constantly changing fifths introduce clear recognizable harmonies for the first time in the piece, but only temporarily as one of the fifths shifts up/down a M/m 2nd creating tensions that are soon released.

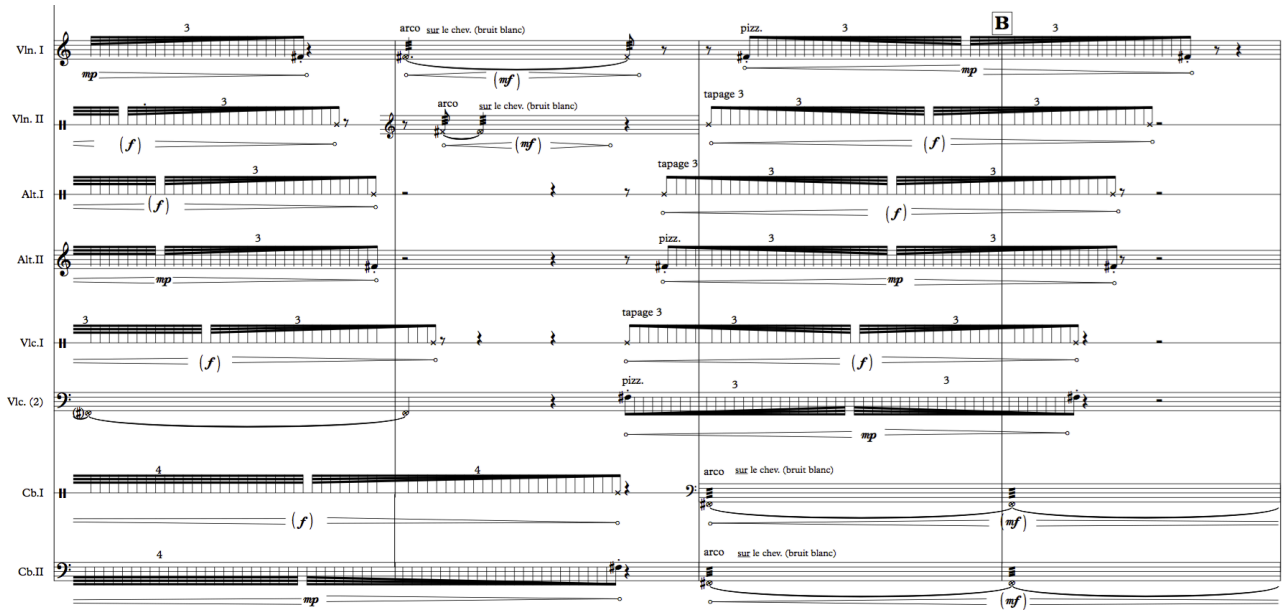
Figure 33: *les étourneaux*, wind section, Section F, harmonic movement reduction



Textural development

I want to briefly speak about the challenge of the textural palette created by the string section in the first movement of the piece. I used video demonstrations for each of the following techniques: tapping 1; tapping 2; tapping 3; pizz. 1; pizz. 2 ; and *col legno battuto*. As it was important to me to provide the clearest examples of what exactly I meant to create the overall dynamic contrast and growth desired in this section. As the piece develops the strings transition from tapping 1 -2 -3, then pizz. 1 -2, and finally *col legno battuto*. The changes are woven in with half of each section transitioning to the next technique in advance. I worked closely with a violinist to video each technique and nuance and provided hyperlinks to avoid cluttering the score. This worked very effectively and having video support material directly in the legend as hyperlinks is definitely a tool I want to continue to work with more. The nuances between the different tapping, (light, heavy, and full handed), pizzicato, (one finger, two finger), and col legno battuto, was really important to specify as the effect of these woven swells of percussive/textural gestures in the string section were designed to create a sensation of a flock moving between the background to foreground.

Figure 34: *les étourneaux*, m. 21-14, strings



ere

violin quintet
7m08s

(program note)

ere – an old English word meaning "before" (in time) ; homophone with "air"
The title of this piece raises simultaneously two of the principal ideas within it.
To evoke, aurally, the word 'air' in which, amongst other activities, we find birds in flight.
Secondly, the definition of ere, 'before', brings up the idea of succession.

ere is the fourth composition in my series emergence, where I continue to explore the phenomenon of flocking in certain bird species. As I wanted to concentrate this particular piece on the idea of a group of birds moving together, but always offset in time, and continually transforming, I chose a uniform instrumentation to further emphasize these rhythmic delays and motivic transfigurations. The five violinists are positioned in a fairly wide semi-circle, and numbered one to five. The two general rules of development through the piece are that firstly the motifs are passed in sequence of proximity from neighbor to neighbor (ex. ***1****-2-3-4-5) or (ex.* ***3****-2/4-1/5). Secondly, the more intense, either in timbre or nuance, the starting motif is, the smaller the offset in time. This dilation and diminution of time fluctuates throughout the piece as the dynamic level builds and drops. Each motif is passed through the 'flock' at least once, before one of the violinists, other than the initiator of the motif, creates a variant of the motif it is mimicking. This variant, acts as a sort of contagion, overtaking the motif already in motion, and spreading through the flock outwards from its starting point. The piece begins fairly static and builds in intensity until all five violins arrive in synchronicity momentarily. All five violins are almost continually playing throughout the piece, as they loop motifs, and change speeds, rhythms and directions. To further underline the fluctuation in roles and movement of these musical 'seeds,' the dynamic spectrum is meant to be exaggerated as much as physically possible. I have purposefully written stark imbalances between them so they disappear beneath and mask each other at certain moments.*

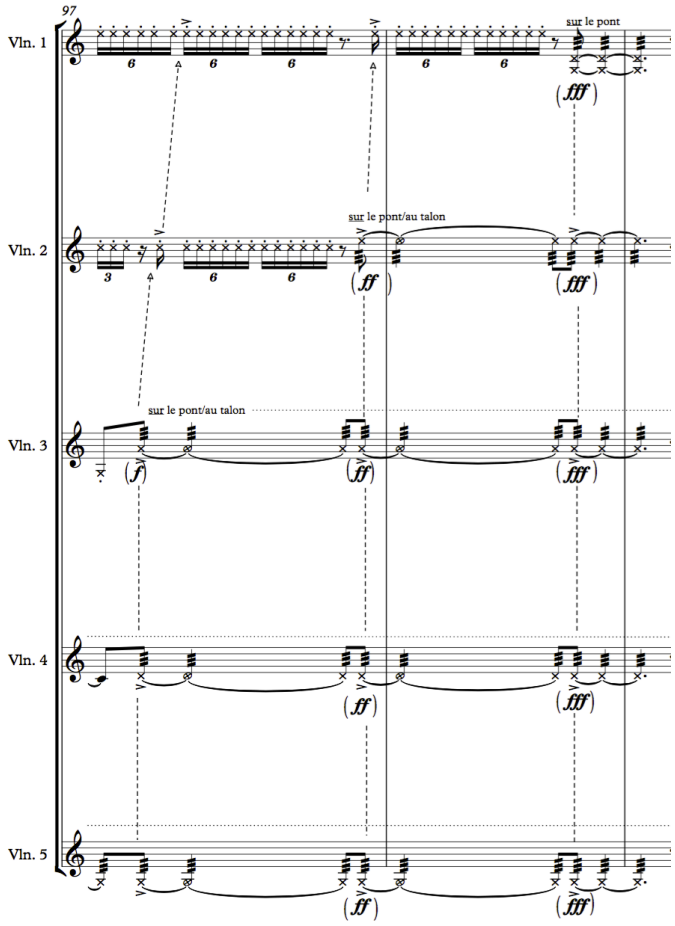
ere, as mentioned above, was written almost in tandem with my orchestral work *les étourneaux*. Although I was working with the same thematic material, the difference in instrumentation and more importantly size of the ensemble completely changed my formal approach. I was invited alongside my compositional director, Ana Sokolović, to participate in the Forum Bypass in Toulouse France, organized by *Oléo* and the *Institute Superieur d'Études de Toulouse*. I decided to use it as an opportunity to explore an ensemble of one homogenous instrument; a quintet for five violins. By doing so it would allow me to also more profoundly study that instrument. Already having written a couple pieces around the theme flocking, I found it an opportunity to continue my exploration of this same idea but with a homogenous limitation. In doing so, my compositional focus weighed more heavily on rhythmic variation and organization of, pitch, timbre, and range, rather than orchestration. As this created the perfect opportunity to further my own education around this particular instrument I made it a priority to meet several times with a violinist to workshop my ideas in several stages of the composition. With notes and video from our meetings I sat down and detailed out my first sketches of the pieces deciding on what textures, and musical motifs I wanted to focus the piece on. I chose techniques based on, not only the level of the musicians I would be working with, but also the compositional character and direction I wanted to take the piece in. Throughout my Master's I have continued to push further my interpretive and musical translation of these behaviours in each composition. The limitations presented in a homogenous quintet inspired as well a more detailed exploration of flocking behaviour. Beyond staggered entrances and general swarm movements, it allowed for the creation of a piece that fluctuated between an analogous mass of sound where each individual is indecipherable sonically from its neighbour, to more rhythmically articulated and distinct phrases. Moving between these two contrasts is what I used as a starting point in the development of this piece.

Form

The global form of the piece is quite simple. It breaks down into three principal sections: **A – B – C.** The first section, **A**, allows each violin to enter separately then fluctuate between a 'still' held harmonic and then swell in and out of a more 'active' harmonic or timbral trill. Once they have all entered the first section establishes itself as a more undistinguishable sonic mass. To maintain this dynamic character uniform quality I kept the five violins within quite limited range, and while they

are voicing different pitches, they are almost always expressing themselves using the same technique. This section evolves into **B** where the first clearly decipherable, and more melodic, motif is voiced in the first violin. This section marks the clear departure from the textural web of sound into more articulated and distinguishable motifs, as well as distinct exits and entrances of each phrase. I will further elaborate below under *spatialisation and melodic-rhythmic development* how these phrases move and evolve throughout this section.

Figure 35: *ere*, m.97/98



As section **B** builds in energy and dissipates into the beginning of **C**, we slow down and begin this section with a quasi climax of ***fortissimo*** tremolo on the bridge at the climax of a glissando. This marks the entrance into a more active, and agitated section that although following the same motivic development as before, is distinguished by more heavily articulated and discontinuous behavior. This builds and the voices tighten resulting in the first synchronized entrance on the upbeat of beat 3 in measure 98, (see Figure 35).

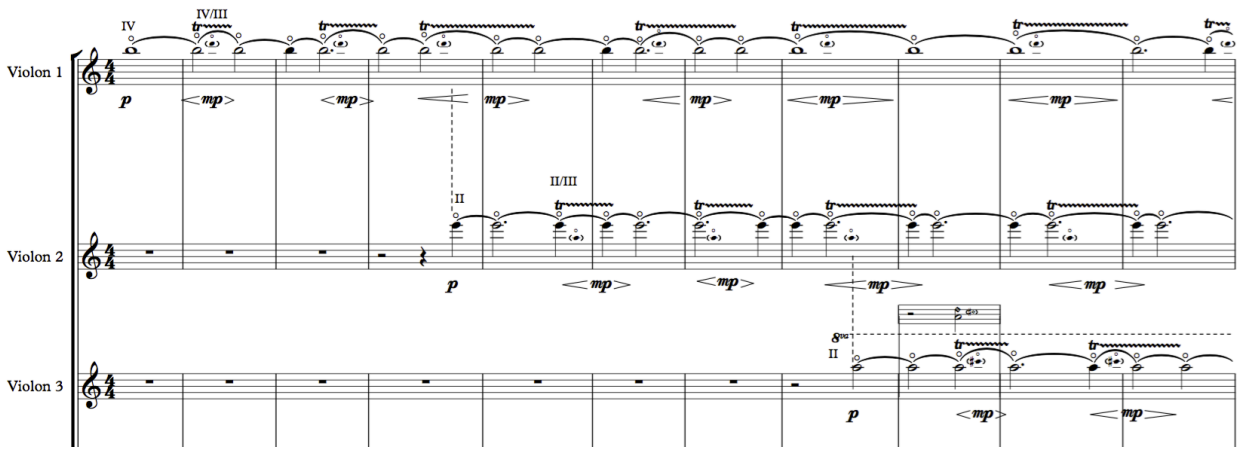
Spatialisation and melodic-rhythmic development

Having already explored heterophonic textures in *les étourneaux* with my staggered entrances of identical and/or similar textural motifs, I was eager to apply this same technique to more distinct melodic lines. Beyond altering the character of the gestures used, I also wanted precise a microform to how these gestures evolved and therefore how each violin behaved within the group. The main principles I applied are inspired directly from flocking behavior and can be simplified into a couple base rules.

1. Listen to your neighbor : motifs pass first to those closest to you and then outwards in the ensemble.
2. The louder and more aggressive in nature the motif is, the more quickly it spreads among the flock.

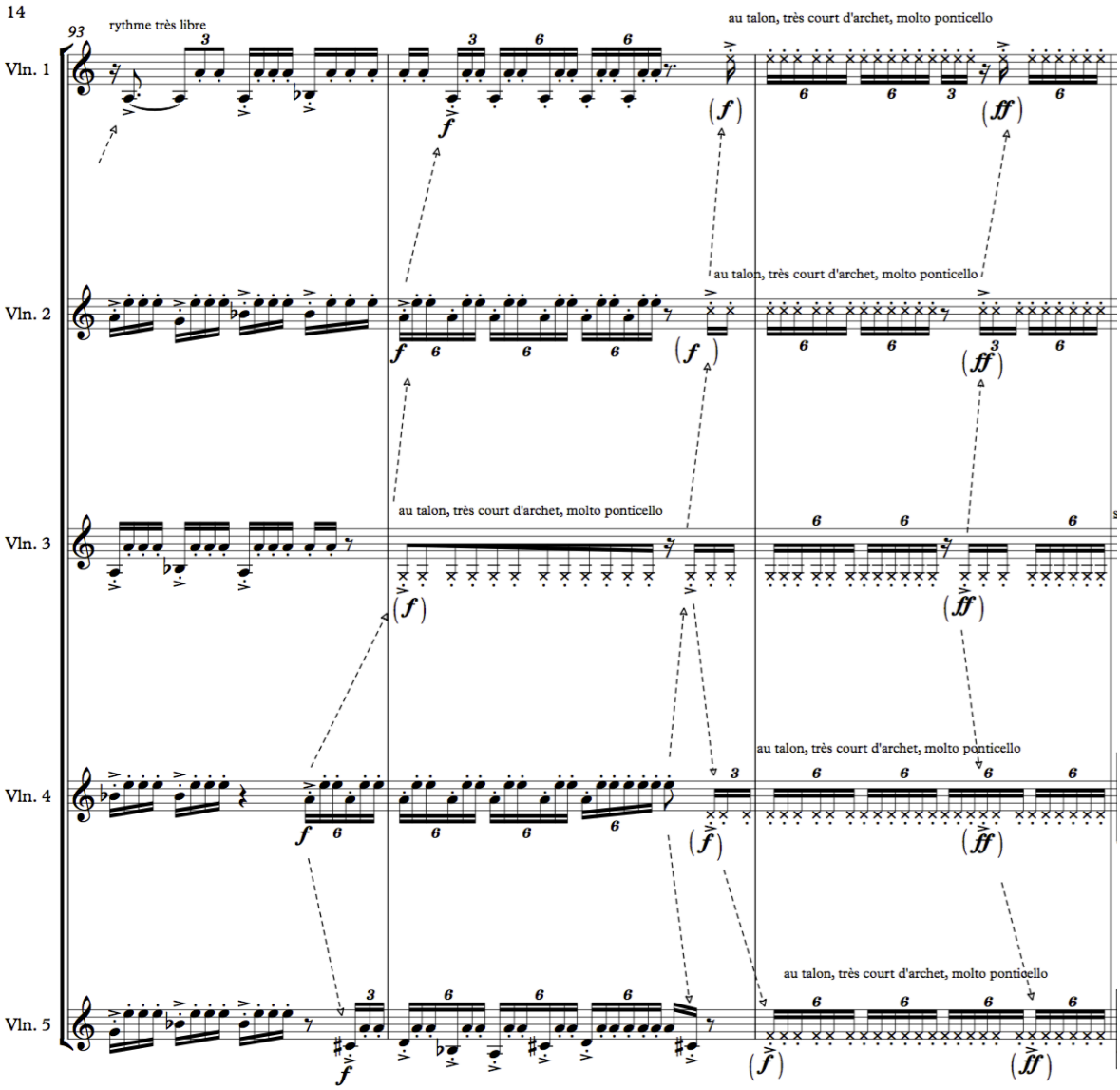
To give two highly contrasting examples of this I will first bring your attention to the very beginning of the piece. Although each violin enters on a different pitch, they all enter expressing the same kind of gesture, at the same dynamic volume, with the same pattern in variation. Each harmonic enters at a soft volume and is held for four beats before it begins to trill for two beats. The fluctuation between held harmonic, and harmonic/timbral trill follows this quarter note pulse pattern: (**4**-(2)-**3-(**3)-**2**-(4)), (the bold numbers represent the held notes). As you can see, as the held harmonic diminishes in duration, (4-3-2), the interlaced trill duration augments, (2-3-4). This same texture, and rhythmic pattern is repeated in each violin on its respective pitch as they enter. As this motif is not a demarcated musical phrase and is performed at a soft volume, it moves from violin to violin at a very slow rate.

Figure 36: *ere*, m. 1-11, violins 1,2,3



A secondary, and highly contrasting example is in measure 94 where the third violin transitions from its previous loose *bariolage* texture into a more strictly measured sextuplets. This texture, and character of *fortissimo*, staccato, rapid, playing at the frog and near the bridge, is in all respects, more aggressive in nature. The starting violin, 3, moves into this technique at the end of the previous gesture, and as it re-states it, (on the 2nd sixteenth of the four beat), it passes very rapidly to the other voices by the offset of a singular sixteenth note creating more a flam like effect as if a synchronous event were falling apart.

Figure 37: *ere*, m. 93-95



Before composing the motifs themselves I developed throughout the piece, I first mapped out and decided upon how the motifs would move within the ensemble, and therefore the spatialized form of the piece was the first established structure. There is constant awareness and consideration of the two above rules throughout the piece, but I will refer to my spatialisation map for the B section to demonstrate.

Figure 38: *ere*, Motif and Spatialisation Pattern

Vn.1 motif 1	Vn.2 motif 1	Vn.3 motif 1	Vn.4 motif 1	Vn.5 motif 1
Vn.1 motif 1	Vn.2 motif 1	Vn.3 motif 1x	Vn.4 motif 1x	Vn.5 motif 1x

Vn.3 motif 2	Vn.2 motif 2	Vn.1 motif 2
	Vn.4 motif 2	Vn.5 motif 2
Vn.3 motif 2	Vn.2 motif 2	Vn.1 motif 2
	Vn.4 motif 2	Vn.5 motif 2x

Vn.5 motif 3	Vn.4 motif 3	Vn.3 motif 3	Vn.2 motif 3	Vn.1 motif 3
Vn.5 motif 3	Vn.4 motif 3	Vn.3 motif 3	Vn.2 motif 3x	Vn.1 motif 3x

Vn.2 motif 4	Vn.1 motif 4		
	Vn.3 motif 4	Vn.4 motif 4	Vn.5 motif 4
Vn.2 motif 4	Vn.1 motif 4		
	Vn.3 motif 4	Vn.4 motif 4x	Vn.5 motif 4x

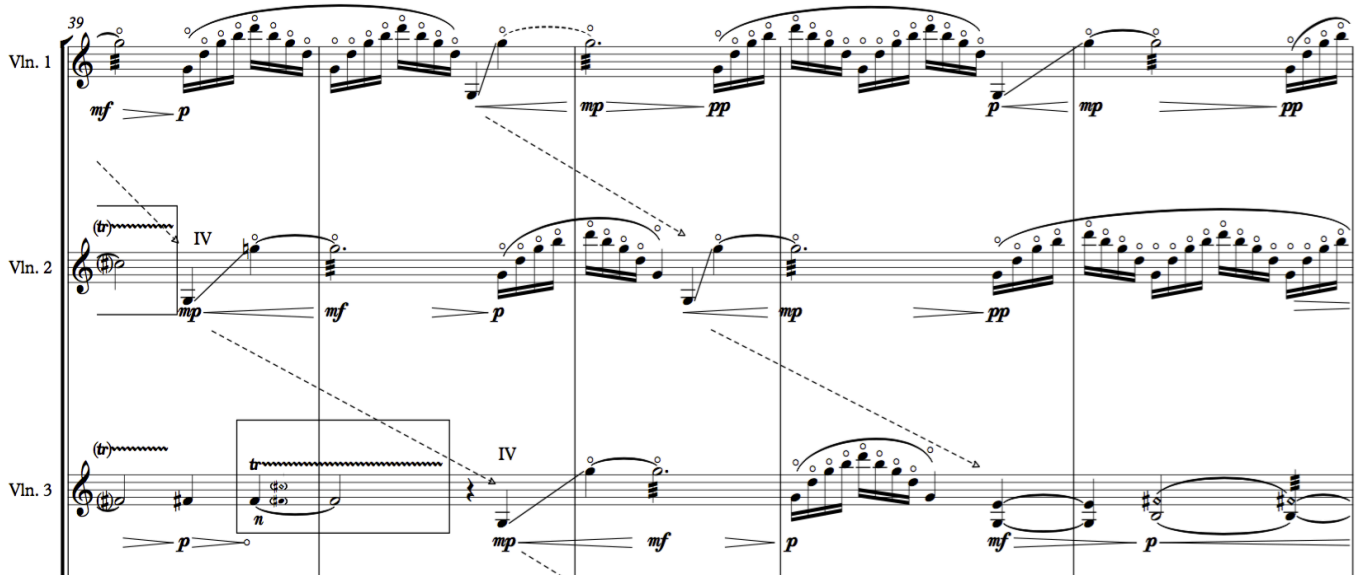
Vn.4 motif 5	Vn.3 motif 5	Vn.2 motif 5	Vn.1 motif 5
	Vn.5 motif 5		
Vn.4 motif 5	Vn.3 motif 5	Vn.2 motif 5	Vn.1 motif 5x
	Vn.5 motif 5		

As you can see from figure 38, I complete one full cycle of motif movement throughout the entirety of the B section. The above chart demonstrates ten complete phrases with the far left cell representing the originating point and trigger for the new motif. Each motif passes through its spatialized pattern twice and in the second repetition there is a variation. This concept of mutation was inspired by my study of emotional contagion in my first series *conversations*, where the musical emotional prosodies were 'caught' by other players and permeated their current gesture. The mutation, or variation, is represented by the colored cell. This cell, or violin, then becomes the next 'leader,' deciding and starting the next motivic wave. As you'll see from the above chart when violin 2, or 4 act as leader the global phrase shortens. When the violin three begins the phrase, it is the most economical in passing the motif. However, despite the difference the starting violin has on overall global phrase length, what is more important, and has more weight in how a phrase moves, is the dynamic and manner of attack within each motif.

Melodic-Rhythmic development and the manner of mutation

The general global direction of soft, slow, and continuous towards loud, fast, and articulated meant that naturally the speed of which the motifs moved from one player to the next gradually contracted over the duration of the piece. Each mutation, arriving in the second repetition of the motif, is only a variation. Therefore the transformation of the global character is gradual. The manner in which I moved from one motif to the next was by simply taking one or two elements in the repeated phrase and allowing them to slightly transform. To give one example, the beginning melodic motif, (mes.40/41, vn. 2), of a low *g* glissing up to a high *g* harmonic transforms to a low *g* with an added 6^{th} moving to a high *f#* harmonic (m. 42-43, vn3).\

Figure 39: *ere*, m. 39-43, violins 1,2,3



I occasionally inserted 'contagions' that are not caught, but left as these undeveloped events (m. 68/67). Secondly as each phrase disappears into the background, both in dynamic level as the phrase loops I would let different violins rest on certain fragmentations of the repeated motif as if the idea were deteriorating in memory. These small, more unpredictable, and temporary motifs served to create a more organic quality to the behavior of the flock.

These three pieces, *volée*, *les étourneaux,* and *ere*, although distinct in their own right, all served as an impressionistic exploration of flocking behavior. The study of flocking, auto-organization, and emergence theory is immensely rich, and this series is simply my preliminary foray into the musical possibilities in the translations of these phenomena.

series III: *transparency*

The third series proved to be the most complex to categorize under one umbrella title. In addition, each of them, in their own way, broke a certain aspect of the title *musical 'translations' of extra-musical experience* in their interpretation. However I chose to title this series *transparency* as the commonality that wove through these four pieces was the idea of layering. It is titled *transparency* as I hope to further develop this series using actual transparent manuscript paper for the scores. In all four works, but in a slightly different method, I composed using the approach of layering. Initially I pictured this approach as a visual artist would. I would imagine the score as a complete picture right from the beginning. I would decide on the different instrumental characters, registers, textures, and how each would evolve throughout the piece. Most importantly, I would decide on how I wanted to the audience to experience the piece. I would consider where their attention would be drawn to at certain points, certain expectations I wanted to establish, and how, at moments, I could deceive their expectations. Therefore these pieces are not focused on the extra-musical experience of 'layering' but on the application of this process, and variations of it, within the method of composing. In doing so, I explored concepts such as censorship in literature, layering in visual arts, poly-genre superimposing, mixing and 'scratch art' in the DJ world, and digital music composition techniques.

In this section I will analyze all four pieces with a slightly different angle and focus as they all apply the concept of 'transparency' in different ways and degrees. The first two, *redaction* and *sépulcre*, play with the idea of layering using the voice as the principal tool and inspirational point in their exploration.

The title *redaction,* (caviardage), is referring to the act of censoring, or blacking out of fragments of text. I have always been visually attracted to texts that have been redacted. This idea of partial censorship and missing information seemed like a rich idea to draw from especially when working with voice. However, as I said above, I am not 'translating' the experience of redacting text as an event. When I explored cinematic conversations, and flocking behavior in birds I was imagining these events unfolding as one would experience them in time. However abstract they became in the end as loose musical 'translations,' the initial intention of mapping out an event

was always the starting point. With *redaction* I was taking an extra-musical concept and applying it in the process of how I developed the score and musical material. Therefore, the extra-musical source is affecting more the compositional process than it is the experience of the end sonic result. I will go into more detail about this process when I analyze the piece, but I will introduce it briefly here. To represent the idea of redaction I worked with sonic masking in this piece. The various methods I worked with were mimicking timbral characteristics between instruments, using unbalanced orchestral and dynamic levels, and some theatrical performative gestures.

Again, less focused on the interpretation of a temporal experience, is the second in the series *Sépulcre*. Of all the compositions I wrote within my theme of musical 'translations,' this piece was written more concretely as an exercise and exploration of the instrument and the physical extremes of it. However the implementation of voice, and how it is superimposed and woven into the phrases of the double bass play with this idea of sonic masking as well.

The second two in the series focus on my fascination with "genre-blurring". I like to call this technique "poly-genre," but have seen similar explorations referred to as musical referencing, or importation of, and allusion to, other musical genres within the contemporary musical world. As mentioned, these last two in the series were initially inspired by DJs or more specifically scratch-artists. Montréal's well-known turntablist Kid Koala's performs quite regularly his ever-changing interpretation[9] of *Moon River* performed by Audrey Hepburn. Witnessing this live was a turning point for me compositionally. This melodious and nostalgic rendition of a pop-Hollywood classic manipulated on a turntable, at moments to the point where it sounded like an experimental contemporary sonic landscape, brought together these equally treasured but heavily disjointed aspects of my musical interests. Having spent equal amounts of my musical training and experience in various popular musical genres as I did in classical and contemporary music studies, I have always aimed to merge my musical influences, interests and processes from both these worlds. In both *f o r e s t f o r t h e t r e e s* and *let (in)* I experiment with using musical influences from popular music within the contemporary music palette of sounds that I have been currently developing. The application of layering or 'transparency' ties these two in as

[9] Mancini, Henry, *Moon River*, Kid Koala (turntabalist), Ninja Tune, XXEN018, 2010

I physically approached these two pieces as if imagining the blending of two sonic worlds. During my research period for these two pieces I had set up two turntables with a mixer and began listening to two pieces simultaneously while manipulating the faders between them. I practiced doing this with a variation of genres. I found the act of superimposing and juxtaposing contrasting cultural and sonic worlds allowed me to hear their idiomatic behaviours in a different context. Therefore the 'layering' of these two pieces is very literally a musical layering and I applied it to my dual experiences of contrasting genres of music.

Working with the concept of layering and sonic masking in my first two pieces of this series led very naturally to these last two works which proved to be much more complex in their creation. In all four of these I will discuss the process of creation: how I implemented the concept of layering, and in some, the digital manipulation of instrumental music. I will also explain specific musical techniques implemented in each, and my constant consideration of the listener's perception.

redaction (2016)

voice, violin, cello, bass clarinet, piano
5m43s

redaction was written for the creation summer course with Ana Sokolovic and Jean Lesage at the *Orford Music Academy* and was performed by the students of the contemporary music course. It is written for a quartet of bass clarinet, violin, cello, and piano with soprano voice. This composition, the impetus for this whole series, arose simply from my interest to integrate voice as another member within a chamber ensemble, and not as the soloist in the foreground. As I mentioned earlier, the obstacle I was overcoming was my reluctance to use text in music. In my reflection on how to use voice without using words, I fell upon the idea of censorship. Upon doing some preliminary reading on the history of censorship and redaction in literature I noticed one book title came up a few times. *I know why the caged bird sings* by author and poet Maya Angelou, is one of the most frequently referenced literature titles when speaking about censorship. In the case of this book, it was completely banned and removed from school libraries and reading lists. It was considered inappropriate due to mention of rape, abuse, and teen pregnancy. There have also been many arguments that the book was banned due to its honest, autobiographical look at coming of age and overcoming racism. Despite its censorship, the book has received multiple awards, is heavily acclaimed as a classic, and is widely read and studied.

However, as I continued to construct how I would apply this concept of censorship within my compositional process, I realized the text in the book itself is too long and dense to be used as the source material itself. Wanting to maintain my allusion to this book, I chose as my source material the poem *Sympathy* by Paul Laurence Dunbar. The title *I know why the caged bird sings* comes from the third stanza in Dunbar's poem *Sympathy*. Dunbar was an African-American poet of the late 19th century.

Sympathy[10]

I know what the caged bird feels, alas!
When the sun is bright on the upland slopes;
When the wind stirs soft through the springing grass,
And the river flows like a stream of glass;
When the first bird sings and the first bud opens,
And the faint perfume from its chalice steals--
I know what the caged bird feels!

I know why the caged bird beats his wing
Till its blood is red on the cruel bars;
For he must fly back to his perch and cling
When he fain would be on the bough a-swing;
And a pain still throbs in the old, old scars
And they pulse again with a keener sting--
I know why he beats his wing!

***I know why the caged bird sings**, ah me,*
When his wing is bruised and his bosom sore,--
When he beats his bars and he would be free;
It is not a carol of joy or glee,
But a prayer that he sends from his heart's deep core,
But a plea, that upward to Heaven he flings--
I know why the caged bird sings!

Paul Laurence Dunbar (1872-1906)

Form: unveiling of the poem

I decided to use the third stanza of the poem. I used its text, and poetic literary elements as my principal source material for my composition. The phrasing of the stanza, as well as the punctuation, is also maintained in my piece. As well, I have made allusions to the rhyming pattern used, and the words, or fragments there of, form the basis for the vocalists' 'text.' I imagined each line of this stanza being spoken or sung by the vocalist. In fact, I wrote a melody for the stanza and then I started to 'censor' the text and therefore the music I had just written. The form and censorship of the stanza in the composition would proceed in such a manner that the poem is slowly and gradually unveiled throughout the stanza. Before proceeding I decided

[10] Dunbar, Paul Laurence, *Lyrics of the Hearthside*, New York, Dodd, Mead and Company, 1989

upon the manner of which I would 'censor' the text of the poem. I knew I wanted to be able to break down the poem into single phrases, words, syllables, and even consonants and vowels. Using the International Phonetic Alphabet (IPA) I analyzed the poem deconstructing each word into its pronounced vowels and consonants. I also did a second analysis of syllabic rhythm and natural emphasis.

1. The first two lines of the stanza would be completely censored except the first and last vowel of both lines.

(original)
I know why the caged bird sings, ah me,
When his wing is bruised and his bosom sore; ---

(redacted)
a____i_____ ~~*know why the caged bird sings, ah*~~ i_____
ɛ_____ ~~*bruised and his bosom*~~ ɔ_____

Two musical liberties I took were to stretch out duration of the vowels, and to omit some text. ex. "his wing is" is not represented in the second line at all. In the execution of these lines the singer would sing, with the pitches given, the phonetic vowels of the first and last words, and speak, almost inaudibly the words redacted, which were illustrated in the score by being enclosed in a box.

2. The third and fourth lines of the stanza would be sung completely but represented exclusively by just the vowels. All the consonants were omitted.

(original)
When he beats his bars and he would be free;
It is not a carol of joy or glee,

(redacted)
ɛ _ i_ i____ ɪ_ ɑ___ æ__ i_ ə_ i_ i_____
ɪ_ ɪ_ a____ ə_ æ_o_ ə_ ɔ__i ɔ_ i___

3. The fifth and sixth lines of the stanza would be represented predominantly by consonants and occasional vowels.

(original)
But a prayer that he sends from his heart's deep core,
But a plea, that upward to Heaven he flings—

(redacted)
b'(ʌ) t' pre(e) (œ)r (th) t' (h)__i: (ss) (ts) (f') ʌ__ m (h') I (ss) (h) a__ tss d' i p' k(h)___ ɔ_____ ,
b'(ʌ) t' p'___ (th)a_t' ʌ__ p' w(ɜ)_ d' t'u h'(ɛ)ɛ___ n h'(i) (f) i___ tss ---

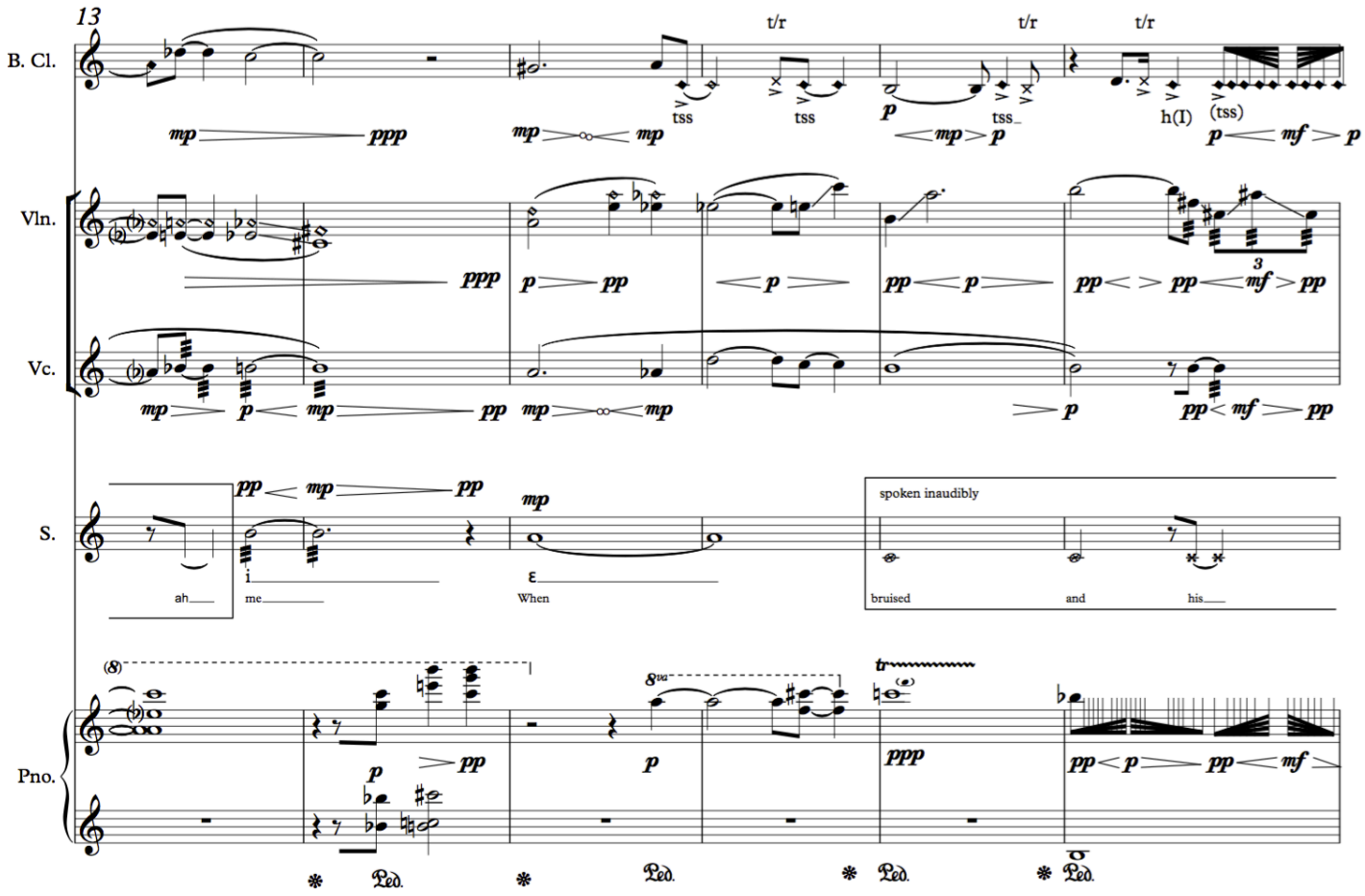
Consonants followed by an (') are meant to be purely percussive. All vowels in ( ) are to just indicate the mouth shape when pronouncing the consonant that they precede.

4. The final line, a line that reiterates the first line of the same stanza, is sung in its entirety, save for the words "caged bird" which the singer mouths inaudibly.

Redaction by masking or replacing

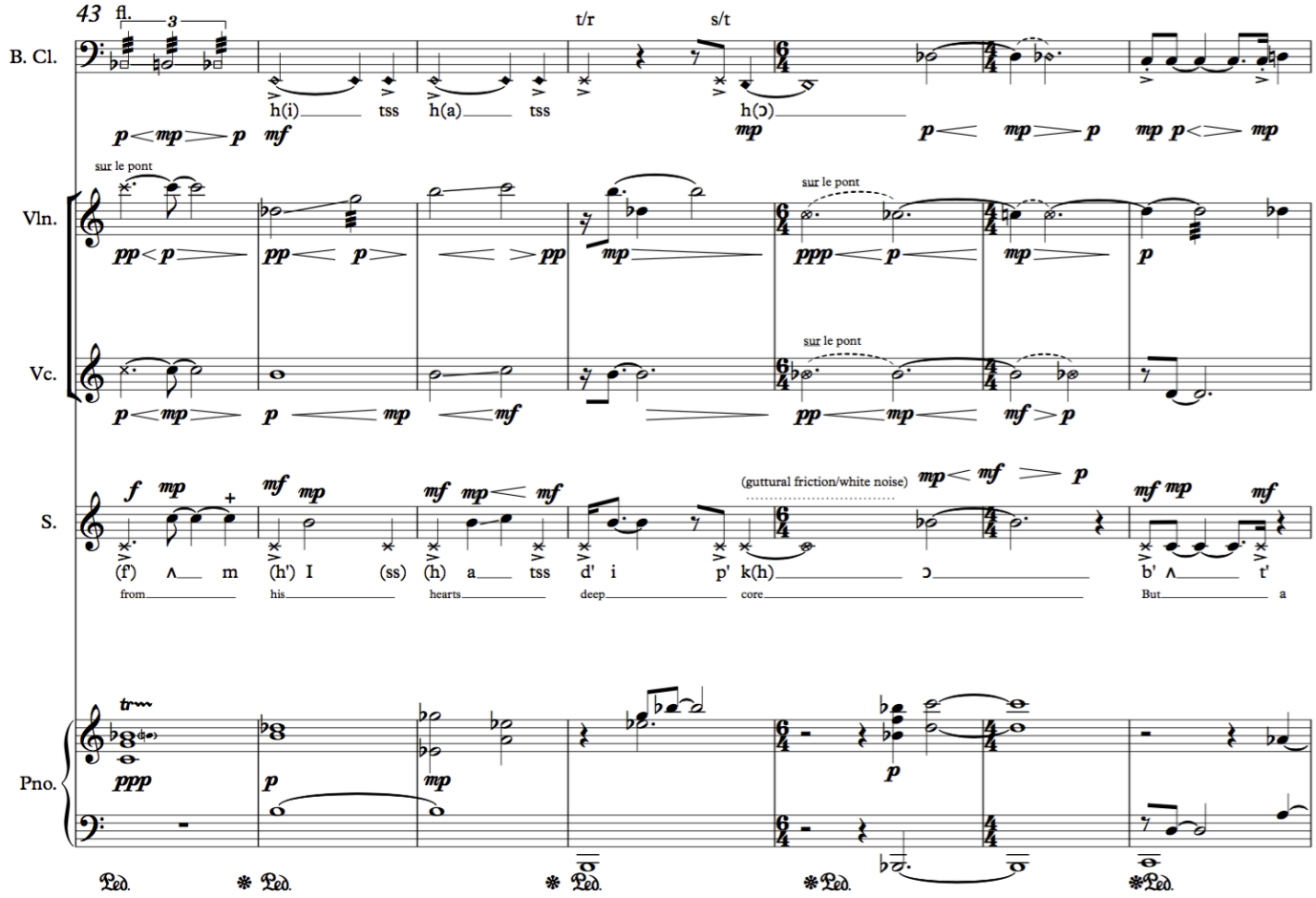
By going through this process I was not only working with the idea of redaction on the existing text, but with the complete melody that I had written out for all the words of the stanza. As I had felt it was important to write a complete melody to represent the complete stanza even though only the last line, and fragments of it are actually sung. It served as the perfect opportunity to voice them in the other instruments. The cello's principal role is to play the melody that I wrote for the text of the first four lines of the stanza. Almost completely synchronized with the vocalist, who, is either mouthing the words or pronouncing vowel fragments, the cello acts as a sonic 'mask' to the voice. Theatrically you see the singer voicing words as the cellist plays in these holes of silence. The figure 40, m. 13-18, shows an example of the cello beginning in unison with the voice. Then we see three pitches (a♭, d and c) played while the 'a' in the voice is still held. These three notes represent the words "his wing is" which are not even written in the vocalist's score. Then the boxed words "bruised and his" which are spoken inaudibly by the singer are represented by the cellist, as well, in complete synchronization.

Figure 40: *redaction*, m. 13-18



The cello continues, for the most part, to represent the melody for the fifth and sixth lines of the stanza. The melody has some transformations and additions that I will explain shortly. As the singer in this section is pronouncing predominantly the attack of consonants for these two lines I decided to 'mimic,' and therefore punctuate, these attacks in various members of the ensemble as well. Figure 41 shows the cello representing the melody of the vowels, however not always completely synchronized with the voice. The bass clarinet in measures 44/45, using spoken and breath attacks into the instrument, represent the soft and medium attacks of the "h" and the "tss" for the words "his" and "hearts." The clarinetists then uses a tongue ram, (t/r), to mark the harder attack of the "d" and a slap tongue, (s/t), for the punctuate "p" for the word "deep." Lastly with the vocalist stretching out the guttural friction consonant "k(h)" of "core" creating a suspended white noise sound, I added bowed notes on the bridge of the violin and cello.

Figure 41: *redaction*, m. 43-49



The quartet, in the last line of the stanza, break free from their roles as 'extensions' of the voice and play almost an ethereal waltz accompaniment to the last sung line with the bass clarinet voicing the melody for the two remaining redacted words, "caged bird."

Praat: The Quartet as extensions of the voice

To build the melodic and harmonic material for the entirety of the piece I used *Praat*, a computer program that analyzes speech and vocal formants. As I mentioned earlier, I imagined the quartet as extensions of the voice. I started with writing a melody for the entirety of the stanza I then recorded each note and syllable, breaking it down into the consonant and/or vowel and prolonging the sound when necessary to get a more accurate reading. I recorded and archived each of these into the *Praat* software program. It then analyzed my voices vocal formants for each pitch I held, and even the high frequencies of the consonant that I attacked. Unlike consonants, the vowel formants have many active frequencies that identify it. I would ask the software to show the formants that would be displayed by dotted lines in the spectrogram. These first few formants represent the primary resonances of the vowels sound file. I would mark down the 4+ most predominant ones that *Praat* displayed for each sound file, marking any dip, disappearance, or growth, and notate these vertically on staff paper translating them from frequencies to musical pitches. Figure 42 below shows my musical reduction of the formant analysis for the vowel "i" from the word "free." Figure 43 shows the musical representation of these pitches. As you can see, with a few exceptions the pitches used in this piece are taken almost exclusively from *Pratt*'s analysis of the vowels and pitches sung into the software. In this figure the sung pitch is represented in the voice and cello. The violin voices a "c" a minor 2nd above. Take note that as I am not a trained vocalist, and I often received 'off pitch' pitches in the analysis that are not part of the strict formant analysis, that I found interesting additions to the harmonic texture in the ensemble as it created more of a human and vocal quality. The bass clarinet using air sounds are supporting purely with texture. The piano, in this example is doing the rich representation of the other vocal resonances. As these were not strong vocal resonances the piano as a quiet, and ethereal accompaniment acted perfectly in this role. Overtop the unisons, and 2nds played in the ensemble it sounded often like a ghostly out of tune waltz landing on these rich ambiguous clusters.

Figure 42: Praat formant analysis of the vowel "i" in "free"

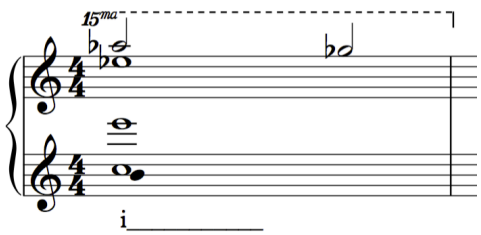


Figure 43: *redaction*, m. 25-30

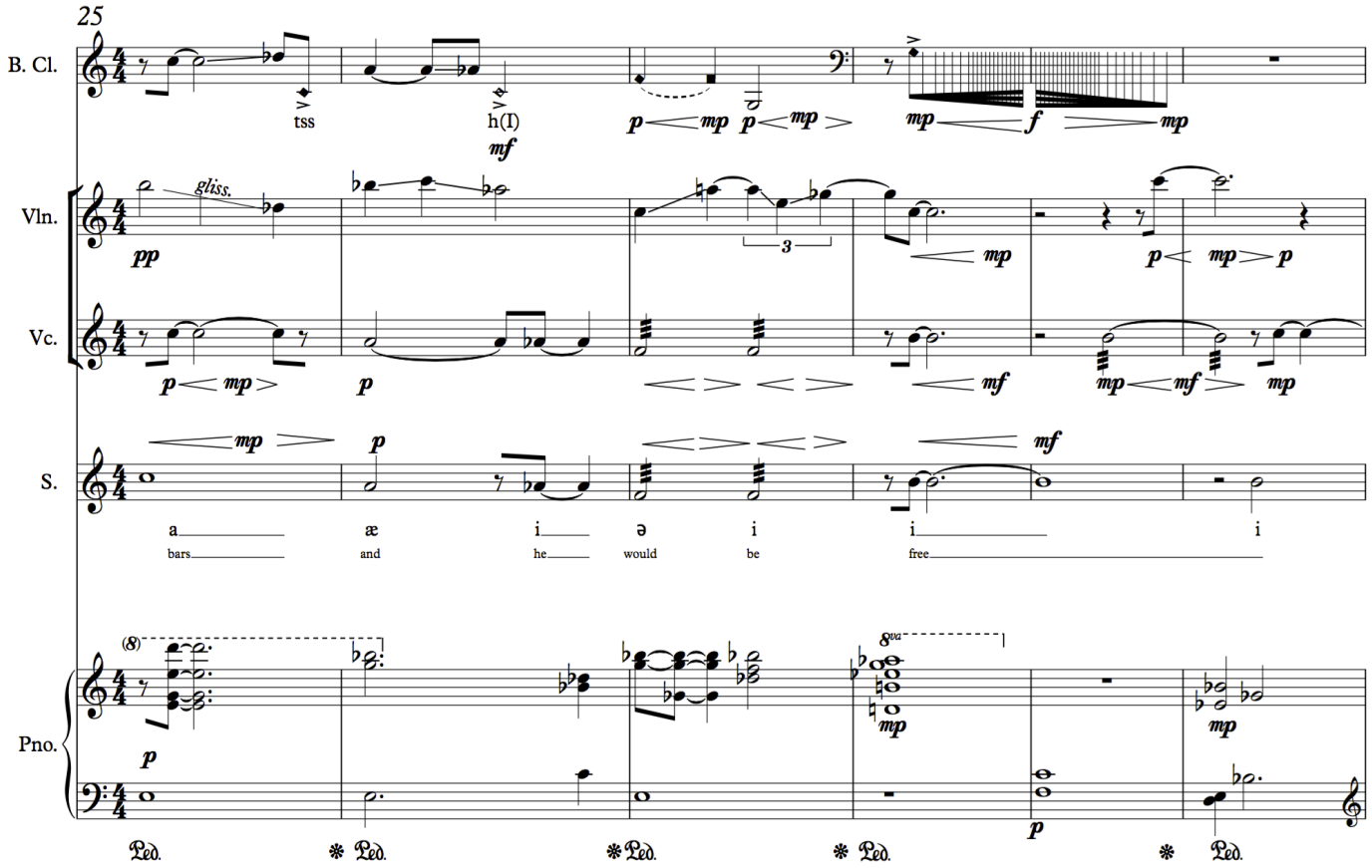
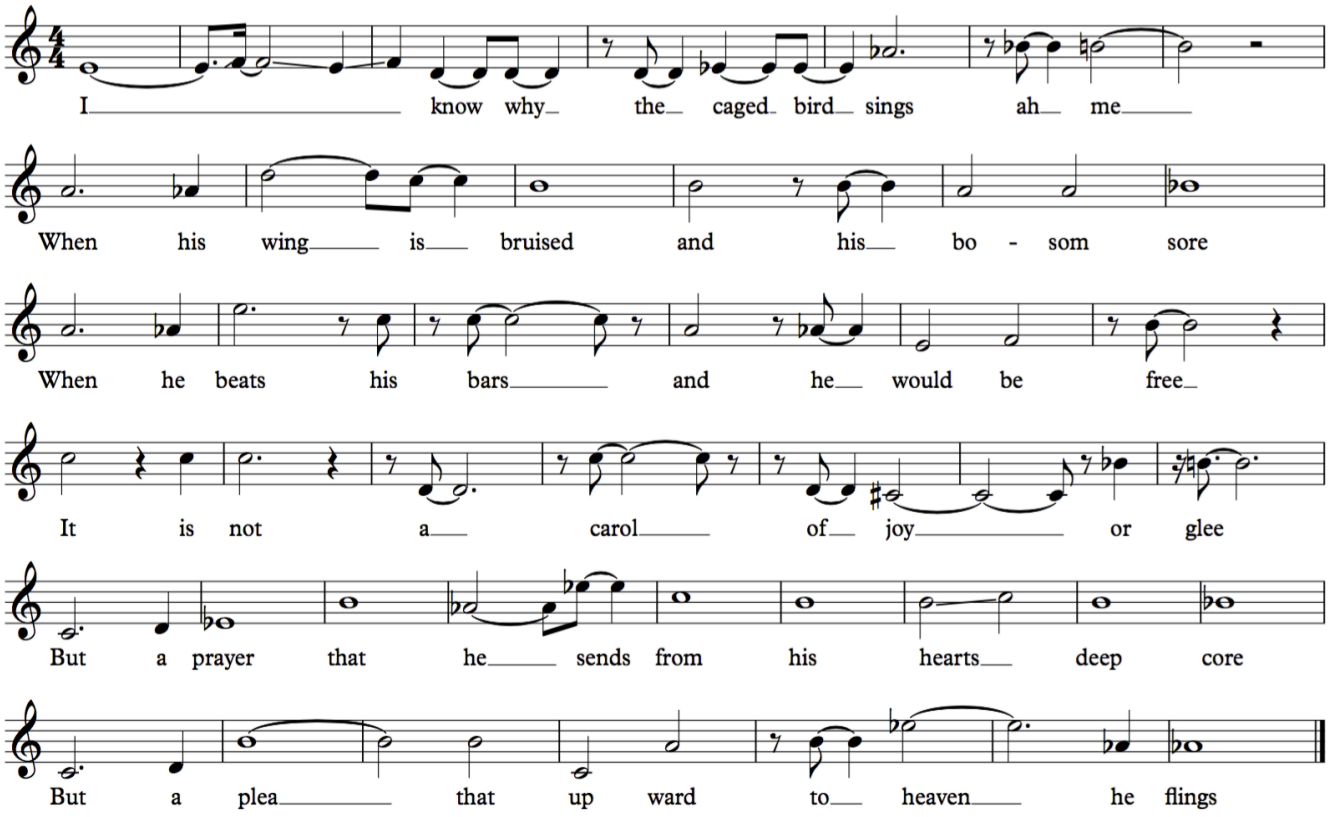


Figure 44 below shows the original melody and rhythm that I wrote for the entire poem. It can be compared with the above excerpts and/or the full score included for comparative material to see from where each line originated.

Figure 44: *redaction*: melodic reduction



I set out composing *Redaction* with the focus of using the voice as a chamber instrument that is, even at times, hidden in the background. This goal was successful and very compositionally enriching for me, not only as it opened up my interest in working with voice and text, but also further opened my interest in working more vertically and designing harmonic palettes based on formant/spectral analysis.

sépulcre (2016/17)

voice and double bass

7m30s

to be performed in complete darkness

(note de programme)

Cette pièce est issue de ma fascination pour l'ambitus de la contrebasse, à la fois la hauteur et le timbre, ainsi que l'aspect physique pur de l'instrument et l'énergie nécessaire pour produire différents sons. Se limitant à une seule hauteur, la pièce se déplace autour de l'instrument passant d'un ton pur à un son plus flou aux gestes «élargis». À mesure que la pièce explore des transformations de la «pédale», les différents gestes montent et baissent, tissés ensemble avec la voix de l'interprète. La ligne vocale, en décalage rythmique, gestuel et dynamique avec la contrebasse, sert à créer des tensions en élargissant la note de la pédale, et à tisser des gestes de l'instrument créant ainsi une métamorphose continue du son.

(program note)

This piece stems from my fascination with the double bass' wide range, in pitch and timbre, as well as the pure physicality of the instrument and the energy needed to produce various sounds. Choosing one pitch, the piece travels around the instrument moving from a straight pure tone to more blurred, and 'widened' gestures. As the piece explores the transformations of the held 'pedal-tone' the various gestures ebb in and out, woven together with the performer's own voice. The vocal line, offset by the voice rhythmically, and in gesture and nuance, acts to create tension and widen the pedal note, as well as weave the instrument's gestures together creating a continuous metamorphosis of sound.

Sépulcre (2016) originated as a one-minute miniature exercise written during my summer courses at the *Orford Music Academy*. We were asked during our 2-week course to write a miniature for a solo instrument that would be performed at the end of the course. I wrote this

piece for double bassist Gaspard Daigle with whom I had just collaborated with earlier that summer at the MCML. *Sépulcre* is for double bass and voice, to be performed by the same person. Gaspard Daigle and I developed my material for this piece in a very close collaboration. I often, when given the opportunity to develop a piece with a performer, will adapt and adjust parameters of the piece to highlight their particular strengths and interests. *Sépulcre*, is very much written for Daigle, to the extent where I asked him to choose the title of the piece at the end of our collaboration together. He named it *Sépulcre*, the French word for "tomb," as many of the techniques in the piece sound eerie, and ghostly and resonate as if in a cavernous enclosure. Fortuitously, we also decided, the day of its premiere, to have it performed in complete darkness. Hearing it performed in the dark for the first time I realized there were moments the instrument sounded unrecognizable, and the voice was so woven into some of the techniques of the bass that it sounded synthetic and as one unified instrument at moments. This effect soon became the launching pad for this piece's final and full-length version.

miniature version: 1m53s

The miniature version of the piece began as an exercise on the idea of creating a continuous sound from beginning to end on the variation of one note. The note we chose was *d* because Gaspard, at the time, was rehearsing Symphony No. 5 by Shostakovich where his fourth string was tuned down to a *d*. We decided, to avoid regularly detuning his fourth string, that we would build the piece around it. The general arc and direction of the piece was that the note *d* would travel from a high to low on the instrument while simultaneously exploring its many variations. I asked myself how many ways could the double bass play this note on the instrument in a sustained manner. Simultaneously, but not strictly, the timbre of the note would go from clear to obscure. What are the different techniques and ways we can blur, bend, and manipulate the sound of this note as it travels across the bass. When I say across the bass, it is because we start on the first string and end on the fourth string, the impetus for the piece, where we have our dynamic and conceptual climax. The addition of voice came about as I was struggling to find ways to transition between some of the bow changes and techniques. The voice in this version has two main roles: as a 'sonic seam' to mask the transitions between the gestures on the double bass, and to 'widen' and blur the pitch of the bass by often holding, bending, or trilling notes a minor second above or below.

full version: 7m30s

I was commissioned by Véronique Lacroix to develop the miniature into a full-length piece to be performed at *Espace Hyperion* in Québec City as part of her ECM+ generation tour. Expanding on this piece came very naturally, as while Gaspard and I had initially worked on the miniature we were forcibly cutting out and condensing material that I had naturally wanted to expand on. Simply, by allowing each of the phrases in the bass to take their time to come to completion and with the addition of a more acoustically extreme, and theatrical, introduction and coda, the piece very naturally stretched and expanded into a full piece itself.

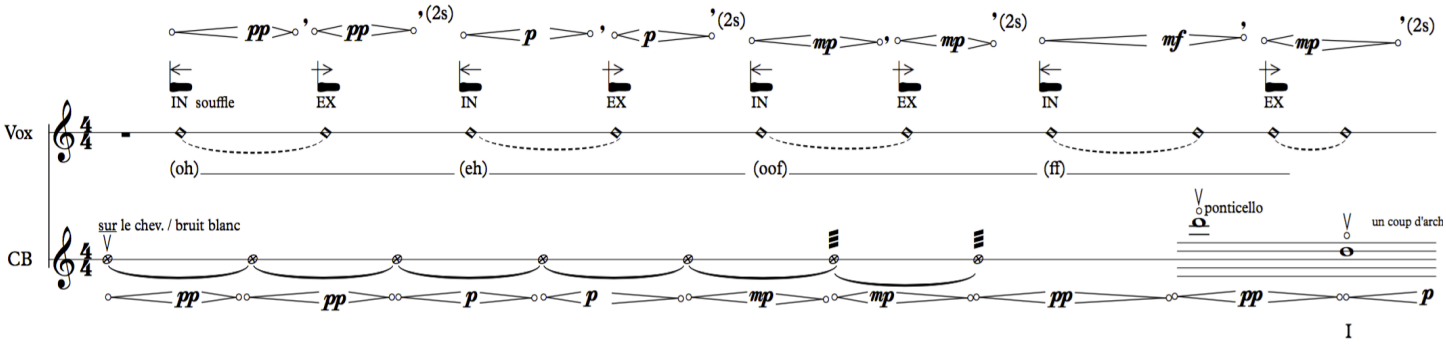
Form

Although there is no analyzed form on the score itself, the final version of the piece can be broken down into five small sections each demarcated by a marked shift in nuance and/or change in textural character. I will refer to those marked shifts as "transition points," (t.p.) below.

Section A: slow bowing and tremolo on the bridge of the double bass while audibly inhaling and exhaling, and changing the shape of the mouth.

t.p.: bass, followed by voice, both enter on their first pitch

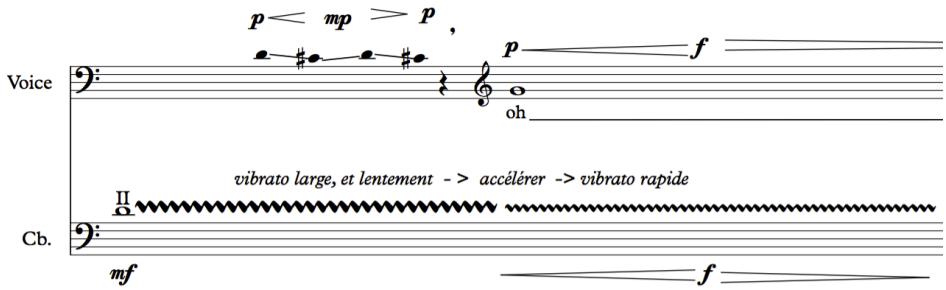
Figure 45: *sépulcre*, transition point 1, A to B



Section B: alternating waves of sound between the bass and voice as they commonly create rubs and tensions holding pitches at a distance of a semi-tone or ninth from each other.

t.p.: the voice jumps up to a fourth above.

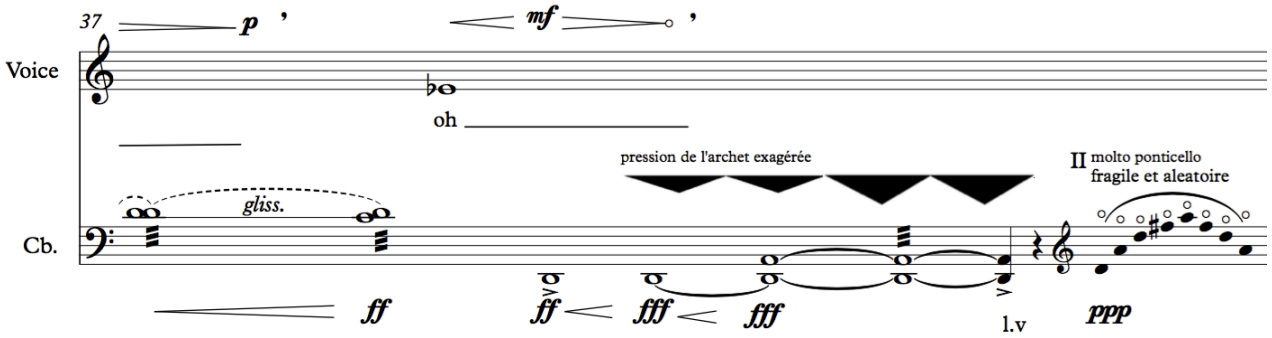
Figure 46: *sépulcre*, transition point 2, B to C



Section C: double bass and voice raise dynamic peaks to *forte* and the voice begins to distinguish it self in intervallic distance from the base note.

t.p : the climax of the piece, bow pressure on the open low *d* string, followed by momentary silence

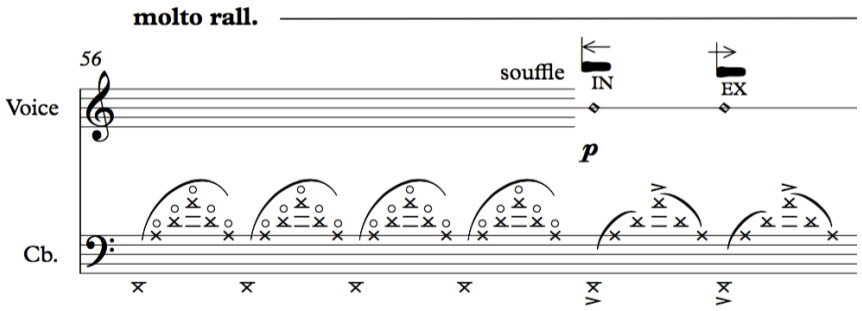
Figures 47: *sépulcre*, transition point 3, C to D



Section D: double bass almost inaudibly plays harmonic glissandos on the II string, and voice in a higher register imitates the sound of an ondes Martenot.

t.p : the gradually shift of the bariolage onto the bridge so that the pitch disappears.

Figure 48: *sépulcre*, transition point 4, D to A'



Section A': a return to breath techniques of the first section, while the bass continues the white noise bariolage, eventually slowing down to a stop.

Sonic masking between voice and bass

Working with sonic masking was not the initial idea I was exploring when I first wrote the miniature. However, after the first performance in the dark when we discovered that the use of voice, especially within a small intervallic distance from the bass, creates an ambiguous timbre and quality to the sound, I decided to explore this even further in the full version. The first instance is the matching of different qualities of breath sound with different levels of nuance and technique, (simple bowing or tremolo), on the bridge of the bass. We spent a fair amount of time working with controlling the amount of friction the lips and teeth provide to the air so that it closely matches the sound of him bowing on the bridge (see figure 45). We revisit the use of breath again at the end, but this time with much more rapid breathing. The very quiet rhythmic pulse of bariolage on the bridge interweaves its light and white noise texture into this pulse as if both voice and instrument are winding down together. The majority of the piece where pitch is played however uses simply dissonances of close intervals to create a blurring of the timbres of both instruments. The voice begins a minor second above. Momentarily it distinguishes itself by holding the third, before quickly returning down to unison and a minor second below with both voice and instrument oscillating slowly between *d* and *c#*. It is at this point, at the beginning of the Section C where the voice jumps up to a fourth where the two instruments separate. The entirety of Section C and D have the two instruments sitting distinctly apart from each other, until the return of breath at the end.

Measurement by dynamic form and breathe

I first imagined this piece as a sustained bowed sound for one minute slowly transforming. Therefore my first workshop with Daigle was focused on bowing speed, and pressure. I was curious what speed and what length of the bow was needed to properly execute each one of these techniques. The first version had an approximate time bracket, in seconds, over every gesture, with a proposed bow direction and amount of bow changes. We quickly found this restrictive and limited the musicality of the piece. Eventually, as each nuance was decided on for each 'phrase,' the length of time required to gradually reach each peak nuance became the form of time measurement. As almost every gesture in the bass crescendos up to a specified peak and often diminuendos back down again, we found this method of temporal measurement quite consistent from performance to performance. The voice is often offset by half the gesture of the bass: meaning it begins its crescendo in at the peak of the bass's note therefore masking the transition of the bass to the next bowing technique. The voice would also often diminuendo in counterpoint with the crescendo in of the next bass note. These overlapping dynamic arcs of singular held notes in the voice therefore became the second determinant in the temporal measurement of each gesture limited to Daigle's lung capacity at certain pitches and volumes.

f o r e s t f o r t h e t r e e s (2017)

11 strings (6 vn, 2va, 3vc, 1db)

6m20s

(program note)

forest for the trees *is a piece that primarily explores perception. I limited myself to a very basic, and tonal melody that is unveiled in each section in different registers, speeds, synchronously or out of phase, and voiced in solos, sections, or tutti. I take these motifs and move them around the ensemble, transforming the material itself in timbre, speed, and fragmentation, and also, by orchestrating textural voices around them either pronouncing or masking them. Because of these explorations, each individual spends time playing independently, and in synchronicity with their section and/or full ensemble. I'm interested in the accumulation and dispersion of sound, and how our ears organize and perceive it. As this hinges strongly on how the voices intermingle, the exaggeration of dynamics is the most important element of this piece. Each section/solo instrument is sometimes meant to poke out from the mass off sound, and disappear into it. To not be able to distinguish the forest for the trees, is an expression, often negative, signifying when one is lost in detail they lose the larger picture. However, my use of this expression in the title is meant positively as I am thoroughly fascinated in the idea of creating layers of sound where the listener can zoom in and out, or focus and un-focus around familiar/memorable melodic motifs, and larger more complicated mass movements in and around them.*

forest for the trees *est une pièce qui explore principalement la perception. Je me suis limitée à une mélodie très simple, tonale, qui se dévoile dans chaque section dans différents registres et à différentes vitesses, tantôt exprimée par des sections de l'ensemble, tantôt en tutti, ou encore traitée en décalage. Je prends un motif abordable et tonal puis le déplace à travers l'ensemble, le manipulant soit par des transformations de la matière elle-même – timbrales, de vitesse et fragmentations – soit en orchestrant des voix texturales qui entourent le motif principal pour le souligner ou le masquer. Par conséquent, chaque musicien passe un temps égal à jouer en synchronisme mélodique et rythmique avec sa section voire avec tout l'ensemble, ou à*

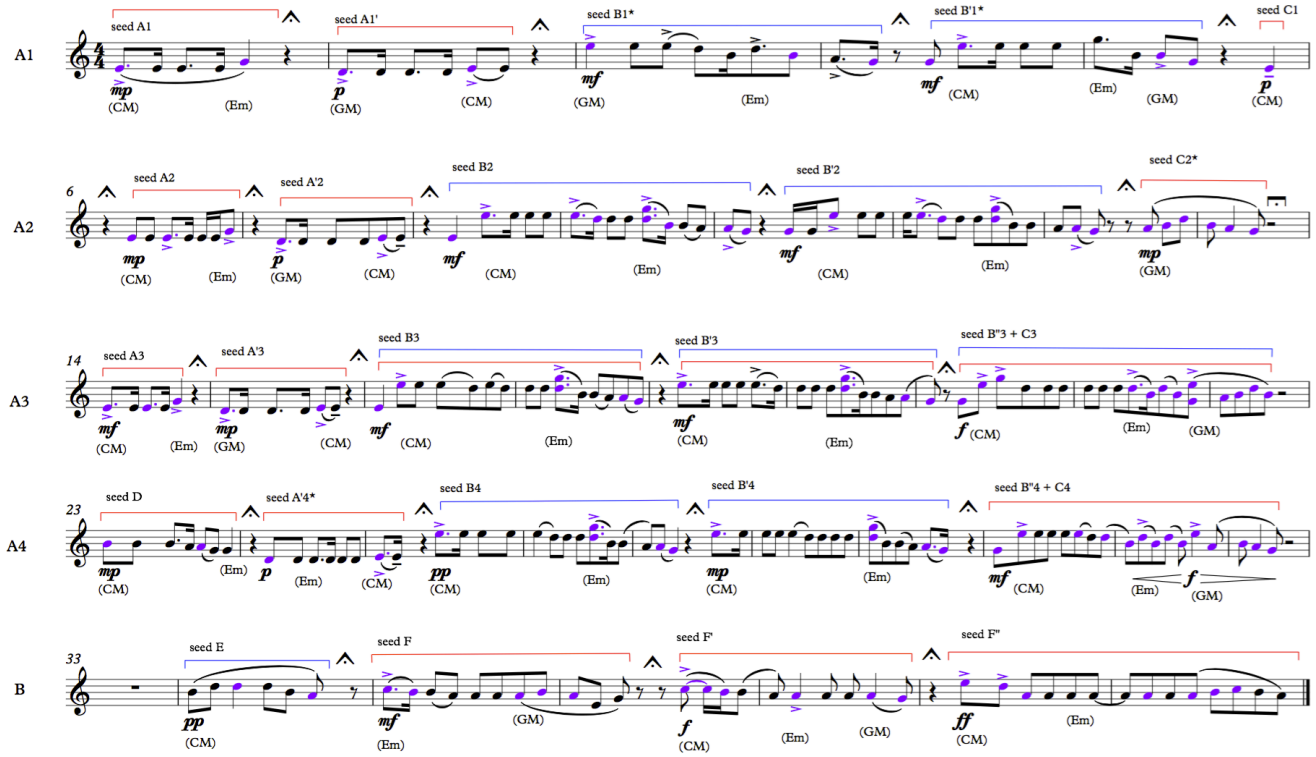
interpréter des passages en solo. Je m'intéresse à l'accumulation et à la dispersion du son et à la façon dont nos oreilles organisent et perçoivent celles-ci. Comme ces explorations dépendent fortement de la façon dont s'entremêlent les voix, l'exagération des nuances est l'élément le plus important de l'interprétation de cette pièce. Chaque section ou instrument soliste devra parfois se démarquer de la masse sonore, pour ensuite redisparaître dans l'ensemble. L'expression anglaise « miss the forest for the trees » est souvent négative, faisant allusion au fait de s'égarer dans le détail et de perdre de vue l'image globale. Ici, l'utilisation de l'expression se veut positive et s'inspire de mon profond intérêt pour la création de couches de son dans lesquelles l'auditeur peut naviguer, tels des zoom avant – zoom arrière : il peut choisir de se concentrer sur les figures mélodiques familières et reconnaissables, ou sur les mouvements plus larges et complexes qui s'entrelacent autour de ces motifs.

forest for the trees was written for the 5th edition of the competition *Accès Arkea* organized by *l'Ensemble Arkea* and its director and chef Dina Gilbert. I had been chosen as one of the four finalists to compose a piece for this ensemble, an 11-piece string ensemble consisting of 6 vn, 2va, 2vc, and 1db. As mentioned earlier, I decided to explore the blurring of genres by using digital and DJ techniques in my instrumental writing. As mentioned in the program notes, the title *forest for the trees* comes from the expression "to not be able to see the forest for the trees." My removal of the negation in the expression leaving simply "forest for the trees" was intentionally done to take away the either/or quality of this expression. Can we see the detail and the big picture simultaneously? This act, of zooming in and out on a composition is certainly an act that some composers engage in as they work on their form, and detail of a piece. I wanted to explore even more literally this process by superimposing two musical genres with their individual idiomatic tendencies. The 'forest' being the skeletal melody from a pop song, and the "trees" the textural landscapes I had been currently exploring in the contemporary music idiom. My aspiration was to embed these more 'emotional' and accessible melodies and harmonies within a more visceral and detailed soundscapes.

I have included the structural, melodic, and harmonic analysis of the pop song I used. I will continue to use it throughout this section in reference to excerpts from my composition itself to explain the various manipulations and techniques I used. In brief, Fig 48 below is the full melodic transcription of the pop song I used. It is an a cappella piece for treated voice. I chose

this song because I found the dynamic arc of the song very compelling and interesting. It is a brief song under two minutes that breaks down into five distinct sections: A1, A2, A3, A4, B. Each A section is broken down into five separate phrases that remain in almost every iteration except A4 whose first phrase is replaced by new material. Then, as a short but sweet tail ending, it moves in a new section completely and ends suspended on the V chord. Equally, if not more important, to why I chose this source material, is the fluctuating register and timbre of voice he uses, combined with extreme emotional nuance that punctuates the form of the piece. In the figure below I have organized each of the five distinct sections into their own system. I have also bracketed above and analyzed each phrase which I call 'seeds.' The notes colored purple are the pole notes of the melody, which I have filtered out to use as my melodic material. The colored bracketing represents the quality of voice I was referring to earlier. Red represents a more belly voice, in the singer's natural tenor range. The blue represents his more fragile falsetto. When there are two brackets it is because he has added treatment to his normal voice to accompany himself an octave+ above. Lastly, I included the general nuance of each phrase and the implied harmonic structure.

Figure 49: *f o r e s t t h e t r e e s,* analysis of pop song, form and melodic pole notes



Form

The form of my piece breaks down into the five parts as seen in the above figure 49. The skeletal melody of the pop song embedded in my piece works as the thematic material that structures the development of the musical material. For cross-referencing the section names correspond as follows:

A= A1 // **B**= A2 // **C**= A3 // **D**=A4 // **E**=A5

In addition I have added an introduction and coda that have no melodic link to the source pop song. The bowing on the bridge with interjected accented and staccato rhythmic figures in the string section, Figure 50, combined with the tapping of the belly in the double bass, Figure 51, represent the warm speaker hum and vinyl pop on a turn table in the beginning grooves before the sound starts. I wanted to allude to the ritual of putting on a record and the 'sonic introduction' that prepares us for the actual song.

Figure 50: *f o r e s t t h e t r e e s,* m 1-7, violin I section

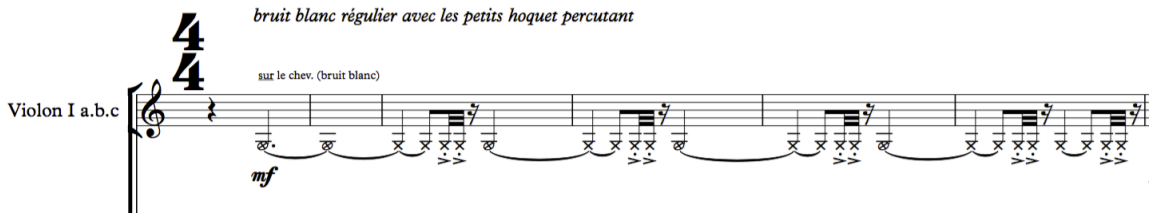
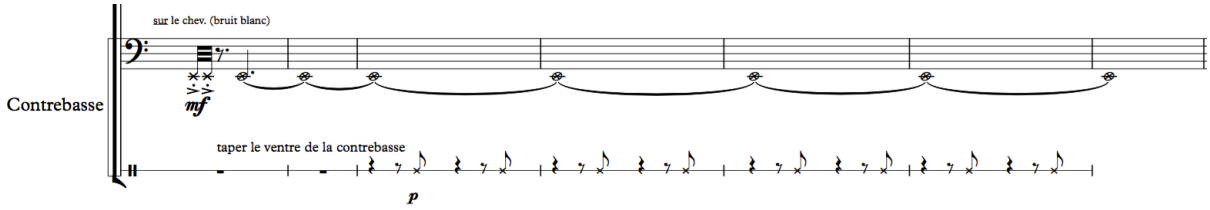


Figure 51: *forest for the trees,* m 1-7, double bass

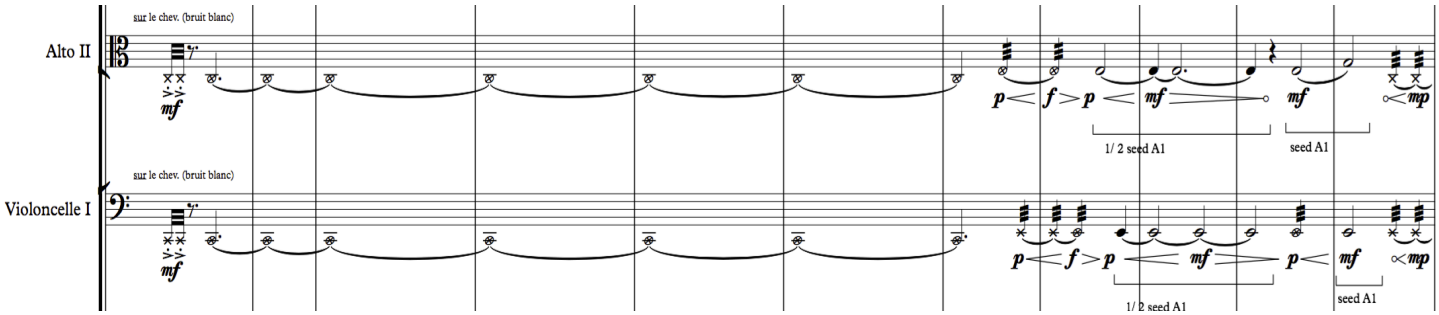


As I mentioned in the introduction, my appreciation of Kid Koala's scratch manipulations of *Moon River* was one of the main catalysts for this piece, so the connotation of a record player spinning had added importance. To be clear, this piece is not a direct study of scratch artist

techniques such as back/forward scratch, dropping, pullback and release, looping, and rewinding, to name few. However, in researching ideas on how to manipulate these melodies, I did watch many 'scratch' tutorials to visually understand and be inspired by the basic concepts and techniques applied. You will see as I give examples in the figures below some parallels with common 'scratch' techniques.

Integration and manipulation of melodic seeds

Figure 52: *forest for the trees*, m.1-11, alto and cello



The figure above shows the appearance of the first melodic seed A1, presented in the viola and cello. As you'll see also the two skeletal notes, *e* to *g*, swell in from tremolo on the bridge. The two instruments unveil the *e*, and then disappear, only to reappear again to play the two-note fragment together. As the viola lifts to the *g*, the cello rests on the *e*, alluding to the tonic of the implied harmony of E minor. Take note, that all other instruments in this section, although continuing to swell in and out, are resting on the bridge and keeping this first melodic appearance still slightly 'masked.' The release of the first note, and then the reiteration followed by the second in seed A1, is mimicry of the release-pull-back-release technique in scratch where you drop the needle, let it play for moment, then lift, pull-back, and drop it again in the same spot often letting it go slightly longer.

Figures 53 and 54 include a combination of: the use of staggered and repeated presentation of fragmented melodic material, allusions to implied harmony, and glissandos between pole notes. In figure 53 we see use of seed B'1 beginning in the violin section, m.12. The *g* then jumps up

to the *e* and then glissandos down slowly to *b*, omitting the fourth pole note. The glissando replaces five non-pole notes in between the *e* and *g* that generally move downward towards it. Meanwhile, in figure 54 the cellos enter in on the tail end of seed B'1 resolving the suspended *b* from the violins down to the *g*, acting as a continuation of the violins above who have started the loop again. As the violas and cellos reiterate the tail of Seed B'1 a second time underneath, the double bass comes in with a three-note melody (*c*-*g*-*e*). These three notes are not from the skeletal melody but are the tonic notes of the implied harmonic progression, (CM-Em-GM) underneath Seed B'1. This marks the first reference to harmony in the piece. Lastly the pizzicato, in the violas, and cellos, punctuating the 3rd beat of measure 14 is the isolated seed C1.

Figure 53: *forest for the trees*, m. 12-18, violin 1

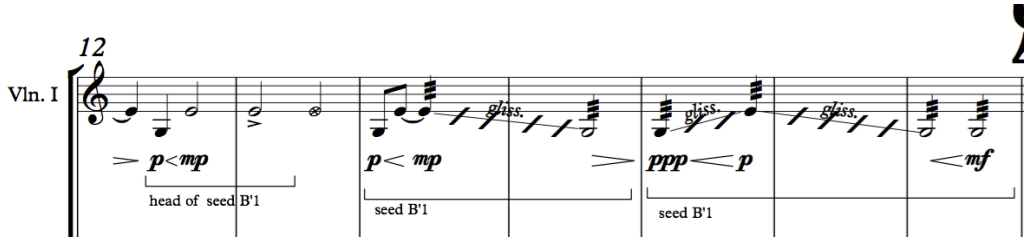


Figure 54: *forest for the trees*, m. 12-18, cello 2 and double bass

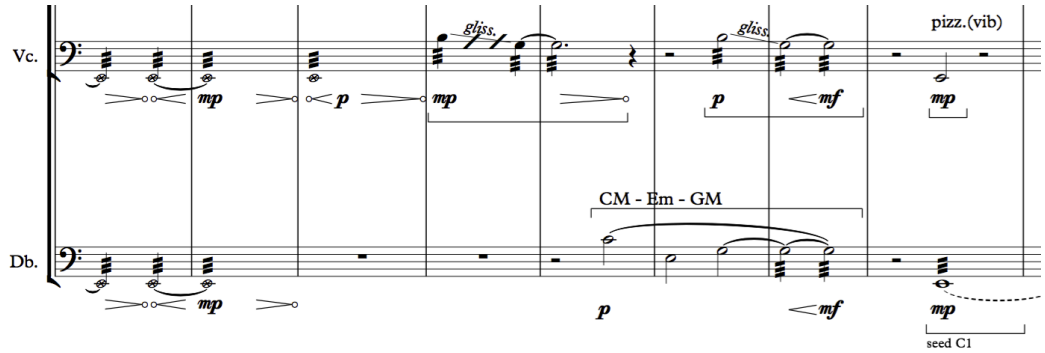


Figure 55 shows seed melody presented in a solo instrument and with extreme use of register. This precedes the second full ensemble excerpt, Figure 56, much denser in contrast. This figure gives examples of repetition and contraction of melodic seeds, and blurring of pitch with offset attacks and glissandos.

Figure 55: *forest for the* trees, m. 74-76, violin I

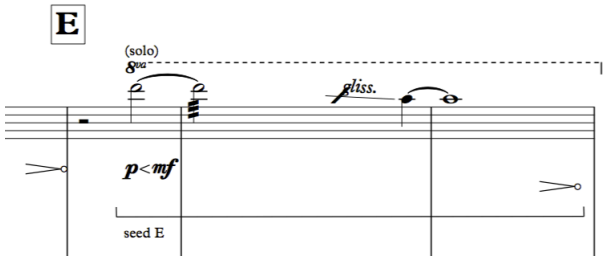


Figure 56: *forest for the trees*, m. 77-79

Violin section I

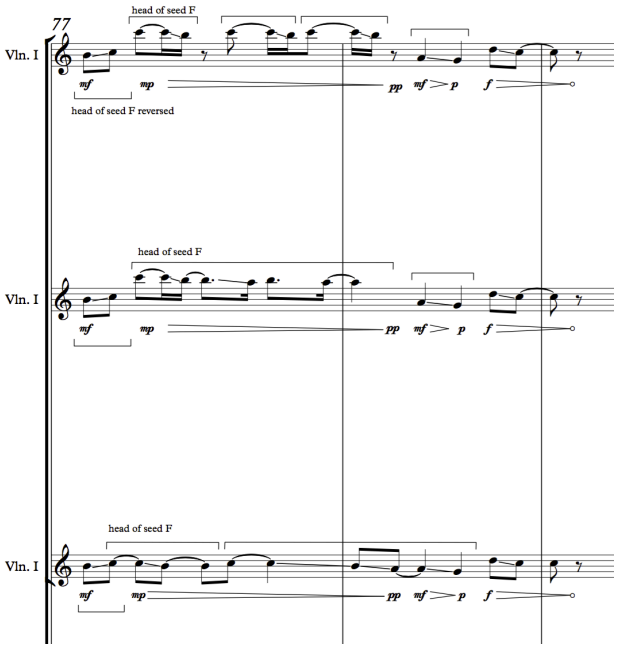
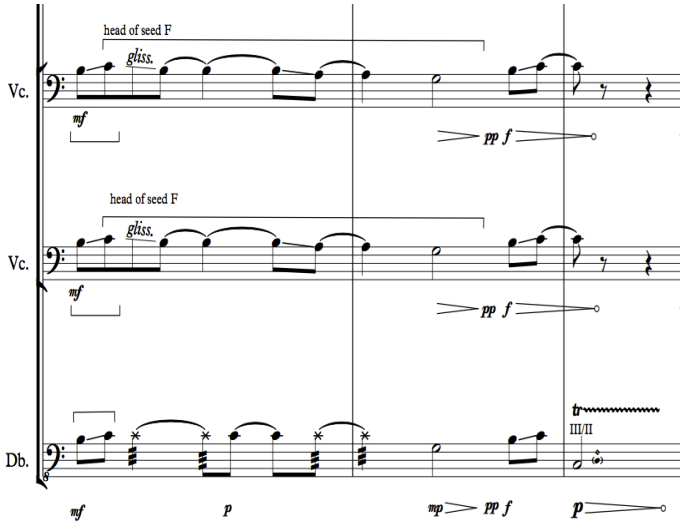


Figure 57: *forest for the trees*, m. 77-79

cellos and double bass



Measures 74-76, in figure 55, present, as a solo melody in violin one, in the extreme register, the two pole notes of seed E soaring above a wave of white noise tremolos. On the downbeat of measure 77, the violins I/II/III, the cellos, and the double bass land on a B and glissando up wards on the upbeat to C, which is the first melodic note of Seed F. This syncopated and glissando entrance is marked by its irregular appoggiatura of the 5th moving up to the 6th. This is, if you refer to Seed F, (Figure 49), the reverse of what happens in seed F. The repeated head of seed F motif, (*c-b*), is then quickly reiterated three times an octave above in violin I (m. 77).

The second Violin jumps up the octave as well but continues the developing the seed (*c*-*b*-*a*), The third violin stays an octave lower, again slightly offset, voicing a combination of the two. The two cellos, Figure 57, offset continuously with violin 2, also develop the seed (*c*-*b*-*a*). With these small motifs, fluctuating between synchronized and offset, among the full ensemble give the sensation of several different albums all playing the same song at the same time, but slightly out of synchronization.

forest for the trees was a very important turning point, not only in this series, but also in my compositions in general. The addition of these more accessible melodic melodies allowed me create a work that, while viscerally formally interesting, also had a lyrical and intimate quality that I found emotionally engaging.

let (in) (2017)

flute, 2 violins, viola, and cello
9m48s

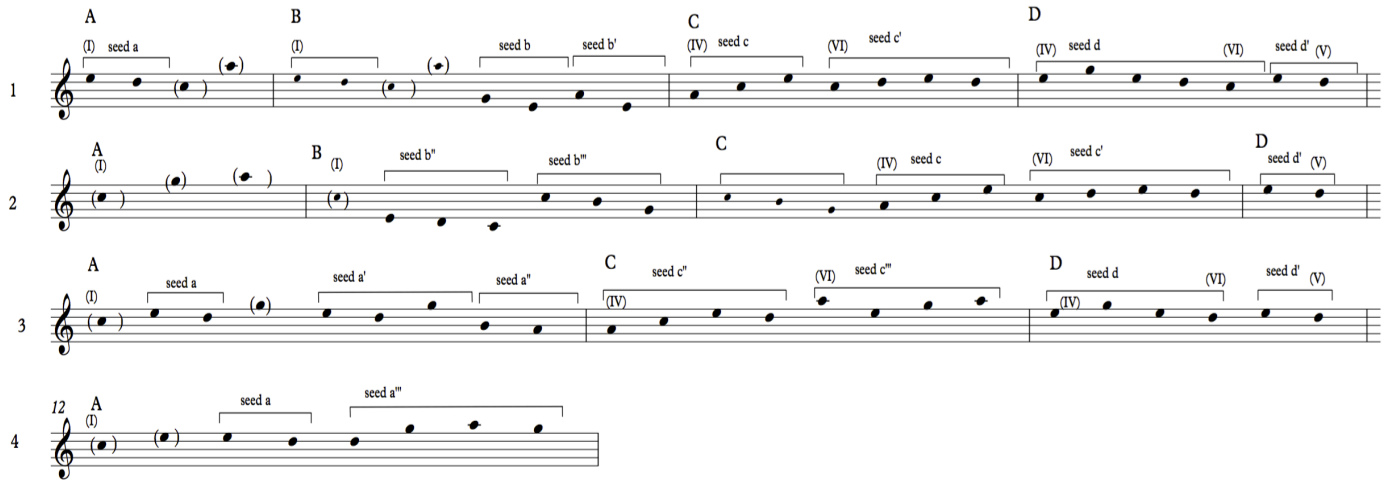
let (in) was composed during my master class studies with Maestro Salvatore Sciarrino at the Chigiana Academy in Siena Italy. The design of the master class was to begin and complete a composition, using the above instrumentation, during the period of our studies there. In the last week of the course, the musicians, Matteo Cesari (flute), and Quartetto Prometeo would work on each of our compositions daily allowing us to make small adjustments leading up to the final concert.

let(in) continues the same exploration of superposing, or embedding, popular melodic material into a more contemporary sonic world and texture. The principle difference, and challenge, with this piece is that it is for a quintet instead of a full ensemble. I was curious to see if these techniques of blurring, stretching, and staggering, would be as effective with just five voices. I wanted to see if these textural waves, obscurities of genre and sound masses I had explored in *f o r e s t f o r t h e t r e e s* would translate to a smaller chamber ensemble. Similar to the previous piece, I used the form and melodic fragments from a pop song as the structural starting point for my composition. I chose this particular pop song, which again is performed a cappella but with clear implied harmonies. My interest in using this song was, unlike the previous source, that its dynamic arc is much more static and subdued. It cycles through clear sections but with no distinct summit. The spacious, calm, and patient quality to this song fascinated me. I have a tendency as a composer to write pieces that gradually enter, crescendo to a big peak romantically, and then disappear. I wanted to use a pop song source with these static and calm qualities to break me out of my habitual formal patterns.

Analysis of a pop song: the melodic skeleton

I have included a very melodically ambiguous analysis of the piece below in figure 58. Unlike the analysis in *f o r e s t f o r t h e t r e e s*, I have not preserved the exact rhythms nor included the non-pole notes. The melodic 'seeds' transcribed in this figure represent the skeletal melody that I use and manipulate in this piece, whereas in my previous figure I had indicated these by color. The main methodological change between these two pieces was simply that I wanted to have the remnants of this pop structure even more obscured than before. By not including in my analysis all the details, I wanted my memory of the complete phrases to fade over the period of time I worked on the piece, leaving me simply with the global idiomatic skeleton of a pop song.

Figure 58: *let(in)*, analysis of pop song, form and melodic pole notes



Form

Each system represents one cycle of the letters. Letter A represents the static, less melodic based sections. The notes in parentheses are chord tones that are presented as 'pedal' notes in these sections, as they pulsate affirming the tonic harmony. The smaller notes represent melodic 'seeds' that have continued from the previous section. These melodic sections (A-B-C-D)

although almost perfectly cyclical in form, never return in an identical manner or duration. This fascinating combination of familiar repetition, but with remarkable variation of each sections duration served as an interesting starting point for the structure and phrasing of this piece. My intention was to play with the repetition of familiar melodic motivic material, but constantly presenting them in a different instrument, different register, and within a different texture. I use extreme dilation and contraction of the melody to blur its recognition. I also fragment the already fragmented melodic motifs to evoke parts of familiar themes, which are then interrupted.

Figure 59: *let(in)*, form table

A1: m. 1-15	B1: m. 16-23	C1: m. 24-31	D1: m. 32-34
A2: m. 35-41	B2: m. 42-50	C2: m. 51-60	D2: m. 61-64
A3: m. 65-81		C3: m. 82–90	D3: m. 91–95
A4: m. 96 – 111			

As I am trying to evoke the pop song quality of repetition and familiarity I will use popular music terms to speak about the functions of the different sections.

Transformation and Integration of melodic seeds

The A sections serve as the introductions that resurfaces in the song and 'set the stage' for the new cycle. They are static and neutral resting points that reoccur four times with slight variations, and sometimes carrying echoes of melodic seeds from other sections. In the two figures, 60 and 61, you will see excerpts from A1 and A4, which in global form of the piece serve also as the Introduction and Outro. The *e* and *d*, that were first presented as bowed wide vibrato harmonics pulsating in offset patterns, are now pizzicato and attacked in unison. The harmonic C that alternates between wide vibrato and timbral trill has now joined in with violin one and two on a pizzicato articulation, before playing a fragment of the a'' seed. Lastly, the harmonic *e* pizzicato and finger tap transforms to a pizzicato and col legno battuto.

Figure 60: ***let(in)*****, m. 1-4, A1**

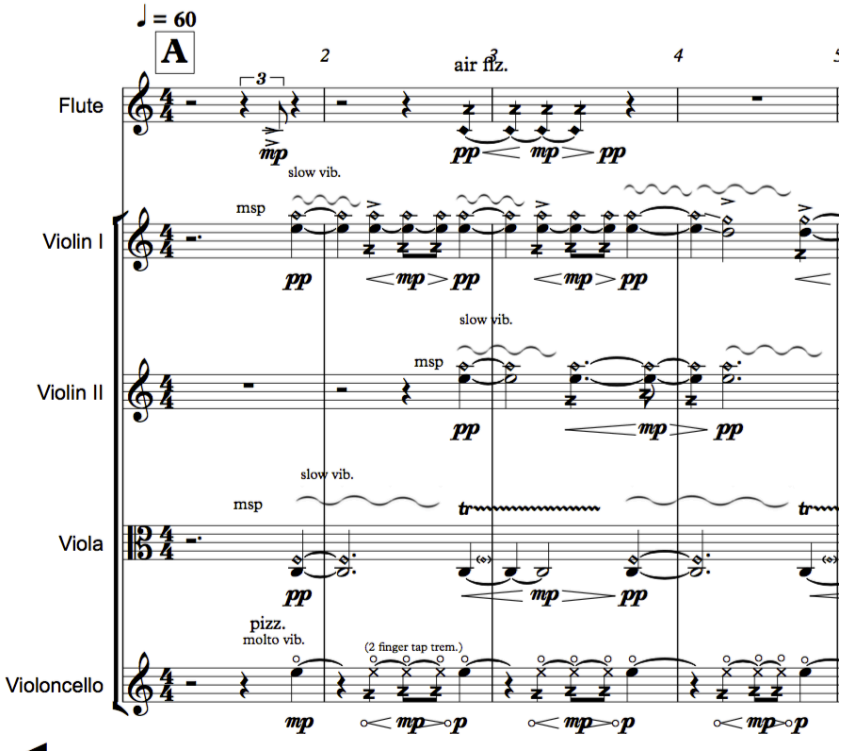
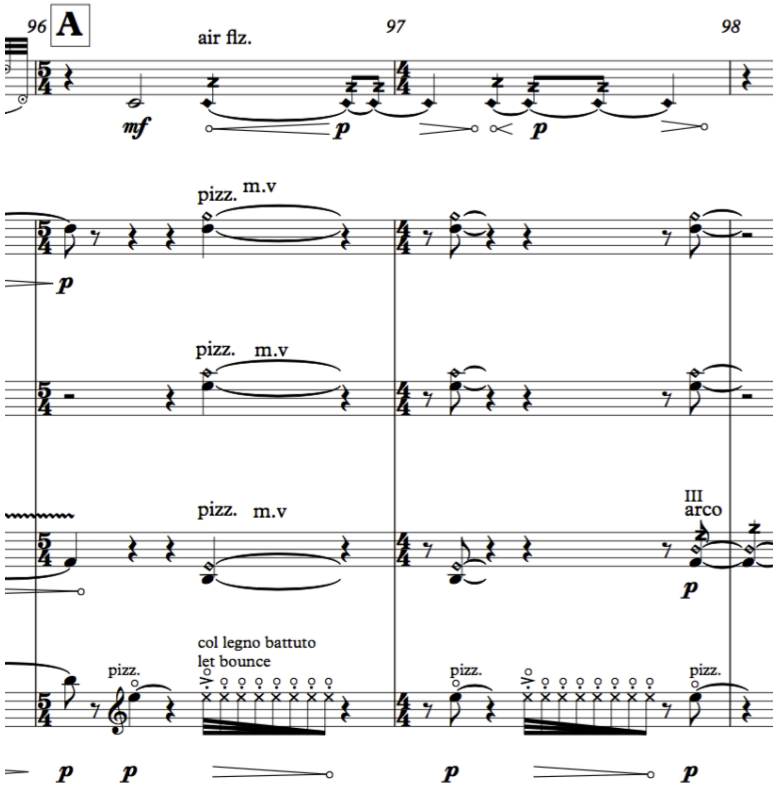


Figure 61: ***let(in)*****, m. 96-99, A4**



The B sections are the equivalent of a verse. They present familiar material, are quite memorable melodically, but tend to transform more throughout the piece. In this piece they are presented only two times, and the second time with a different 'response' melody. The familiar element they share is the descending third that is the general arc of the descending 3rd interval, seed b and seed b''(Fig. 58). In B1, seed b is presented in the violin alone descending on a slow glissando from the *g* to the *e* (Fig. 62). This glissando and dilation of these B section materials are what tie them together. The motif moves *e-d-c*, a minor third lower, it is reaffirmed on the violin in the same register (Fig 63). Here in B2 we have not just the violin, but the flute and viola playing this melodic motif. The flute, staggered by an eighth note, underlines this second reiteration an octave above, and the viola entering last starts the descent (*e-d*), before a quick glissando up to disappear underneath the others. Both B Sections, acting as continuations from the A maintain their stability grounded to the tonic note. In B1, a timbral trill in the alto represents the tonic. In B2, this pedal moves down to the cello.

Figure 62: *let(in)*, m. 16-18, B1

fl, vn1, vn2, va, vc

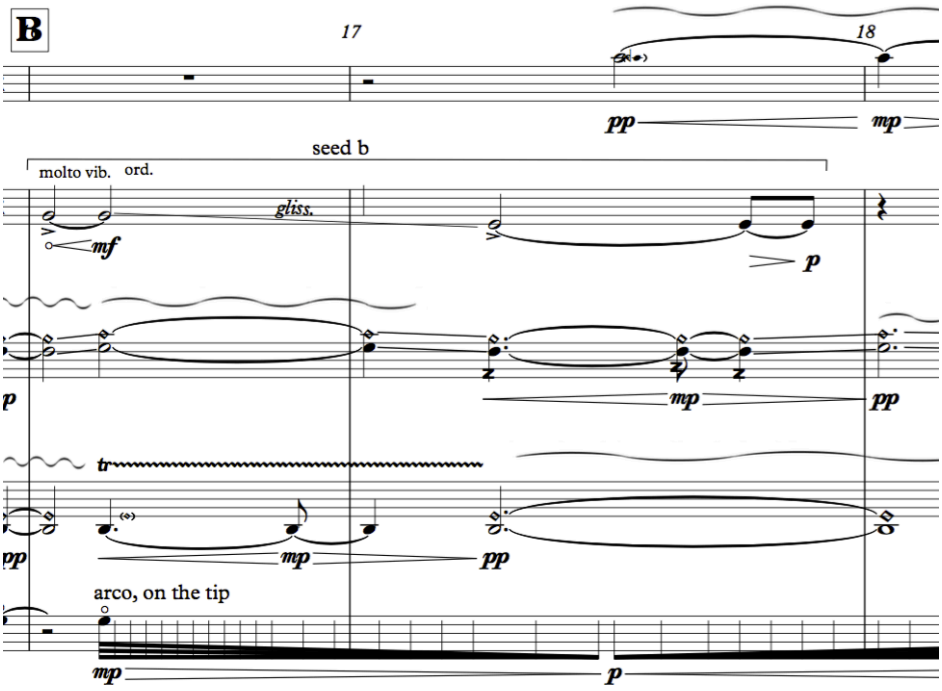
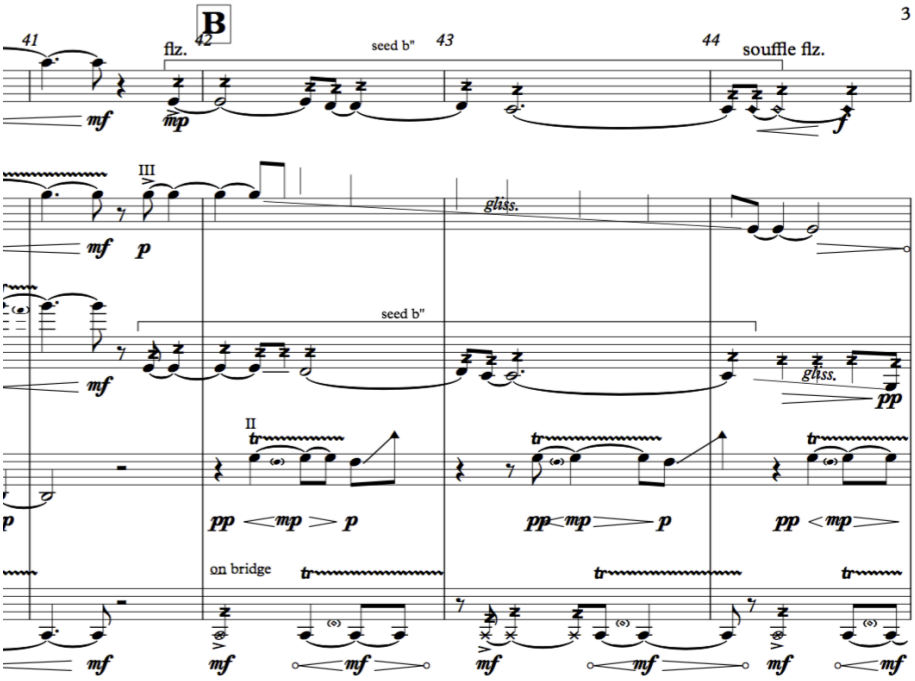


Figure 63: *let(in)*, m. 41-44, B2

fl, vn1, vn2, va, vc



The C sections, represent, within the context of pop form, as the pre-chorus. They are highly recognizable and in their triadic ascent tend to signal a build up in energy. Seed c, occurs in all 3 cycles, with the small transformation of the added note 'd' in the third (seed c''). Each of these ascending triads is followed by a response melody, (seed c' and seed c'''). Although the material goes through different transformations in each repetition, I maintain the call and response nature of this section. As you'll see in the three figures below (64, 65, 66), the cello introduces the ascending A minor triad and the flute and/or violin voice the response in C1 and C2. However in C3, although the cello begins the ascent, the motif is now voiced by the two violins as the cello moves and outlines the bass notes of the implied harmony in the section.

Figure 64: *let(in)*, m. 27-30, C1

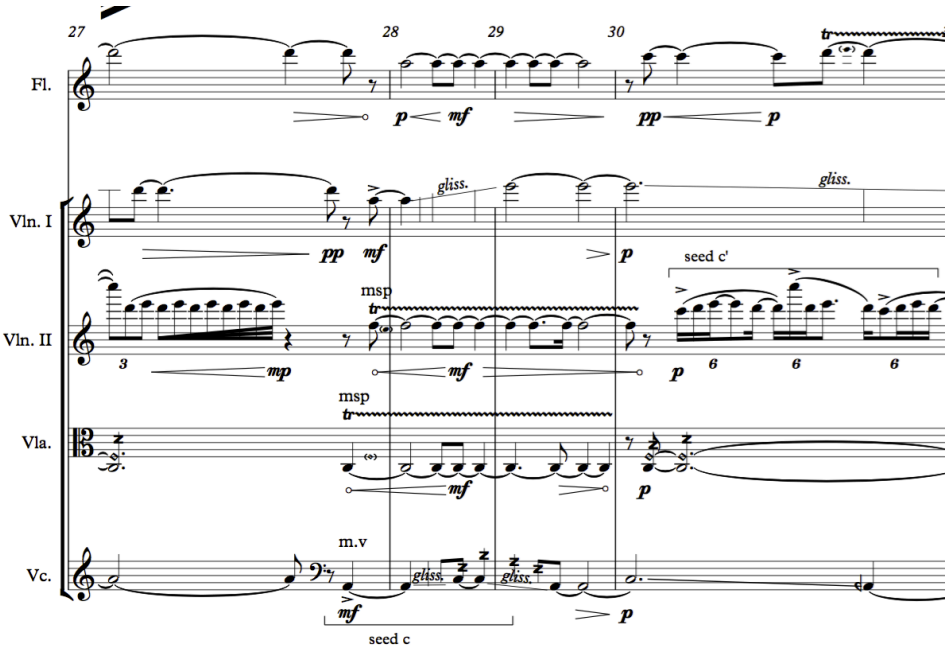


Figure 65: *let(in),* m. 51– 55, C2

fl, vn1, vn2, va, vc

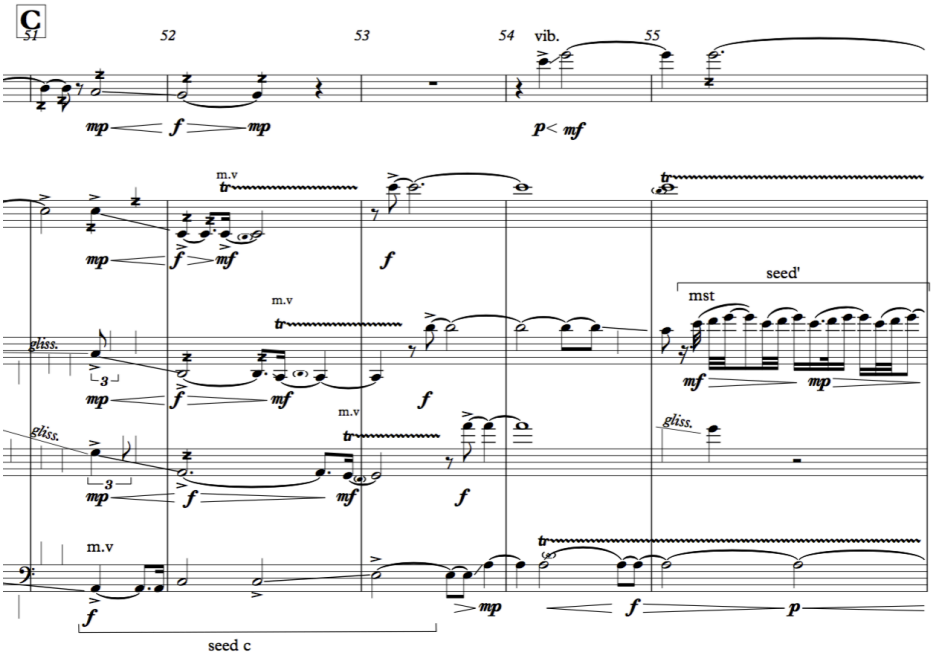
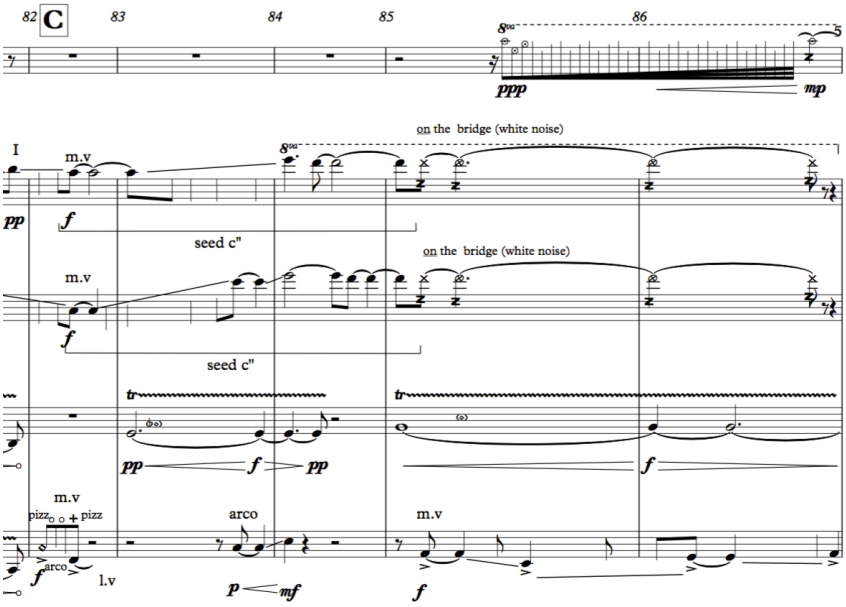


Figure 66: *let(in)* m. 83-86, C3

fl, vn1, vn2, va, vc



The D section is the brief but economical chorus. It comes directly out of the C sections, in mimicry of the pre-chorus to chorus relationship. It is dense and to the point, and yet is equally transformed between the repeats. As you'll see in figure 58, d', is simply the *e* to *d*, (5-6), descent overtop of the implied V chord. This is preceded in D1 and D2 by a longer motif (seed d). Figure 67 and 68 below show two different treatments and focuses of these two seeds (seed d and seed d'). Figure 67 shows seed d presented in the violin, viola, and cello, offset, and never synchronized. Directly afterwards, in the same manner they present seed d.' Figure 68 shows D2 where seed d is omitted and just the flute and cello present seed d' directly in three different iterations.

Figure 67: *let(in),* m. 32– 35, D
fl, vn1, vn2, va, vc

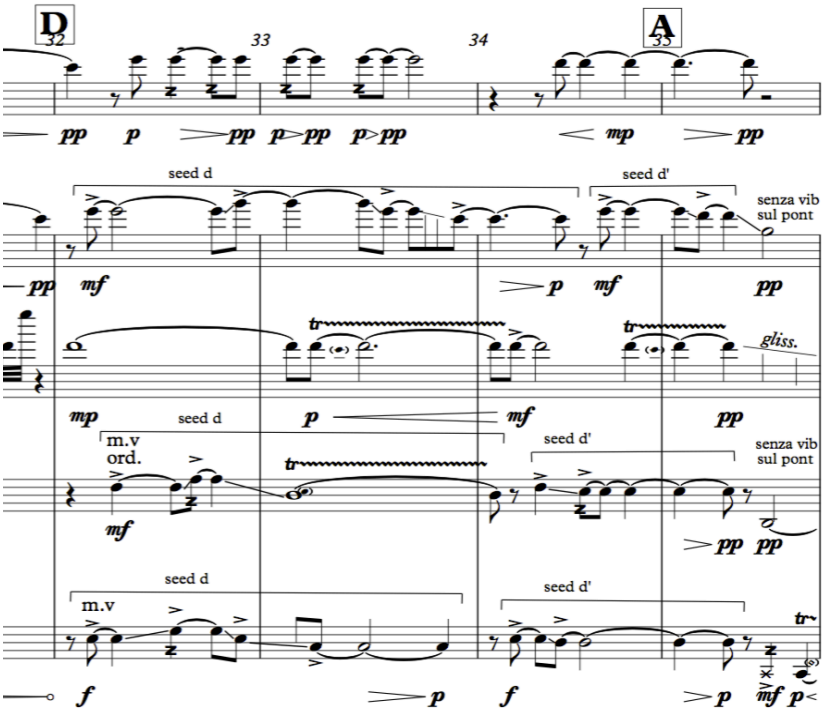
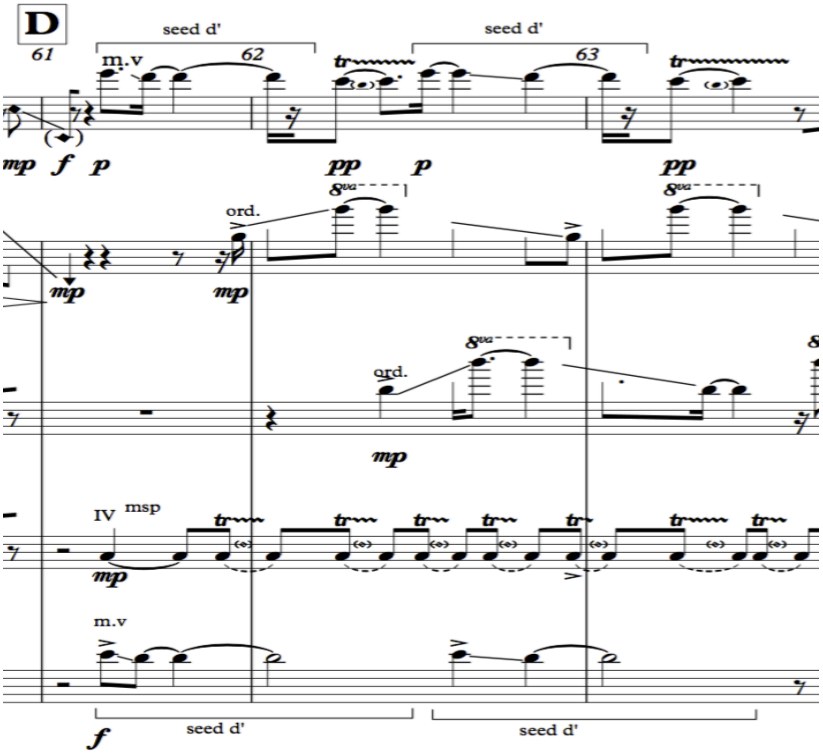


Figure 68: *let(in),* m. 61– 63, D
fl, vn1, vn2, va, vc



Harmonic Consideration

I worked with harmony in a few consistent ways in this piece. Firstly, and as made clear by my frequent staggered entrance style with the motifs, there is often no clear, vertical harmony. These 'blurring' of melodic seed material by voicing them in multiple voices in a polyphonic manner results in a tonal sound, but constantly ambiguous. This resulting heterophonic texture that is common in both *let (in)* and *forest for the* trees has allowed me to work with very tonal material, while maintaining a slightly more ambiguous harmonic structure. The intention behind the majority of the techniques I used to integrate these seeds was to introduce familiar tonal melodies in unfamiliar ways. However, as I am also interested in the gradation of this there are a couple other ways I worked with harmony in this piece. The A sections, which are the least melodic, are based more on the static tonic chord and pulsating quality of them. In its four repetitions the clarity of this I major chord goes through different levels. A1 omits the 5^{th} and A2 omits the 3^{rd} leaving both very open and ambiguous. A3 begins in a similar manner to A2, but then with the addition of seed a' we finally have the full triadic sound although never constant. A4 does the opposite of A3 by again beginning with just the third, but then through the melodic seeds played in the second half, introduce the 5^{th}. Lastly, within the other sections, that all have strongly implied harmony based on their melodic repetitive tendencies, I introduce triadic harmony by using rhythmically unstable notes and extreme stratification. Figure 67 above gives a good example of these two techniques combined. In this section the implied harmony is the G Major triad. The two violins are both constantly moving in glissandos in their very high stratospheric range. The violin I voices the tonic of the chord, and violin II, the 3^{rd}. Meanwhile the alto using underlines the 3^{rd} in pulsating timbral trills. The 5^{th} in this case, is intermittingly played in our 'hook,' (seed d'), in the cello and flute. This play on constant rhythmic instability and synchronization of very stable figures allows the blurriness to work, not just on a rhythmic level, but on a harmonic tonal one as well.

The *transparency* series began as an exploration of integrating voice in *redaction*, and *sépulcre*. However, the theme of masking evolved beyond just the relationship between voice and the instrumental ensemble, and branched towards the masking, and layering between two melodic and textural structures, which I am eager to continue to explore.

Conclusion

I recently returned from a summer master course program at the Accademia Musicale Chigiana in Siena Italy. During this intensive three-week compositional period and studies under Maestro Salvatore Sciarrino I took copious amounts of notes about subjects ranging from orchestration techniques and use of silence to fluctuations of weather, and how to be in one's body when creating a work. For me, one of the most remarkable things that was said, however simple, very particularly pertains to a lot of the reflections I have been having upon the completion of my Master's in Instrumental Composition. Sciarrino spoke with us as a group about changes we make in our compositions, and how to reflect upon finished works and move forward. I will paraphrase the sentiment as it was given in a conversational manner in a combination of languages.

If you don't make any change between compositions, then you are not developing or learning from what you just did. However, if you make too much change you are not learning either. To not reflect on previous works and continue developing certain elements means that the process you went through, and lessons you have learned are not carried forward.

As simple as this sentiment was, it meant a lot to me at that certain point nearing the end of my Master's studies. I had initially set out to explore experiences and concepts that fascinated and moved me. As the term 'experience' is vast and I wanted my compositions to be less vague in their explorations, I created my sub series of compositional explorations: *conversations, emergence, and transparencies*. This was an important and useful step for me, not only in limiting and concentrating my compositional process, but, for reasons of continuity, as mentioned above. I was, in a way, making a creative commitment to a curiosity and/or question that, for me, needed to be explored multiple times to receive proper reflection. In general, after having explored these three series, I have made few reflections on how it has shaped my compositional process and voice.

Although the three series overlapped, they did in general arrive in the order that they are presented in this paper. I began with *conversations* as self-imposed exercise to challenge my

heavy reliance on repetitive rhythmic elements, minimalist tendencies, and to deepen my palette of musical gestures with more textural and timbral nuance. If I question whether I achieved this within the pieces, the answer would be that I did. Of the three series, *conversations*, was certainly the most restrictive and exhaustive in terms of process. As the series progressed I allowed for heavier subjective interpretation and focused less on the transcription of the rhythmic form and patterns. For me, this demonstrates perfectly the importance of working through an idea with several pieces. The first piece *reconciliation* acted as a framework to pull me aggressively out of my comfort zone and habits. *Any port in the storm*, let me refine and develop the techniques even more. Most importantly by the time I began *falling's just like flying* I had begun incorporating naturally these patterns and gestures into my proper voice and therefore the process of 'translating' this experience became much less important. The 'translation' step served simply as a launching pad and framework to explore musical ideas more intuitively and freely.

Emergence, a series that began with the search for more virtuosic gestures quickly evolved into the exploration of group organization patterns in ensembles of individual simple gestures. In this situation, the extra-musical inspiration ended up shifting the focus of this series by the nature of its own properties. I had looked to bird flocking for their poetically vast and complicated gestures and ended up becoming fascinated with the inner mechanism of the auto-organization of simpler ones. *Emergence*, as I stated in its introduction, is a very vast term, and I purposefully left it as the series title as, quickly into my research, I realized I would want to continue examining this field during my doctoral studies. Whereas *conversations* was a temporal interpretation of emotional conversations and the musicality of language, *emergence* served as, not only a visual temporal experience of these bird formations, but as an influential concept in how I organized individual voices both rhythmically and harmonically. I have never been overly determinate and exacting about my harmonic global form in composition. In general, I have approached harmony from a more ambiguous and horizontal standpoint. In this series I was able to delve further into heterophonic and contrapuntal imitative writing using flocking behavior rules and patterns to better harness a variety of textures and densities. The first two pieces, *volée* and *les étourneaux*, as they were for large ensemble and orchestra, gave me the opportunity to apply these ideas utilizing each individual in an autonomous manner, and working with the

distinct sections to distinguish separate motifs/textures, and in this narrative, flocks. *Ere*, in its instrumental homogeneity, directed my focus towards the depth and timbre of each gesture itself to distinguish the individual voice. I could no longer shape and individualize the counterpoint between the different voices with the contrast of timbres and orchestration. Although, I wrote *ere* during the same period as *les étourneaux*, I place it third in the series because of this directional shift it created in my compositions. Although, categorized under a different series, *ere*, was a strong musical inspiration for a lot of the textures and rhythmic organization that I continued to explore in *forest for the tree* and *let(in)*, in the second half of my series *transparency*.

Although the starting point for the series *transparency* came from my interest in exploring sonic-masking with voice and text, upon reflection, it was simply just a starting point. Looking back on my foray into these four pieces, I don't necessarily see them as a unified series in the same way as the others. Aesthetically they have contrasting elements and focuses, but conceptually I was adjusting the way I imagined the form of a piece. I questioned the title of my dissertation the further I went into this third series. When I first wrote the word 'experience' in the title, I intended it to signify exclusively a temporal experience. What I mean is, to imagine an extra-musical event and then to re-interpret and re-produce that with sound. This third series that focuses on the process of writing in layers encouraged me to view the compositions as a completed static 'pictures' that I could add to, and subtract from. This series pushed the limits of my auditory imagination, and encouraged me to trust it, allowing for riskier, and more complex sound forms to enter my compositions.

Throughout all these pieces, the listener's experience has always remained important to me, and I always take it into consideration when writing. The act of composing, for me, is an act of communication and therefore needs to provide an accessible element in the piece for the listener to orient him/herself with. "Accessible" used in the context of new music often has as negative connotation as it conveys something that is easily understandable. However, to me, is very positive attribute even in the creation of new and contemporary music as I view it more as a point of entry into a piece that can bring you somewhere else. I realized my desire to maintain a link, however tenuous sometimes, with temporal extra-musical sources, was simply my way of structuring these creations within experiences that were familiar for me.

Moving forward with my compositions, I am eager to continue and deepen my exploration of both *emergence* and *transparencies*. I transition between my Master's and Doctoral studies, I am hoping to begin, with two major compositions in their beginning stages. As resident composer with *le Nouvel Ensemble Moderne* I have begun sketches for a piece that merges the vertical and research based timbral sounds I discovered in *redaction* with the horizontal and auto-organizational inspired movement that I explored in my *emergence* series. Parallel to that I will be working on my commissioned piece for *L'Ensemble Arkea* featuring soloist Elinor Frey on cello. In this work, I will explore scratch technique inspired manipulations, rewind, cut, fast-forward, loop, fade-in/out, and mix. This piece will fuse textural and heterophonic aspects I began exploring in my series *emergence* with my interest in fusing idiomatic elements from different musical genres. I aim to exert this influence even more vigorously by literally translating these manipulations directly into the meter and tempo itself. As I continue to articulate the direction for these two brand new compositions I realize that these three series that I had separated, have now fused. I always questioned the importance and influence of having an extra-musical narrative when composing. Sometimes it served to be a distraction and other times liberating. Throughout the duration of my Master's studies it served perfectly as a way to routinely reflect on habits, and weaknesses. Naturally as I developed new habits within these constructs, I began composing more intuitively, 'breaking rules,' and eventually breaking the narrative.

Bibliography

-Adler, Samuel (2002), *The Study of Orchestration*, W.W. Norton & Company, New York.

-Bergé, Pierre et al (1994), *Des rythmes au chaos,* Odile Jacob, Paris.

-Blanco S, Weitz S, Fournier R, Gautrais J, Jost C, Theraulaz G (2012), *Modeling Collective Animal Behaviour with a Cognitive Perspective: A Methodological Framework,* PLoS ONE 7(6): e38588. https://doi.org/10.1371/journal.pone.0038588

-Camazine et. al (2003), *Self-Organization in Biological Systems*, Princeton University Press, New Jersey.

-Bailey, Derek (1992), *Improvisation: Its Nature and Practice in Music*, Da Capo Press, Boston.

-Chanan, Michael (1995), *Repeated Takes: A Short History of Recording and its Effects on Music,* Verso, London.

-Cope, David (1997), *Techniques of the Contemporary Composer*, Schirmer Books, New York.

-Dunbar, Paul Laurence (1989), *Lyrics of the Hearthside*, Dodd, Mead and Company, New York.

-Gleick, James (1987), *Chaos: Making a New Science*, Penguin Books, New York

- Goldstein, Jeffrey, "Emergence as a Construct: History and Issues", *Research Gate*, November 19, 2016, http://www.tandfonline.com/doi/abs/10.1207/s15327000em0101_4, 49-27, August 15, 2016

-Hendy, David (2013), *Noise: A Human History of Sound and Listening*, HarperCollins Publishers, New York.

-Hubbard, Timothy. L, "Auditory Imagery: Empirical findings," *Psychological bulletin*, 2010, Vol. 136, No.2.

-Hurley, Susan and Chater, Nick, "Perspectives on Imitation: From Neuroscience to Social Science," *Imitation, Human Development, and Culture*, vol. 2, 2005.

-Johnson, Steven (2001), *Emergence*: *The Connected Lives of Ants, Brains, Cities, and Software*, Scribner, New York.

-Kostka, Stefan (2006), *Materials and Techniques of Twentieth-Century Music*, Pearson Prentice Hall, New Jersey.

-Lorenze, Edward N. (1993), *The Essence of Chaos,* University of Washington Press, Seattle.

-Mancini, Henry, *Moon River*, Kid Koala (turntabalist), Ninja Tune, XXEN018, 2010

-Ross, Alex (2007), *The Rest is Noise: Listening to the Twentieth Century*, Farrar, Straus and Giroux, New York.

-Rotman, Brian (2008), *Becoming Beside Ourselves: The Alphabet, Ghosts, and Distributed Human Being*, Duke University Press, Durham.

-Stone, Kurt (1980), *Music Notation in the Twentieth Century: A Practical Guidebook*, W.W Norton & Company, New York

-Taylor, Marc C. (2001), *The Moment of Complexity: Emerging Network Culture*, The University of Chicago Press, Chicago.

-Varela, Francisco J. (1992), *Ethical Know-How: Action, Wisdom, and Cognition*, Stanford University Press, California.

-Zwirn, Hervé P. (2007), *Les Systèmes complexes,* Odile Jacob, Paris

Documents Attached

Scores

conversations I*: *reconciliation (8x11, portrait)

conversations III: falling's just like flying (8x11, landscape)

volée (8x11, landscape)

les étourneaux (8x11, landscape)

ere (8x11, landscape)

redaction (8x11, portrait)

sépulcre (8x11, landscape)

f o r e s t f o r t h e t r e e s (8x11, portrait)

let(in) (8x11, landscape)

Audio

1.*conversations I*: *reconciliation*, performed by *Ensemble Wapiti* at La Sala Rossa [11/05/15]

2. *conversations III: falling's just like flying,* performed at *Le Conservatoire de musique du Québec* [01/06/16], in the context of LMCML 2016

3. *volée* read by le Nouvel Ensemble Moderne, conducted by Lorraine Vaillancourt in their student reading series [2016]

4. *les étourneaux*, performed by L'Orchestre de L'Université de Montréal, conducted by Nadege Frances Foofat [05/11/06]

5. *ere,* performed by students of l'Institute Superior d'Études de Toulouse as part of Forum Bypass and conducted by Clément Lanfranchi at L'Espace JOB. [05/11/16]

6. *redaction*, performed by students of the contemporary music workshop and directed by Véronique Lacroix at the Orford Music Academy [12/08/16]

7. *sépulcre*, performed by Gaspard Daigle at L'Église Saint-Viateur D'Outremont.

8.*f o r e s t f o r t h e t r e e s*, performed by *l'Ensemble Arkea* and conducted by Dina Gilbert at La Chapelle du Bon Pasteur [25/01/17]

9. *let(in)*, performed by Matteo Cesari and Quartetto Prometeo at The Accademia Musicale Chigiana in Siena Italy. [22/07/17)

conversation I: reconciliation

pour violon et piano

par

Keiko Devaux

commandée par ensemble Wapiti (2015)

conversation I : reconciliation (2015)
Keiko Devaux

Commande du duo Wapiti ; Geneviève Liboiron (violon) et Daniel Añez (piano)
Durée: 8 min 20s

Conversation I est une commande du duo *Wapiti* (Geneviève Liboiron, violon, Daniel Añez, piano). La contagion émotionnelle est une thématique que j'ai voulu explorer à travers une composition. Par contagion émotionnel, j'entends la tendance humaine d'imiter et de se synchroniser avec les gens autour de nous, en effet « d'attraper » les émotions des autres. Ces émotions peuvent être soit implicites, soit explicites et peuvent se manifester par les mots, la prosodie vocale, ou le langage corporel. Cette pièce emploie deux techniques : le contagion émotionnel définit la grande forme et la dynamique générale entre les deux musiciens, tandis que la prosodie vocale est utilisée comme point de départ pour la palette de sons gestuels qu'emploient ceux-ci. Comme les interactions émotives possibles entre deux personnages sont pratiquement sans limite, j'ai décidé de tirer mon inspiration d'une œuvre de cinéma. Lorsqu'on « brouille » délibérément sa vision, rendant flou tous les objets dans notre champ de vision, le paysage perd son information détaillée et devient une abstraction de formes, de couleurs et de lumière. La beauté ainsi révélée ne s'offre pas à celui qui regarde en fixant un objet précis. De la même façon, lors de mes recherches sur la prosodie émotionnelle j'ai regardé des films étrangers tournés dans des langues que je ne comprends pas, « brouillant » mon écoute afin de m'exposer au paysage sonore dépourvu de toute figure précise.

J'ai choisi une de mes scènes préférées en cinéma comme point de départ pour cette conversation. J'ai tracé la ligne de dialogue des deux personnages ainsi que d'autres sons vocaux significatifs : la respiration, les soupirs, grognements, rires et sanglots. J'ai ensuite superposé à cette représentation audible de la conversation, un tracé de la prosodie vocale. Enfin, j'ai ajouté mon interprétation de la dynamique émotionnelle de la conversation, tant explicite qu'implicite : les expressions faciales, les frémissements, les regards lourds de sens. Une attention particulière au contenu émotionnel plus subjectif tel que lu dans les subtilités du jeu des acteurs m'a permis de construire une composition contrapuntique plus fidèle à l'échange émotionnel que si je m'étais limité aux seuls échanges verbaux.

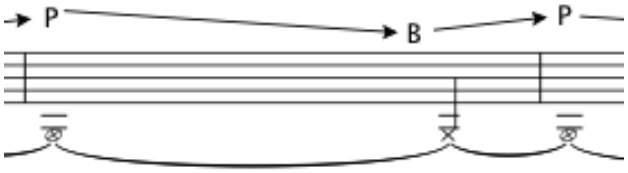
Au début de l'arc formel de la conversation, l'un des personnages (représenté par le piano) établit la direction émotionnelle pendant que l'autre (violon) compatit, résonne, assure. Ce fragment se succède par une montée abrupte d'énergie de la part du personnage du violon, s'affranchissant de la domination de son vis-à-vis et introduisant un virage radical du ton émotionnel.

Dans cette mise en musique d'un échange émotionnel, j'établis quelques conventions pour distinguer entre des mots réellement parlés, des sons de bouche non linguistiques ou des expressions faciales. Par exemple, je choisis une harmonique au piano pour signaler une aspiration rapide du comédien, tandis que des mots parlés sont représentés par une ligne mélodique au clavier. De façon générale, le dialogue parlé est symbolisé à travers les éléments rythmés de la pièce, les émotions étant indiqués par des sons longs et résonnants : utilisation de la pédale forte au piano, longues notes tenues aux deux instruments.

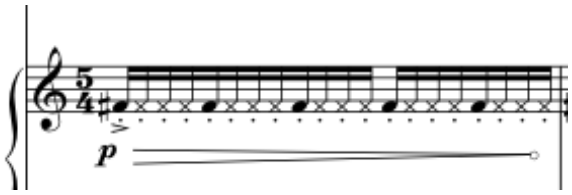
Je suis très intéressée à poursuivre mon exploration de ces thèmes en composant pour d'autres duos et même des formations plus larges. Je suis très séduite par la cadence organique que dicte la structure d'une conversation, et le fait de créer des motifs et gestes musicaux à partir de mon interprétation essentiellement subjective de l'émotion m'a poussée à sortir de mon esthétique compositionnelle précédente et d'introduire une grande part d'espace et de dynamique à mon écriture.

Performance Notes

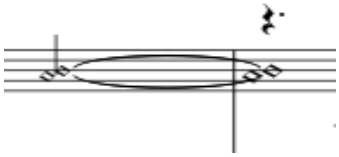
Violinist using the full length of the bow**,** and no pressure, alternates slowly between P (ponticello) towards B (on the bridge) creating the effect of 'white noise" periodically. (fig.1)



Pianist pulses on the notes so lightly that they regularly do not sound creating a ghost note (x note head) effect. Allow the note to sound only periodically, and irregularly. (fig.2)



Diamond shape notes in the piano part indicate a silent depression of the keys (fig.3)



Piano pedalling:

Slanted line upwards following regular pedal symbol indicates a slow release of the pedal (fig. 4a)

½ symbol = ½ depression of the pedal, use the natural weight of foot, no pressure (fig. 4b)

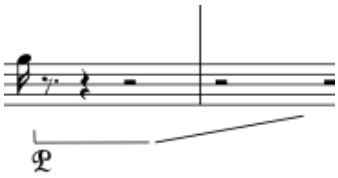


fig 4a

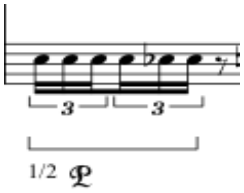
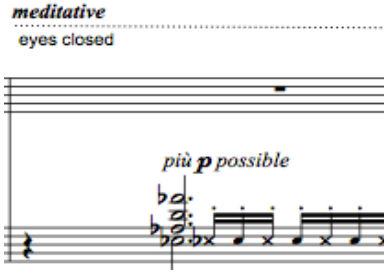
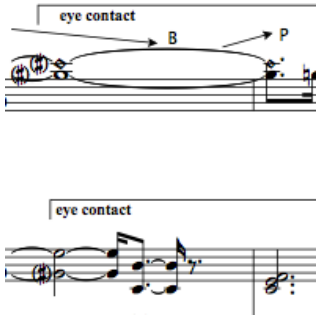


fig.4b

At one point in the piece the pianist is asked to keep eyes closed during a passage of music. (fig 5a)

At two points in the piece the performers are asked to intentionally make hold eye contact for passage of music. (fig.5b)





violin
piano

conversation I : reconciliation

keiko devaux

♩ = 60

tense

ponticello (P) / on the bridge (B)

P B P B P B

più ***p*** *possible (barely audible)*

tense

più ***p*** *possible (barely audible))*

p ***p***

4

P B P B

rit.

p ***p*** ***p***

delicate, warm

♩ = 40

7

sul tasto

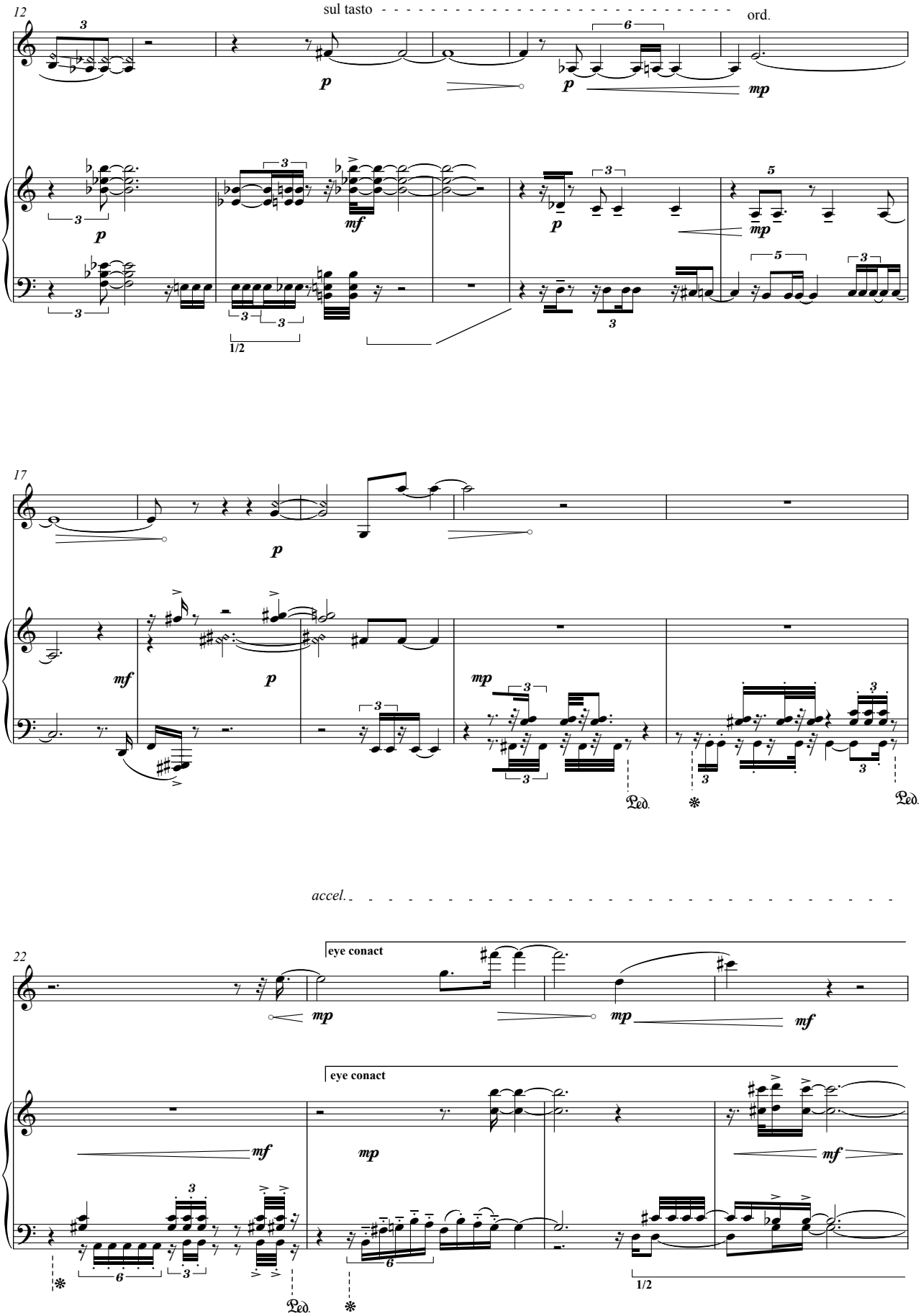
p ***p*** ***p***

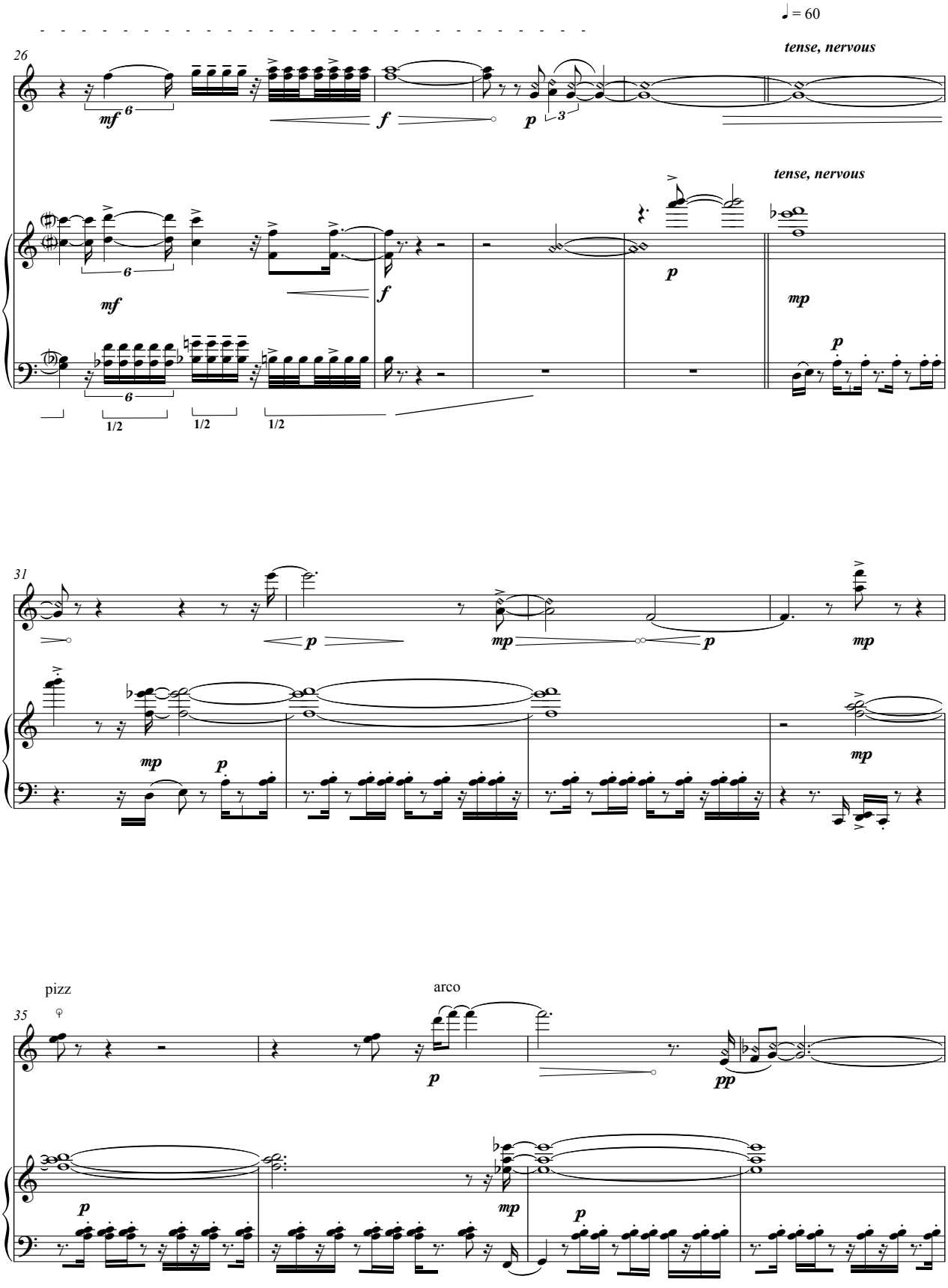
nervously

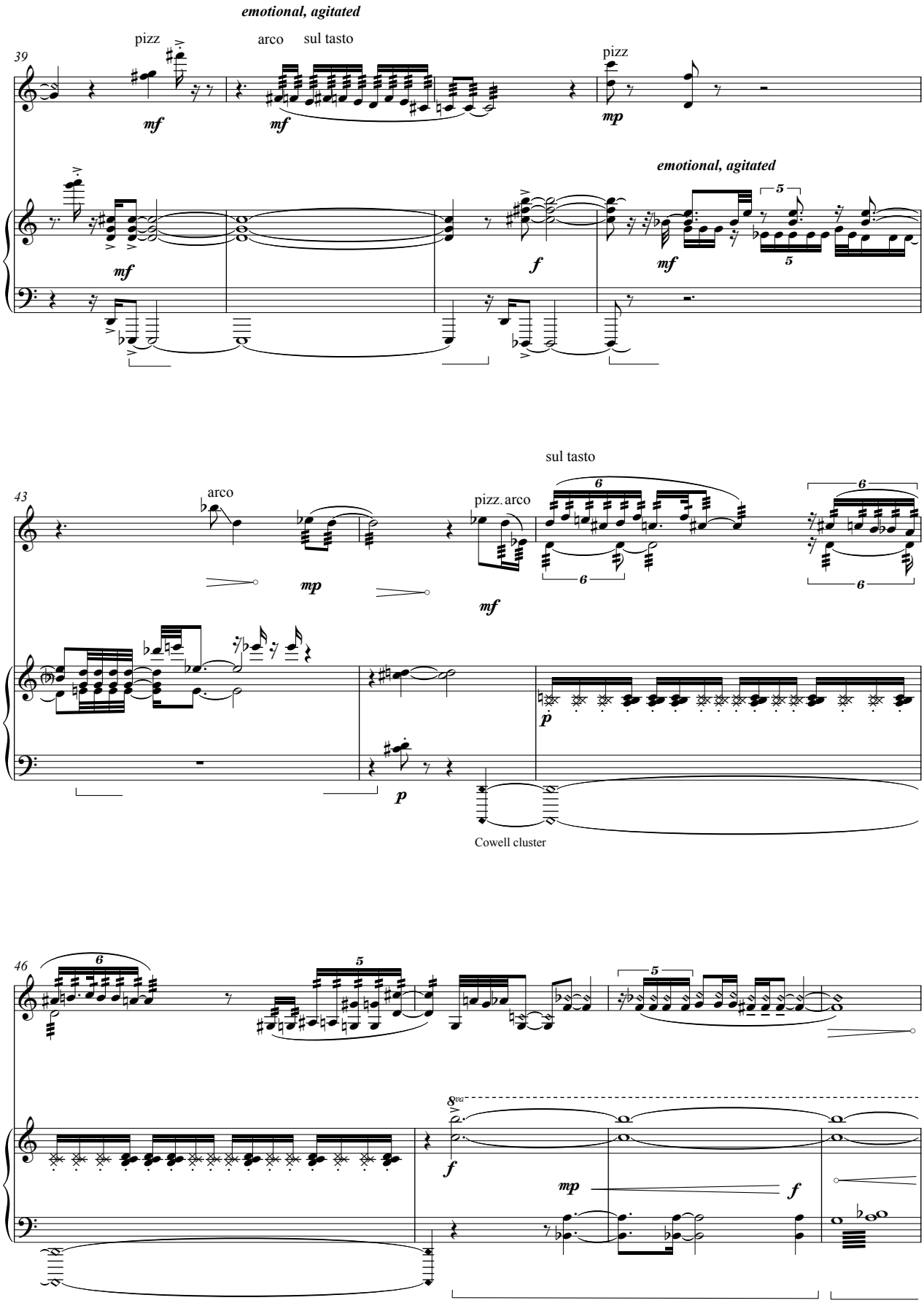
mp

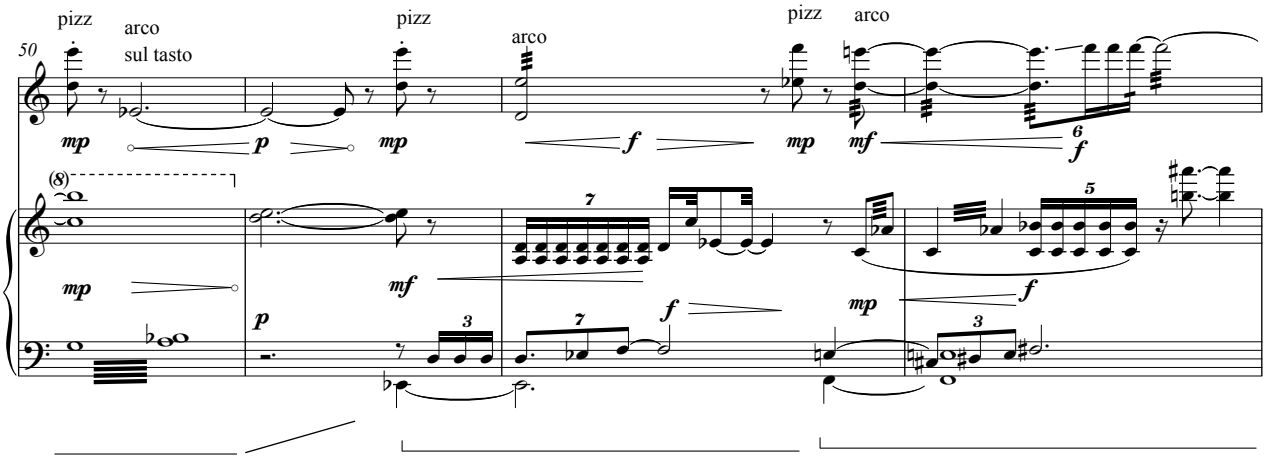
3 3 3 3 3

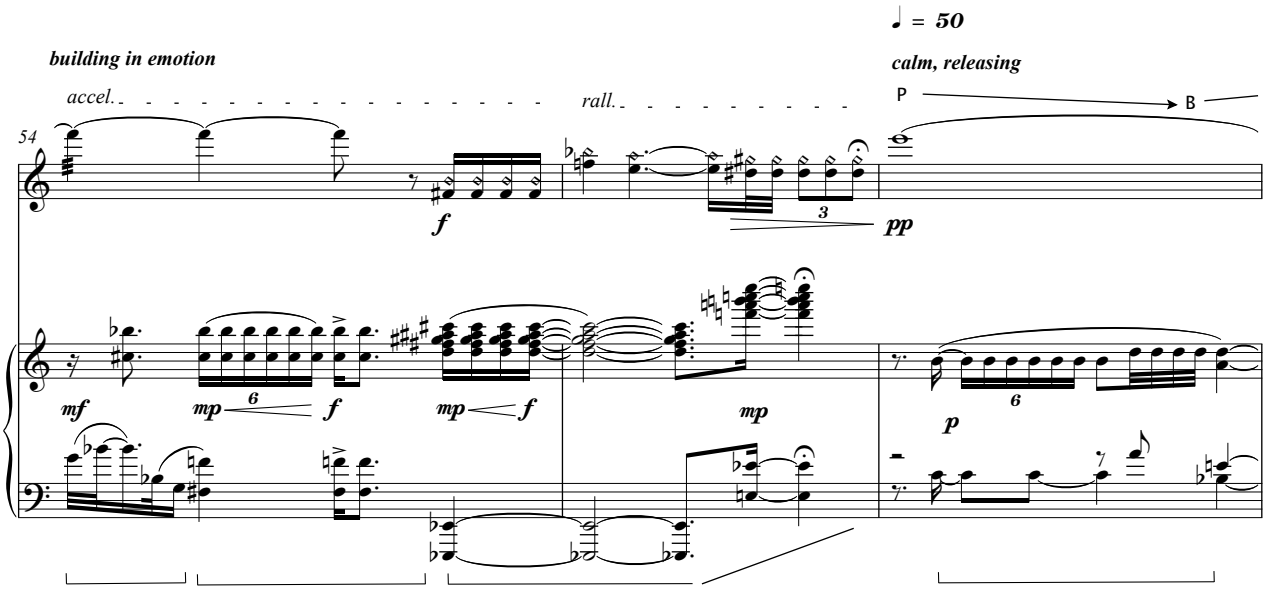
1/2

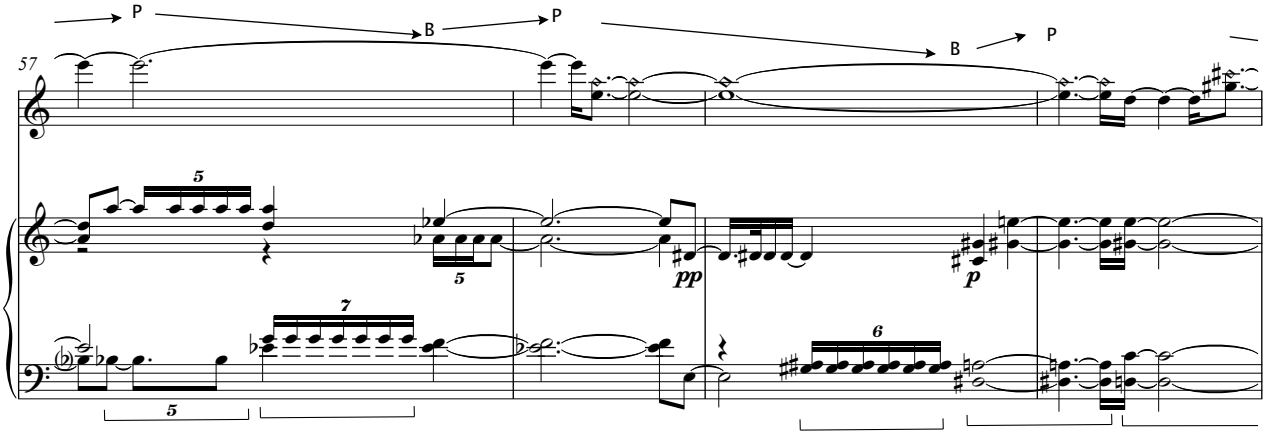

12
sul tasto
ord.
17
accel.
22
eye conact
eye conact
1/2
1/2

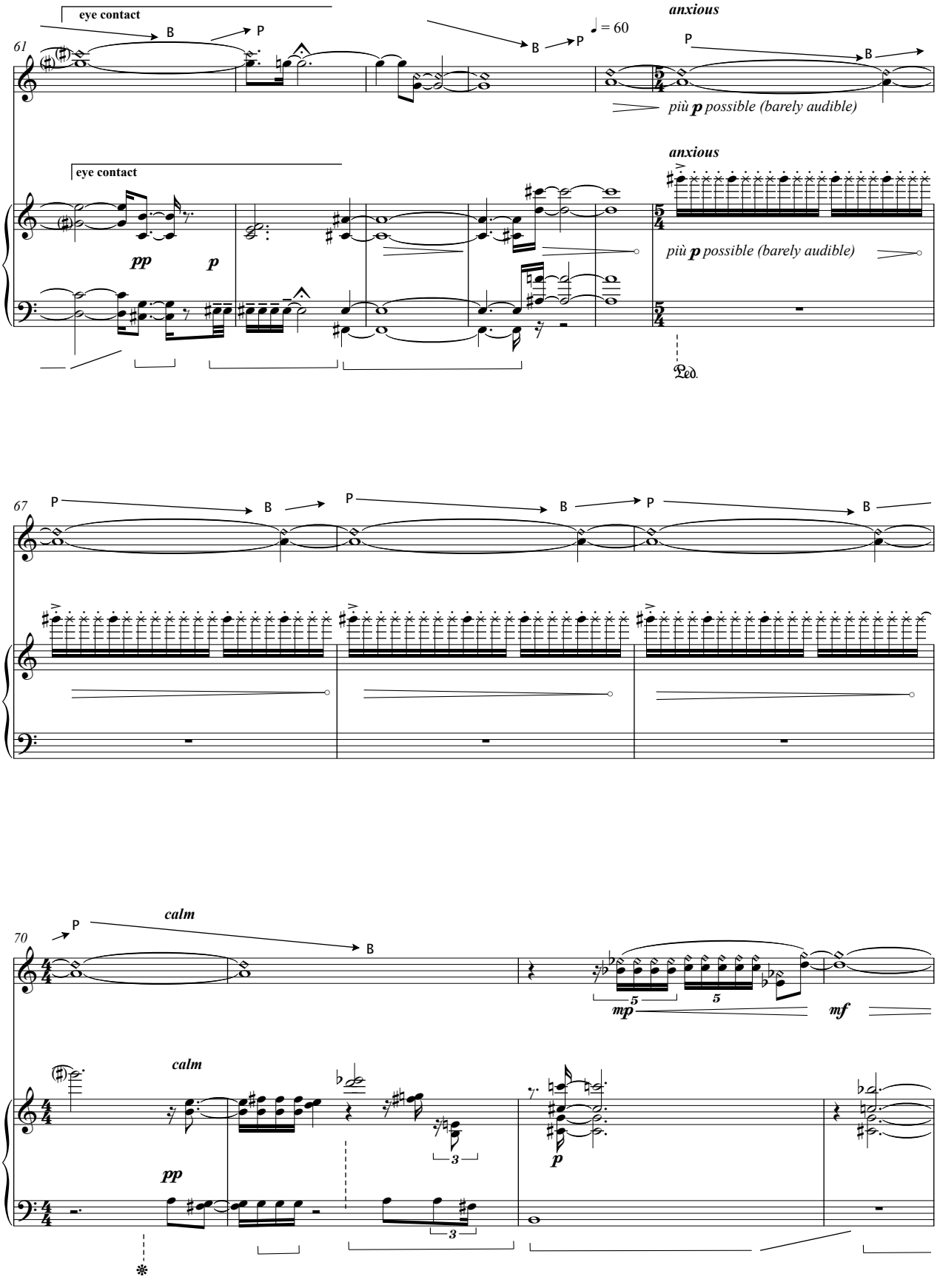

♩ = 60
26
tense, nervous
mf
f
p
3
6
1/2
tense, nervous
mp
31
mp
pizz
arco
35
pp

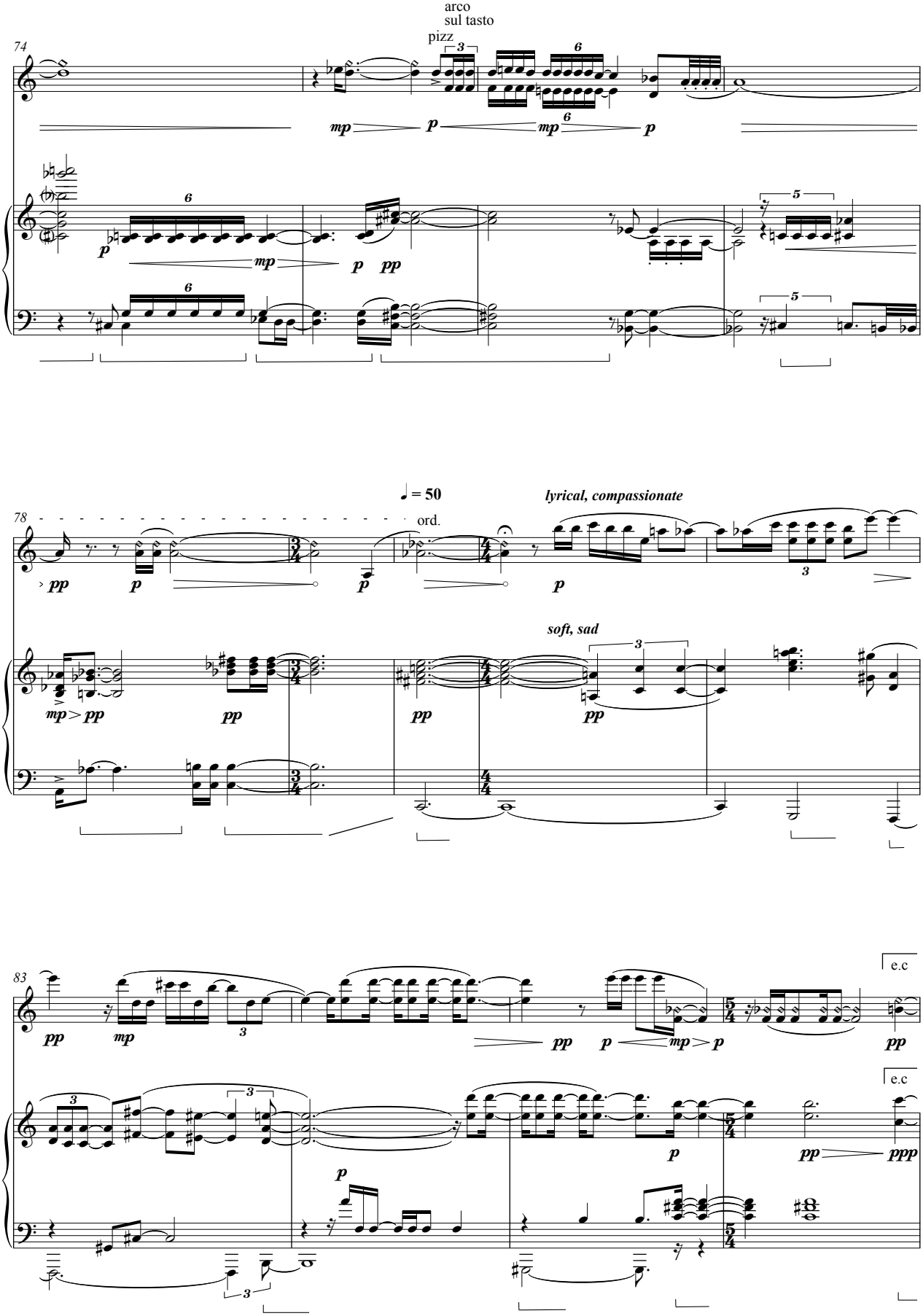

emotional, agitated
pizz
arco
sul tasto
39
mf
mf
pizz
mp
emotional, agitated
mf
f
mf
5
5
sul tasto
43
arco
mp
pizz. arco
mf
6
6
6
6
p
p
Cowell cluster
46
6
5
5
8va
f
mp
f

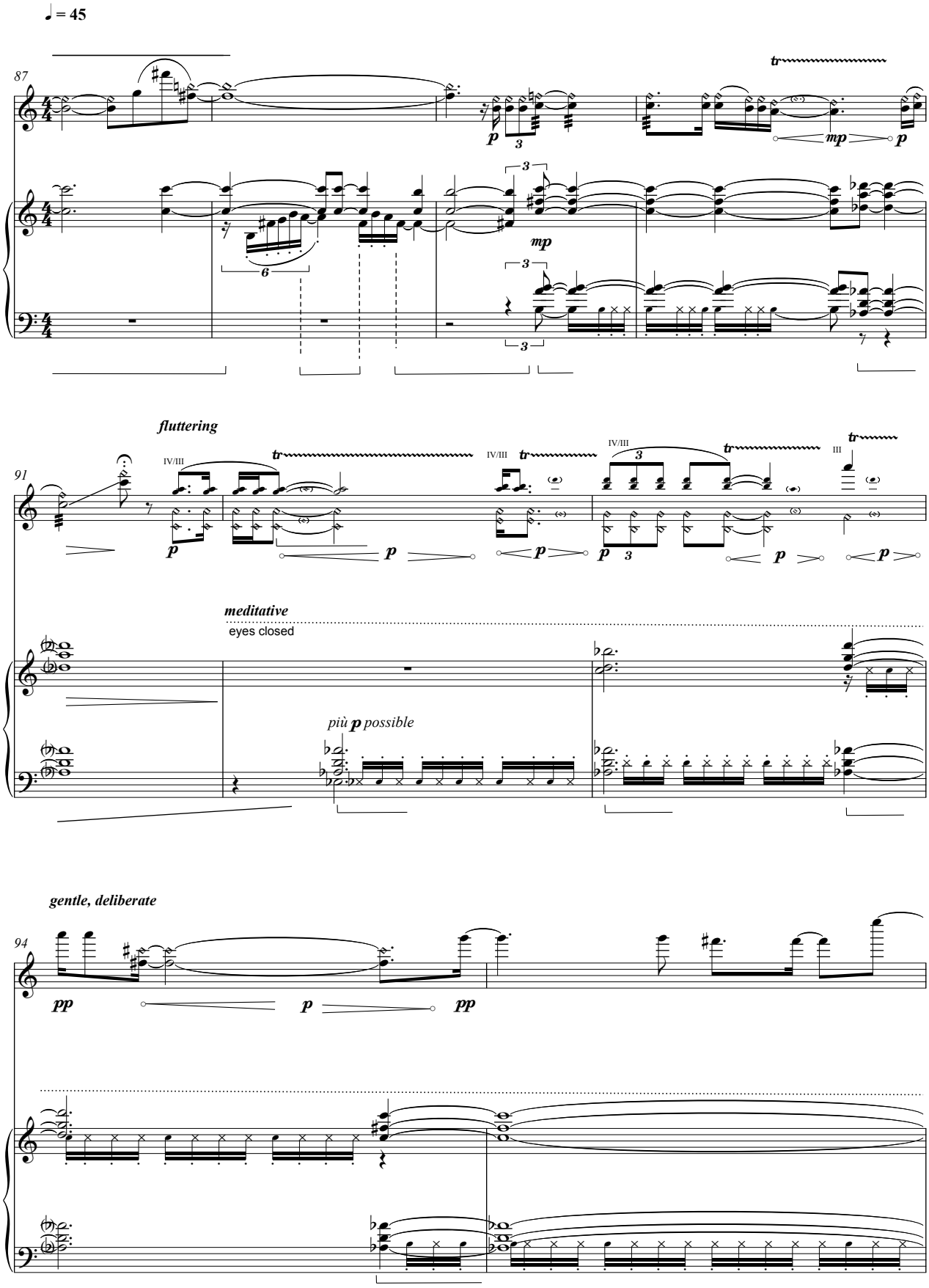

50
pizz
arco
sul tasto
pizz
arco
pizz
arco
mp
p
mp
f
mp
mf
f
(8)
mp
mf
p
f
mp
f

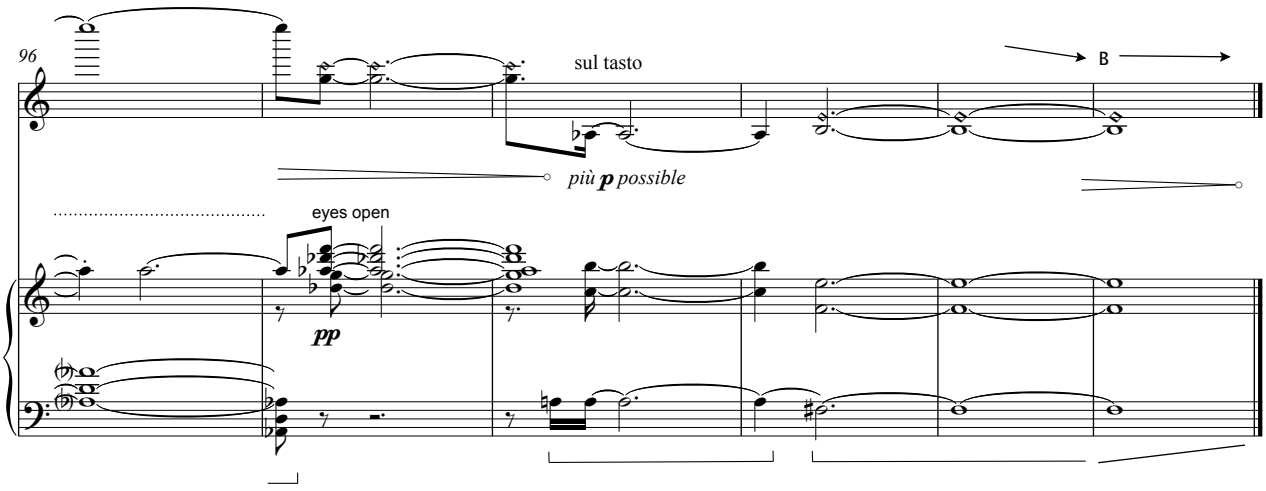

♩ = 50
building in emotion
calm, releasing
accel.
rall.
P
B
54
f
pp
mf
mp
f
mp
f
mp
p


P
B
P
B
P
57
pp
p


61
eye contact
B
P
B
P
♩ = 60
anxious
P
B
più p possible (barely audible)
eye contact
anxious
pp
p
più p possible (barely audible)
Ped.
67
P
B
P
B
P
B
70
calm
P
B
mp
mf
calm
pp
3
3
p


74
arco
sul tasto
pizz
78
♩ = 50
ord.
lyrical, compassionate
soft, sad
83
e.c
e.c


♩ = 45
87
tr
p
3
mp
p
3
mp
6
3
3
fluttering
91
IV/III
tr
IV/III
tr
IV/III
3
tr
III
tr
p
p
p
3
p
p
meditative
eyes closed
più p possible
gentle, deliberate
94
pp
p
pp

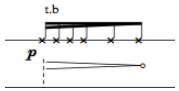

96
sul tasto
B
più p possible
eyes open
pp

falling’s just like flying

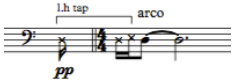
flute
tenor saxophone
cello
double bass

keiko devaux

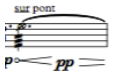
Strings



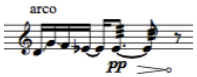
t.b = tap bell of instrument



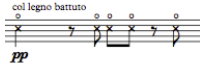
l.h tap = l.h tap string (*nuance is for result, not force)



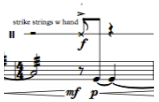
play <u>on</u> the bridge for a ‘white noise’ effect



slide between notes

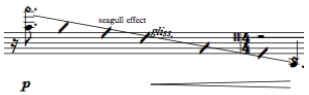


col legno battuto with harmonics



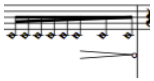
strike all 4 strings with the palm of your hand

T=tasto, P=pont
slide slowly, and irregularly between e + f
(creating unstable note)

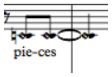


seagull effect: keep fingers same distance as sliding down

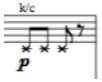
woodwinds



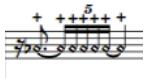
diamond note head = air tone



air tone + sing into instrument



k/c = key clicks

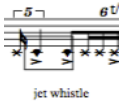


air tones + with key clicks

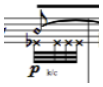
square note hard = 1/2 air, 1/2 tone

t/s = tongue slap
t/r = tongue ram

bend between notes



diamond note head = jet whistle



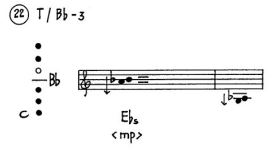
constant air tone (unpitched), with rhythmic key clicks (pitched)

air tone +key click trill

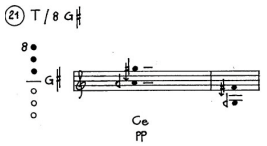
TENOR SAX MULTI PHONICS FINGERING

FLÛTE

T-M1

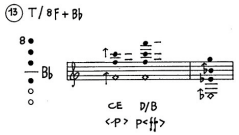


T-M2

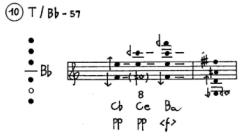


F-M1

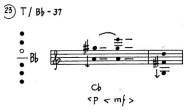
T-M3



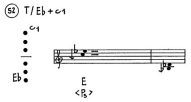
T-M4



T-M5



T-M6



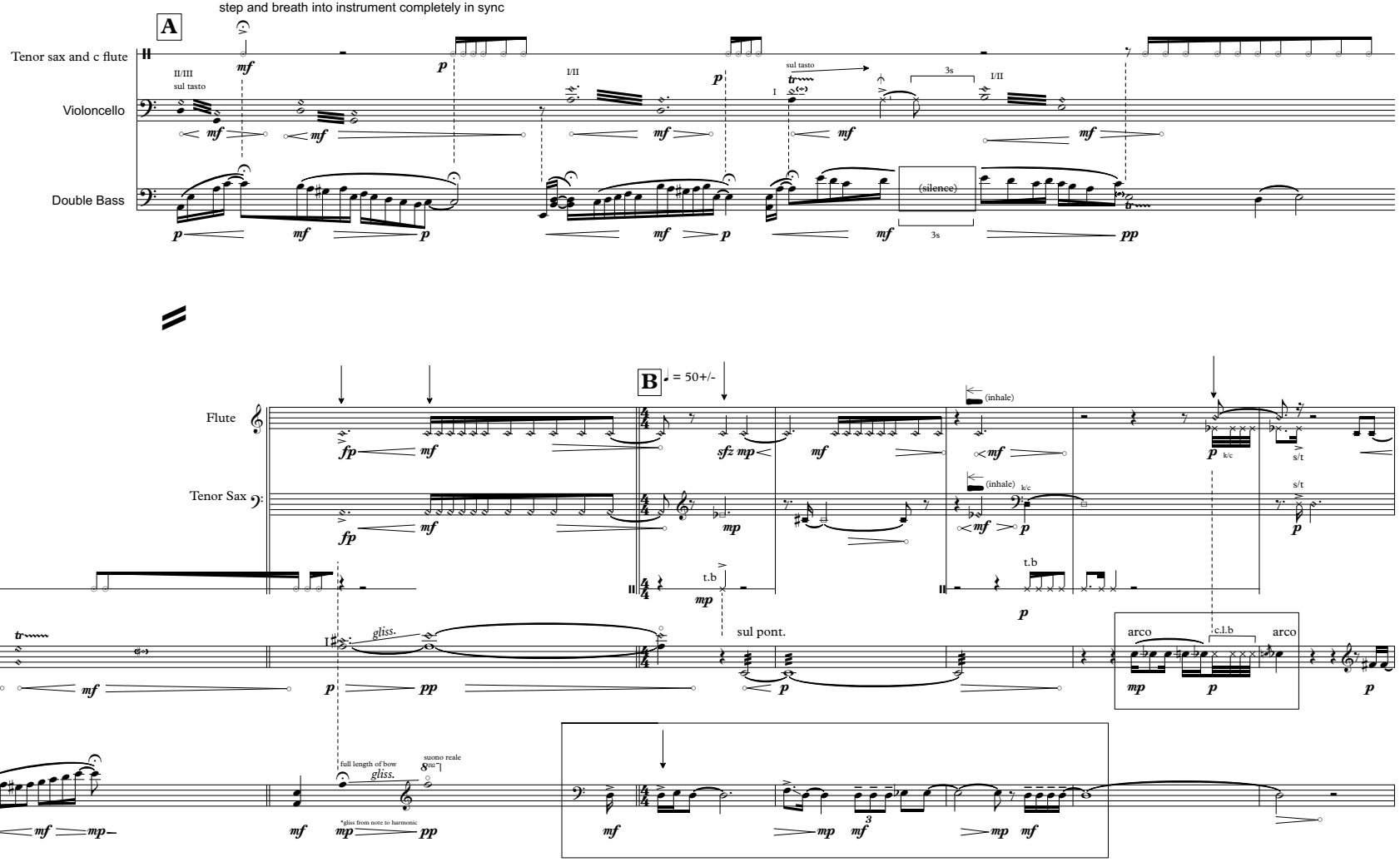
Concert Pitch

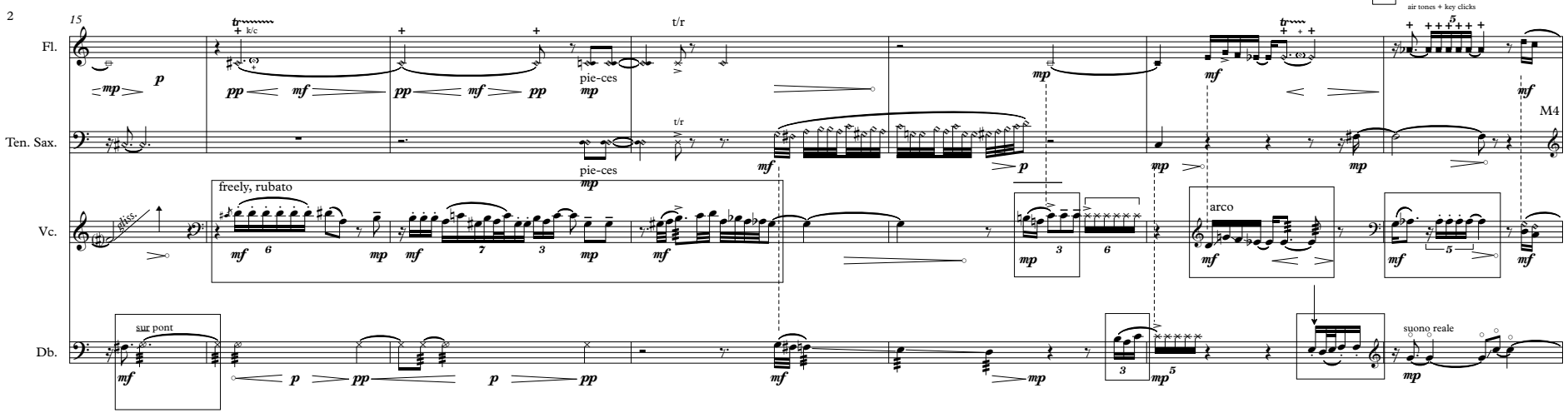
falling's just like flying

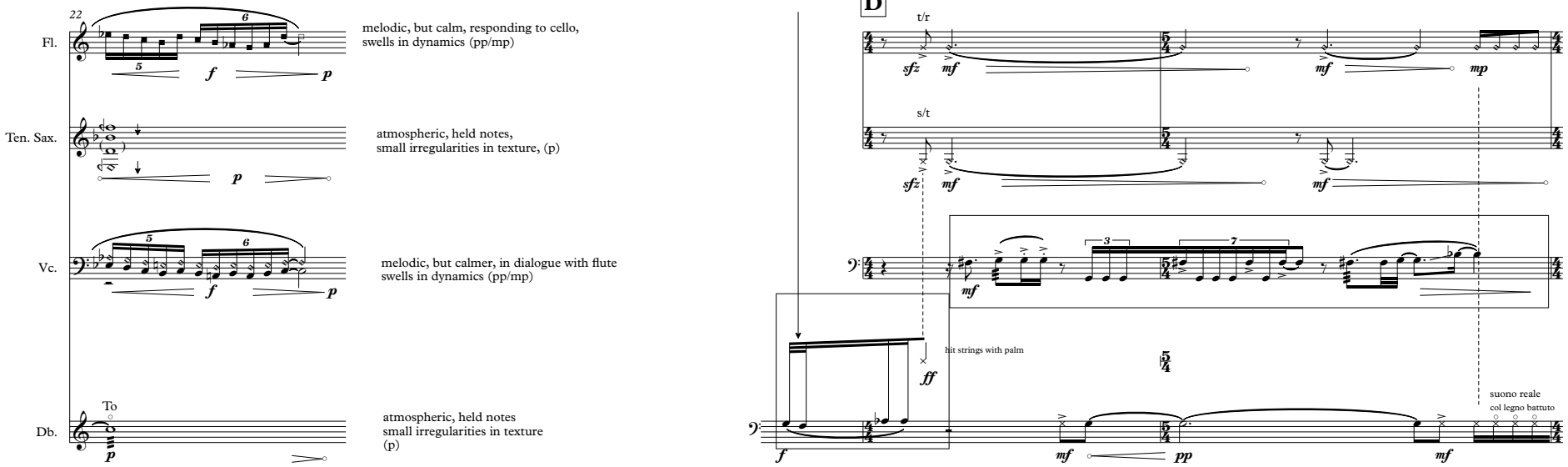
keiko devaux

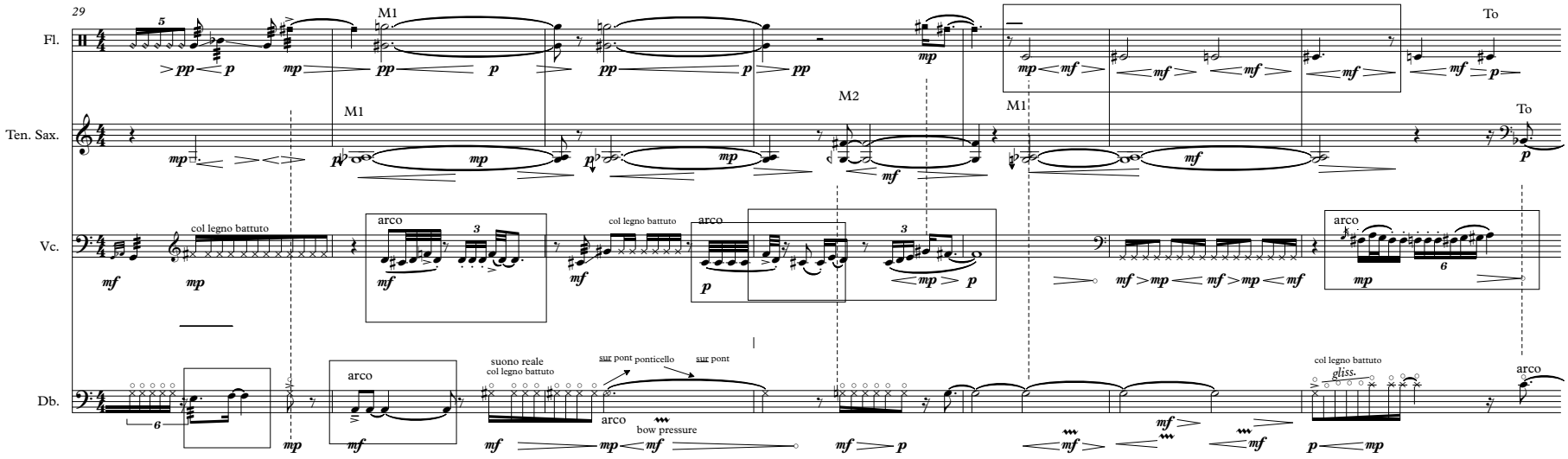
rubato

step and breath into instrument completely in sync




15
C
air tones + key clicks
Fl.
Ten. Sax.
Vc.
Db.
pie-ces
t/r
freely, rubato
arco
sur pont
suono reale
M4


22
D
Fl.
Ten. Sax.
Vc.
Db.
melodic, but calm, responding to cello, swells in dynamics (pp/mp)
atmospheric, held notes, small irregularities in texture, (p)
melodic, but calmer, in dialogue with flute swells in dynamics (pp/mp)
atmospheric, held notes small irregularities in texture (p)
t/r
s/t
hit strings with palm
suono reale
col legno battuto

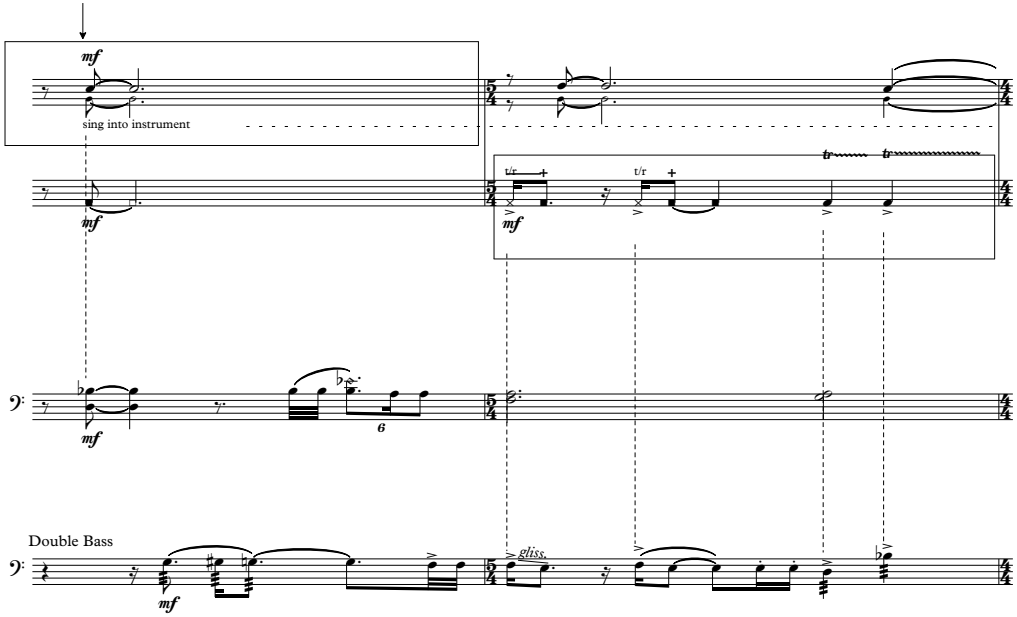


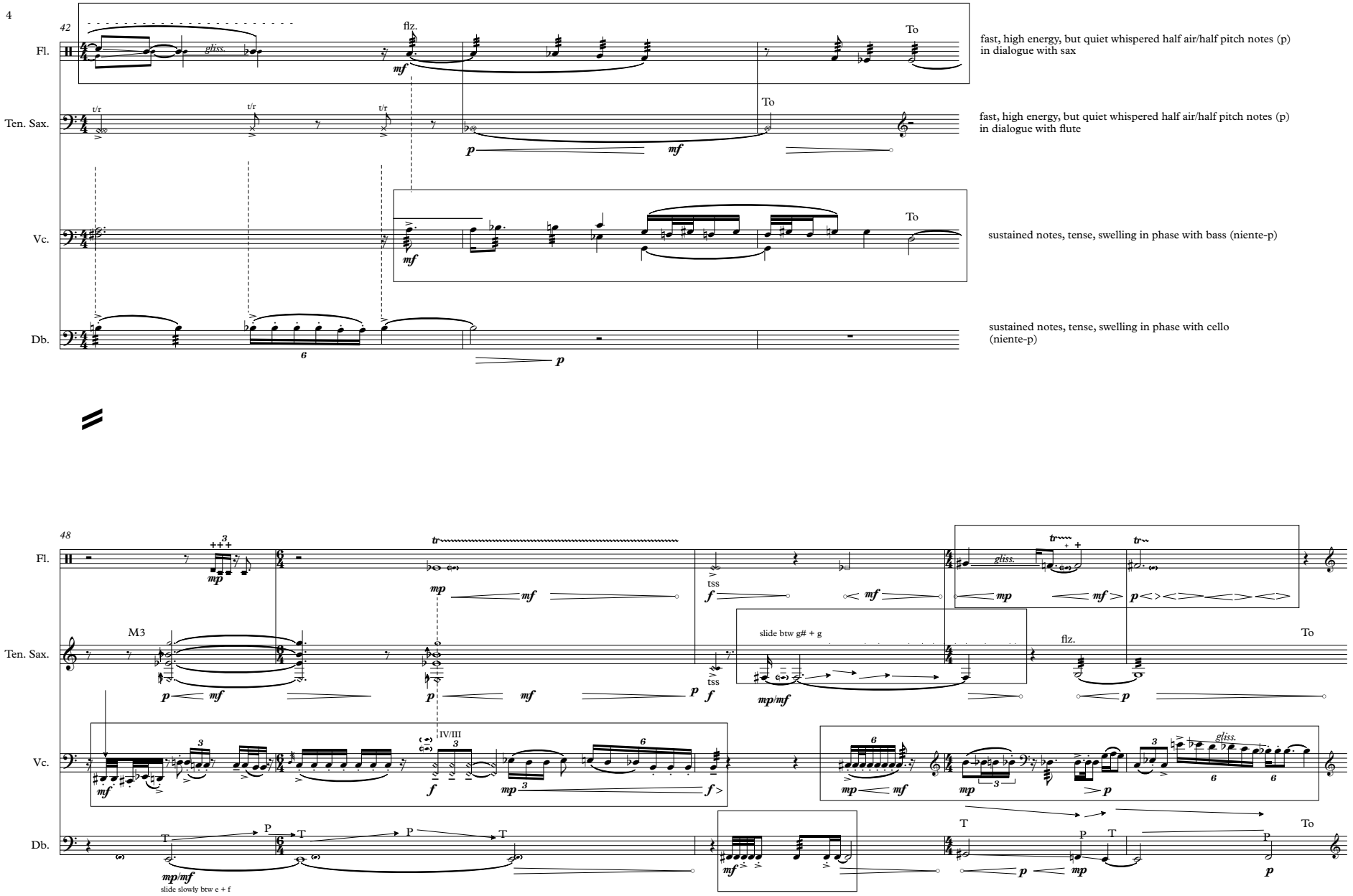
held notes, distant siren sounds, air and tone, ambience
(swells between niente and mp)

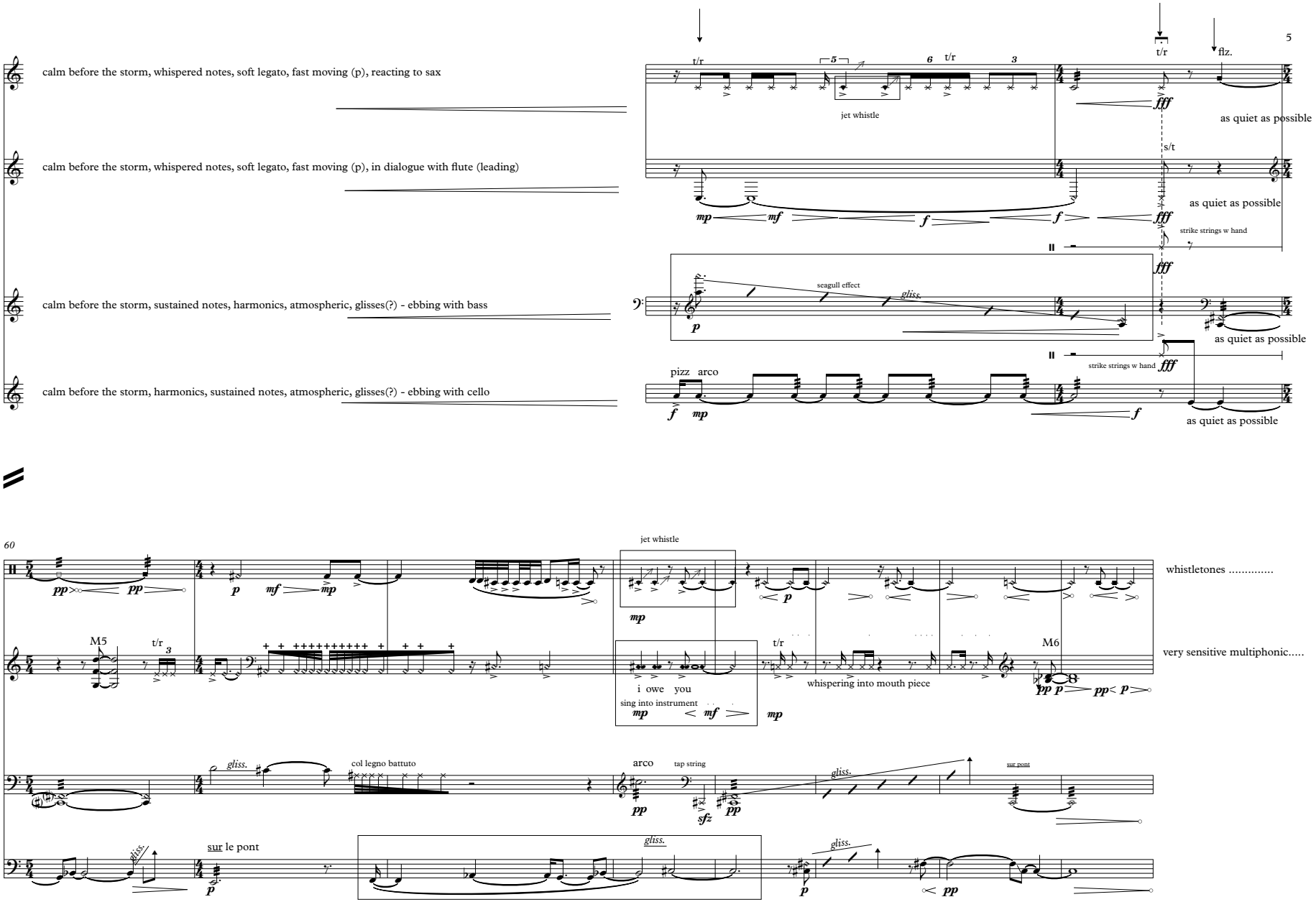
held notes, distant siren sounds, air and tone, ambience
(swells between niente and mp)

melodic, quick and intense, but light, and quiet,
in dialogue with bass
(mp)

melodic, quick and intense, but light, and quiet,
responding to cello
(mp)




42
Fl.
flz.
To
fast, high energy, but quiet whispered half air/half pitch notes (p) in dialogue with sax
Ten. Sax.
t/r
To
fast, high energy, but quiet whispered half air/half pitch notes (p) in dialogue with flute
Vc.
To
sustained notes, tense, swelling in phase with bass (niente-p)
Db.
sustained notes, tense, swelling in phase with cello (niente-p)
48
Fl.
tss
gliss.
Ten. Sax.
M3
slide btw g# + g
flz.
To
Vc.
IV/III
gliss.
Db.
T
P
To
slide slowly btw e + f


calm before the storm, whispered notes, soft legato, fast moving (p), reacting to sax
calm before the storm, whispered notes, soft legato, fast moving (p), in dialogue with flute (leading)
calm before the storm, sustained notes, harmonics, atmospheric, glisses(?) - ebbing with bass
calm before the storm, harmonics, sustained notes, atmospheric, glisses(?) - ebbing with cello
5
t/r
jet whistle
flz.
as quiet as possible
s/t
strike strings w hand
seagull effect
gliss.
pizz arco
60
Fl.
Ten. Sax.
Vc.
Db.
whistletones .....
very sensitive multiphonic.....
M5
M6
i owe you
sing into instrument
whispering into mouth piece
col legno battuto
arco
tap string
sur pont
sur le pont

Keiko Devaux

volée

pour 15 instruments

flute

hautbois

clarinette

clarinette basse

basson

cor

trompette

trombone

piano

percussion: vibraphone, marimba, timbales (32” / 28”)

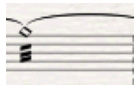
2 violons

alto

violoncelle

contrebasse

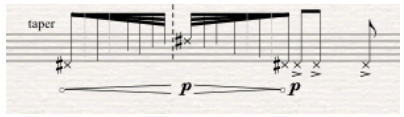
remarques générales



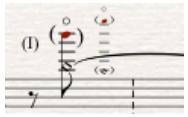
tous les trémolos sont non mesurés

exprime la variation de vitesse de trille/tremolo

les cordes



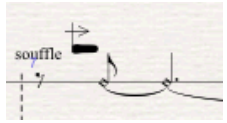
Taper avec la main gauche. Les extrémités (x) sont suggérées; les autres (-) sont libres.



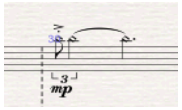
trille harmonique

N.B Toutes les harmoniques pour la contrebasse sont écrites en sons réels

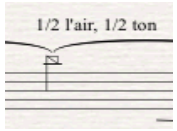
les vents



losange 1 ligne : souffle libre

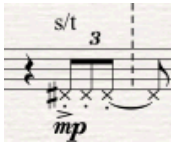


losange sur portée: souffle, avec doigtée



triangle : moitié souffle, moitié ton

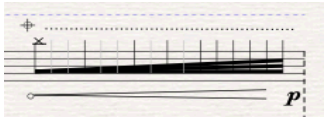
souffle continu avec des attaques « tuh »



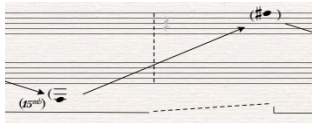
s/t : slap tongue

piano

lever la pédale graduellement



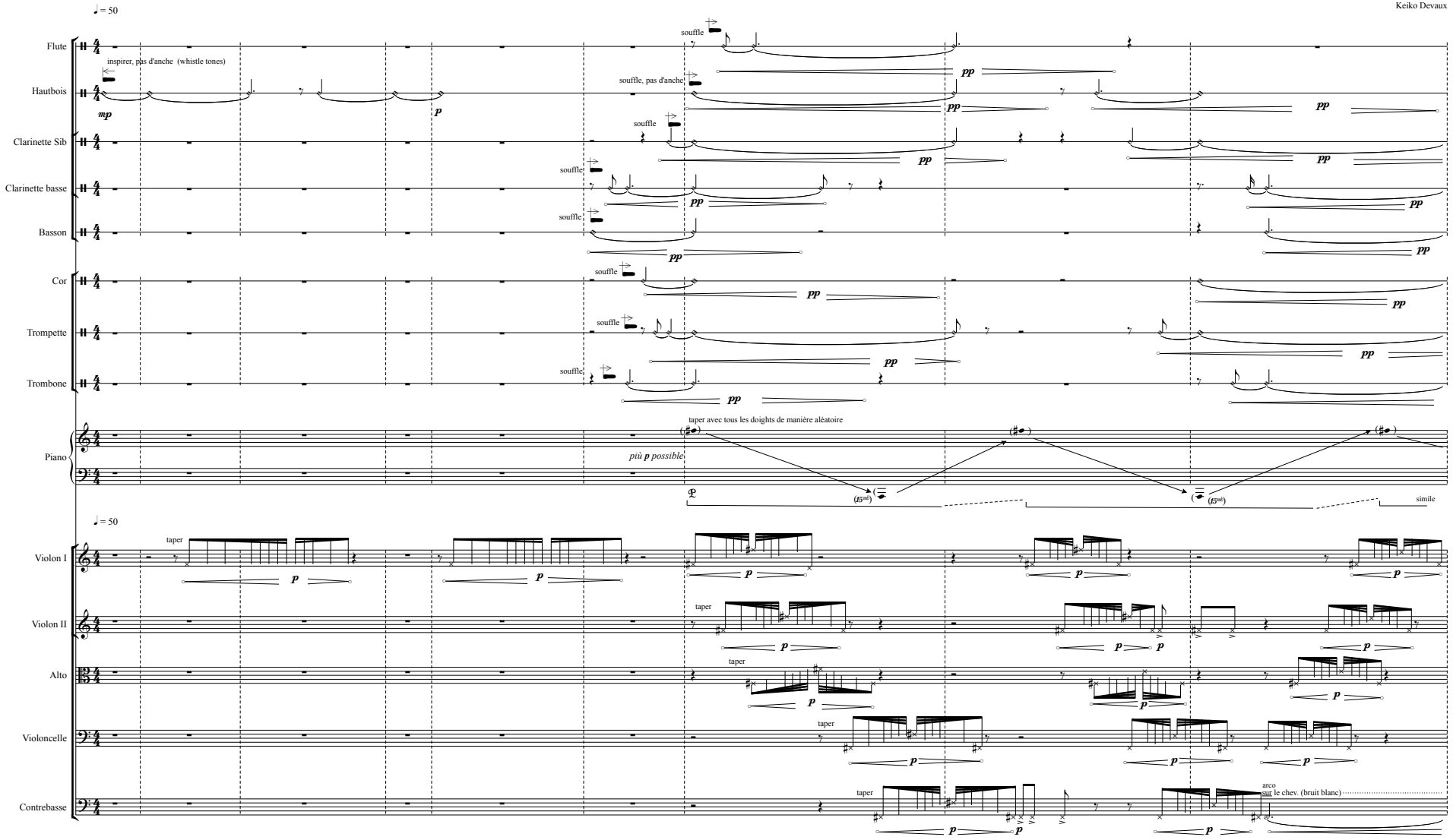
étouffer la corde dans le piano complètement

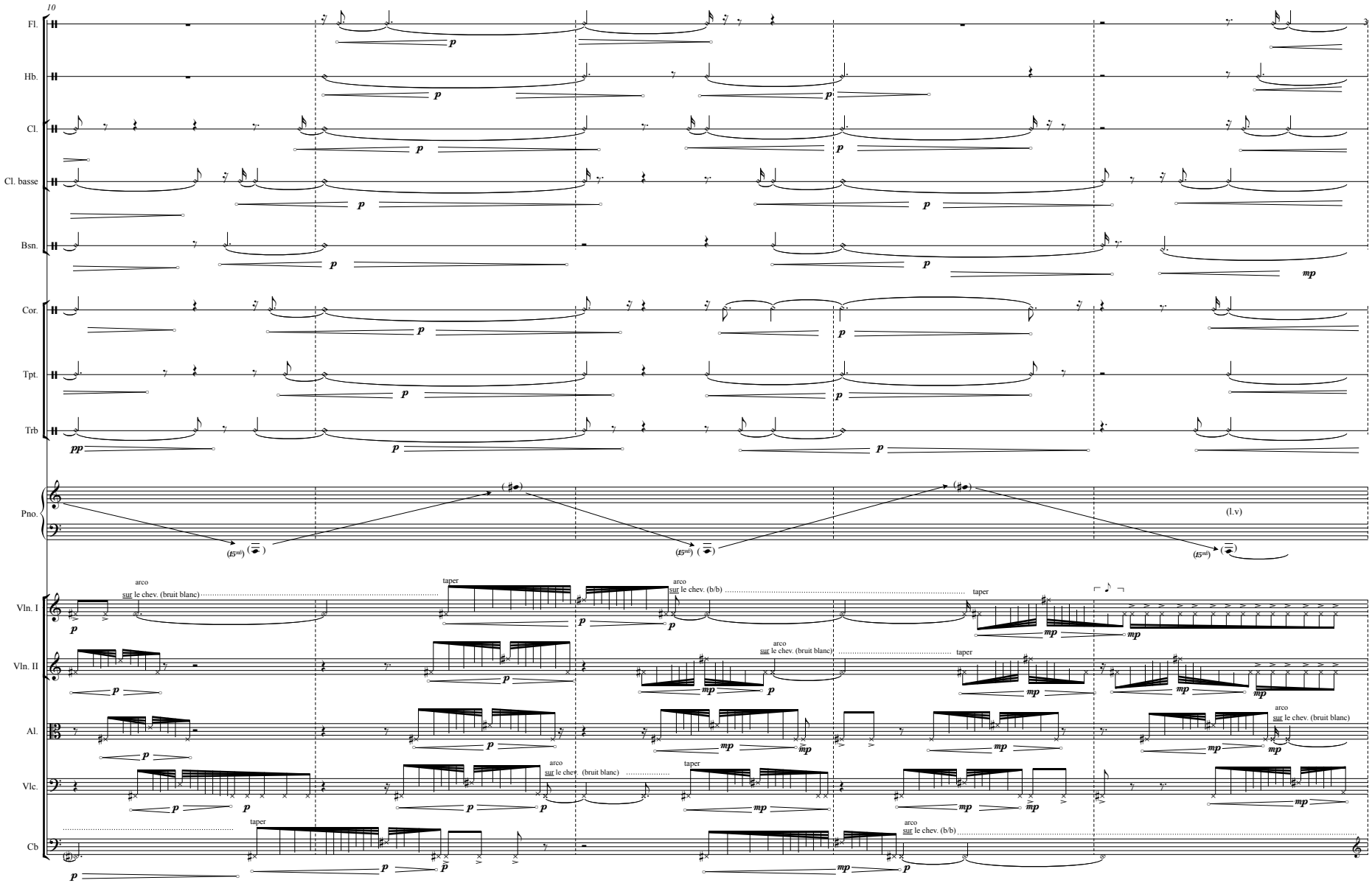


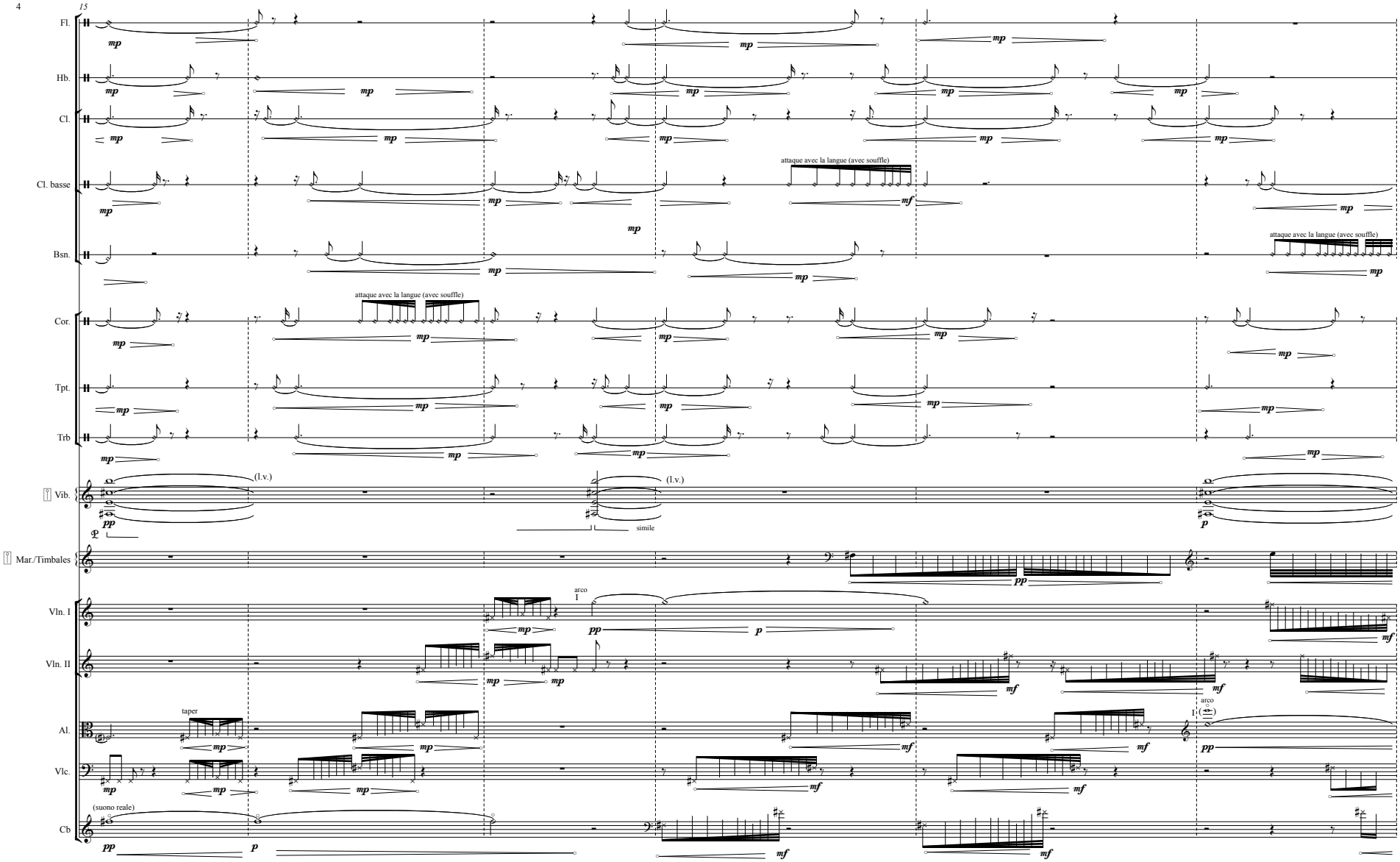
garder le geste entre ces deux notes (environ)

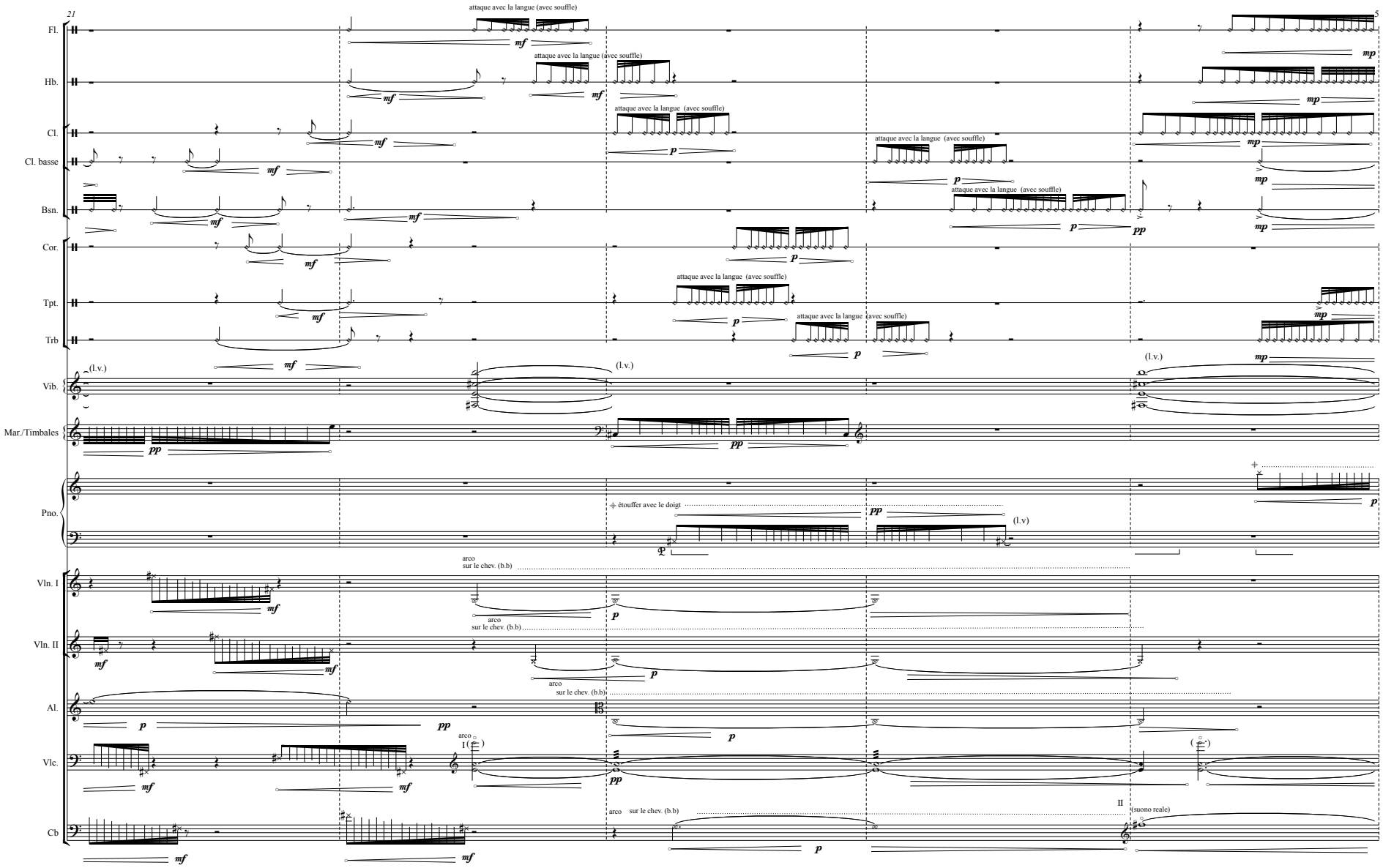
volée

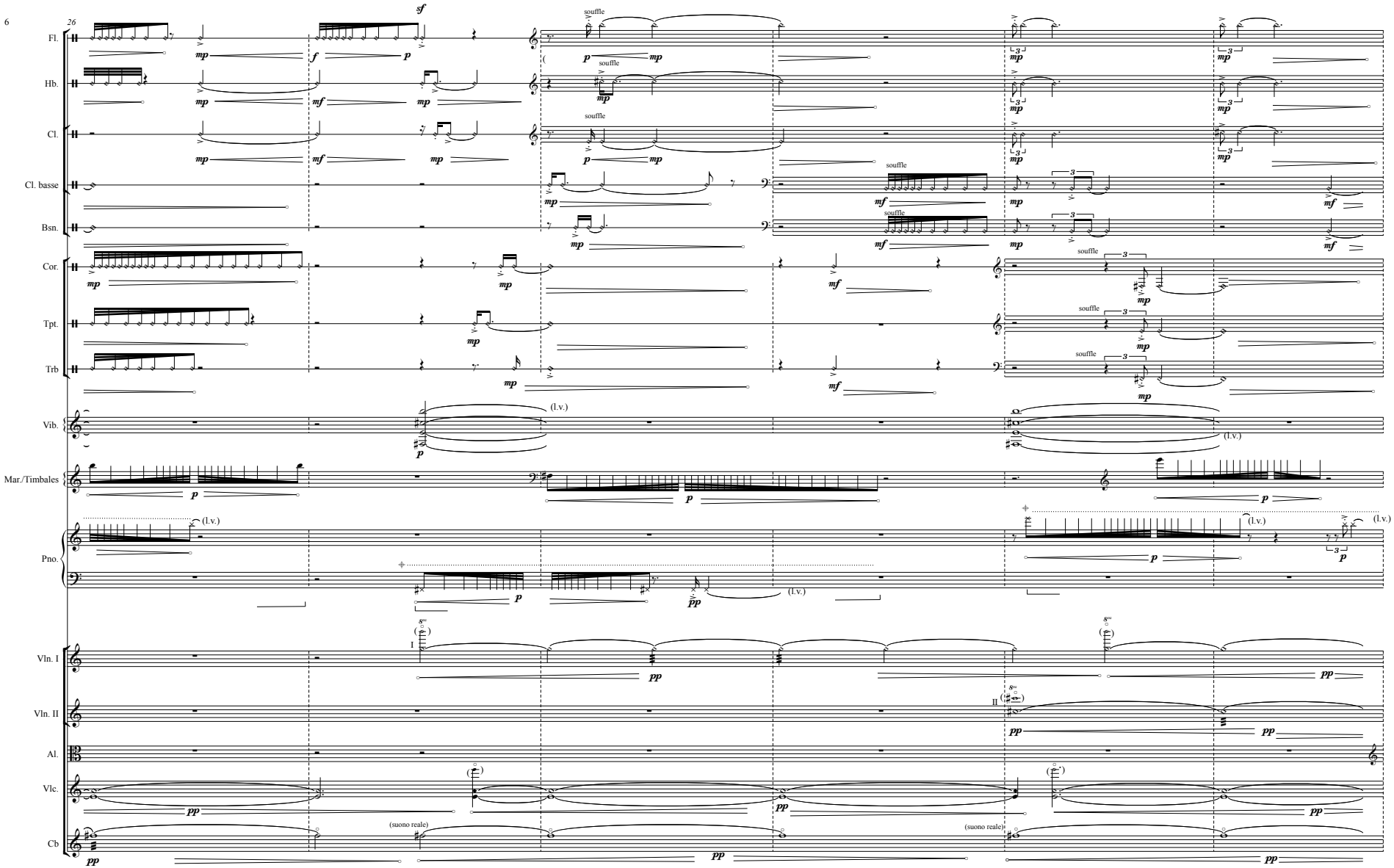
Keiko Devaux

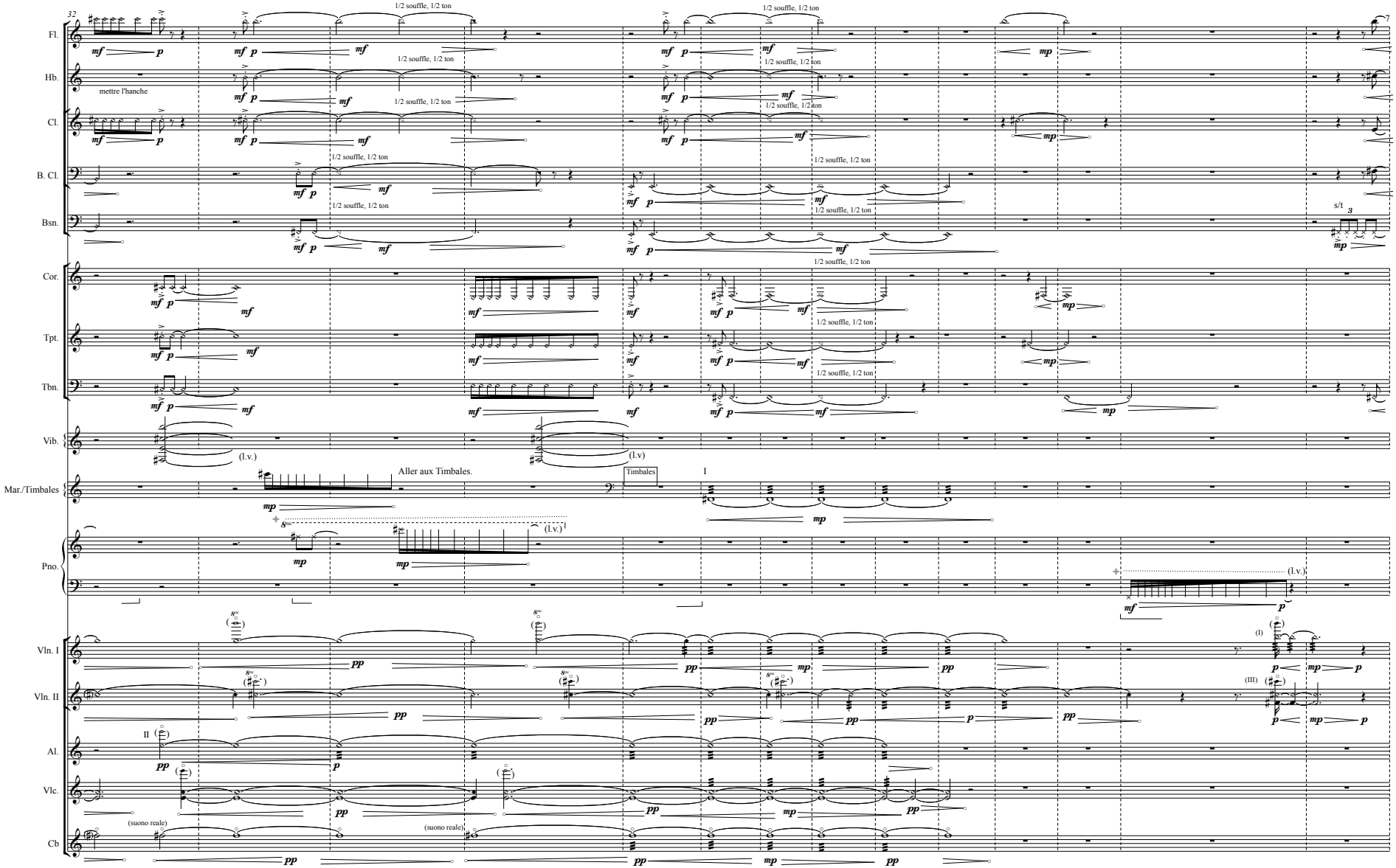


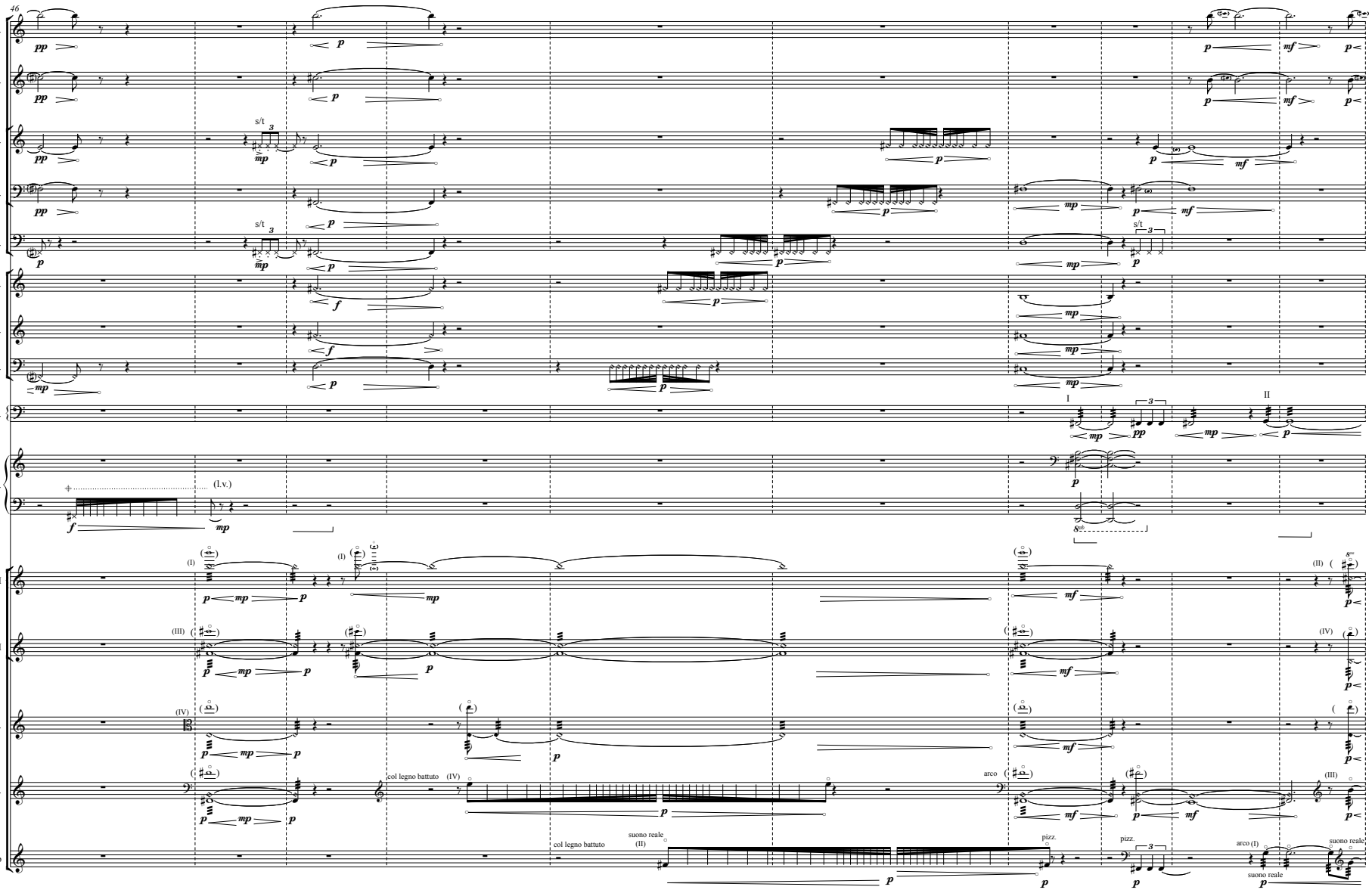

10
Fl.
Hb.
Cl.
Cl. basse
Bsn.
Cor.
Tpt.
Trb
Pno.
Vln. I
Vln. II
Al.
Vlc.
Cb
arco
sur le chev. (bruit blanc)
taper
arco
sur le chev. (b/b)
(l.v)

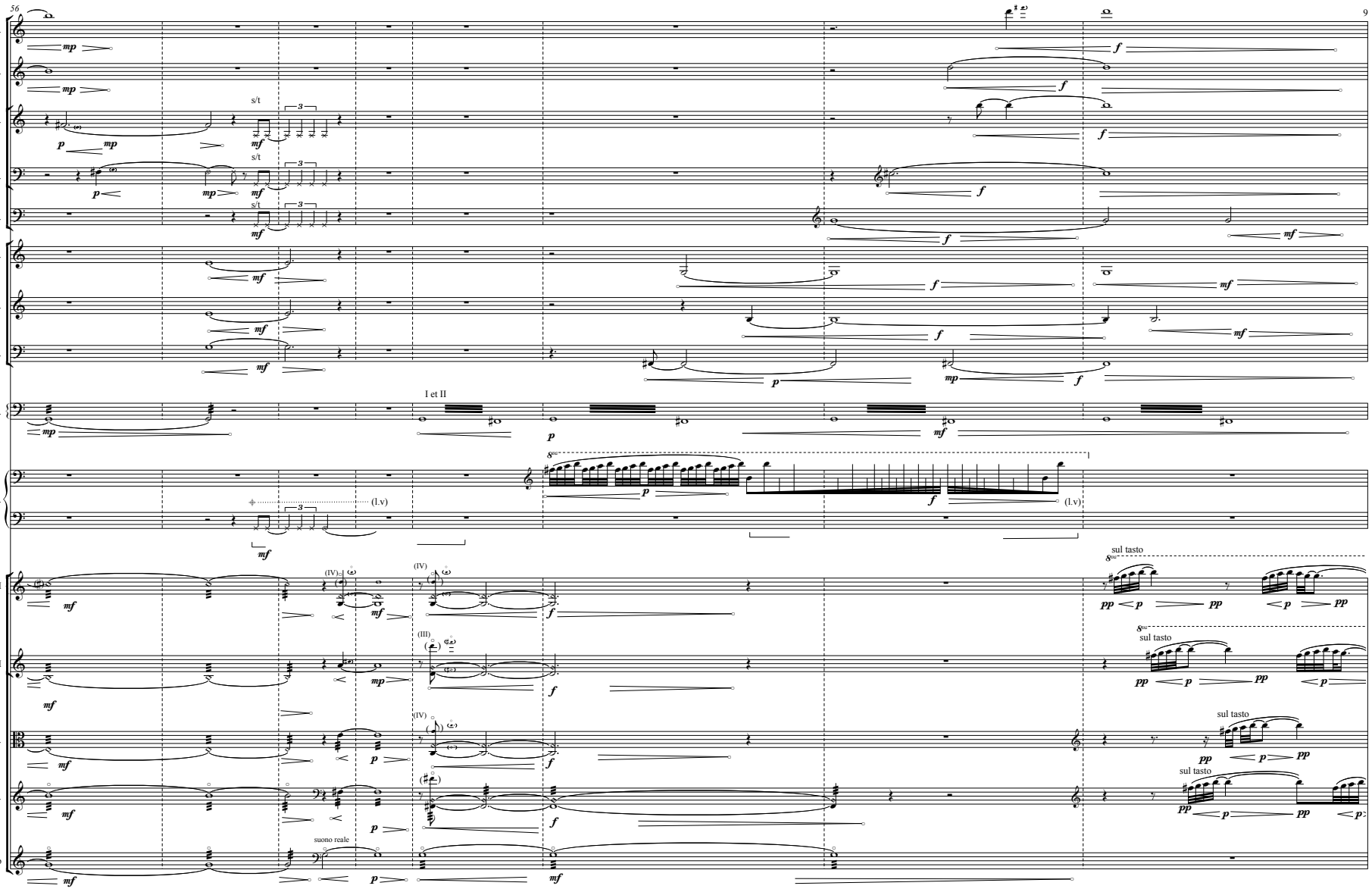

15
Fl.
Hb.
Cl.
Cl. basse
Bsn.
Cor.
Tpt.
Trb
Vib.
Mar./Timbales
Vln. I
Vln. II
Al.
Vlc.
Cb
attaque avec la langue (avec souffle)
(l.v.)
simile
arco
taper
(suono reale)

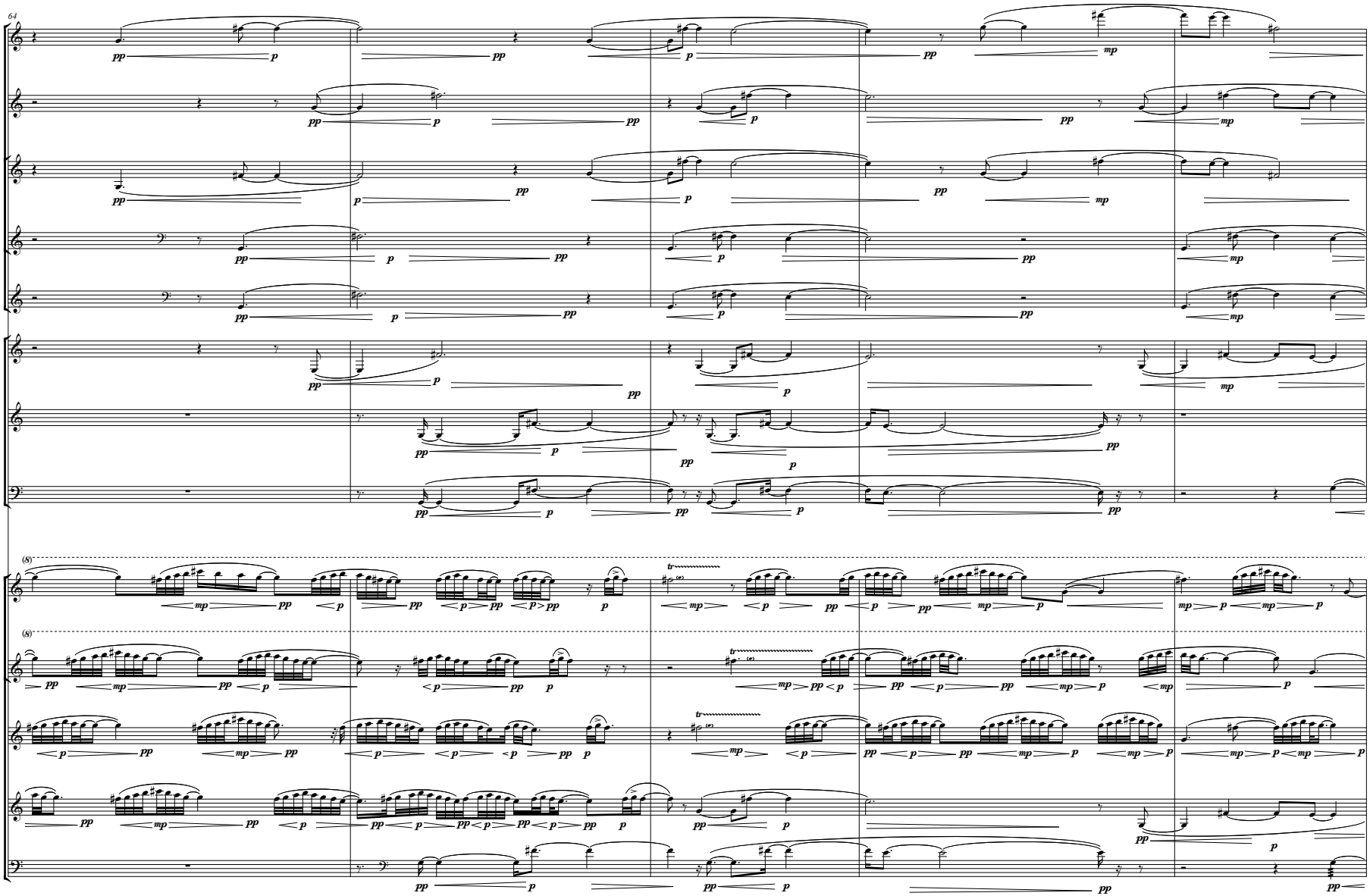

21
5
Fl.
Hb.
Cl.
Cl. basse
Bsn.
Cor.
Tpt.
Trb
Vib.
Mar./Timbales
Pno.
Vln. I
Vln. II
Al.
Vlc.
Cb
attaque avec la langue (avec souffle)
attaque avec la langue (avec souffle)
attaque avec la langue (avec souffle)
attaque avec la langue (avec souffle)
attaque avec la langue (avec souffle)
attaque avec la langue (avec souffle)
attaque avec la langue (avec souffle)
(l.v.)
(l.v.)
(l.v.)
(l.v)
étouffer avec le doigt
arco
sur le chev. (b.b)
arco
sur le chev. (b.b)
arco
sur le chev. (b.b)
arco
I
arco
sur le chev. (b.b)
II
(suono reale)

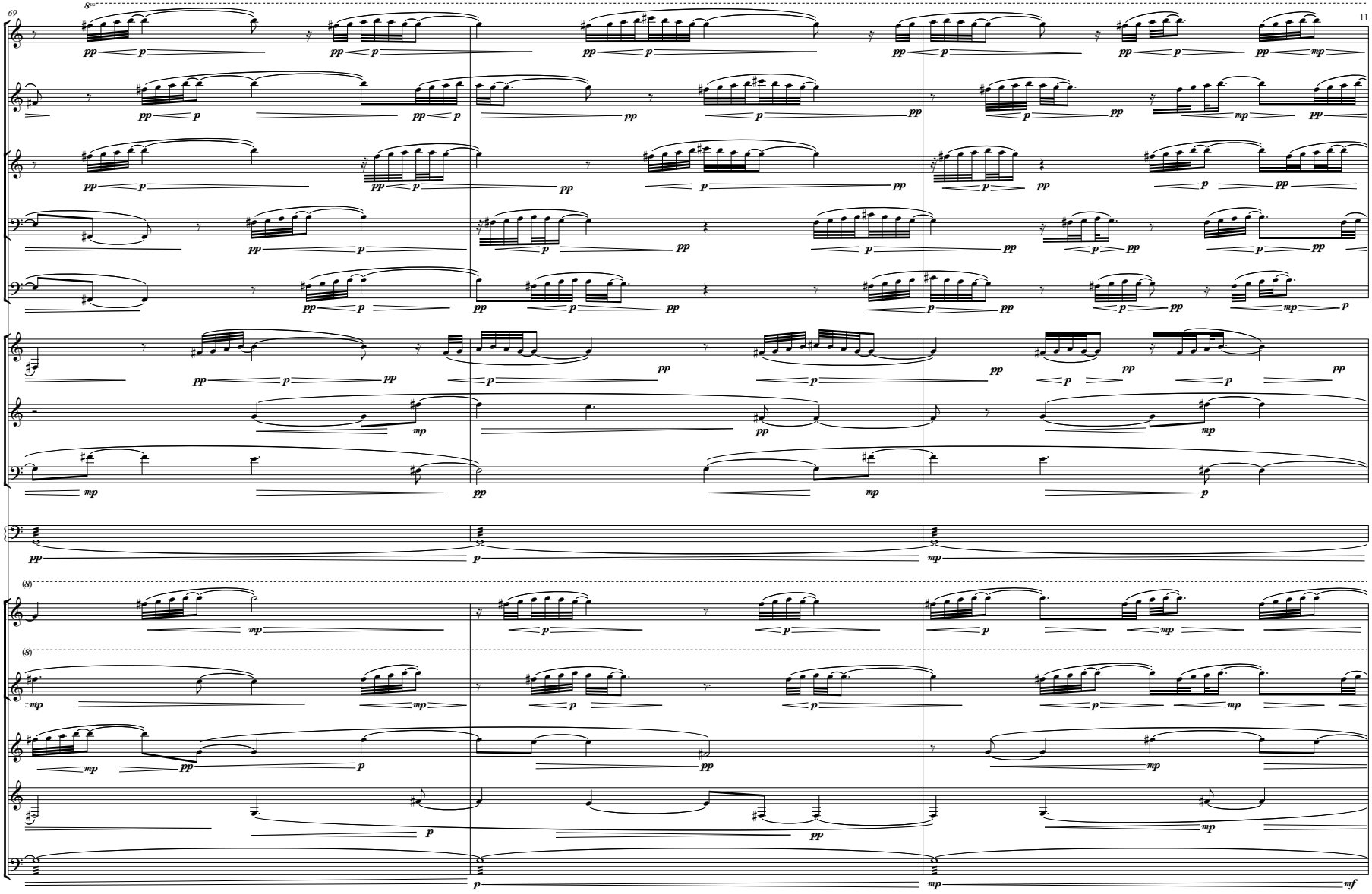

26
Fl.
Hb.
Cl.
Cl. basse
Bsn.
Cor.
Tpt.
Trb
Vib.
Mar./Timbales
Pno.
Vln. I
Vln. II
Al.
Vlc.
Cb
souffle
(l.v.)
(suono reale)

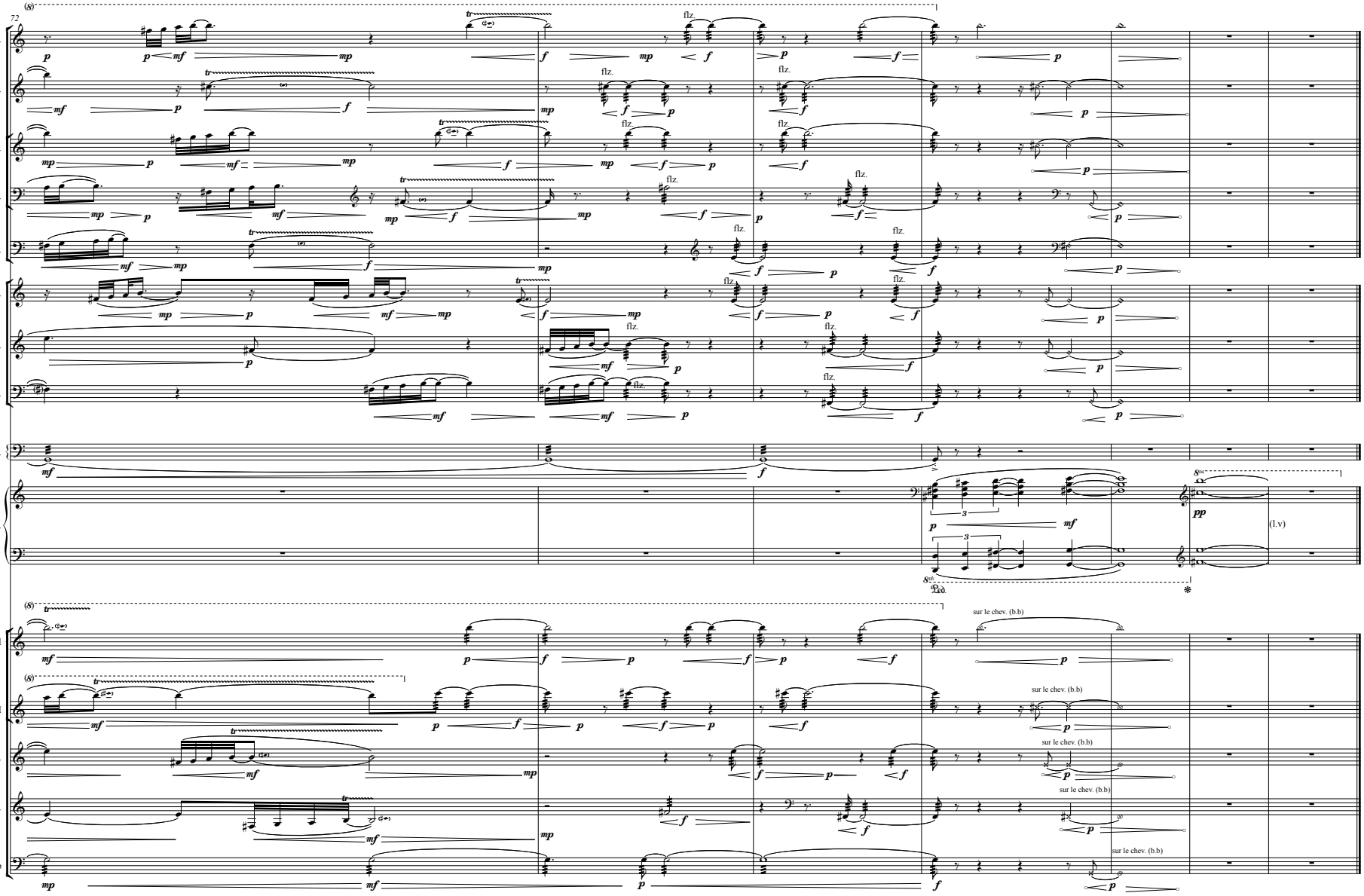

32
Fl.
Hb.
Cl.
B. Cl.
Bsn.
Cor.
Tpt.
Tbn.
Vib.
Mar./Timbales
Pno.
Vln. I
Vln. II
Al.
Vlc.
Cb
1/2 souffle, 1/2 ton
mettre l'hanche
s/t
(l.v.)
Aller aux Timbales.
Timbales
I
II
III
(suono reale)


46
Fl.
Hb.
Cl.
B. Cl.
Bsn.
Cor.
Tpt.
Tbn.
Timp.
Pno.
Vln. I
Vln. II
Al.
Vlc.
Cb
s/t
(l.v.)
I
II
col legno battuto
suono reale
(II)
arco
pizz.
arco (I)
suono reale


56
9
Fl.
Hb.
Cl.
B. Cl.
Bsn.
Cor.
Tpt.
Tbn.
Timp.
I et II
Pno.
(l.v)
Vln. I
Vln. II
Al.
Vlc.
Cb
s/t
suono reale
sul tasto


64
Fl.
Hb.
Cl.
B. Cl.
Bsn.
Cor.
Tpt.
Tbn.
Vln. I
Vln. II
Al.
Vlc.
Cb


69
8va
Fl.
Hb.
Cl.
B. Cl.
Bsn.
Cor.
Tpt.
Tbn.
Timp.
(8)
Vln. I
(8)
Vln. II
Al.
Vlc.
Cb


72
Fl.
Hb.
Cl.
B. Cl.
Bsn.
Cor.
Tpt.
Tbn.
Timp.
Pno.
Vln. I
Vln. II
Al.
Vlc.
Cb
flz.
sur le chev. (b.b)
(l.v)

les étourneaux

pour orchestre

3* 2 3* 2, 4331, T+2, H, pno, cordes

2016

keiko devaux

les étourneaux

les étourneaux is the french word for 'starlings', which are a species of bird famously known for their large and impressive flocking behavior. This is the third piece in my series *emergence,* where I began exploring the flocking behavior of birds.

This piece has several different narrative characters in it, and the form of the piece is inspired directly from common movements and accumulations found in starling flocking behavior. The string section represents one flock, the wind section represents a second flock, and the piano and percussion present both the static harmonic theme that is maintained through 2/3 of the piece and acts as the instigator of changes and waves of movement in the flocks. As well, as the piece develops, they also interact as solo birds of the flock, sharper in image, and in the foreground.

The two general textures created in the first section of the piece are 1) continuous sound, as air through the instrument's body, held string harmonics, or tremolo bowing on the bridge and 2) discrete sound, as tapping on the strings fingerboard, pizzicato, col legno battuto, and strong air attacks, and slap tongue, and tongue rams in the winds. In the first section of the piece, these textures are used to both unify the sonic identity as well as differentiate the two flocks as they are initially presented. They then, with contagions of motifs entering from the other flock, begin to exchange textural roles. Momentarily the two flocks move together, rising and falling in momentum, until at the end where they bifurcate back into their separate flocks. Harmony, barely present, throughout the majority of the piece, comes in during this very last section, ambiguous and shifting, as they motifs scatter in their entrances and build.

NOTES GÉNÉRALES

souffle sans instrument : la bouche légèrement ouverte en forme de la voyelle "o", permettant la friction des dents et les lèvres contre le vent

inspiration de 5 secondes.

expiration de 5 secondes.

les nuances :

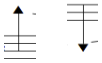
les nuances de l'intention (f) (ff) (fff)

Toutes les nuances écrites pour des effets de bruit, (p.ex. vent, tapage, archet sur chevalet), indiquent l'intention plutôt que le résultat.
L'exaggeration d'énergie et les bruits qui surgissent involontairement sont désirables

À moins d'incitation contraire, le point d'arrivée le plus fort est toujours le point médian de la durée de la note. Ces pics/crêtes sont souvent en décalage avec des instruments voisins; il est donc important de maintenir la forme individuelle de votre nuance.

les tremolos et trilles:

Les trilles/tremolos ne sont pas mesurés et sont à exécuter le plus rapidement possible au sommet de la nuance. La structure des nuances guide la vitesse du trémolo (accélération et ralentissement)



la hauteur la plus haute/basse possible

l.v : laisser résonner

LES VENTS

la majorité de la première partie de la pièce ce concentre sur le souffle. L'exagération entre ces variations sont très important:

*le souffle est toujours indiqué par les lozenges

*dans le cas du hautbois, le souffle se fait toujours sans anche.

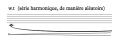
souffle: les vents ont 6 niveaux de variation:

1. souffler dans l'instrument, sans hauteur indiquée (**entre *niente* et mp**). l'air peut demeurer dans l'instrument exclusivement, mais choisir une doigtée qui permettre la plus large gamme d'amplitude du son de l'air.
2. souffler dans l'instrument, sans hauteur indiquée **(entre mf et fff).** Selon votre instrument individuel et son équilibre avec les autres, laissez l'air de sortir autour de l'embouchure à exagérer son propre son de l'air.
3. souffler dans l'instrument, **avec** hauteur indiquée.
4. moitié souffle, moitié ton.

5. pour les attaques de souffle utilisent, "tuh," ou d'autres consonnes dures, avec les expirations tranchantes.

pour flûte seulement

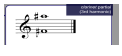
flutter tongue de souffle. Il est important que cette texture ressortisse de l'ensemble des vents. Ainsi, il est acceptable de laisser sortir un peu d'un hauteur (si ça arrive).



w.t - whistle tones (série harmonique, de manière aléatoire

pour les clarinettes seulement

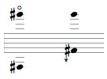
M1



M2

Ici, les multiphoniques notées sont simplement des suggestions. D'autres variations donnant un résultat semblables sur le plan de l'harmonie et de la nuance peuvent aussi être utilisée, à la discrétion des interprètes.

M1 trem.



Trémolo de multiphonique. Voir video # x, et hyperlien dan le courriel fourni. **(*H)**

s/t: slap tongue: commencer le plus rapidement possible puis ralentir ralentir.

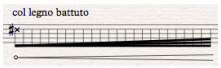
LES CORDES

tapage 1/2/3 (V*)

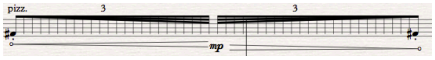
Ce n'est pas un geste mesuré, mais une texture. Tel que démontré dans les vidéos, essayer de positionner les deux mains de façon à laisser résonner au maximum les cordes. La précision de tapage sur les cordes elle-mêmes, est moins importante et c'est plus sur la touche en générale.

pizz. 1/2 (*V)

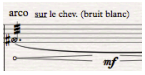
pizz 1 est fait avec la colophane sur la doigt.
pizz 2 est simplement le geste pizz. 1, mais avec une transition vers un pizz. à deux doigts pour augmenter l'énergie/amplitude



col legno battuto (*V)



La durée des accélérations et ralentissements est indiquée en chiffres arabes au-dessus des notes, donnant la durée (en noires) de chaque geste.



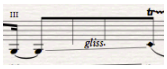
sur le chef. (bruit blanc) - toujours indiqué avec la tête de note (x) **(*V)**
Il s'agit d'un effet de bruit, la hauteur est indiquée simplement au cas où il ressortait un peu de ton.
Cet effet est utilisé sur une gamme des nuances allant de *niente* jusqu'à fff (avec pression d'archet exagérée). Plus la nuance est forte, moins il est important de rester parfaitement sur le chevalet. Il est acceptable que l'archet glisse légèrement d'un côté ou de l'autre.

les trilles /trémolos :
* Les trémolos sont montrés suivant la convention normale des trilles et ce, dans le but de rendre le plus clair possible la durée de ceux-là.

trémolo normal écrit comme une trille

un trémolo entre deux harmoniques artificiels

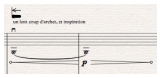
un trémolo entre un harmonique artificiel et une corde à vide



les notes sans tête indiquent le temps du glissando

vibrato large et exagéré

pression de l'archet exagéré **(*V)**



l'archet sur le chevalet, un vrai bruit blanc, et avec l'inspiration/expiration synchronisé (tel qu'expliqué dans les notes générales)

PERCUSSION

1: TIMBALES (sur deux jeux, I: 32" et II: 28"): 2 maillets doux, 2 maillets dures moyennes, 2 super balls
2: MARIMBA (5 OCTAVES): 4 maillets doux, 2 maillets dures moyennes, 1 archet (idéalement de vlc ou cb)
3: MARIMBA (4.5 OCTAVES) / **VIBRAPHONE**: 4 maillets doux, 2 maillets médium, 1 archet (idéalement de vlc ou cb)

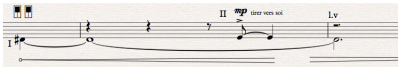
archet

maillets doux

maillets moyennes dures

super ball

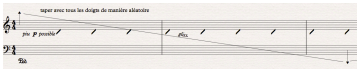
TIMBALES



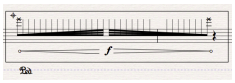
2 gestes avec super ball: le premier lent, constant et circulaire, **(*H)**, et l'autre plus bref, en tirant le maillet ver soi
*laisser résonner tous ces sons résonner, sauf indication contraire

trémolos: toujours le plus vite possible, et pas mesurés

PIANO



taper avec tous les doigts de manière aléatoire **(*V).**



le note est étouffée (le plus possible) dans le piano en jouant ave l'autre main, toujours avec la pédale **(*V)**

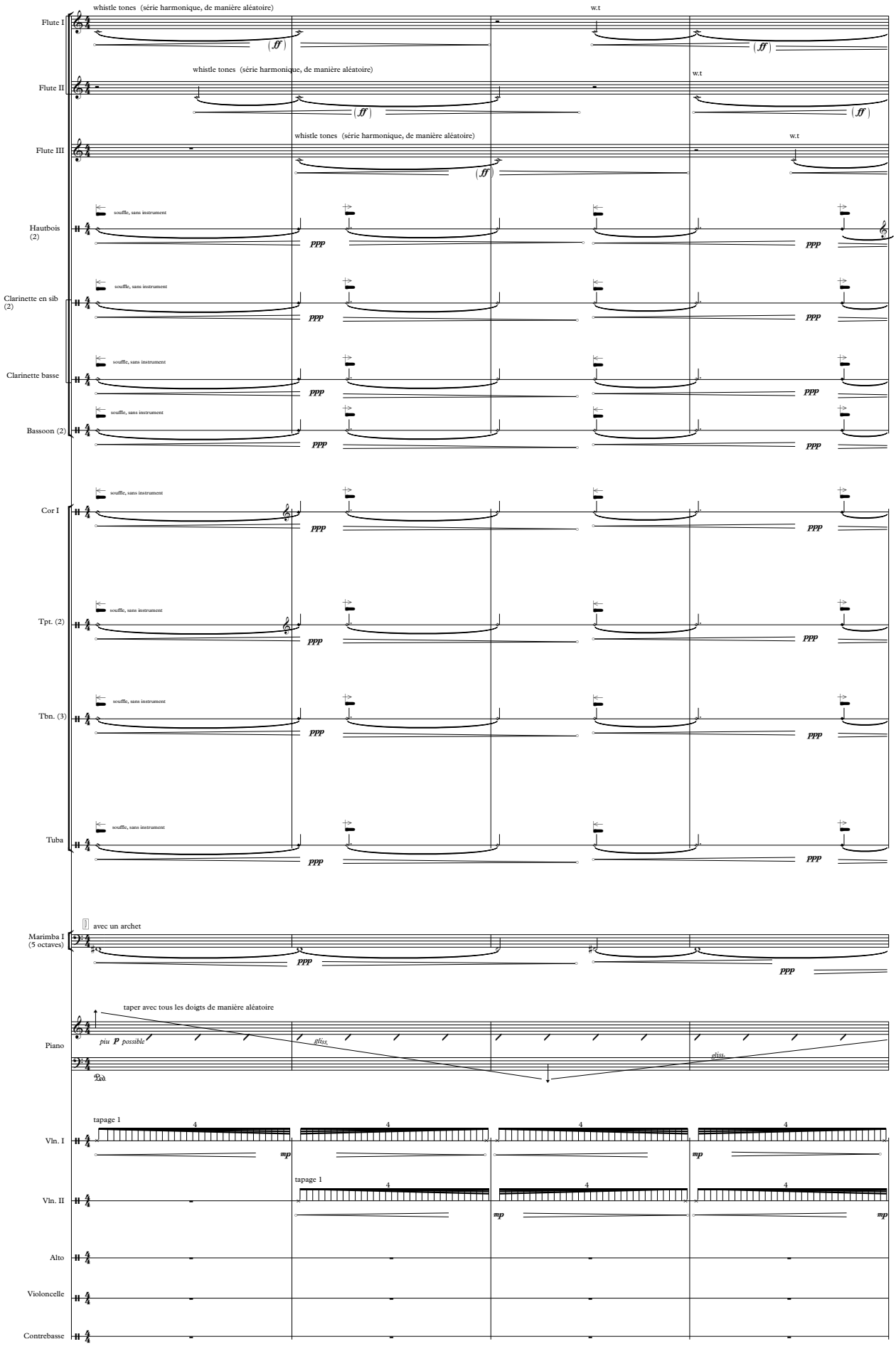
***V -** vidéo fourni

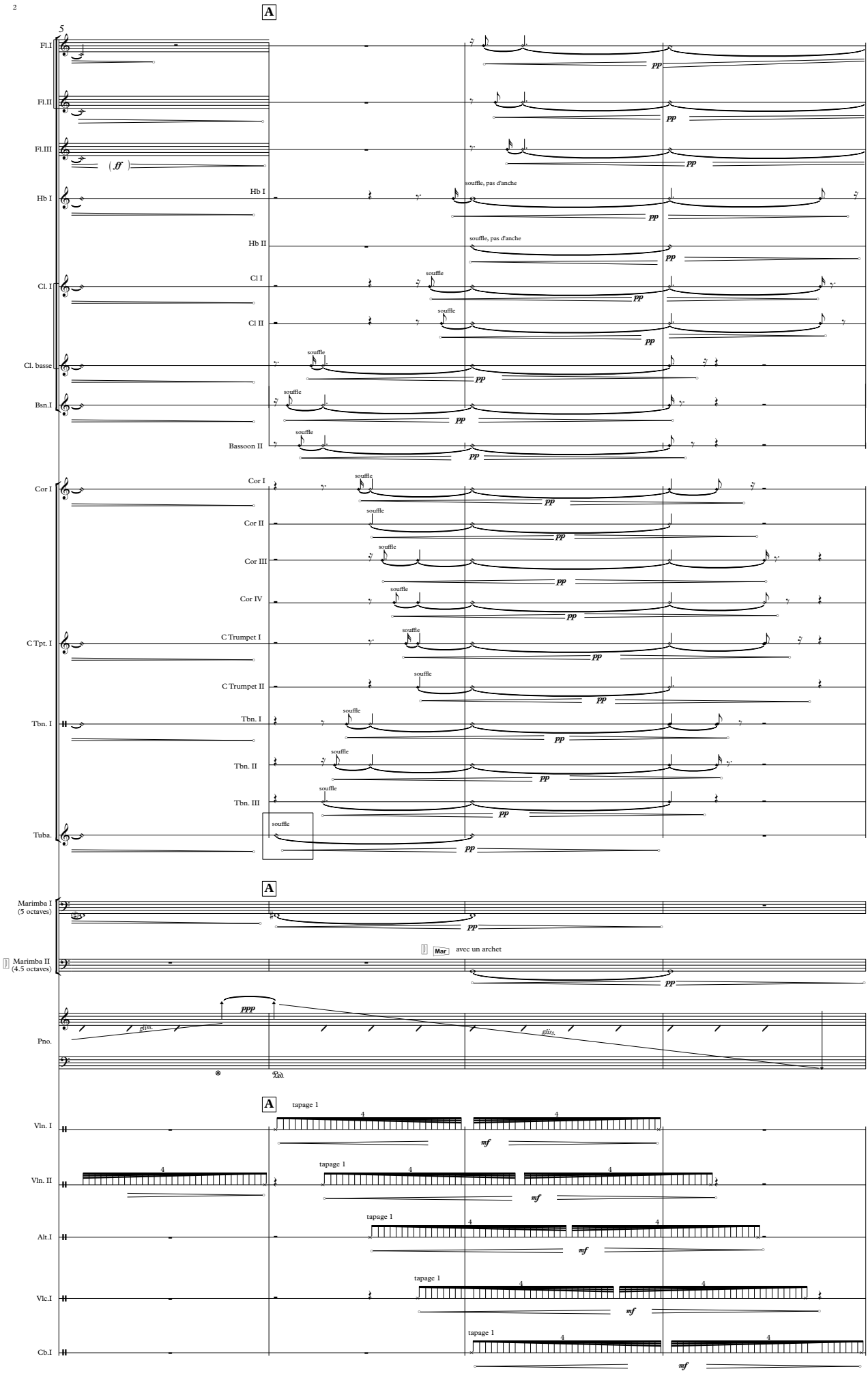
***H -** hyperlien fourni

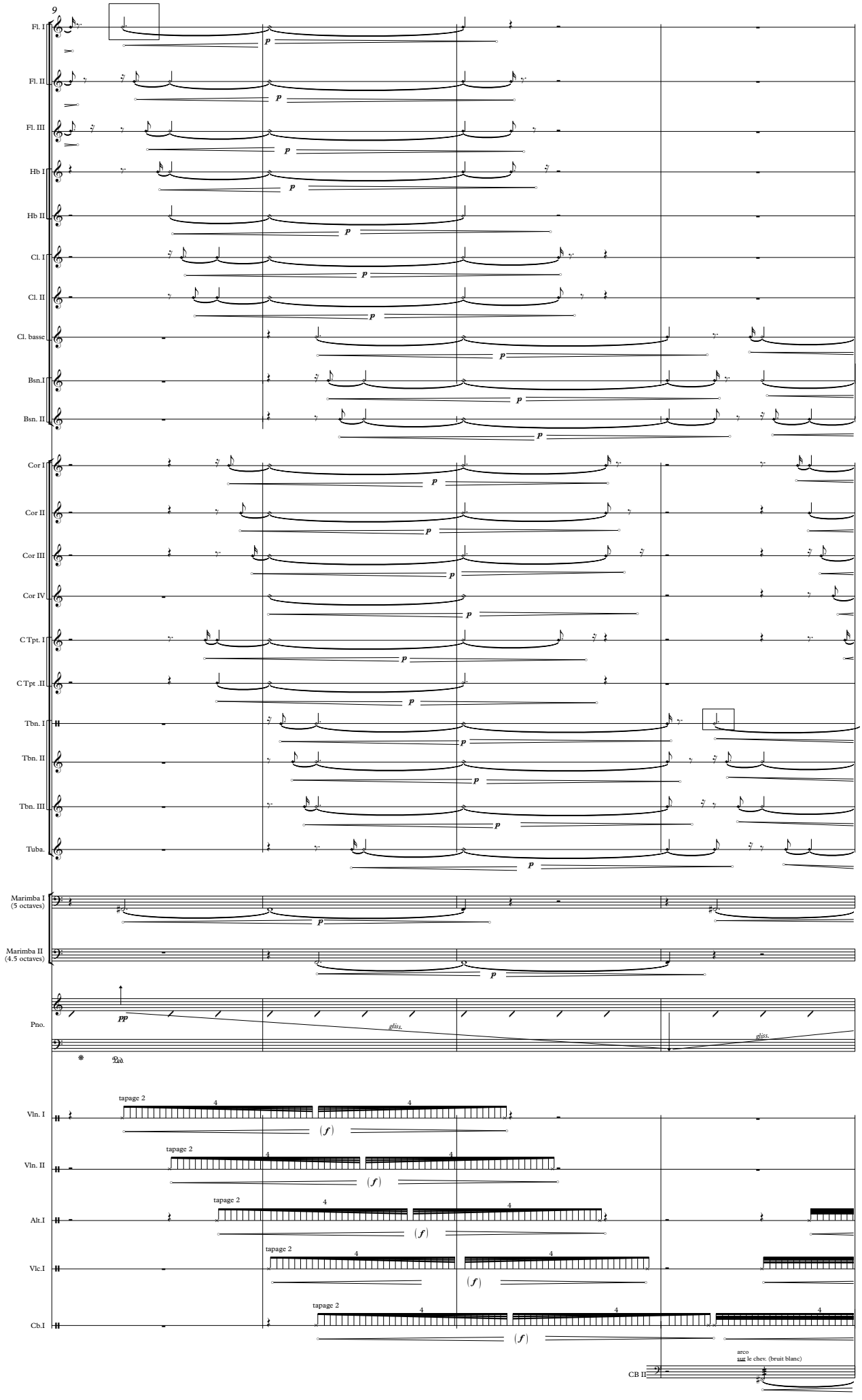
les étourneaux

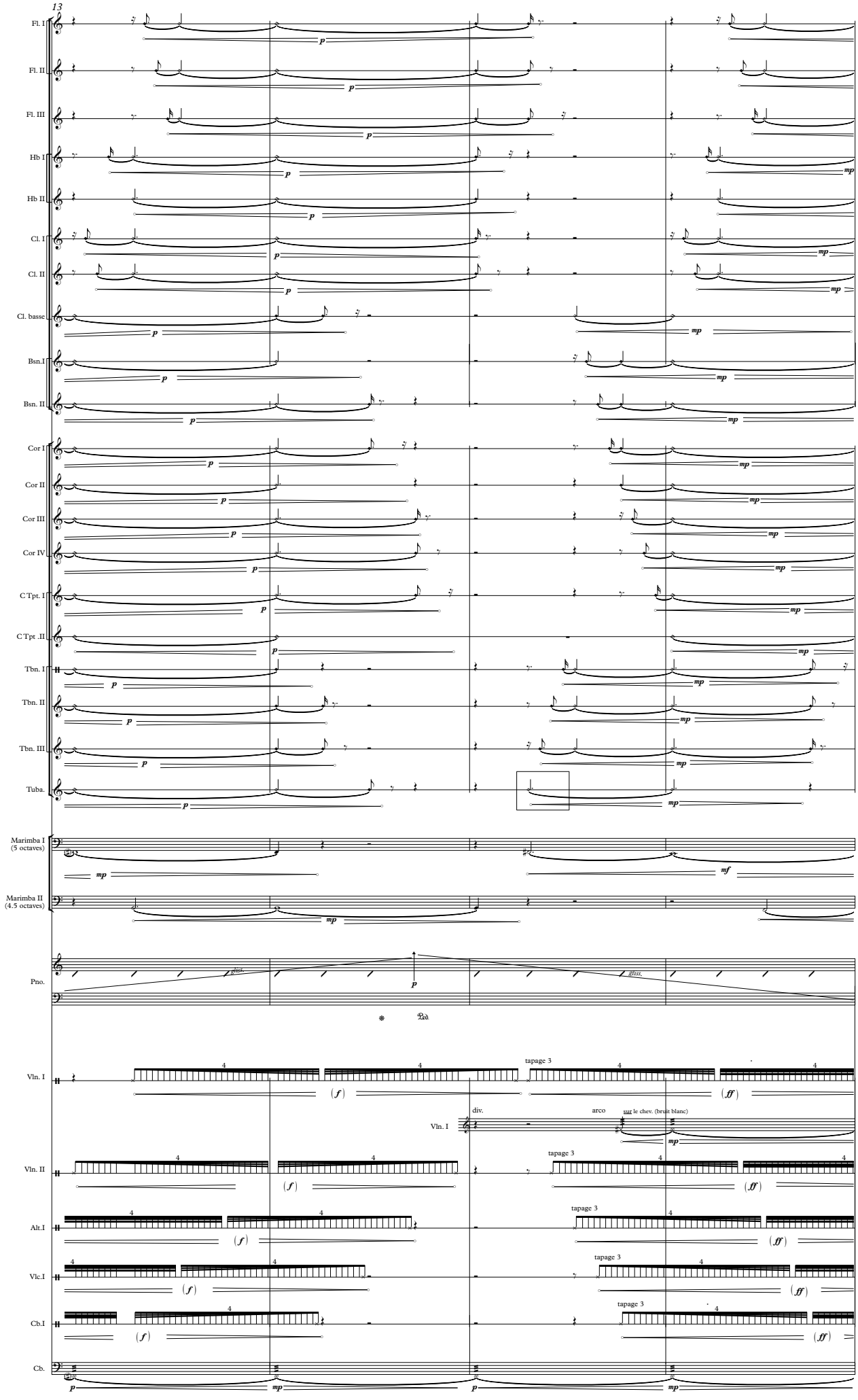
♩ = 60

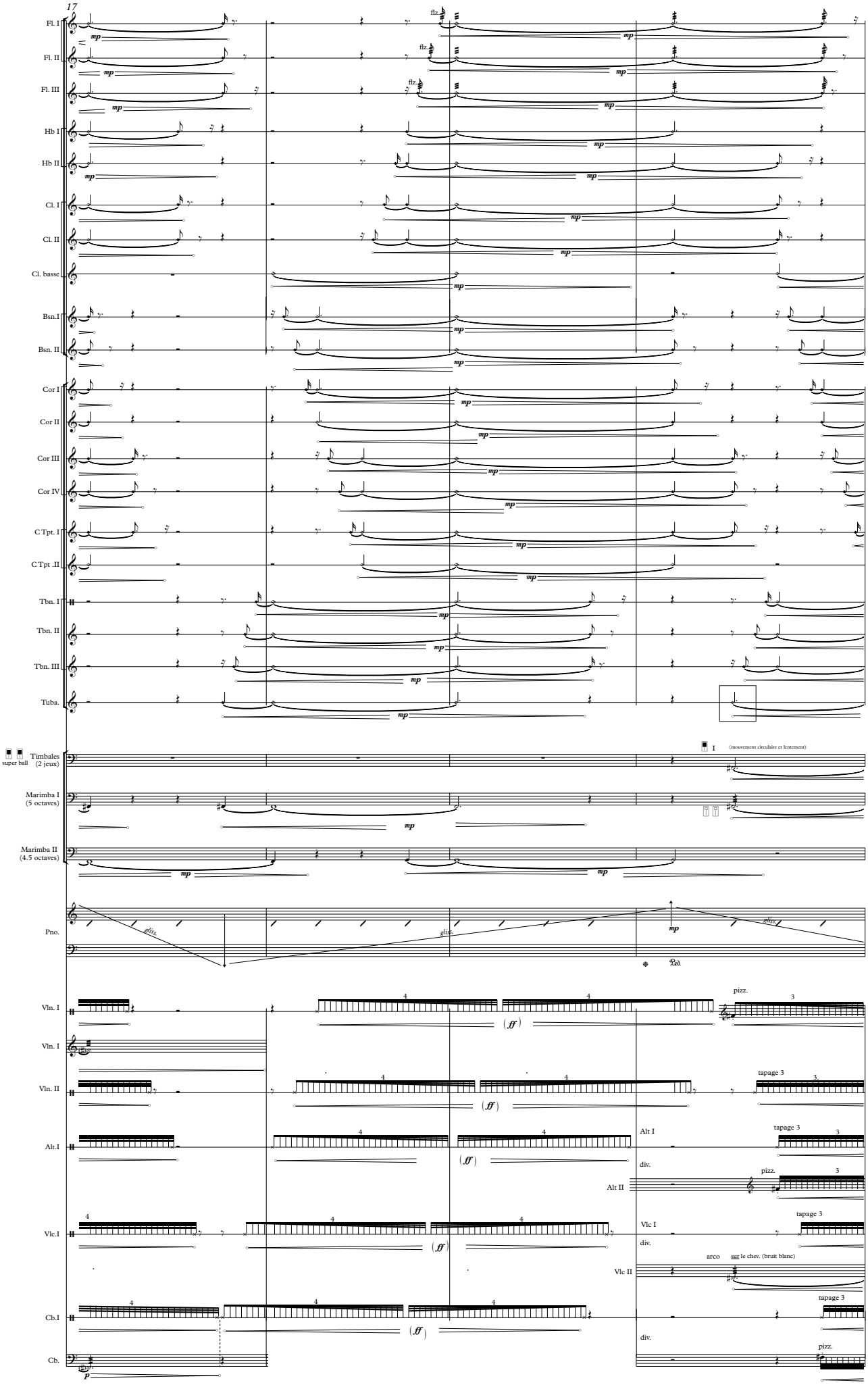
keiko devaux

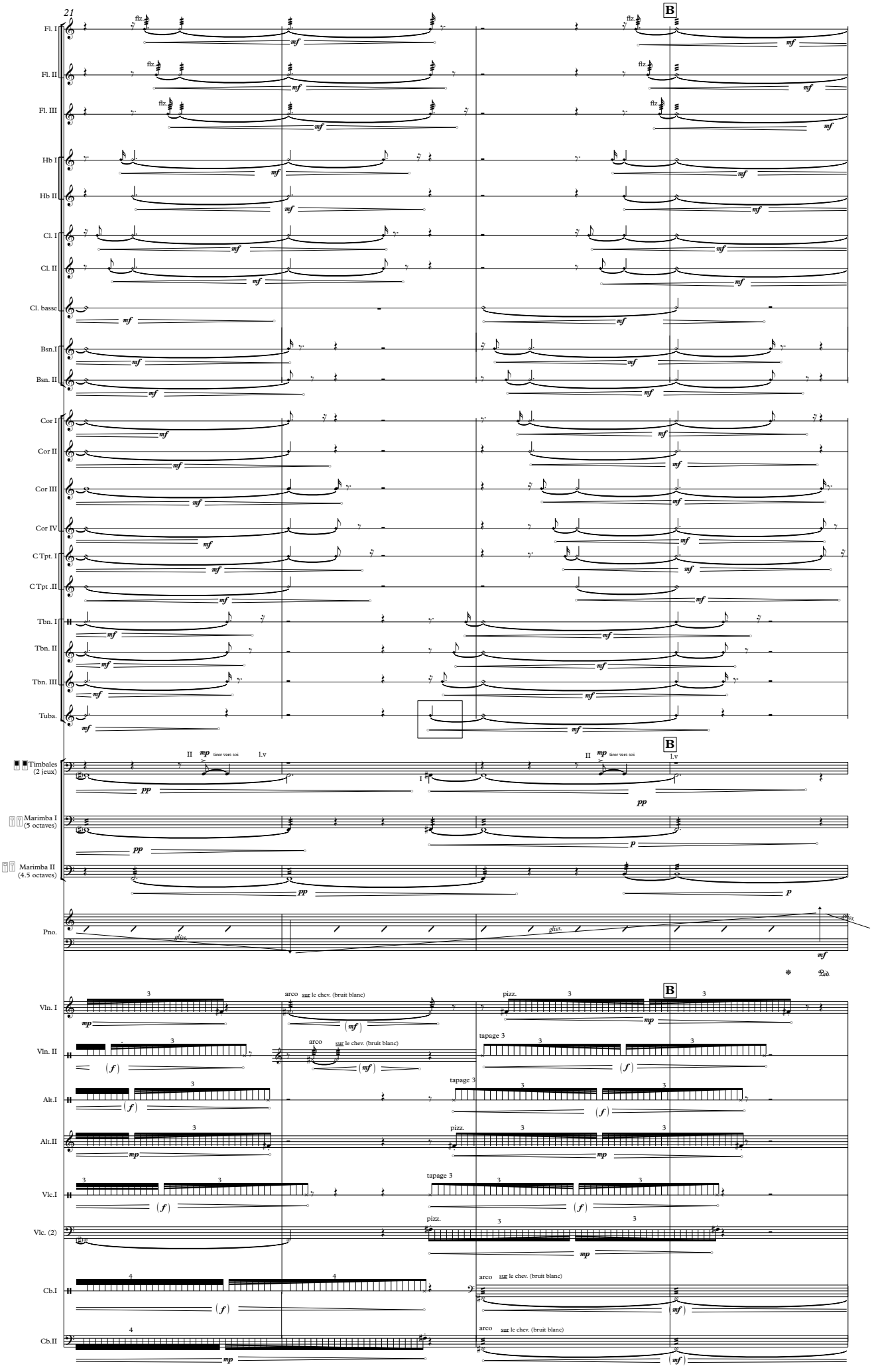


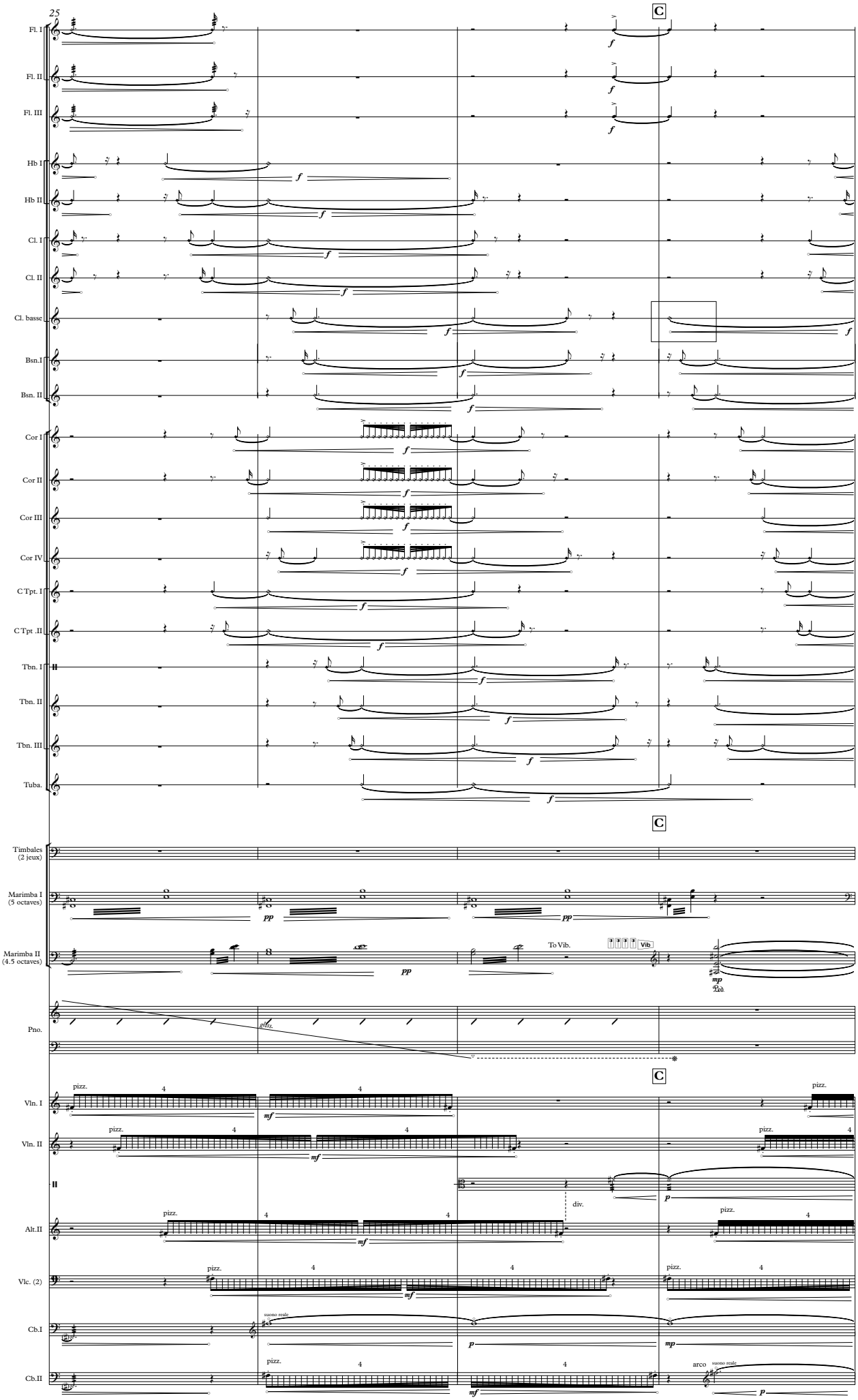

A
5
Fl.I
Fl.II
Fl.III
(ff)
pp
Hb I
Hb II
souffle, pas d'anche
Cl. I
Cl I
Cl II
souffle
Cl. basse
Bsn.I
Bassoon II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Trumpet I
C Trumpet II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Marimba I
(5 octaves)
Marimba II
(4.5 octaves)
Mar
avec un archet
ppp
gliss.
Pno.
Ped.
tapage 1
Vln. I
Vln. II
Alt.I
Vlc.I
Cb.I
mf

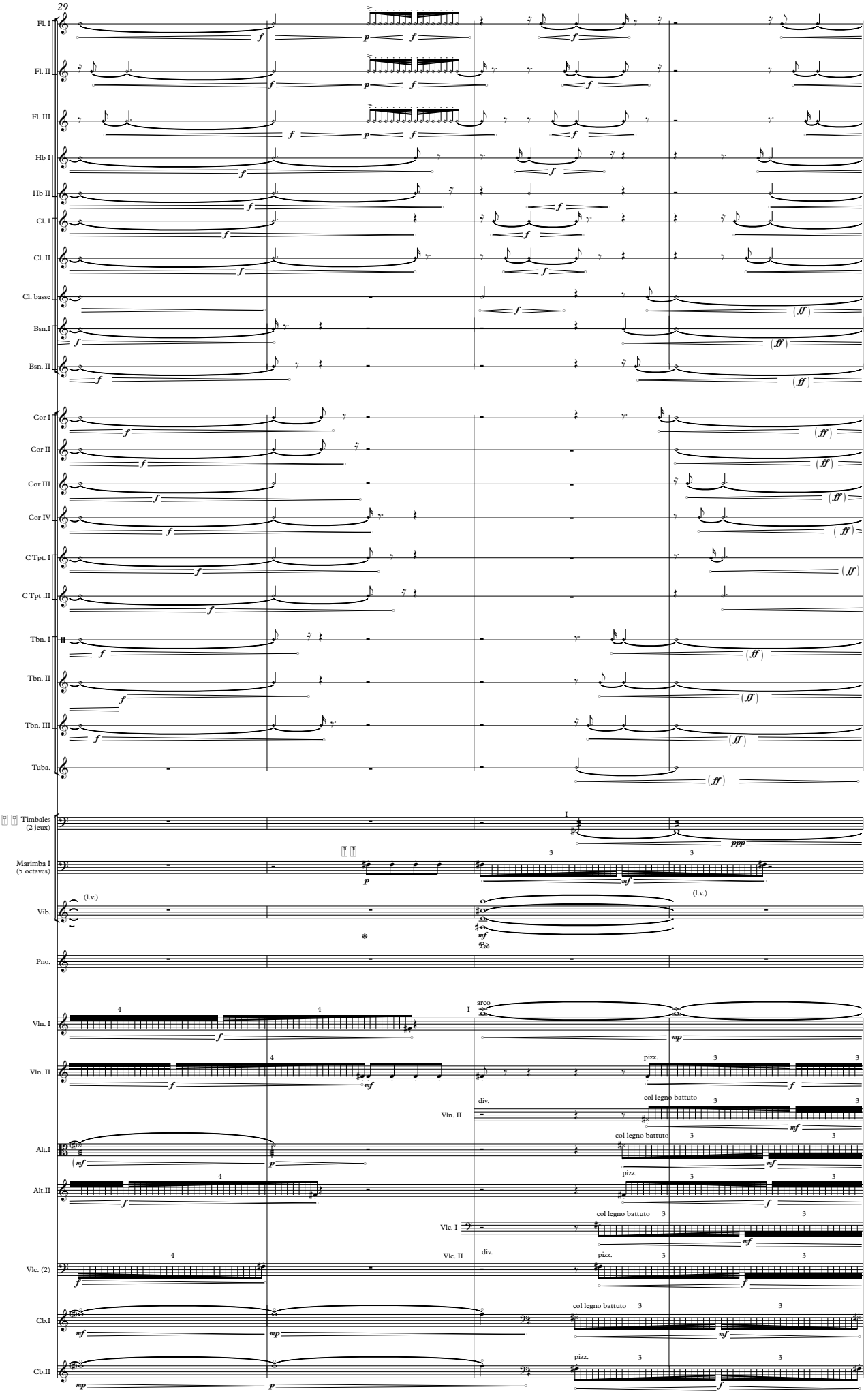

9
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Marimba I (5 octaves)
Marimba II (4.5 octaves)
Pno.
Vln. I
Vln. II
Alt.I
Vlc.I
Cb.I
CB II
tapage 2
arco
sur le chev. (bruit blanc)

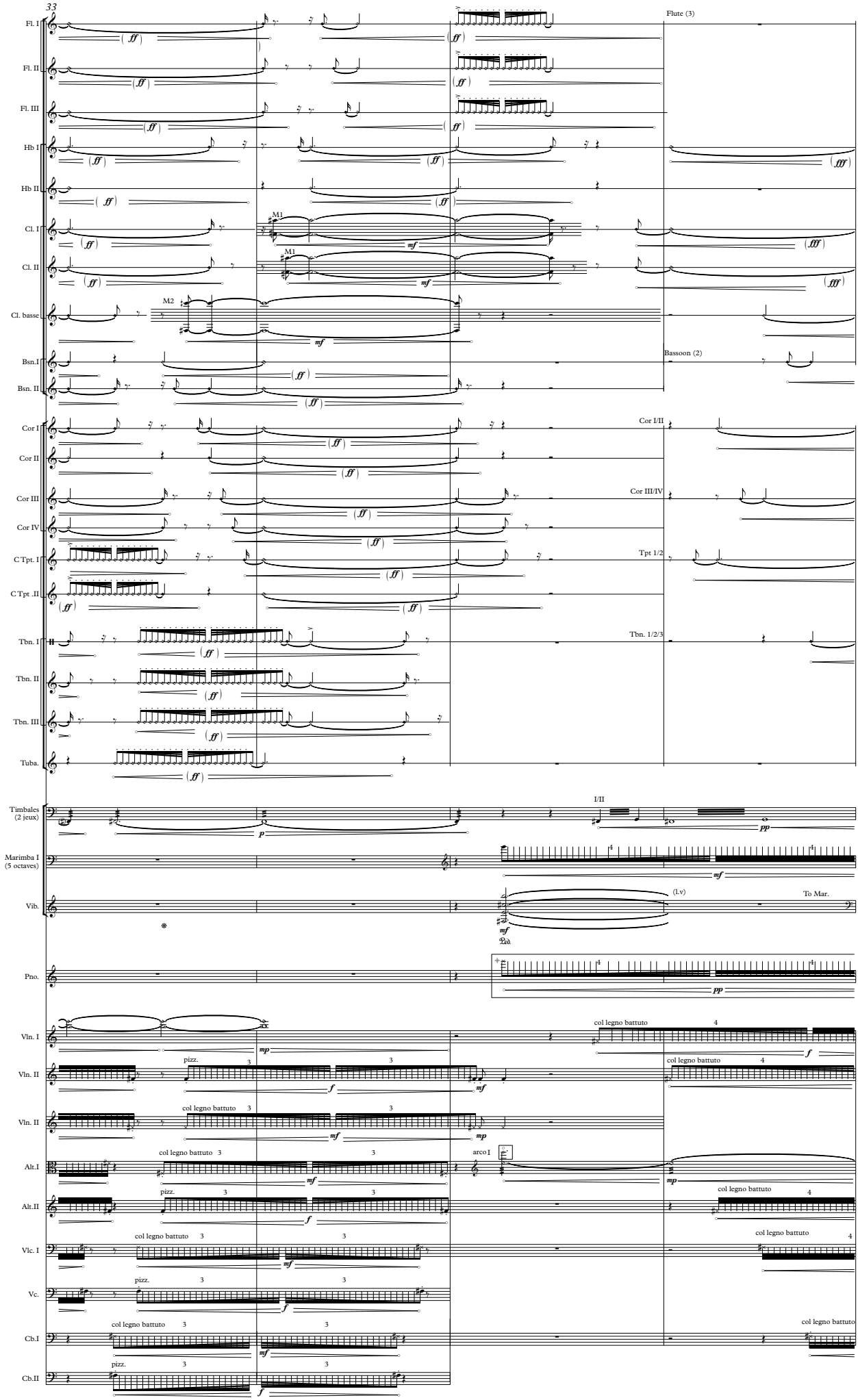

13
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Marimba I
(5 octaves)
Marimba II
(4.5 octaves)
Pno.
Vln. I
Vln. II
Alt.I
Vlc.I
Cb.I
Cb.
tapage 3
div.
arco
sur le chev. (bruit blanc)

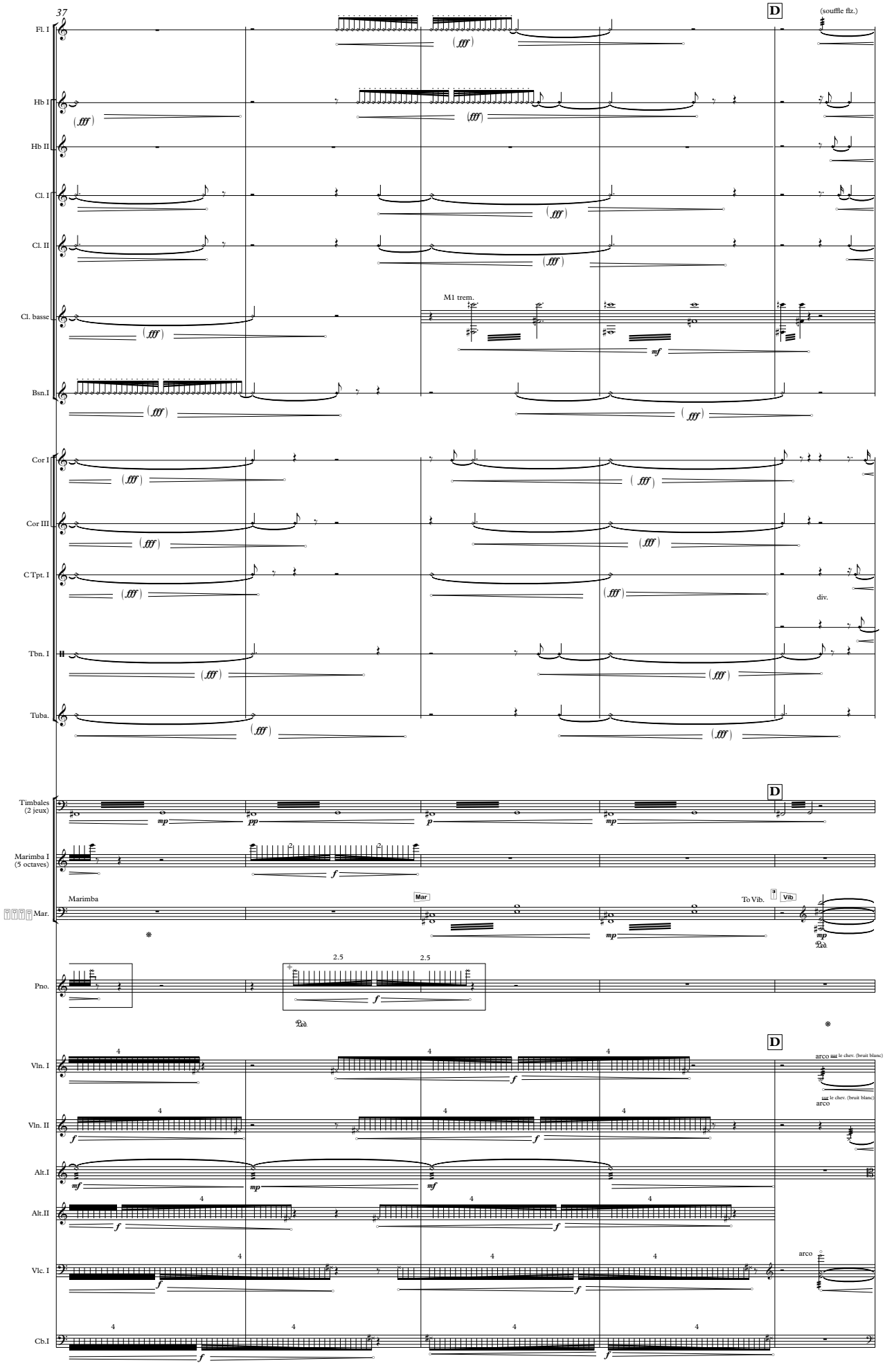

17
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
flz.
mp
Timbales
super ball
(2 jeux)
I
(mouvement circulaire et lentement)
Marimba I
(5 octaves)
Marimba II
(4.5 octaves)
Pno.
gliss.
Vln. I
Vln. II
Alt.I
Vlc.I
Cb.I
Cb.
(ff)
pizz.
tapage 3
Alt I
Alt II
Vlc I
Vlc II
div.
arco
sur le chev. (bruit blanc)

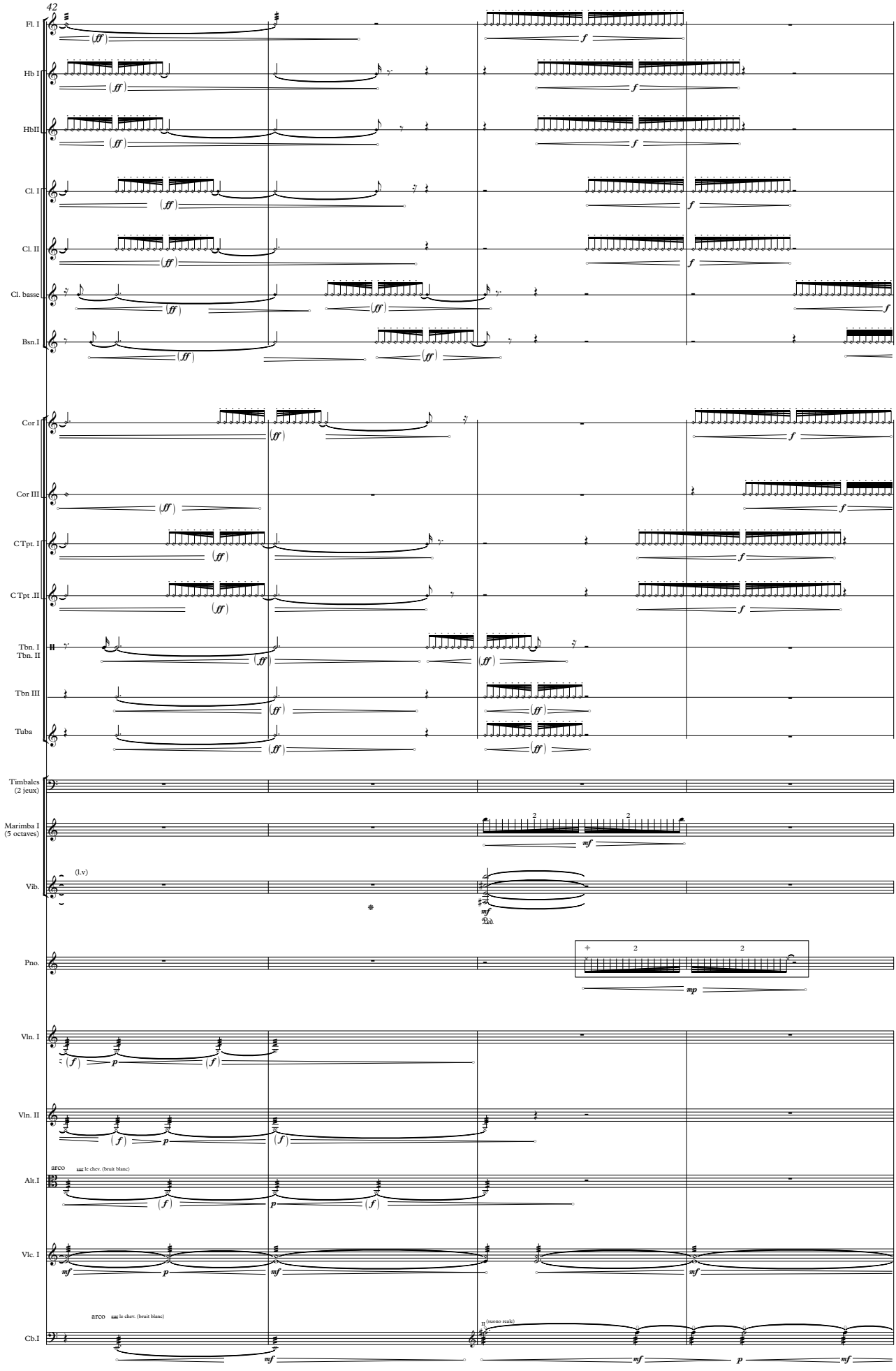

21
B
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Timbales (2 jeux)
Marimba I (5 octaves)
Marimba II (4.5 octaves)
Pno.
Vln. I
Vln. II
Alt.I
Alt.II
Vlc.I
Vlc. (2)
Cb.I
Cb.II
flz.
mf
mp
pp
p
f
tirer vers soi
l.v
gliss.
arco sur le chev. (bruit blanc)
pizz.
tapage 3

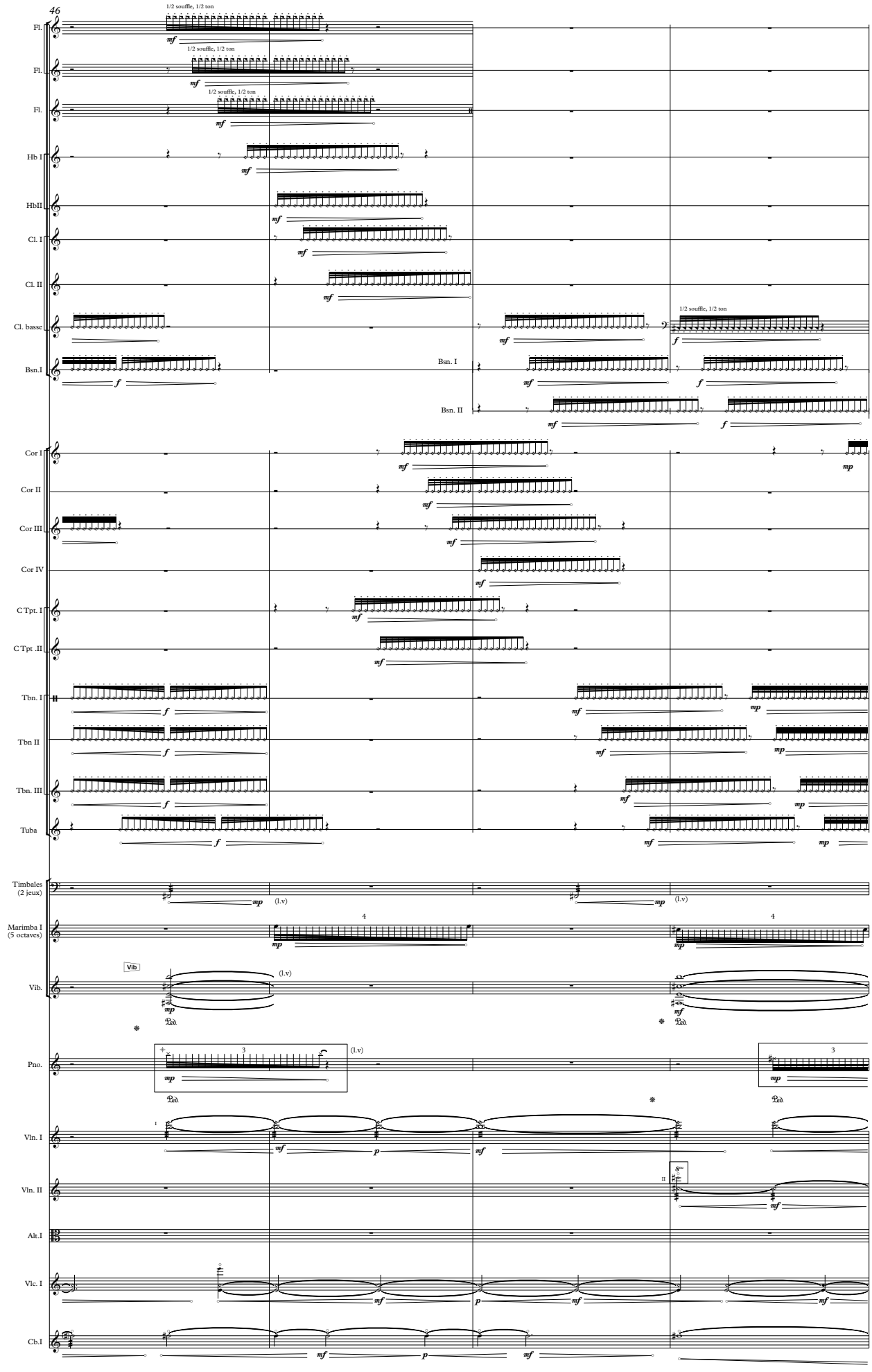

25
C
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Timbales (2 jeux)
Marimba I (5 octaves)
Marimba II (4.5 octaves)
To Vib.
Vib
Pno.
glis.
Vln. I
Vln. II
Alt.II
div.
Vlc. (2)
Cb.I
Cb.II
pizz.
arco
suono reale

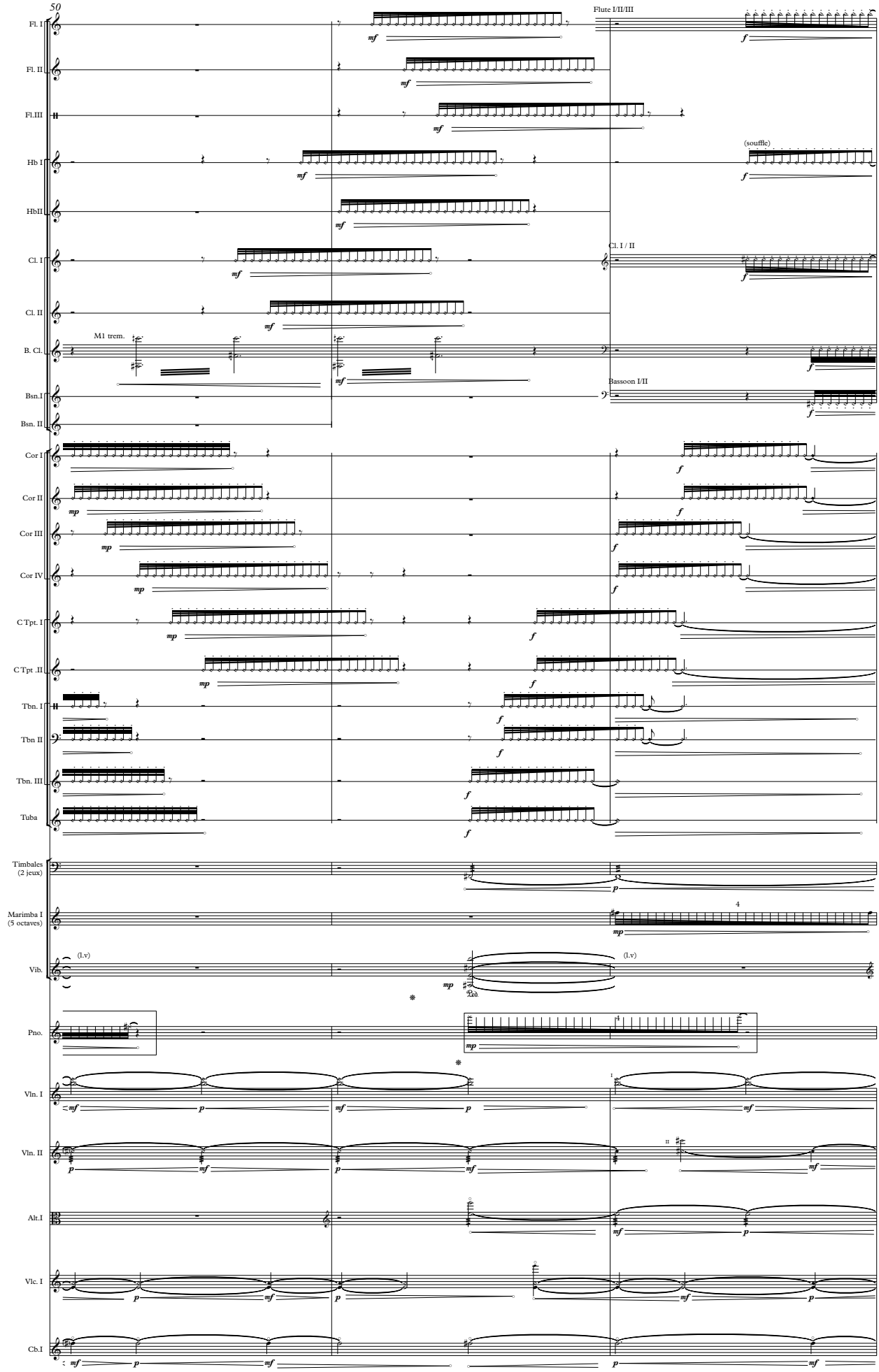

29
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Timbales (2 jeux)
Marimba I (5 octaves)
Vib.
Pno.
Vln. I
Vln. II
Alt.I
Alt.II
Vlc. (2)
Cb.I
Cb.II
Vlc. I
Vlc. II
arco
pizz.
col legno battuto
div.
(l.v.)

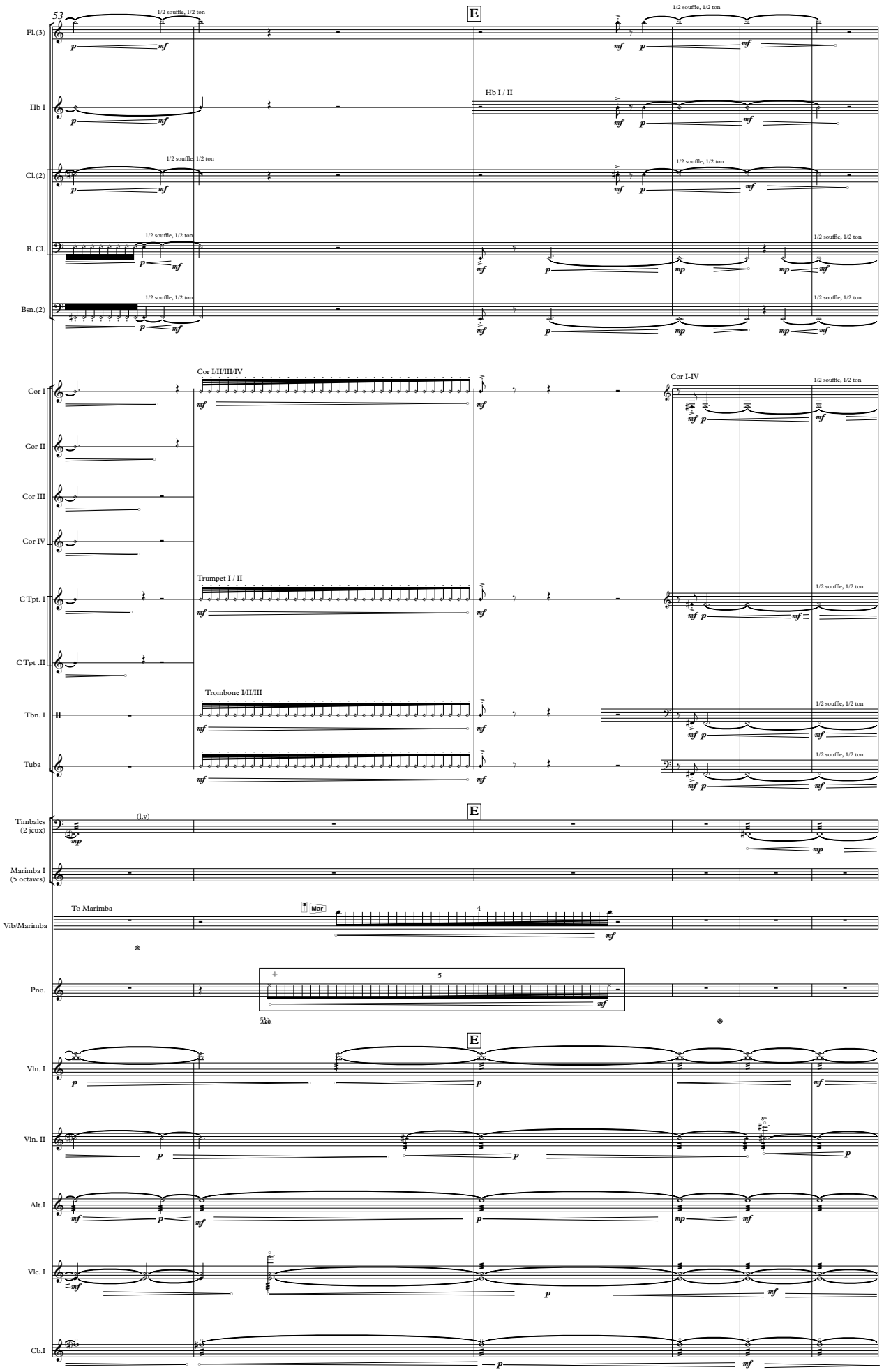

33
Fl. I
Fl. II
Fl. III
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn. III
Tuba.
Timbales (2 jeux)
Marimba I (5 octaves)
Vib.
Pno.
Vln. I
Vln. II
Vln. II
Alt.I
Alt.II
Vlc. I
Vc.
Cb.I
Cb.II
M1
M2
Flute (3)
Bassoon (2)
Cor I/II
Cor III/IV
Tpt 1/2
Tbn. 1/2/3
I/II
(l.v)
To Mar.
pizz.
col legno battuto
arco I

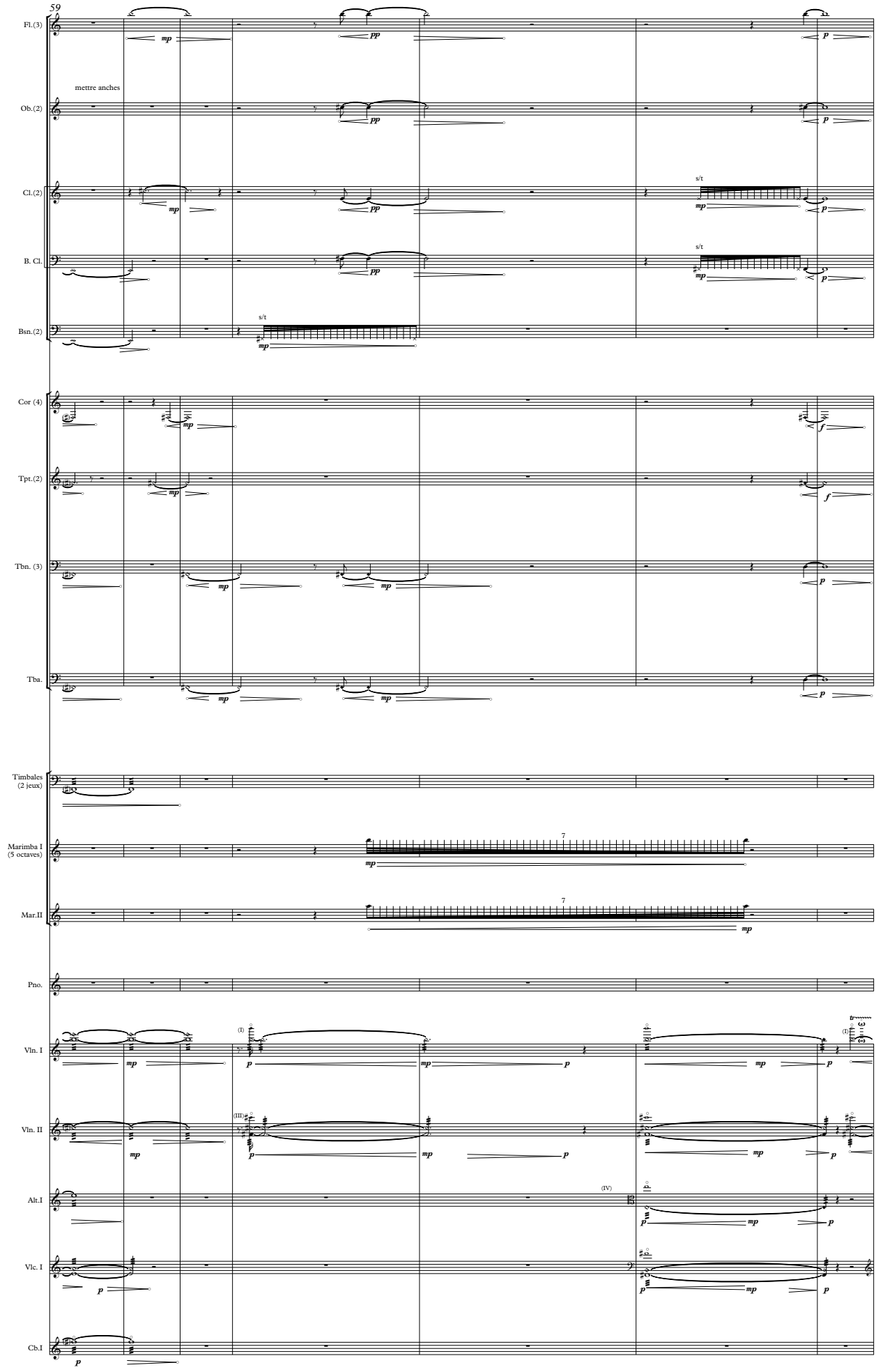

37
D
(souffle flz.)
Fl. I
Hb I
Hb II
Cl. I
Cl. II
Cl. basse
M1 trem.
Bsn.I
Cor I
Cor III
C Tpt. I
div.
Tbn. I
Tuba.
Timbales (2 jeux)
Marimba I (5 octaves)
Marimba
Mar
To Vib.
Vib
Mar.
Pno.
2.5
2.5
Vln. I
arco sur le chev. (bruit blanc)
Vln. II
arco
Alt.I
Alt.II
Vlc. I
arco
Cb.I

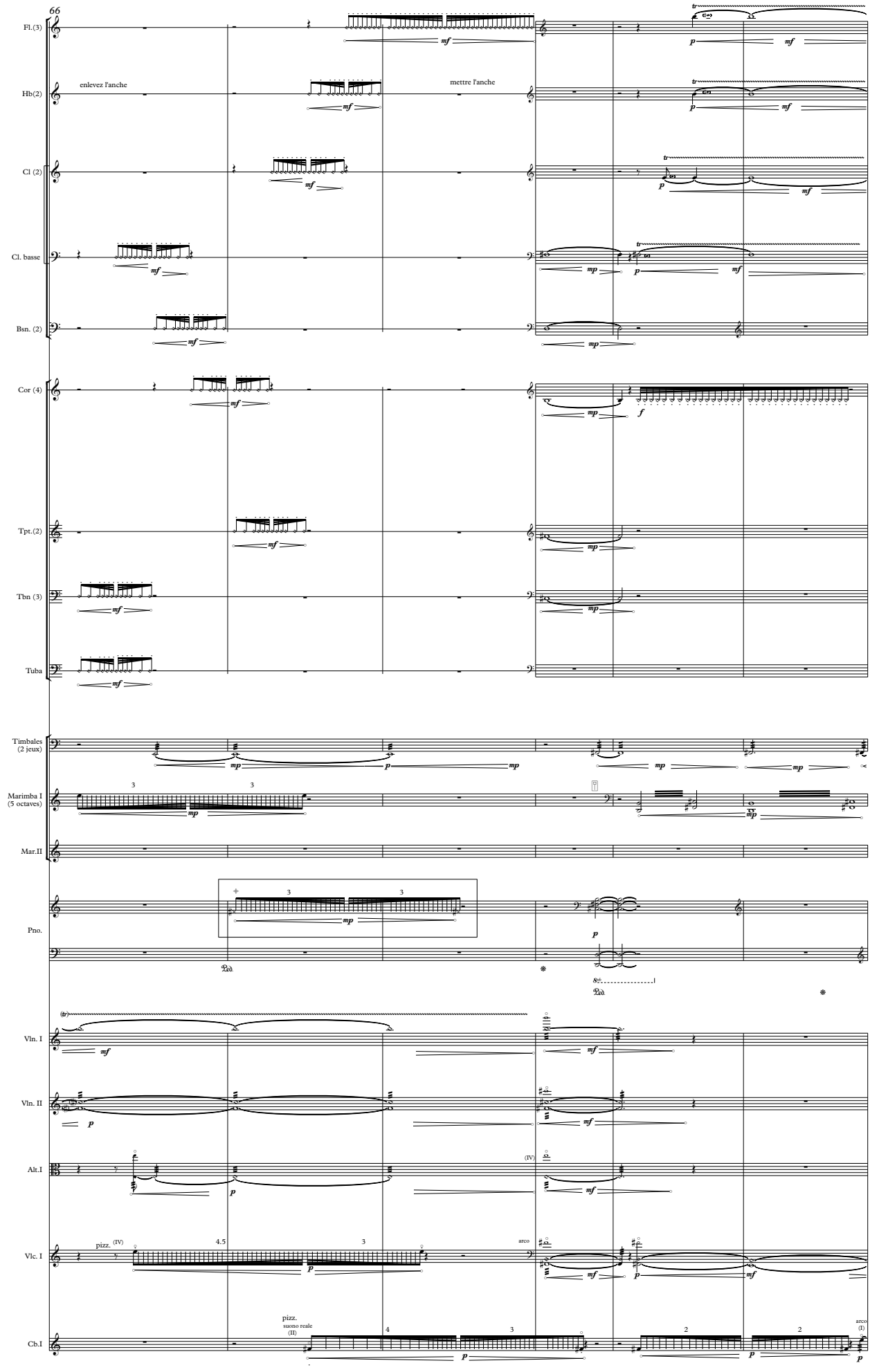

42
Fl. I
Hb I
HbII
Cl. I
Cl. II
Cl. basse
Bsn.I
Cor I
Cor III
C Tpt. I
C Tpt .II
Tbn. I
Tbn. II
Tbn III
Tuba
Timbales
(2 jeux)
Marimba I
(5 octaves)
Vib.
(l.v)
Ped.
Pno.
Vln. I
Vln. II
Alt.I
arco
sur le chev. (bruit blanc)
Vlc. I
Cb.I
(ff)
f
mf
mp
p

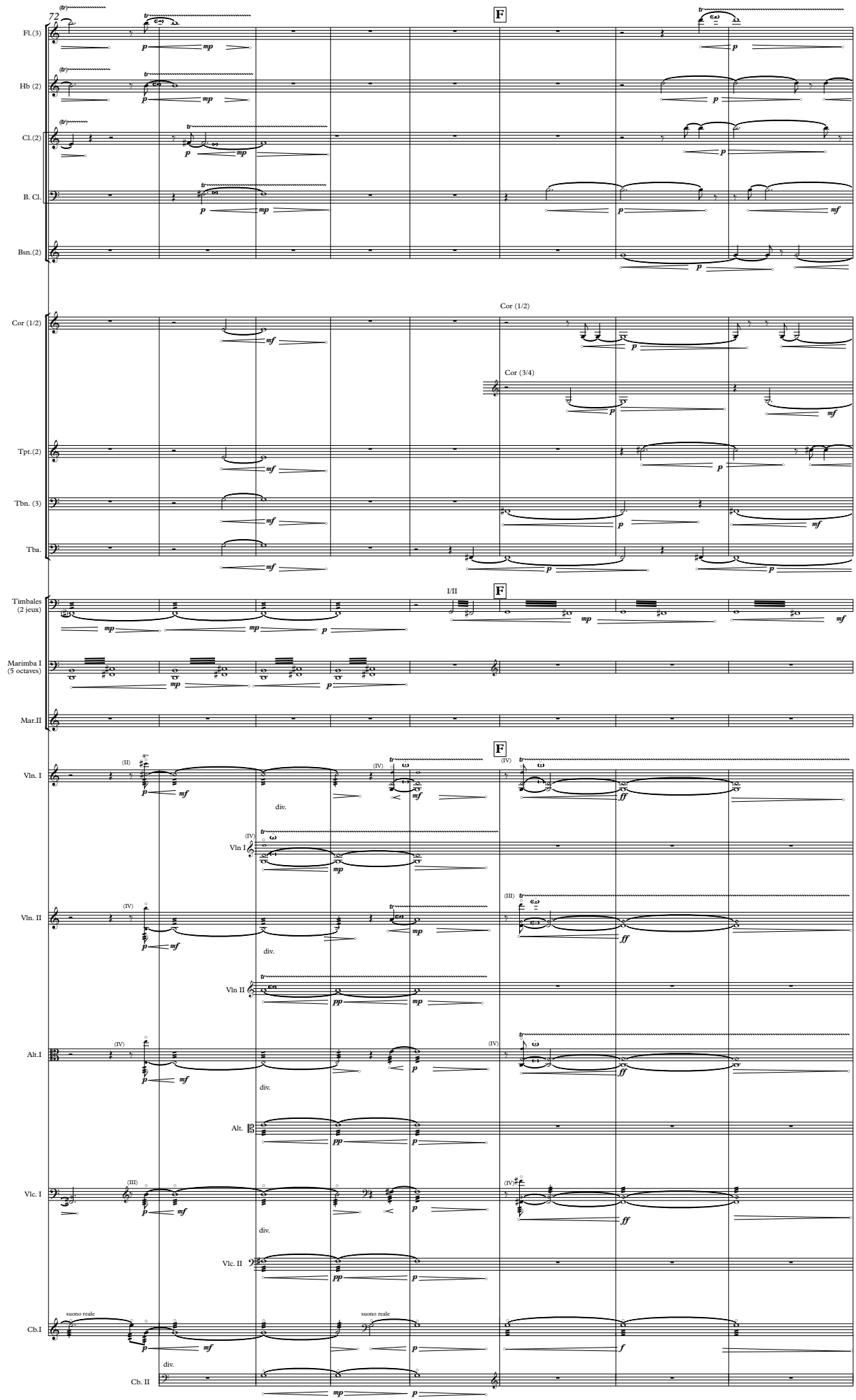

46
Fl.
Fl.
Fl.
1/2 souffle, 1/2 ton
Hb I
HbII
Cl. I
Cl. II
Cl. basse
Bsn.I
Bsn. I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn II
Tbn. III
Tuba
Timbales (2 jeux)
Marimba I (5 octaves)
Vib.
Pno.
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I
(l.v)
Ped.

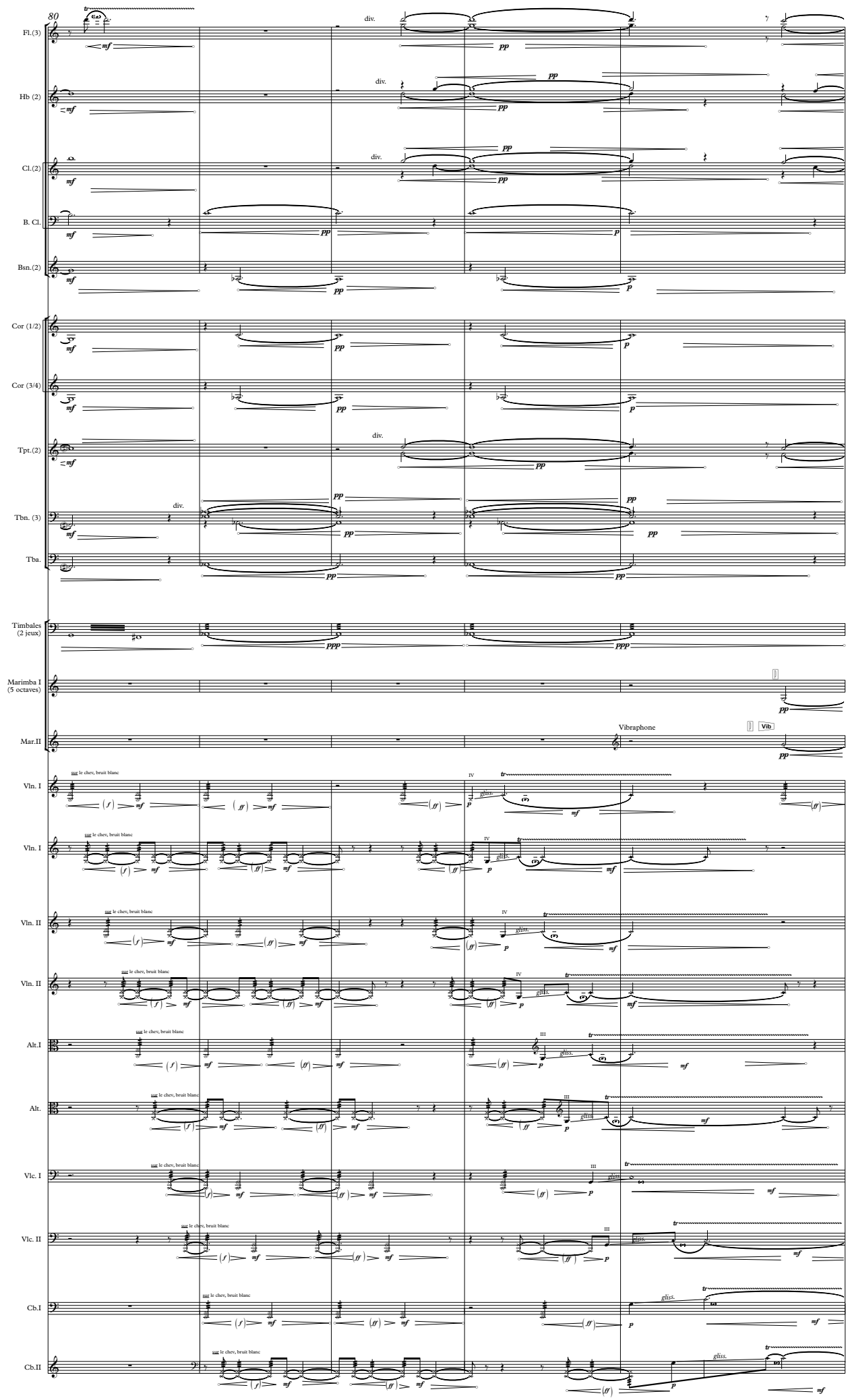

50
Fl. I
Fl. II
Fl.III
Hb I
HbII
Cl. I
Cl. II
B. Cl.
Bsn.I
Bsn. II
Cor I
Cor II
Cor III
Cor IV
C Tpt. I
C Tpt .II
Tbn. I
Tbn II
Tbn. III
Tuba
Timbales (2 jeux)
Marimba I (5 octaves)
Vib.
Pno.
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I
Flute I/II/III
(souffle)
Cl. I / II
M1 trem.
Bassoon I/II
(l.v)
(l.v)
4

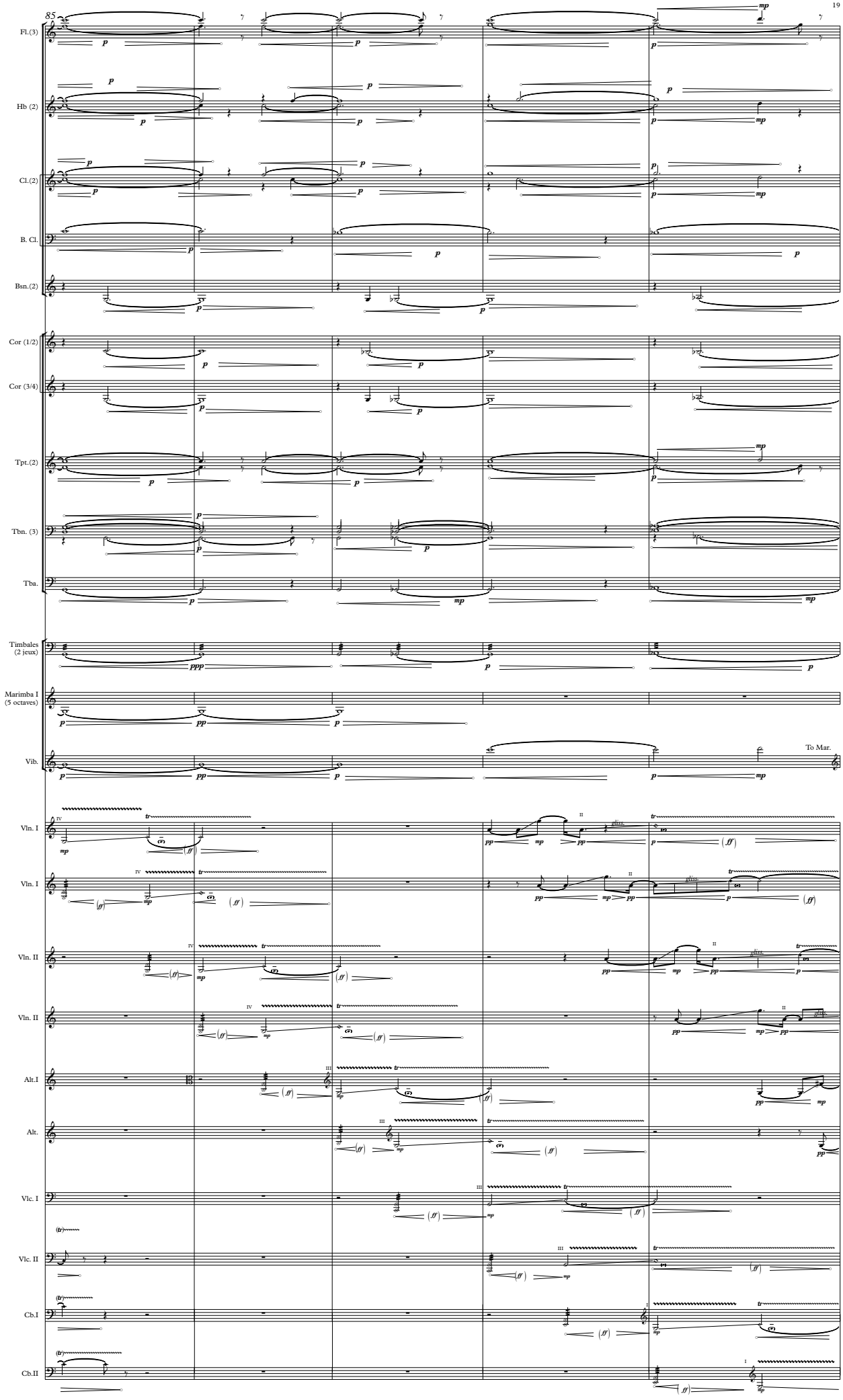

53
E
Fl.(3)
Hb I
Hb I / II
Cl.(2)
B. Cl.
Bsn.(2)
1/2 souffle, 1/2 ton
Cor I
Cor II
Cor III
Cor IV
Cor I/II/III/IV
Cor I-IV
C Tpt. I
C Tpt .II
Trumpet I / II
Tbn. I
Trombone I/II/III
Tuba
Timbales (2 jeux)
(l.v)
Marimba I (5 octaves)
Vib/Marimba
To Marimba
Mar
Pno.
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I

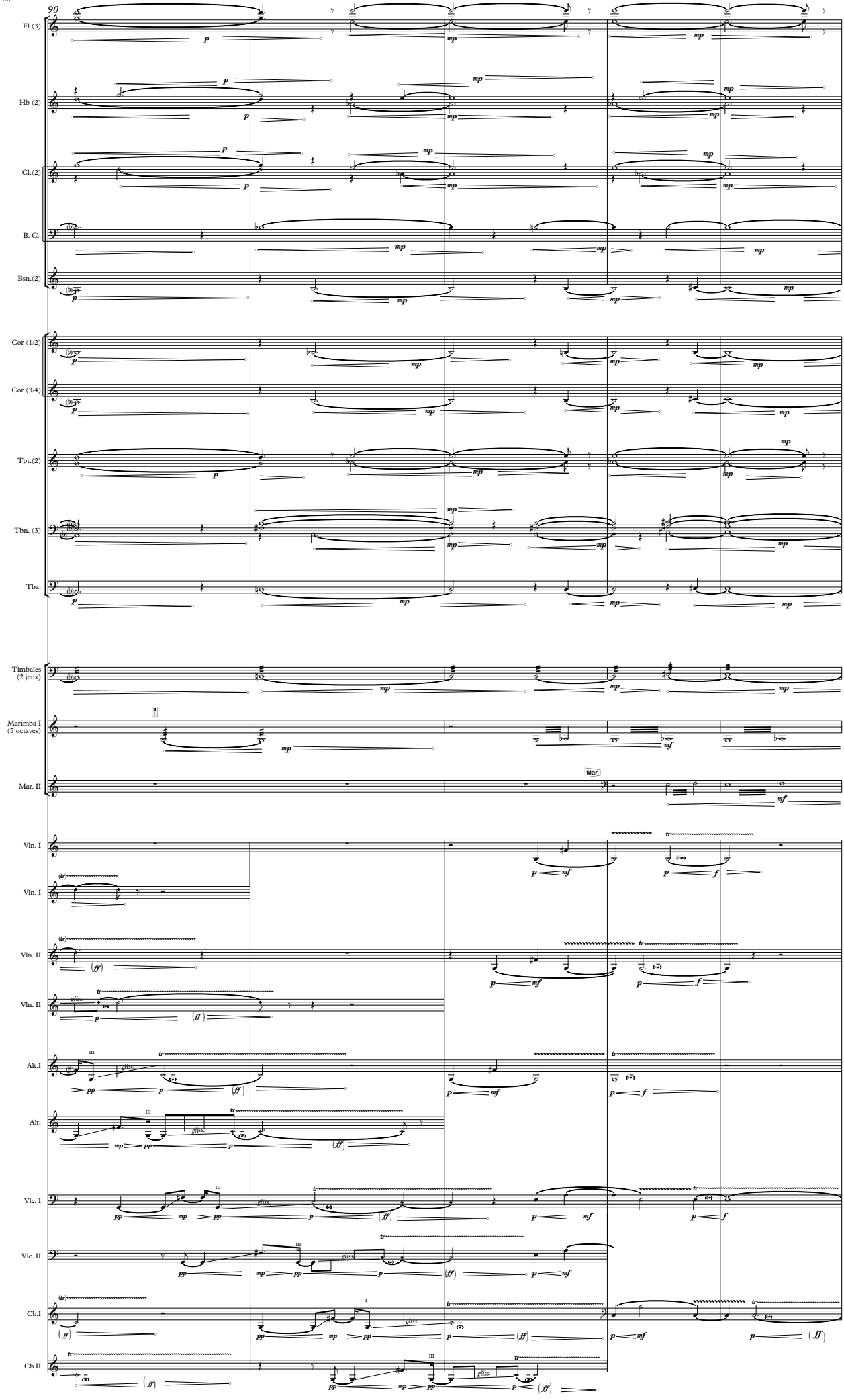

59
Fl.(3)
mettre anches
Ob.(2)
Cl.(2)
B. Cl.
Bsn.(2)
s/t
Cor (4)
Tpt.(2)
Tbn. (3)
Tba.
Timbales
(2 jeux)
Marimba I
(5 octaves)
Mar.II
Pno.
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I

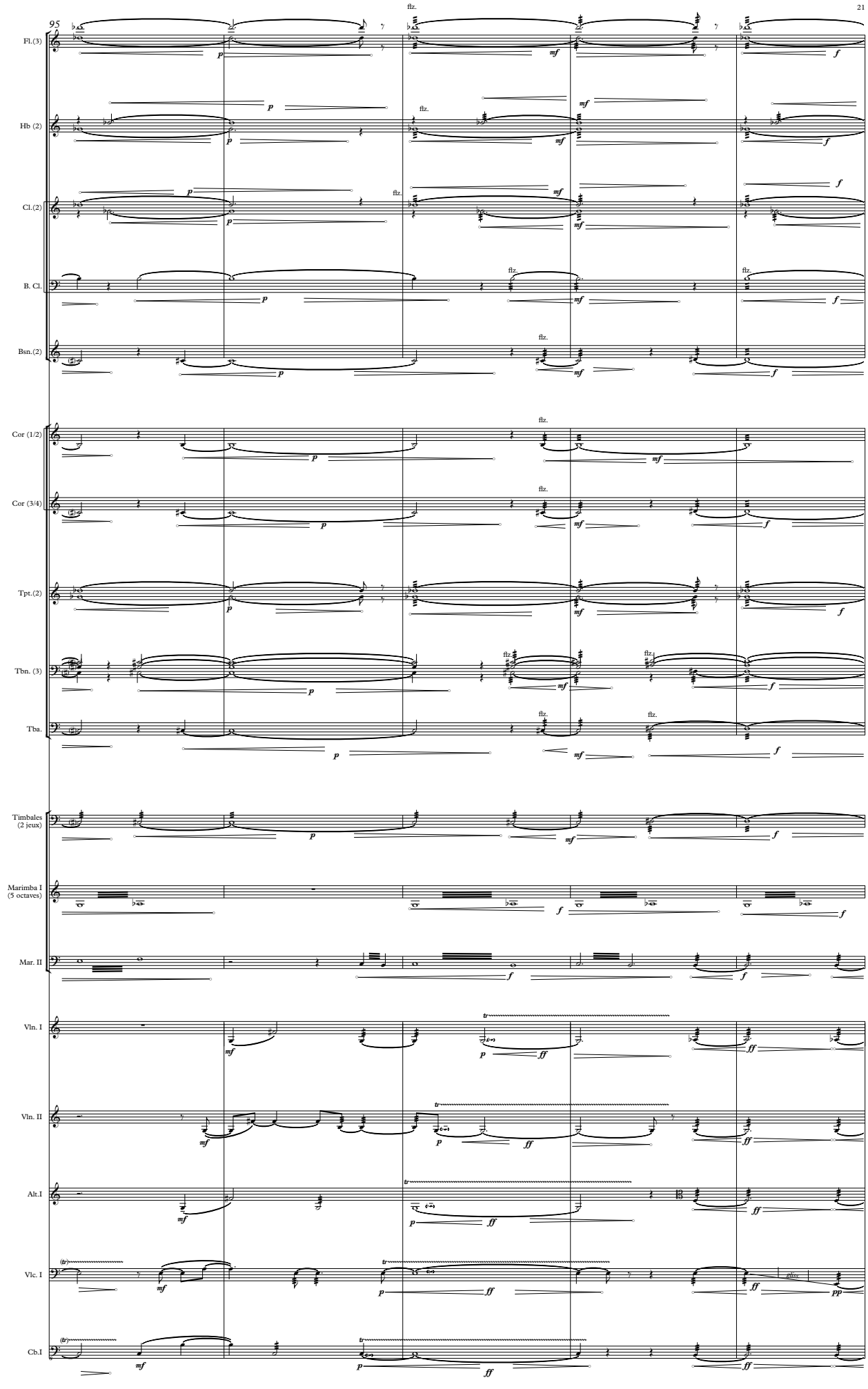

66
Fl.(3)
Hb(2)
enlevez l'anche
mettre l'anche
Cl (2)
Cl. basse
Bsn. (2)
Cor (4)
Tpt.(2)
Tbn (3)
Tuba
Timbales (2 jeux)
Marimba I (5 octaves)
Mar.II
Pno.
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I
pizz.
(IV)
arco
pizz.
suono reale
(II)
arco
(I)

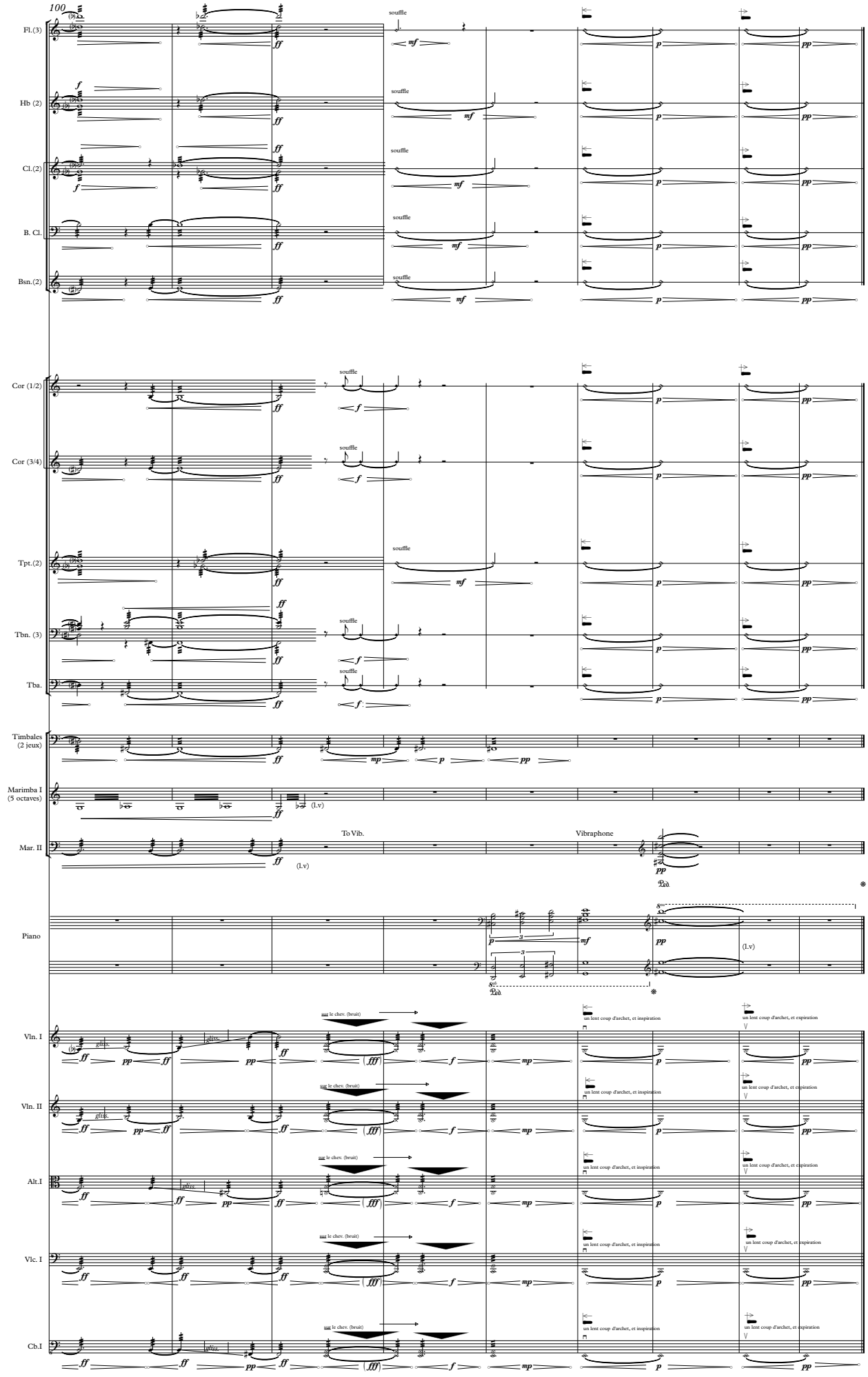

72
F
Fl.(3)
Hb (2)
Cl.(2)
B. Cl.
Bsn.(2)
Cor (1/2)
Cor (3/4)
Tpt.(2)
Tbn. (3)
Tba.
I/II
Timbales (2 jeux)
Marimba I (5 octaves)
Mar.II
Vln. I
Vln I
Vln. II
Vln II
Alt.I
Alt.
Vlc. I
Vlc. II
Cb.I
Cb. II
div.
suono reale


80
Fl.(3)
Hb (2)
Cl.(2)
B. Cl.
Bsn.(2)
Cor (1/2)
Cor (3/4)
Tpt.(2)
Tbn. (3)
Tba.
Timbales (2 jeux)
Marimba I (5 octaves)
Mar.II
Vibraphone
Vib
Vln. I
Vln. II
Alt.I
Alt.
Vlc. I
Vlc. II
Cb.I
Cb.II
div.
sur le chev, bruit blanc
gliss.


85
Fl.(3)
Hb (2)
Cl.(2)
B. Cl.
Bsn.(2)
Cor (1/2)
Cor (3/4)
Tpt.(2)
Tbn. (3)
Tba.
Timbales (2 jeux)
Marimba I (5 octaves)
Vib.
To Mar.
Vln. I
Vln. I
Vln. II
Vln. II
Alt.I
Alt.
Vlc. I
Vlc. II
Cb.I
Cb.II


90
Fl.(3)
Hb (2)
Cl.(2)
B. Cl.
Bsn.(2)
Cor (1/2)
Cor (3/4)
Tpt.(2)
Tbn. (3)
Tba.
Timbales (2 jeux)
Marimba I (5 octaves)
Mar. II
Mar
Vln. I
Vln. I
Vln. II
Vln. II
Alt.I
Alt.
Vlc. I
Vlc. II
Cb.I
Cb.II


95
Fl.(3)
Hb (2)
Cl.(2)
B. Cl.
Bsn.(2)
Cor (1/2)
Cor (3/4)
Tpt.(2)
Tbn. (3)
Tba.
Timbales (2 jeux)
Marimba I (5 octaves)
Mar. II
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I
flz.
tr
glis.


100
Fl.(3)
Hb (2)
Cl.(2)
B. Cl.
Bsn.(2)
Cor (1/2)
Cor (3/4)
Tpt.(2)
Tbn. (3)
Tba.
Timbales (2 jeux)
Marimba I (5 octaves)
Mar. II
Piano
Vln. I
Vln. II
Alt.I
Vlc. I
Cb.I
souffle
To Vib.
Vibraphone
(l.v)
sur le chev. (bruit)
un lent coup d'archet, et inspiration
un lent coup d'archet, et expiration

ere

pour cinq violons

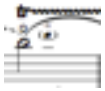
2016

Keiko Devaux

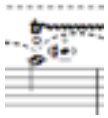
Notes générales:

1. J'ai écrit les trémolos de la même manière que les trilles de façon à garder la durée de chaque le plus clair possible.
2. Les trémolos entre deux cordes sont toujours liés.
3. Lors d'un trémolo timbral (entre harmonique et note normale) : donner la priorité à la pression pour mieux faire ressortir la note principale
4. Afin de garder fluide la relation entre les notes tenues et les trilles/trémolos. Éviter le changement d'archet lors de le changement de geste.
5. Revenir à la nuance d'origine, après les crescendos et diminuendos, quand ce n'est pas spécifié.
6. Le sommet de nuance est au milieu de la durée de chaque trille/trémolo.

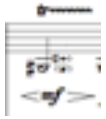
Harmoniques (les trilles et les trémolos)



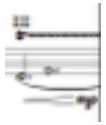
trémolo entre deux harmoniques naturels (et sur deux cordes différentes / trémolo d'archet)



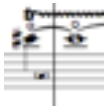
trémolo entre deux harmoniques naturels (et sur une corde uniquement / trémolo des doigts)



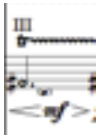
trémolo entre une note normale et un harmonique artificiel *(faire ressortir le note normale)



trémolo entre une corde à vide et un harmonique naturel *(faire ressortir la corde à vide)



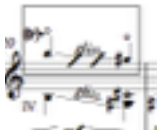
trémolo entre un harmonique naturel et une corde à vide (inverse de exemple précédent)



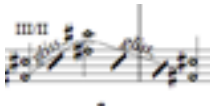
*même que précédent

Glissandi

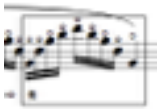
glissandi harmoniques: non-mesurés.



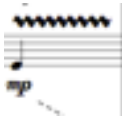
glissando, sur une corde, entre un harmonique naturel et un harmonique artificiel.
*pour les harmoniques naturels choisir la position le plus loin de la fausse harmonique pour avoir le glissando le plus long



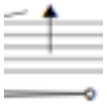
glissando, sur 2 cordes, (les deux sont des harmoniques naturels)



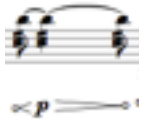
Tous les gestes dans les boîtes sont purement des gestes physiques/théâtraux. J'ai écrit ***niente,*** mais c'est important que le geste ressemble au vrai geste, donc vous pouvez toucher les cordes avec les doigts et l'archet pour un nuance la plus proche possible de *niente* pour que ce soit caché par le son des autres violons.



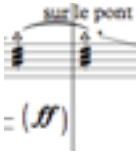
vibrato large et rapide. (approx. un intervalle d'un demi-ton)



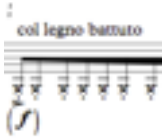
hauteur la plus haute possible



Les tremolos sont pas mesurés et doivent être joué le pus rapidement possible, au sommet de la nuance. La structure des nuances guide la vitesse du trémolo. (accélération et ralentissement).

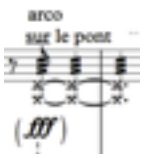


les nuances entre les ( ) indiquent plus l'intention que le résultat sonore

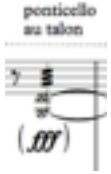


battuto poco col legno

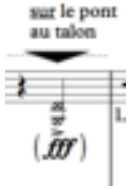
pression de l'archet plus forte



sur le pont pour créer un son de bruit



blanche 1/2 ponticello, 1/2



sur le pont mais avec un pression d'archet plus forte

garder l'archet sur la corde jusqu'à la ligne pointillée (geste théâtrale)

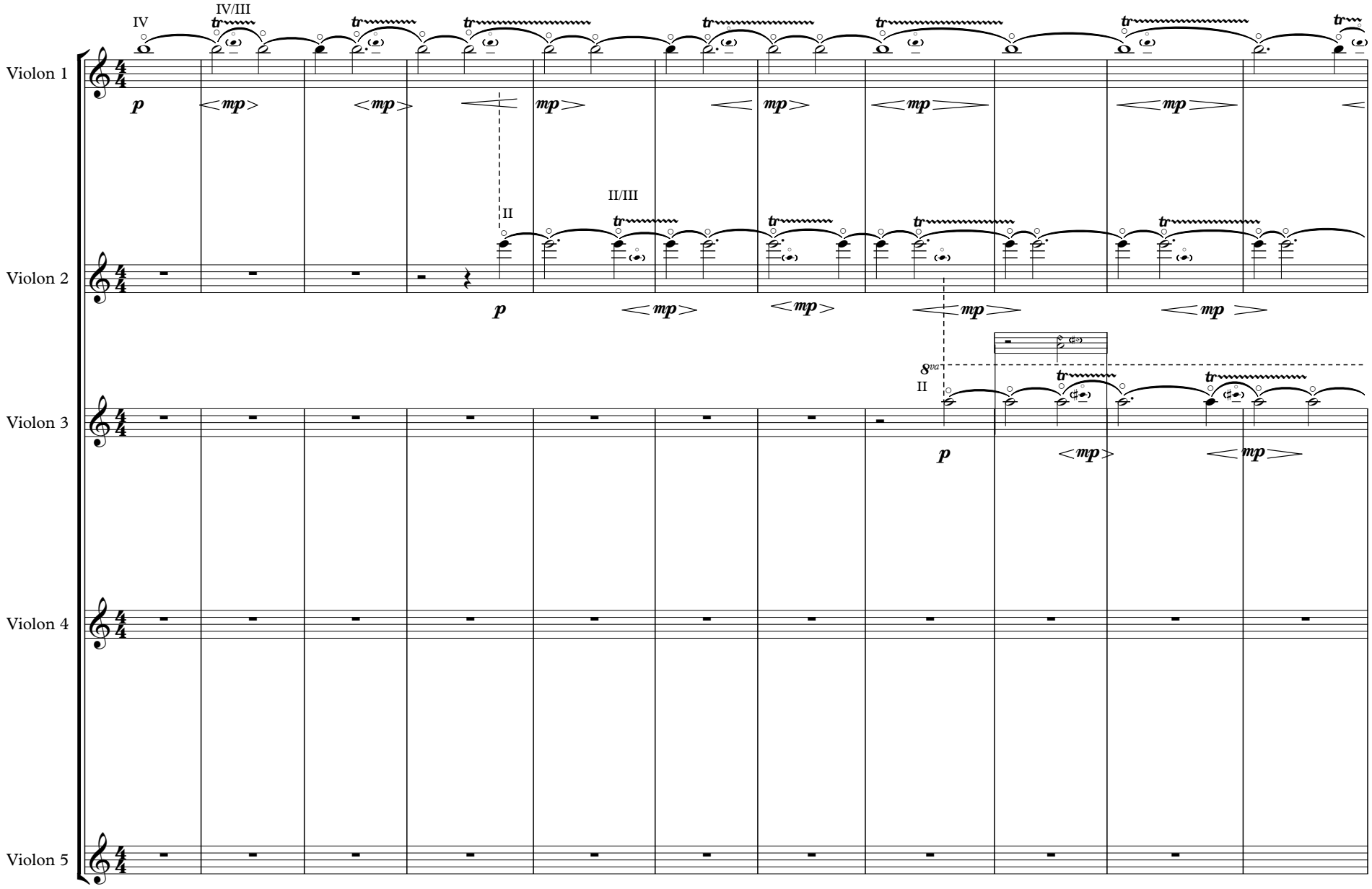
les flèches en pointillé indiquent le relai entre les motifs (plus une indication pour le/la chef)

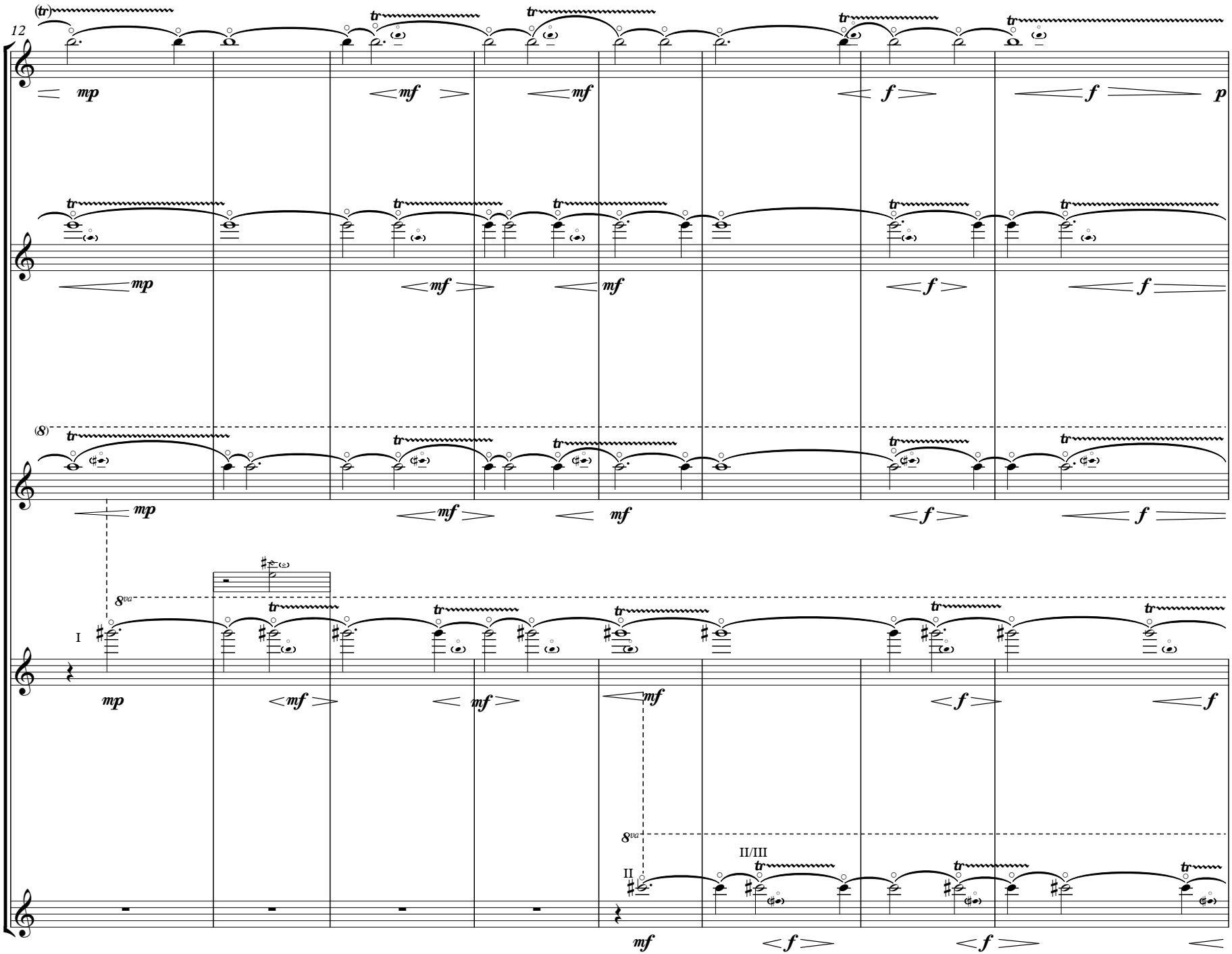
l.v : laisser les cordes résonner

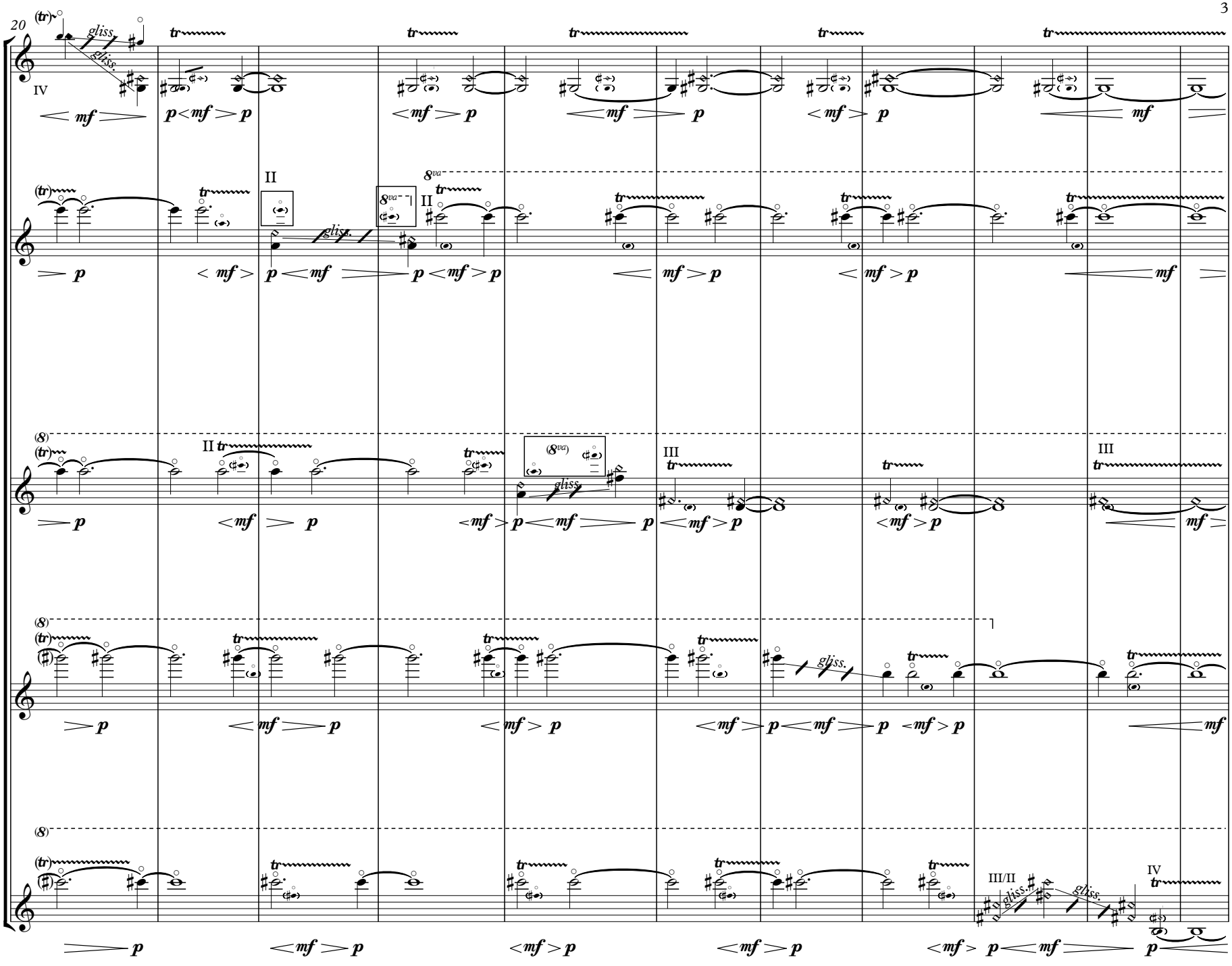
e r e

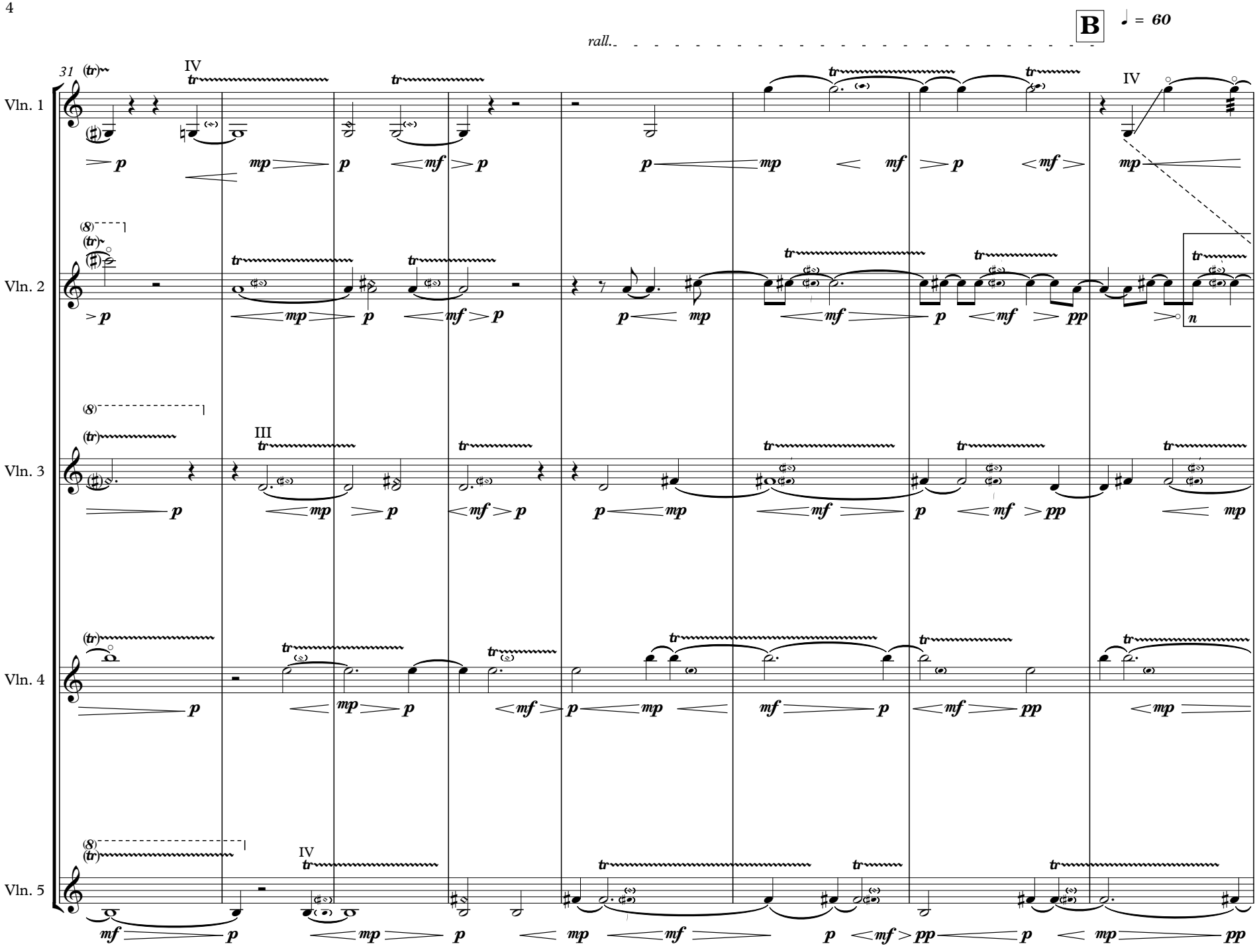
A ♩ = 70

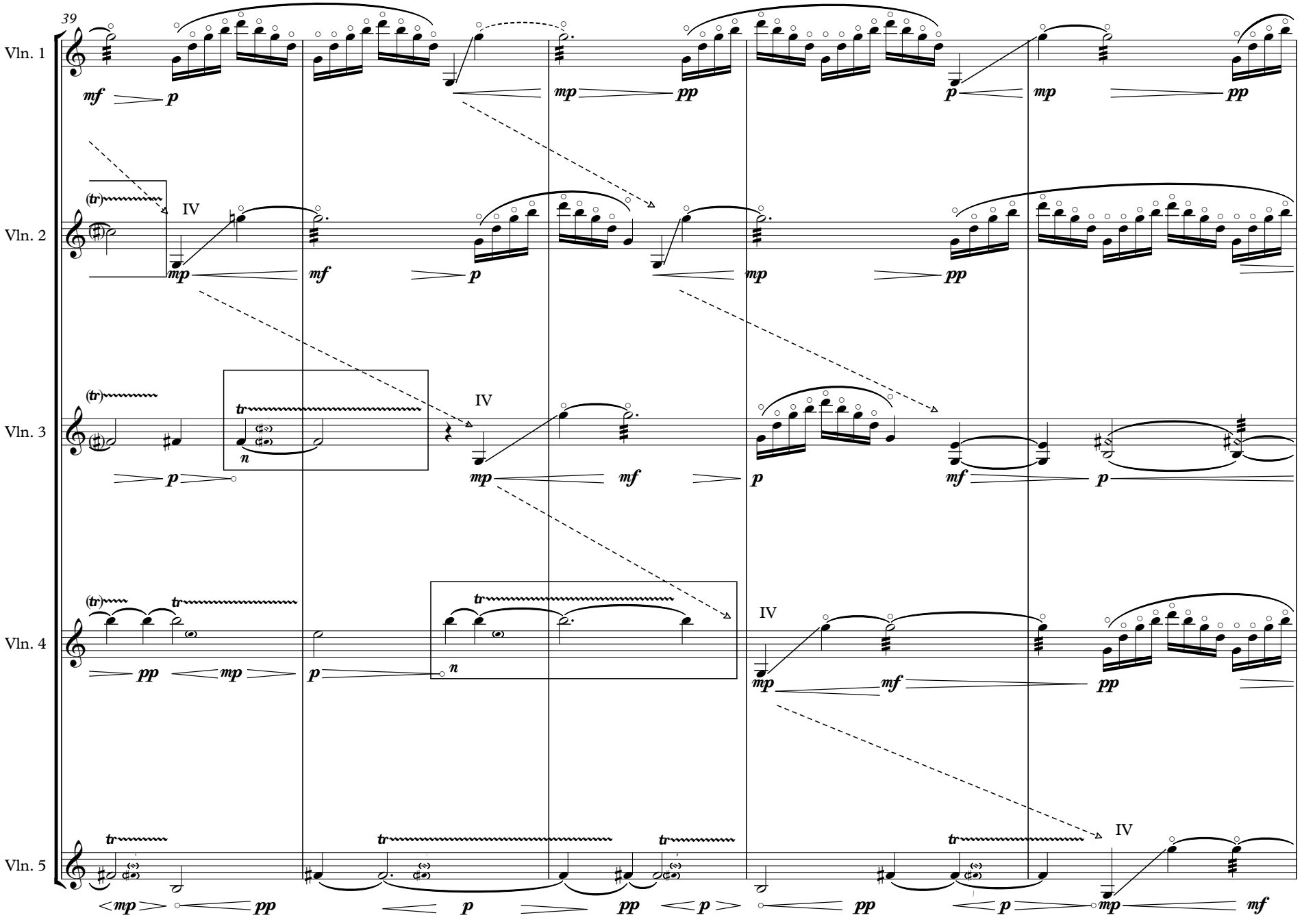
keiko devaux

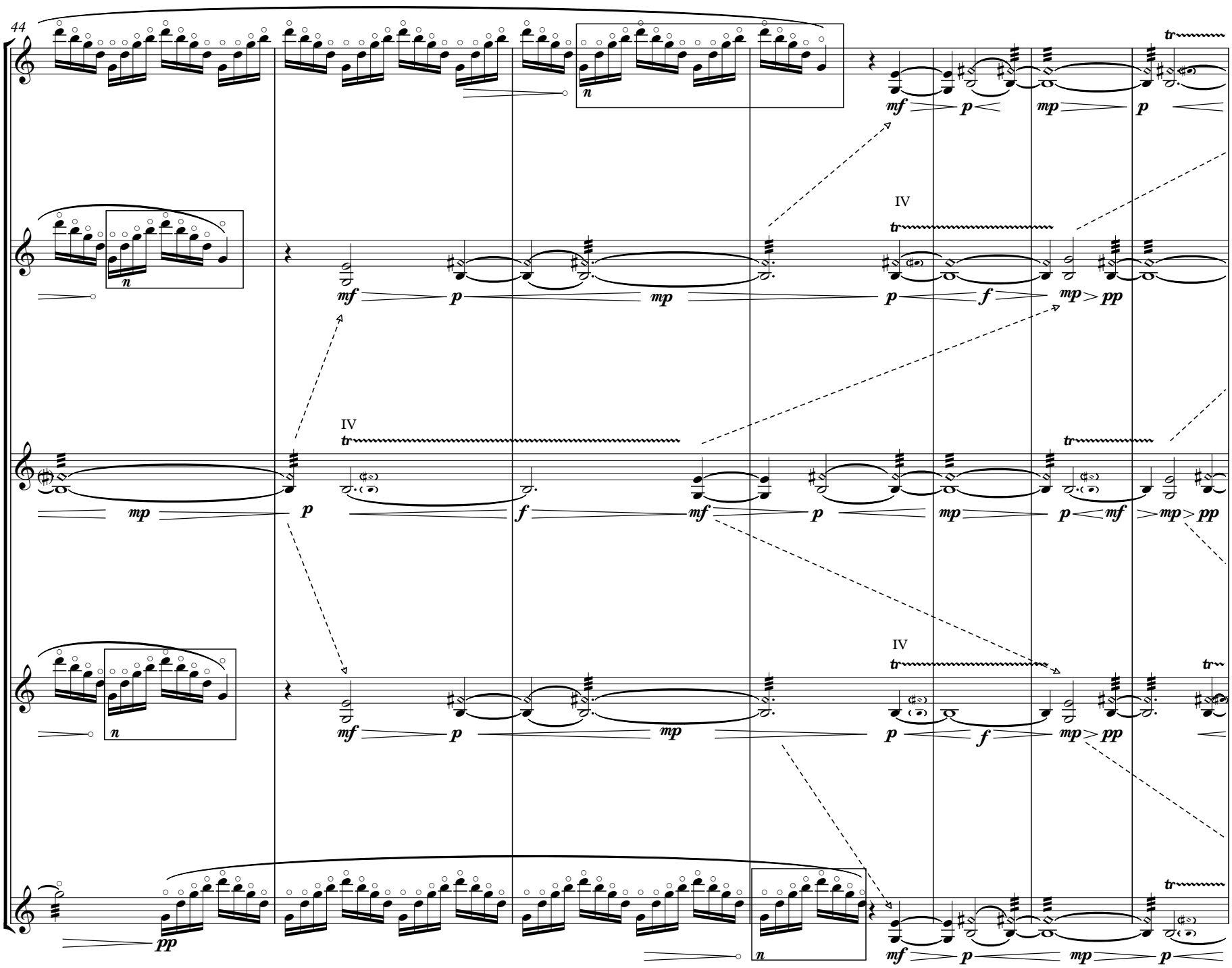


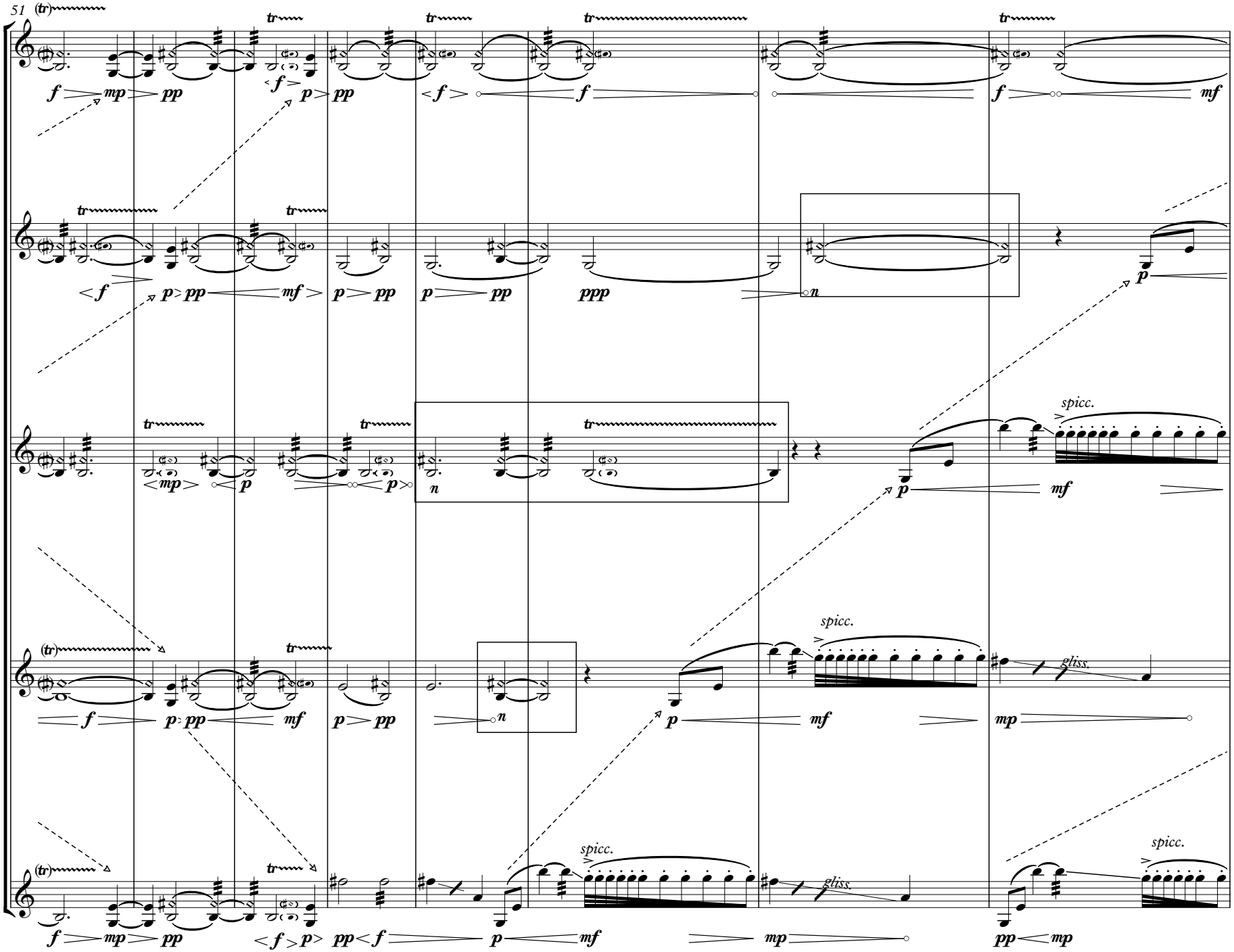

12
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
mp
mf
f
p
8va
I
II
II/III

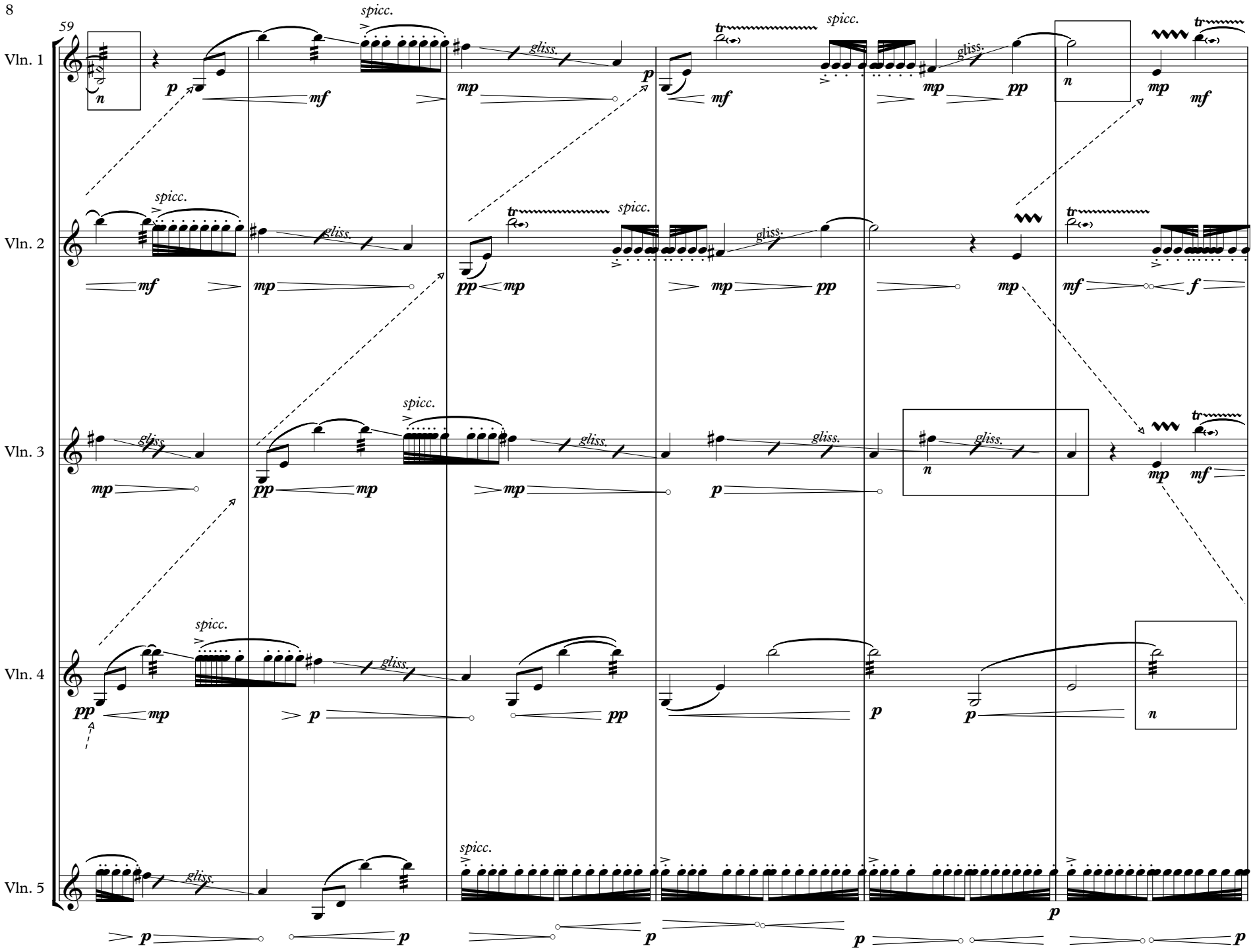

20
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
gliss.
tr
mf
p
II
III
IV
III/II
8va

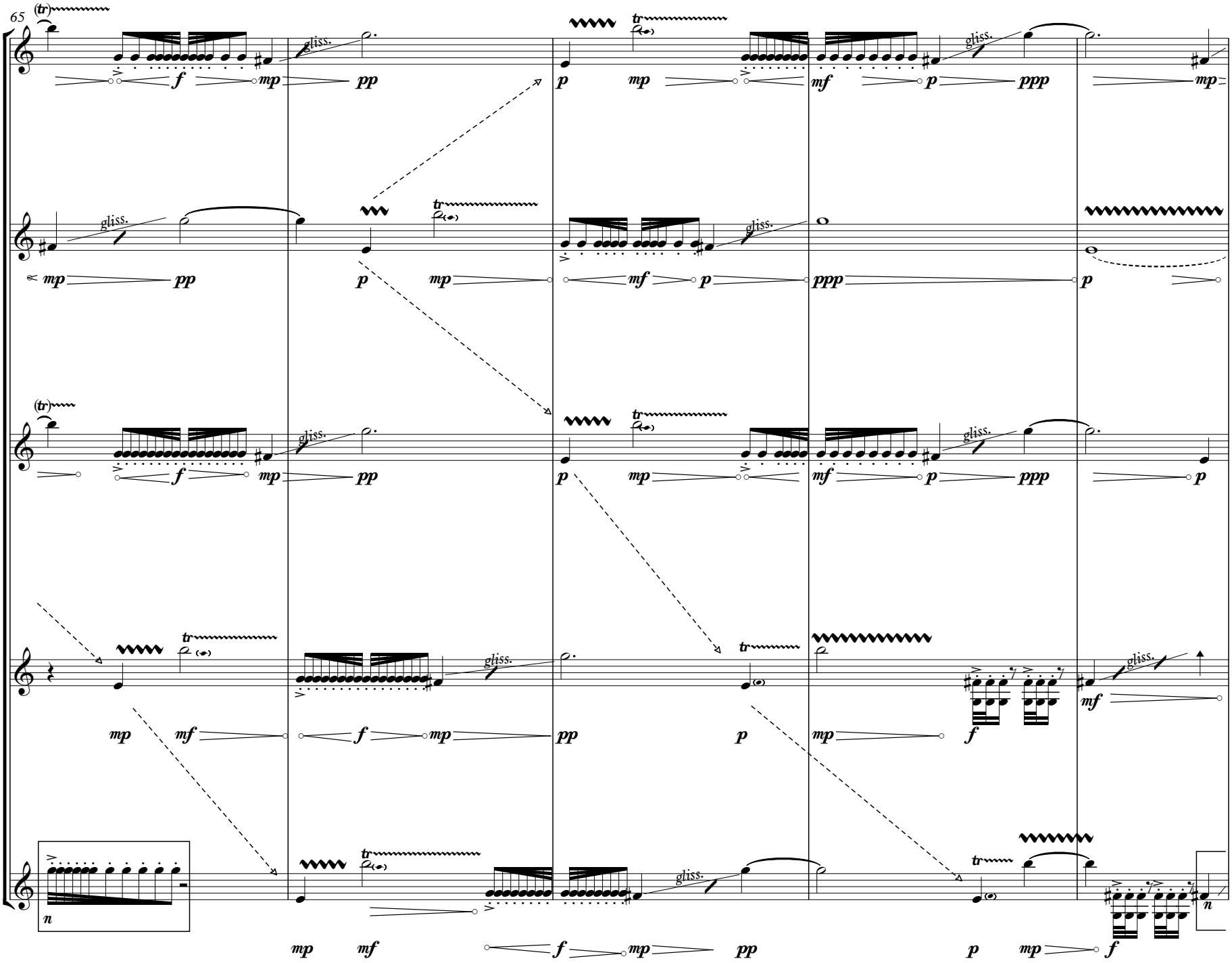

B
♩ = 60
rall.
31
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
IV
III
(8)
(tr)
tr
p
mp
mf
pp
n

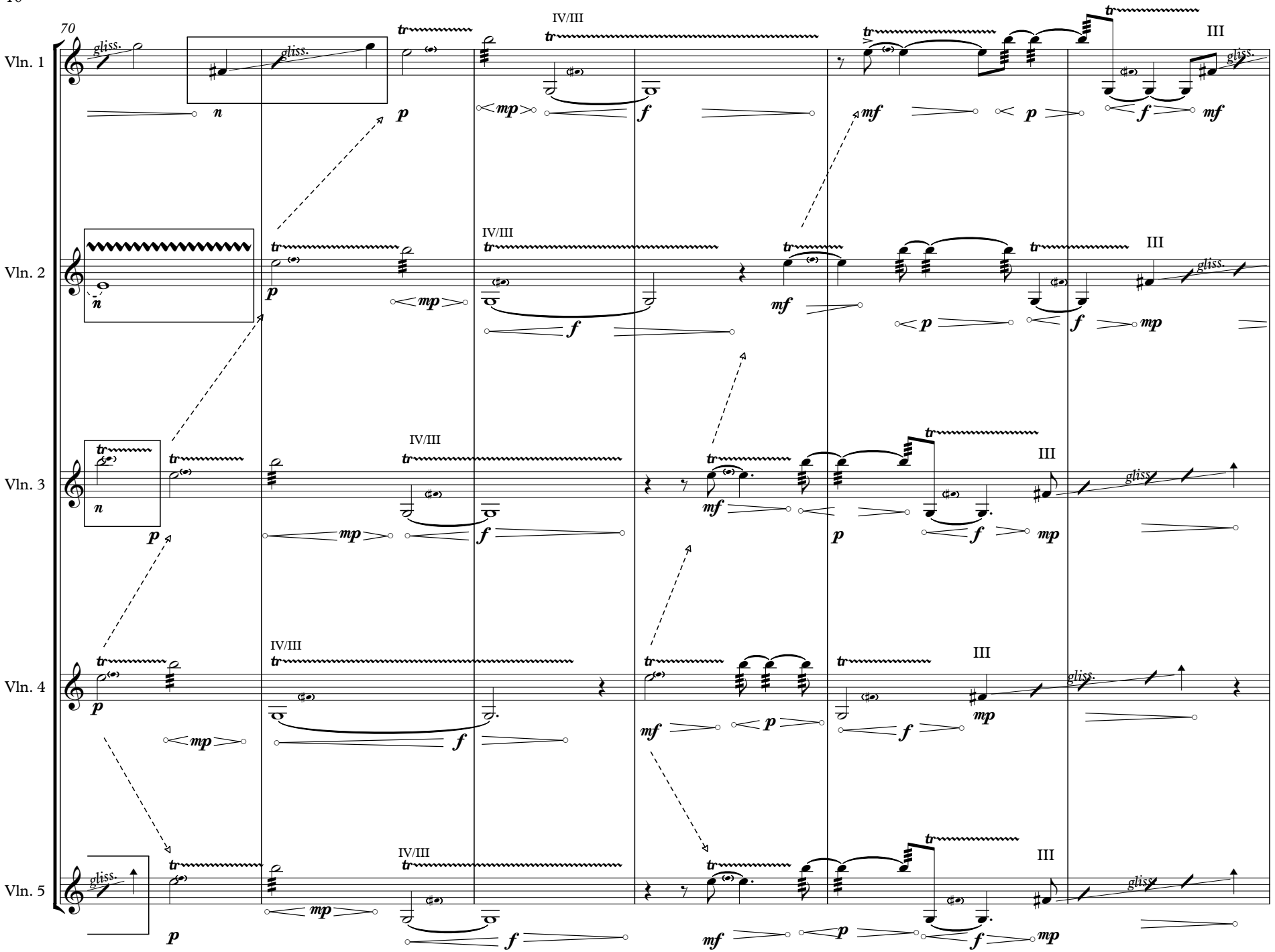

39
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
IV
tr
n

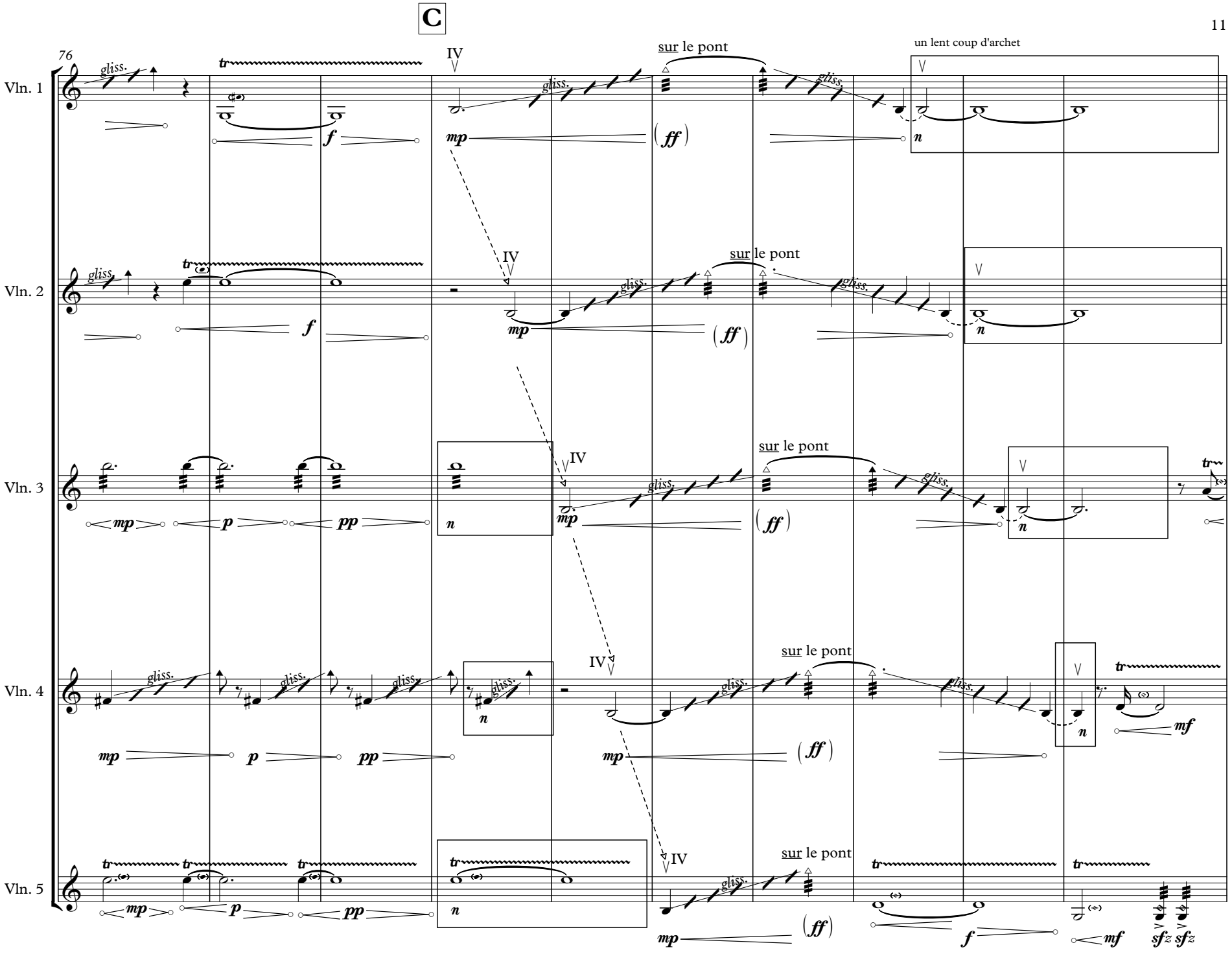

44
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
IV
tr
n
mf
p
mp
f
pp

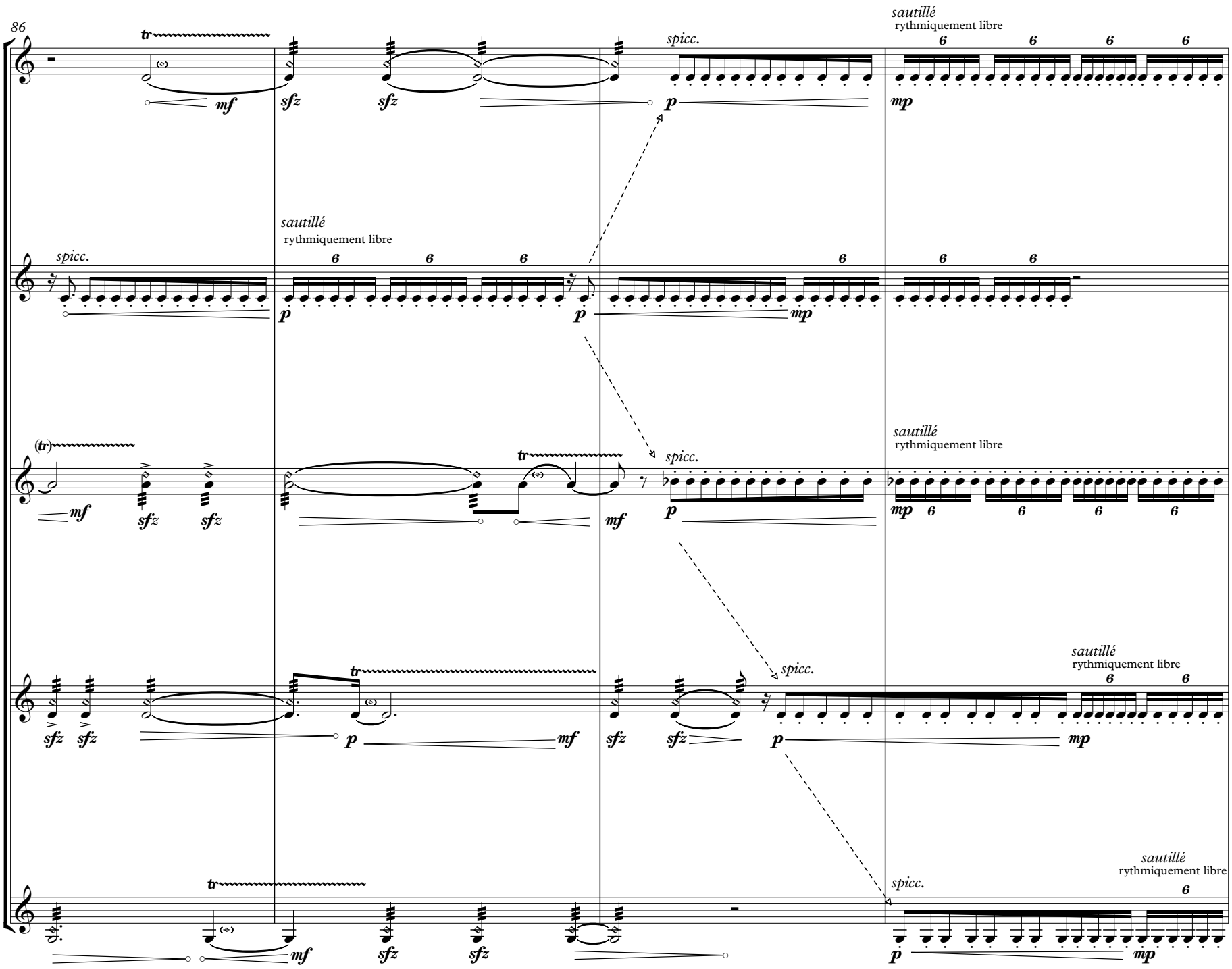

51
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
spicc.
gliss.

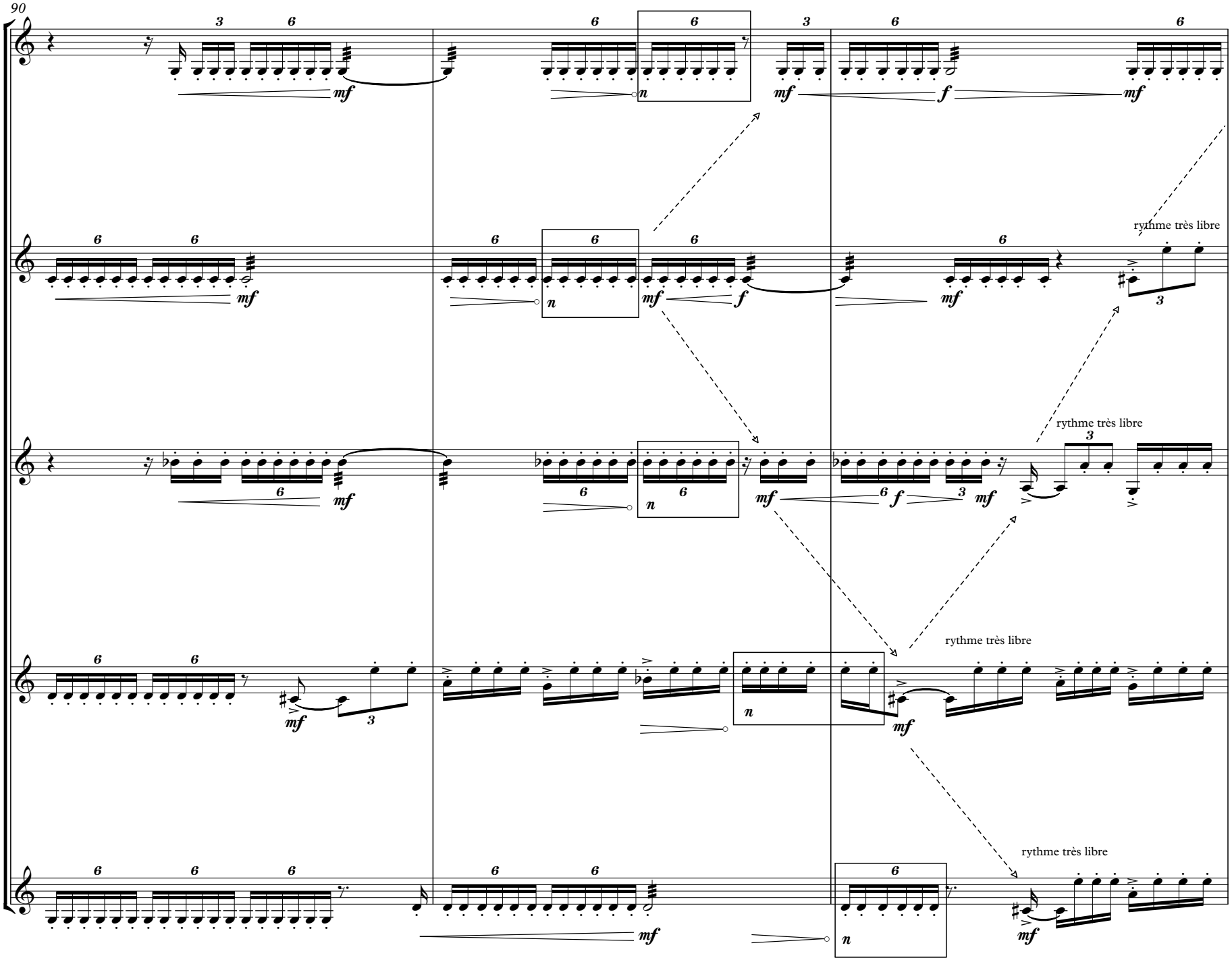

59
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
spicc.
gliss.
tr
n

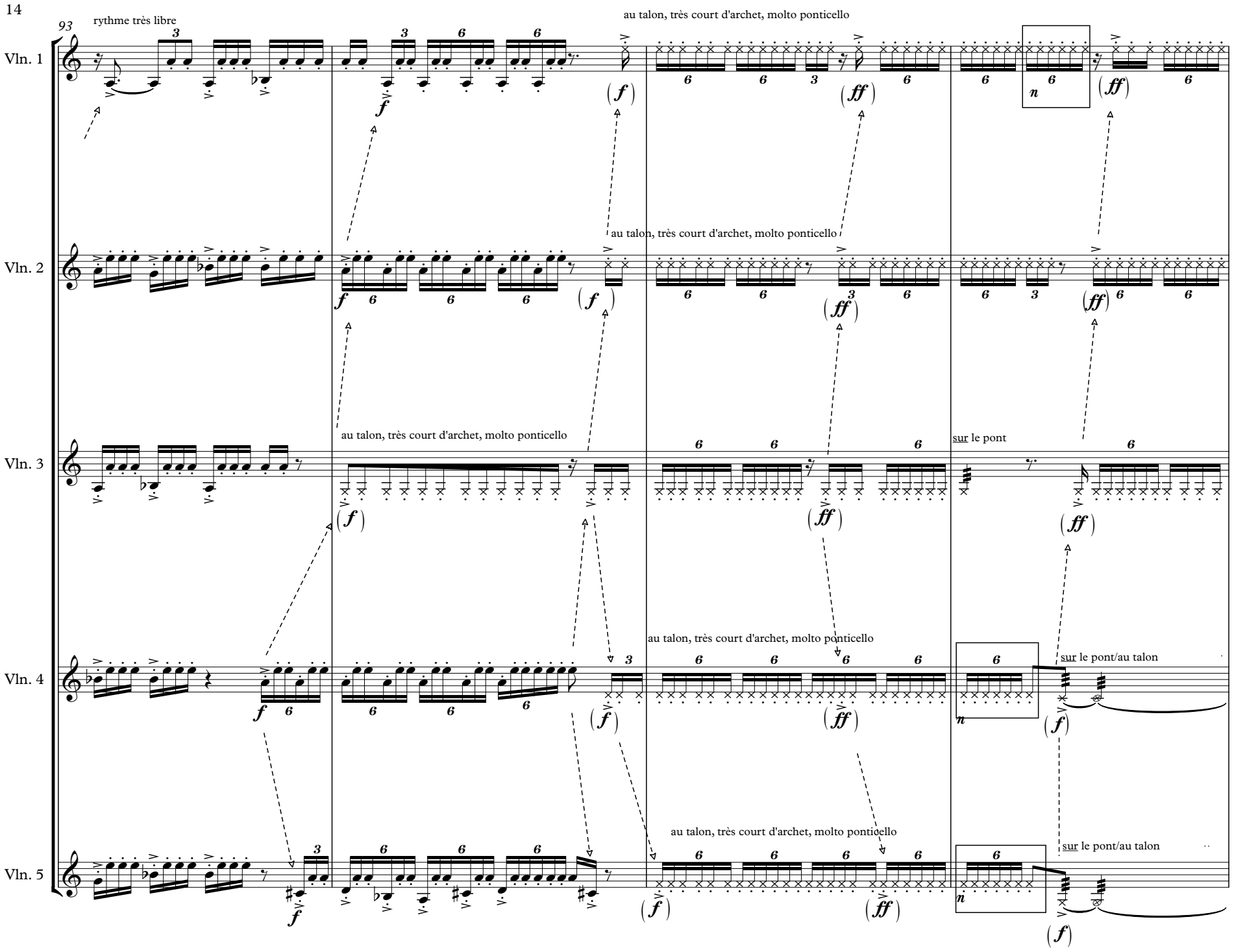

65
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
gliss.
n

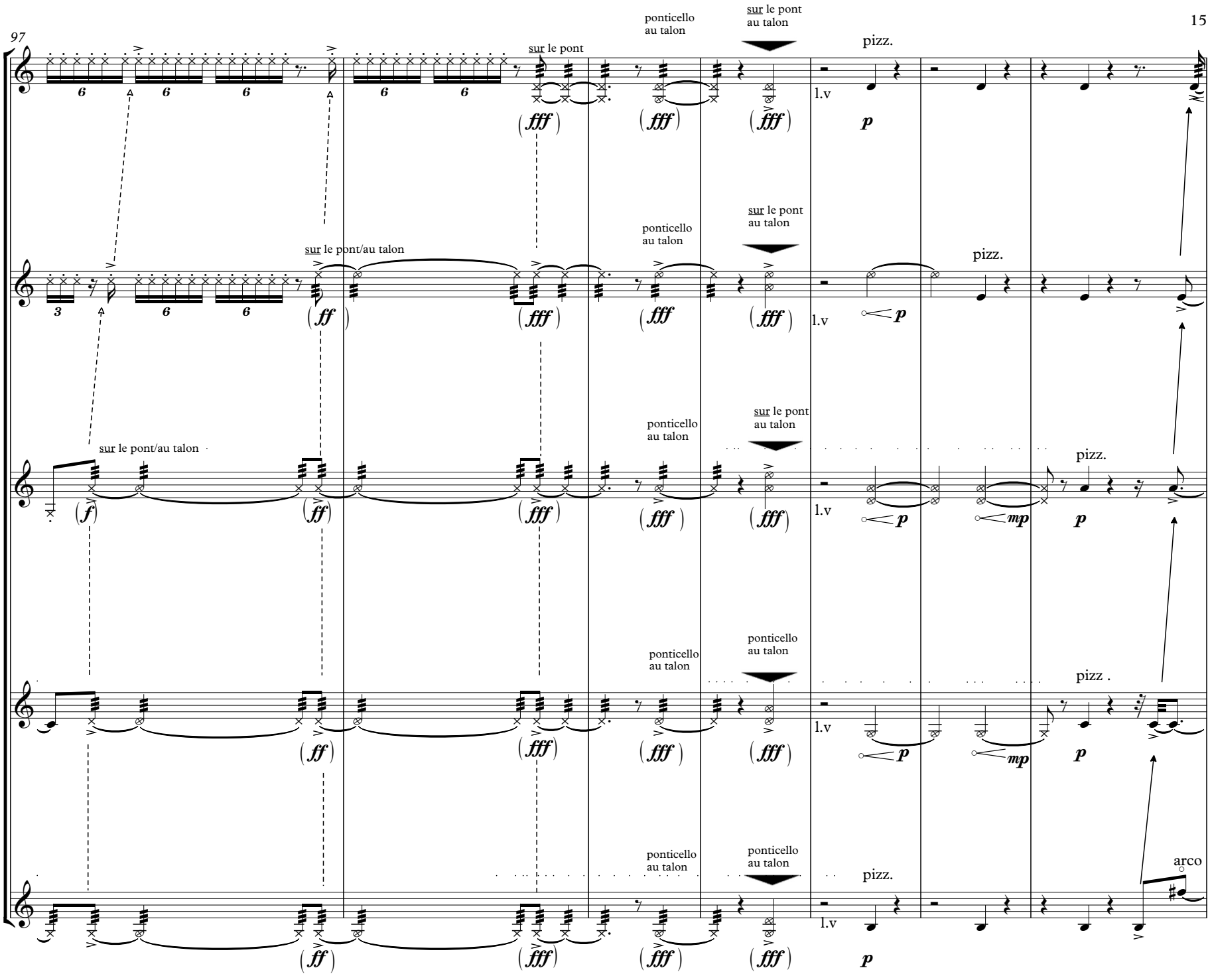

70
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
gliss.
n
p
mp
f
mf
tr
IV/III
III

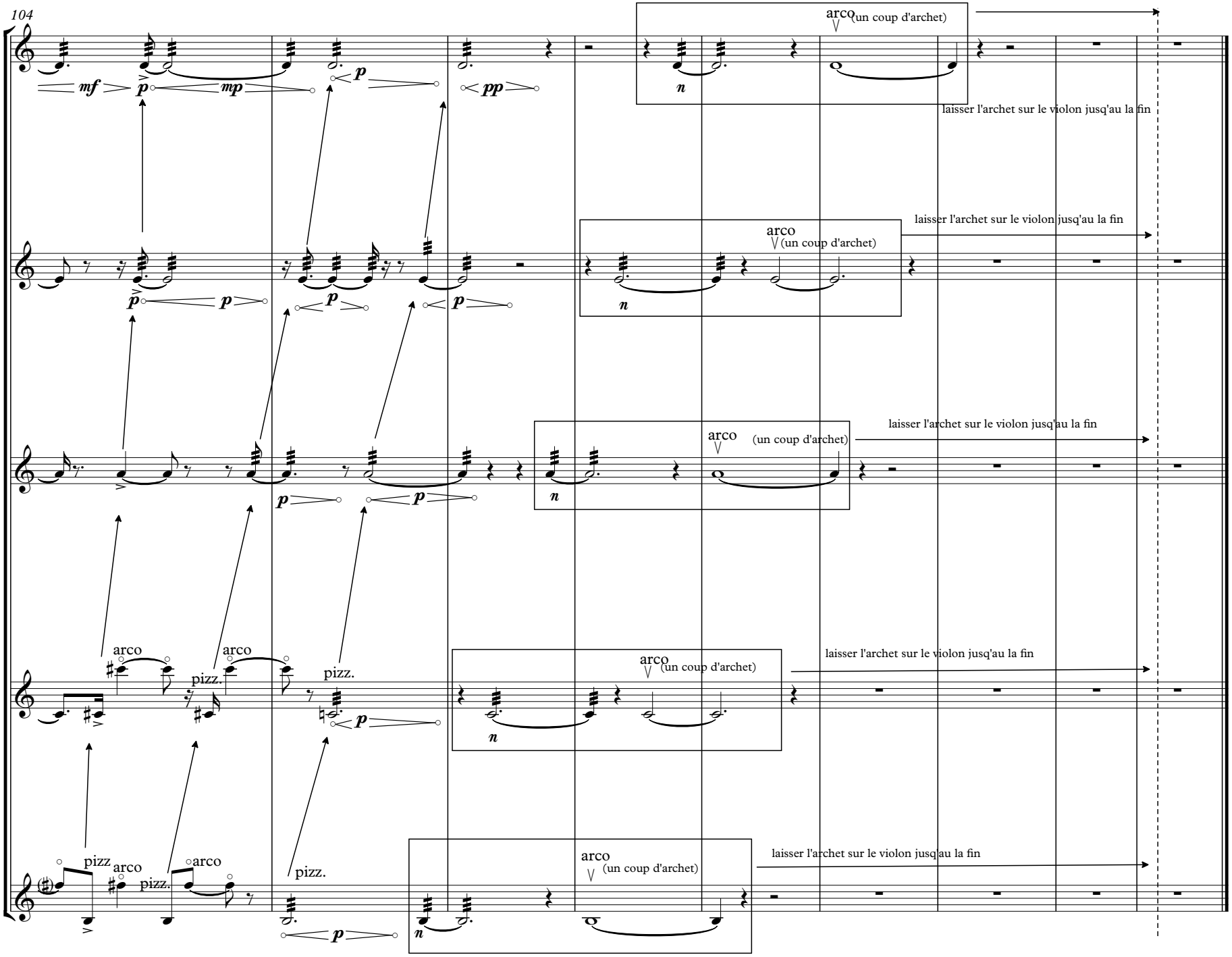

C
76
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
gliss.
tr
IV
sur le pont
un lent coup d'archet
mp
f
p
pp
(ff)
n
mf
sfz


86
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
spicc.
sautillé
rythmiquement libre


90
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
rythme très libre
rythme très libre
rythme très libre
rythme très libre


93
rythme très libre
au talon, très court d'archet, molto ponticello
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
sur le pont
sur le pont/au talon


97
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
sur le pont
ponticello au talon
sur le pont au talon
sur le pont/au talon
pizz.
pizz .
l.v
arco


104
Vln. 1
Vln. 2
Vln. 3
Vln. 4
Vln. 5
mf
p
mp
pp
arco
(un coup d'archet)
laisser l'archet sur le violon jusq'au la fin
pizz.
n

keiko devaux

redaction

[redacted]

pour

quatuor (cl. basse, violon, violoncelle, et piano)

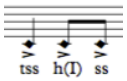
et

voix (soprano)

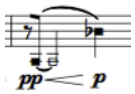
ORFORD 2016

bass clarinet

diamond note head : air sounds (pitched)



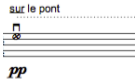
tss / h / ss : vocal air sounds (un-pitched) into and outside of mouthpiece



square note head : 1/2 air + 1/2 pitch

t/r : tongue ram
s/t : slap tongue

strings

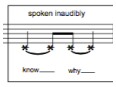


bow on the bridge, white noise (always indicated with x note head)

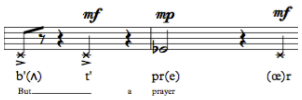
voice

lyric line 1: line to be performed
lyric line 2: word reference line that vowels/consonants are derived from

for vowel pronunciation refer to the IPA phonetic chart

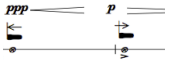


boxed lyrics with x note heads : words are mouthed inaudibly



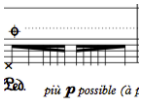
consonants followed by (‘) are meant to be purely percussive, and un-pitched (all x note-heads are un-pitched)

vowels in ( ) are to indicated mouth shape



inhale, exhale

piano



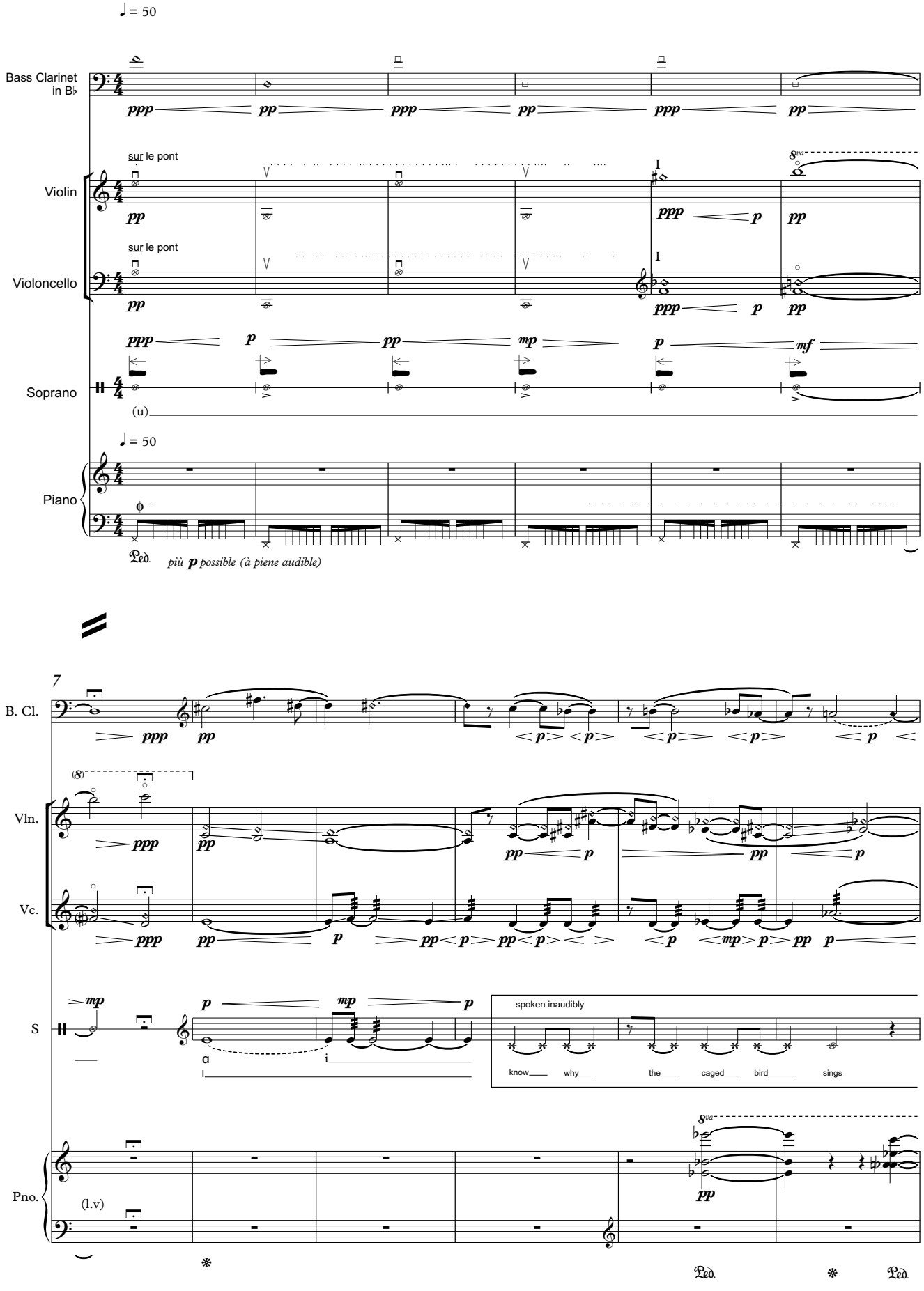
note is dampened with fingertip inside piano (x note head)

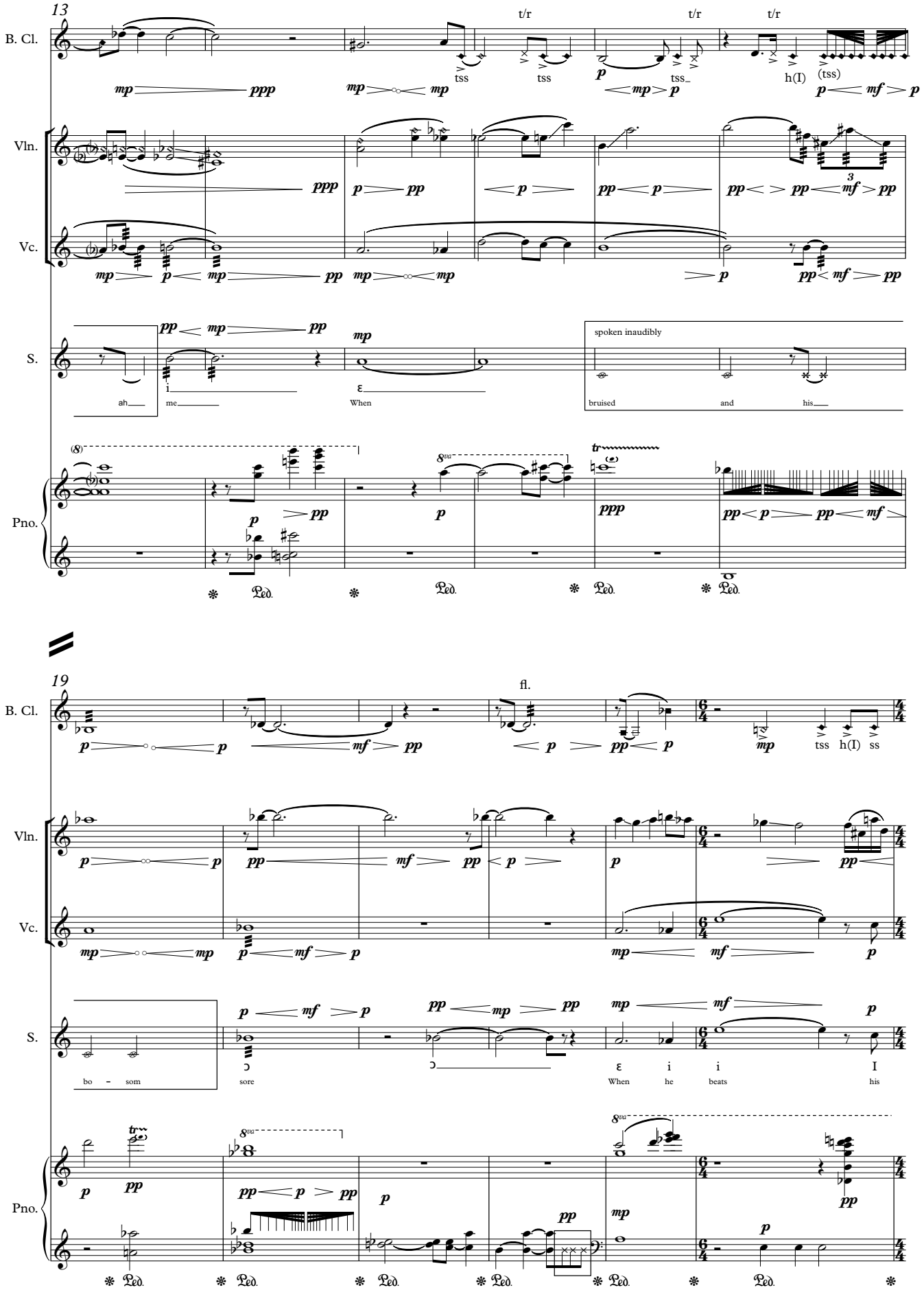
redaction

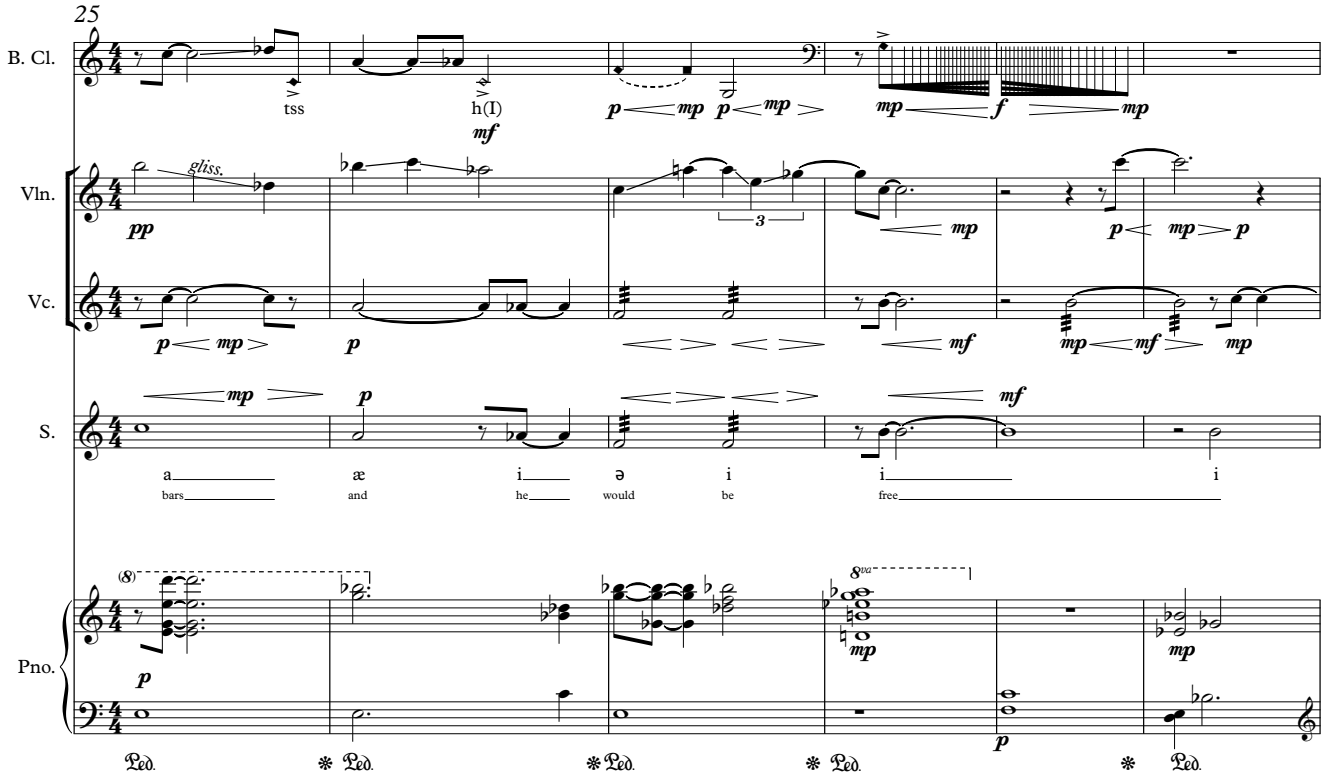
[redacted]

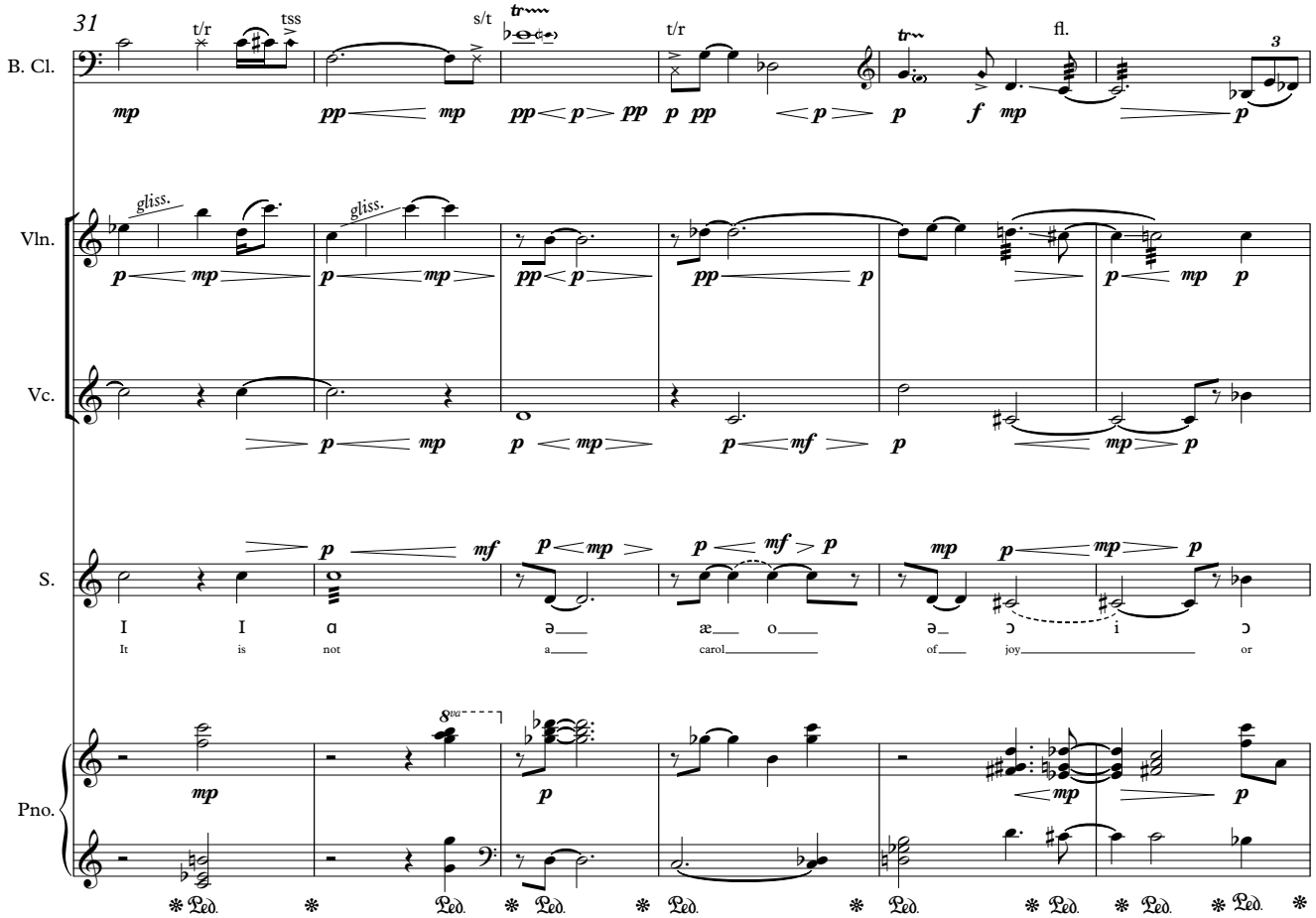
concert pitch

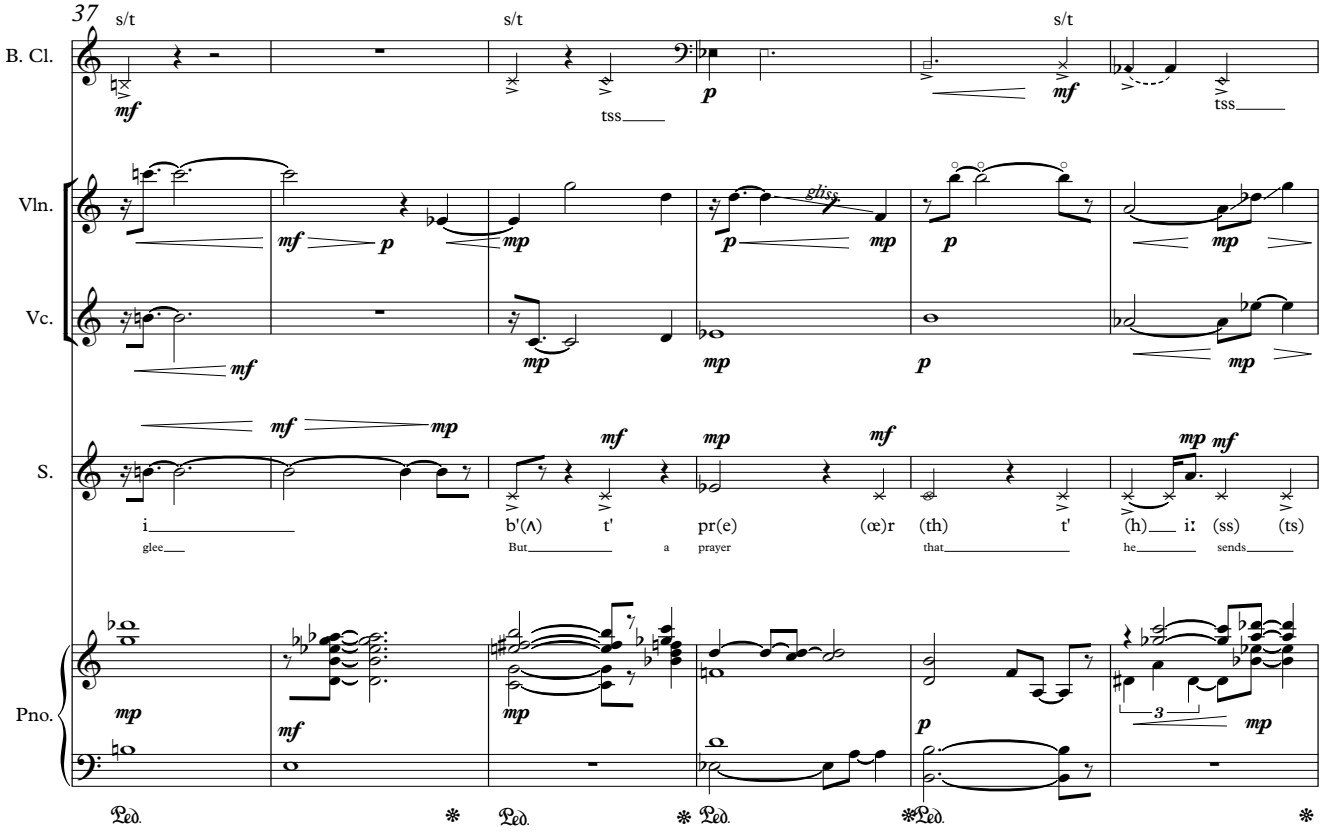
keiko devaux

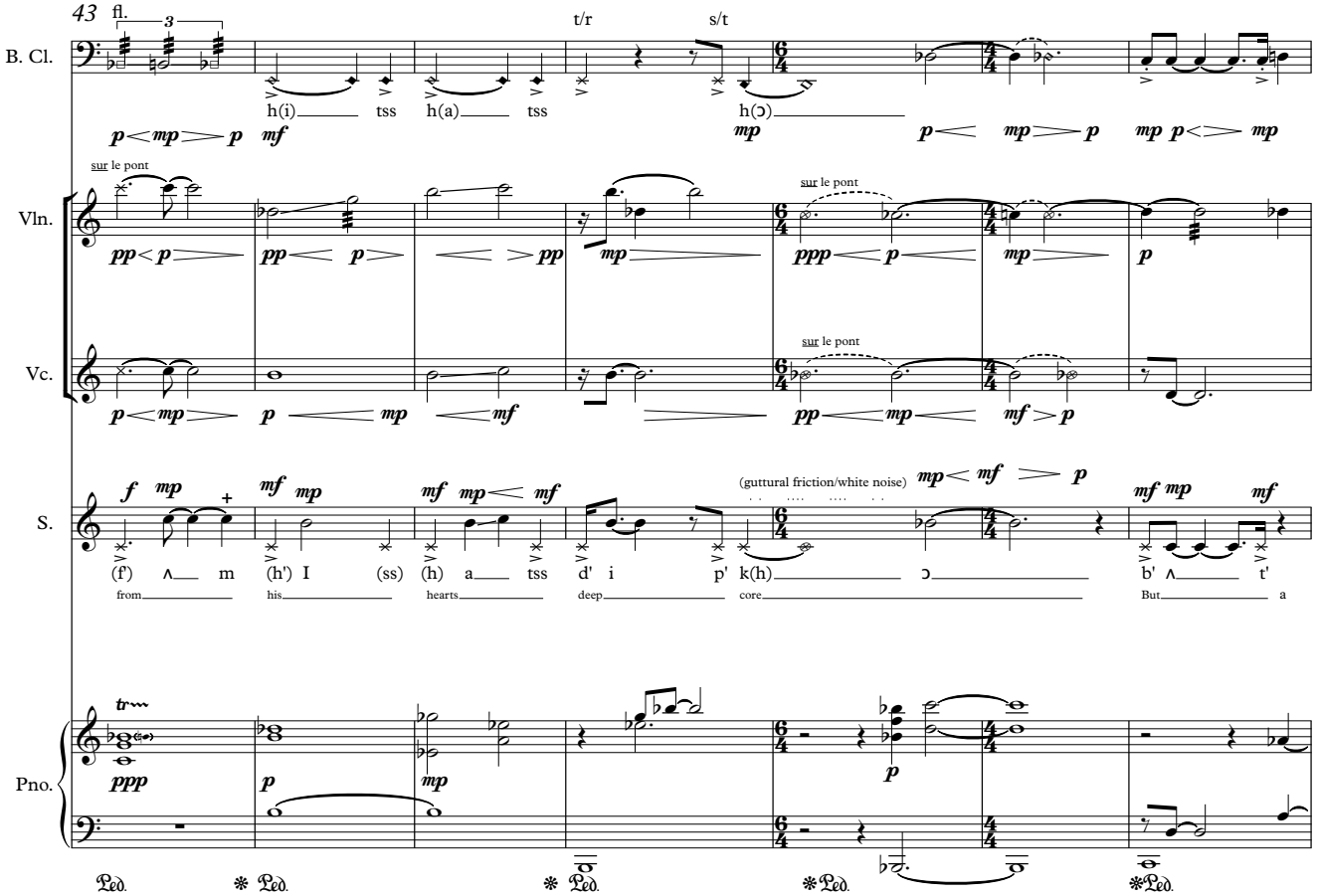


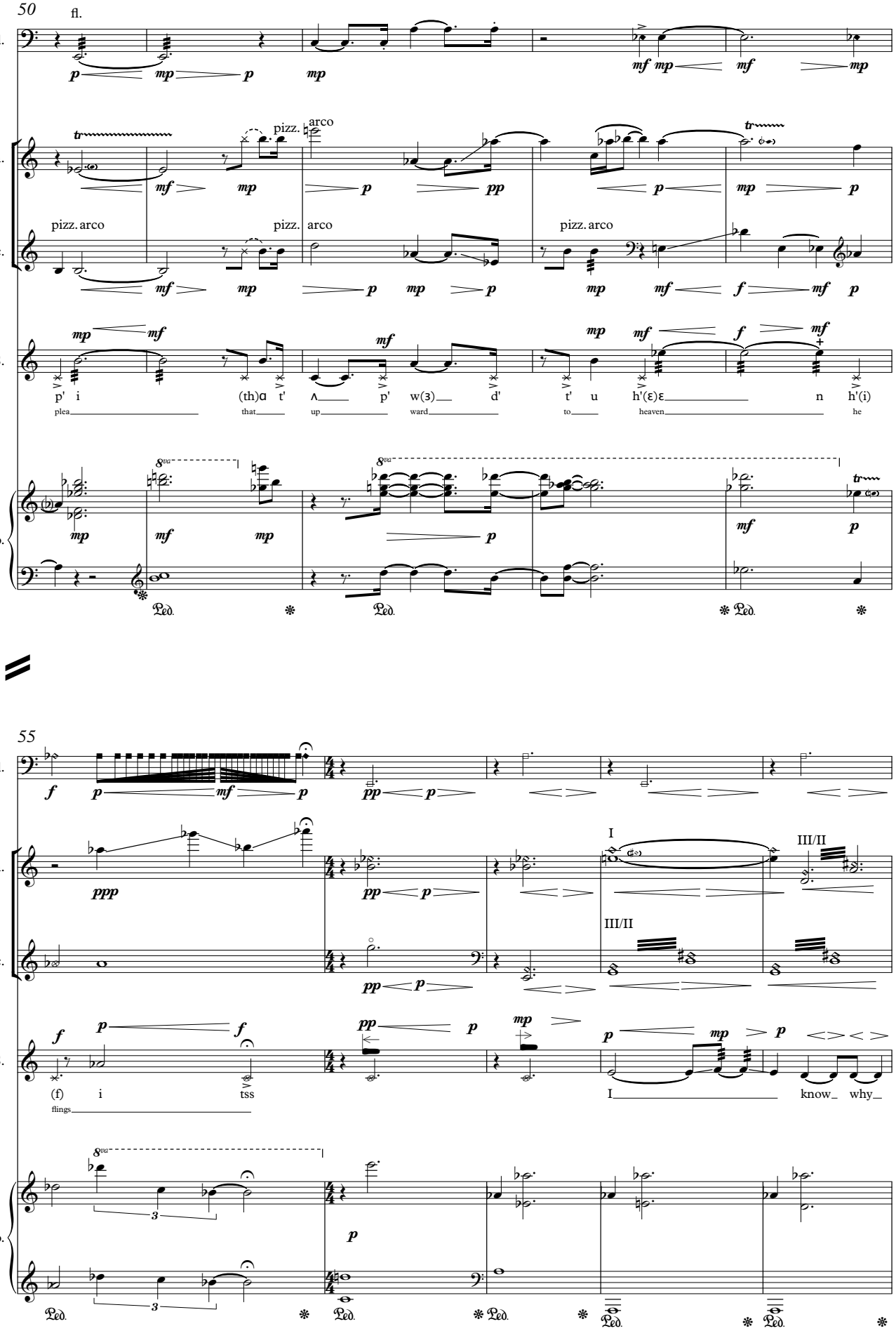

13
B. Cl.
t/r
t/r
t/r
tss
tss
tss
h(I)
(tss)
Vln.
Vc.
S.
ah
me
When
spoken inaudibly
bruised
and
his
Pno.
Ped.
19
fl.
tss
h(I)
ss
bo
som
sore
When
he
beats
his

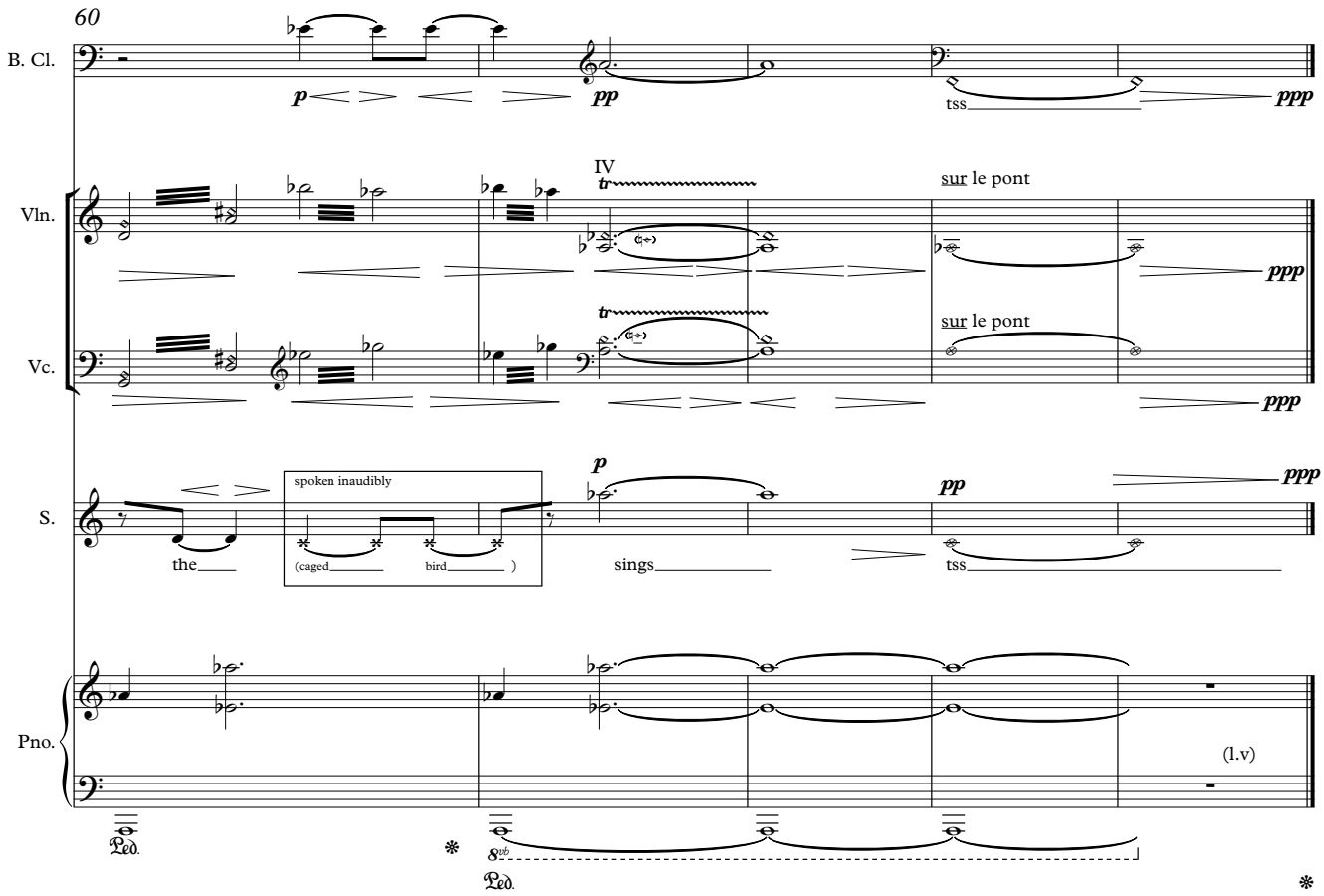

25
B. Cl.
tss
h(I)
Vln.
gliss.
Vc.
S.
a bars
æ and
i he
ə would
i be
i free
i
Pno.
Ped.


31
B. Cl.
t/r
tss
s/t
t/r
fl.
Vln.
gliss.
Vc.
S.
I It
I is
ɑ not
ə a
æ carol
o
ə of
ɔ joy
i
ɔ or
Pno.
Ped.


37
s/t
s/t
s/t
B. Cl.
Vln.
Vc.
S.
Pno.
tss
glee
But
a
prayer
that
he
sends


43
fl.
t/r
s/t
B. Cl.
Vln.
Vc.
S.
Pno.
sur le pont
(guttural friction/white noise)
from
his
hearts
deep
core
But


50
fl.
B. Cl.
Vln.
Vc.
S.
Pno.
pizz.
arco
pizz. arco
p' i (th)ɑ t' ʌ p' w(ɜ) d' t' u h'(ɛ)ɛ n h'(i)
plea that up ward to heaven he
8va
Ped.
55
I
III/II
ppp
(f) i tss
flings
I know why


60
B. Cl.
p
pp
tss
ppp
IV
tr
sur le pont
Vln.
ppp
Vc.
sur le pont
ppp
S.
spoken inaudibly
the
(caged
bird
)
p
sings
pp
tss
ppp
Pno.
(l.v)
Ped.
8vb
Ped.

Sépulcre (2016)

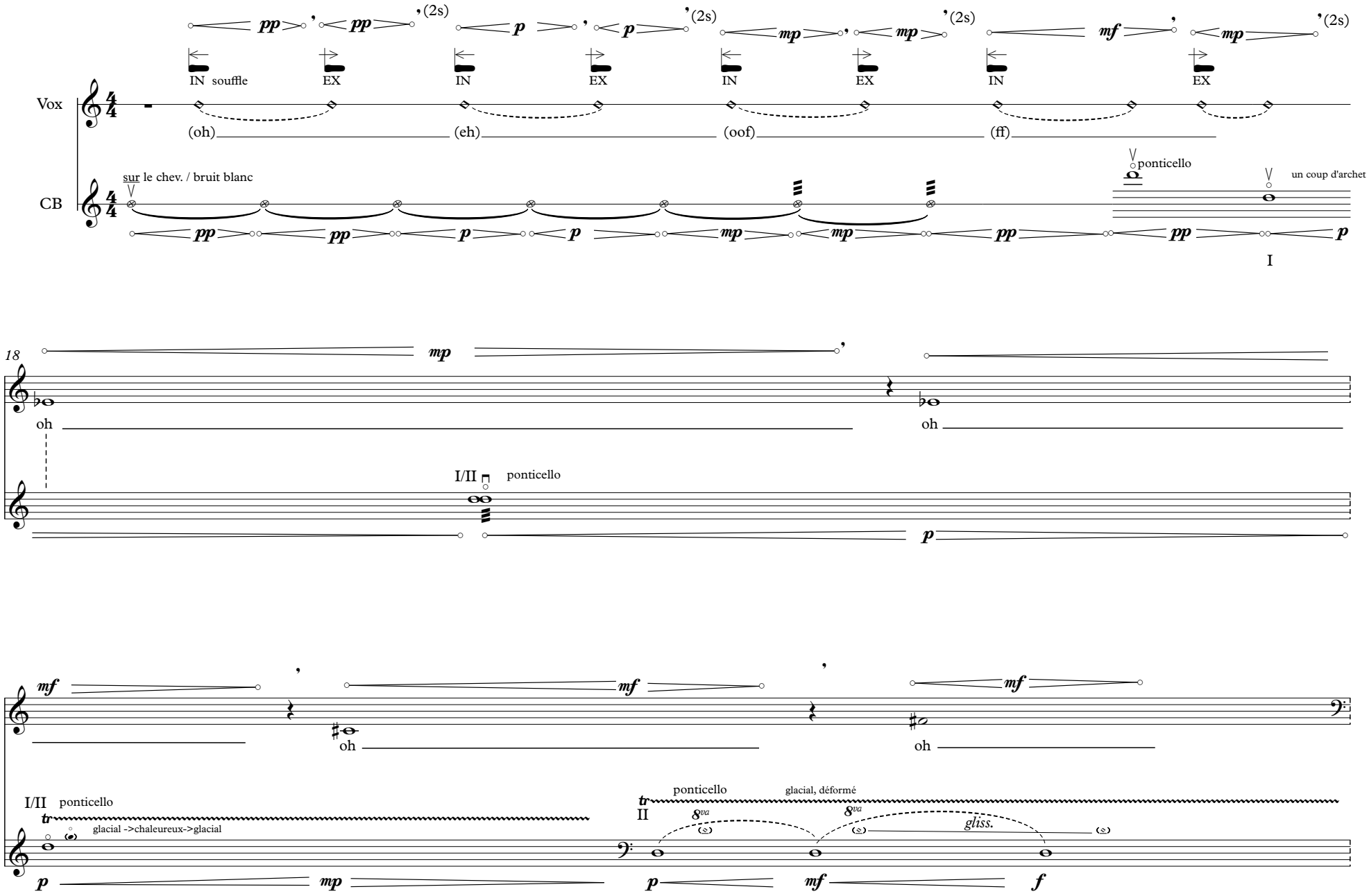
solo pour contrebasse et voix

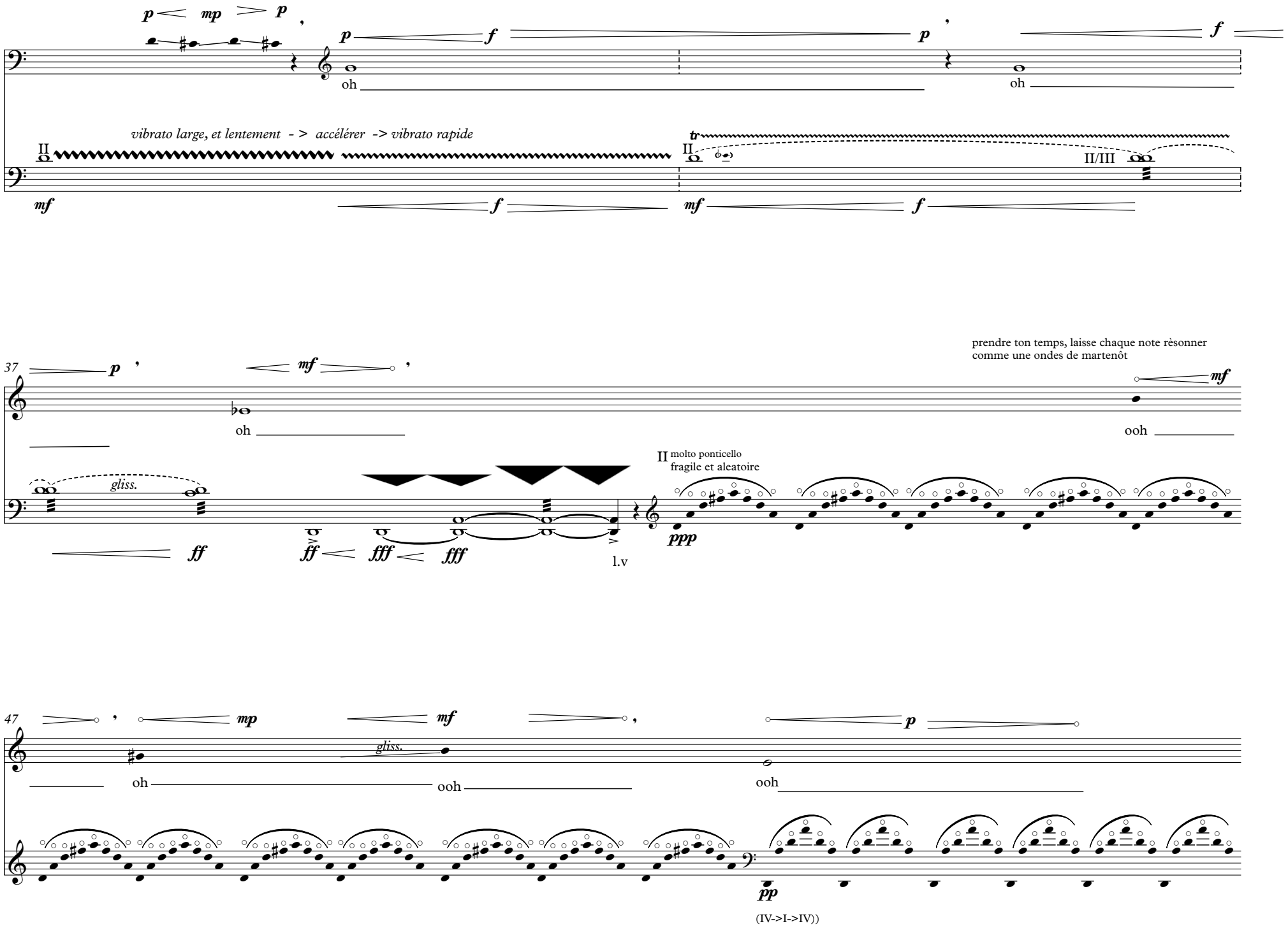
dédiée à & conçue pour Gaspard Daigle

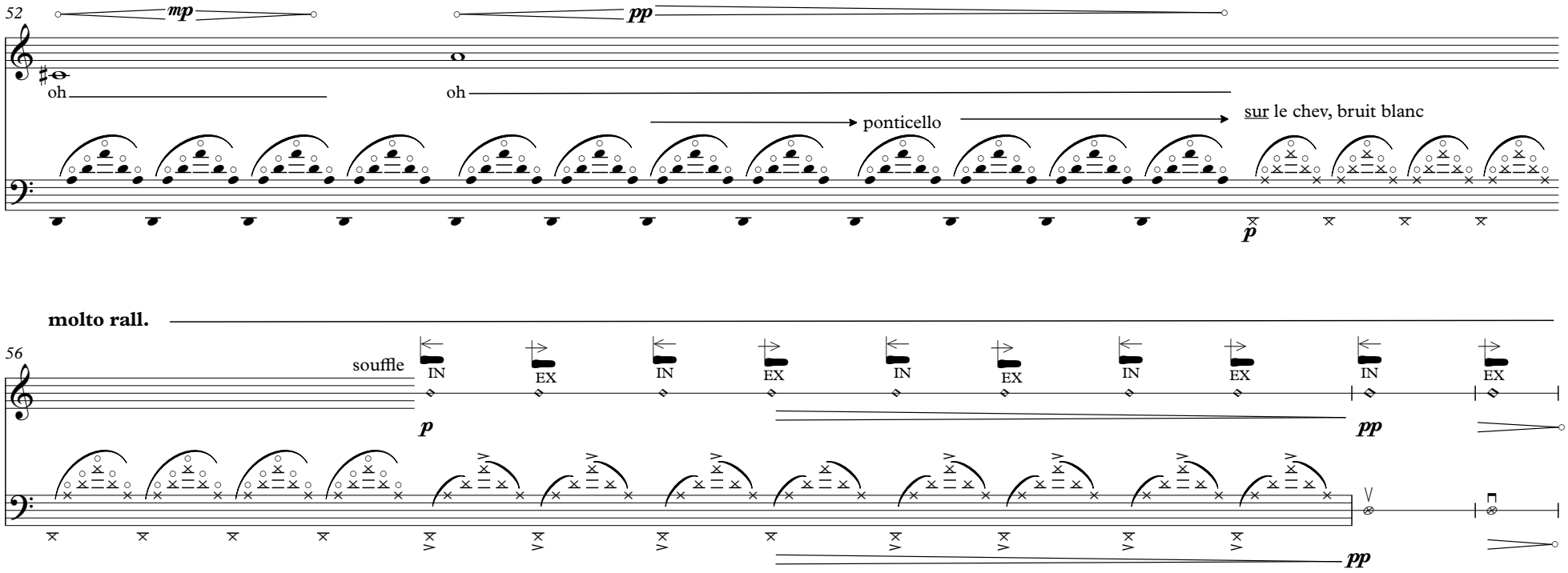
Keiko Devaux

Sépulcre

Keiko Devaux




p mp p
p f
p
f
oh
oh
vibrato large, et lentement - > accélérer -> vibrato rapide
II
II
II/III
tr
mf
f
mf
f
37
p
mf
oh
prendre ton temps, laisse chaque note rèsonner
comme une ondes de martenôt
mf
ooh
gliss.
II molto ponticello
fragile et aleatoire
ff
ff
fff
fff
l.v
ppp
47
mp
mf
p
gliss.
oh
ooh
ooh
pp
(IV->I->IV))
calme, avec un rythme aleatoire
bariolage


52
mp
pp
oh
oh
ponticello
sur le chev, bruit blanc
p
molto rall.
56
souffle
IN
EX
IN
EX
IN
EX
IN
EX
IN
EX
p
pp
pp

f o r e s t f o r t h e t r e e s

2016

pour Ensemble Arkea

Accès Arkea 5e edition

keiko devaux

NOTES GÉNÉRALES

souffle sans instrument : bouche légèrement ouverte en forme de' "o", permettant la friction des dents et des lèvres contre le souffle

inspiration de 5 secondes.

expiration de 5 secondes.

nuances :

nuances de l'intention (f) (ff) (fff)

Toutes les nuances écrites pour des effets de bruit, (p.ex. vent, tapage/tapotage, archet sur chevalet), indiquent l'intention plutôt que le résultat. L'exaggeration d'énergie et les bruits qui surgissent involontairement sont désirables

À moins d'incitation contraire, le point d'arrivée le plus fort est toujours le point médian de la durée de la note. Ces pics/crêtes sont souvent en décalage avec les instruments voisins; il est donc important de maintenir la forme individuelle de chaque nuance.

tremolos et trilles:

Les trilles/tremolos ne sont pas mesurés et sont à exécuter le plus rapidement possible au sommet de la nuance. La structure des nuances guide la vitesse du trémolo (accélération et ralentissement)

la hauteur la plus haute/basse possible

l.v : laisser résonner

VENTS

la majorité de la première partie de la pièce ce concentre sur le souffle. L'exagération entre ces variations très important:

*le souffle est toujours indiqué par les lozenges

*dans le cas du hautbois, le souffle se fait toujours sans anche.

souffle: les vents ont 6 niveaux de variation:

1. souffler dans l'instrument, sans hauteur indiquée (**entre *niente* et mp**). l'air peut demeurer dans l'instrument exclusivement, mais choisir un doigté qui permette la plus large gamme d'amplitude du son de l'air.
2. souffler dans l'instrument, sans hauteur indiquée **(entre mf et fff).** Selon chaque instrument et son équilibre avec les autres, laisser l'air sortir autour de l'embouchure
3. souffler dans l'instrument, **avec** hauteur indiquée.
4. moitié souffle, moitié ton.

5. souffler de manière percussive en utilisant une consonne dure.

pour flûte seulement

flutter tongue de souffle. Il est important que cette texture ressortisse de l'ensemble des vents. Ainsi, il est acceptable de laisser sortir un peu les hauteurs.

w.t - whistle tones (série harmonique, de manière aléatoire

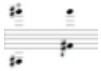
pour les clarinettes seulement

M1

M2

Ici, les multiphoniques notées sont simplement des suggestions. D'autres variations donnant un résultat semblables sur le plan de l'harmonie et de la nuance peuvent aussi être utilisées, à la discrétion des interprètes.

M1 trem.



Trémolo de multiphonique. Voir video # x, et hyperlien dan le courriel fourni. **(*H)**

s/t: slap tongue: commencer le plus rapidement possible puis ralentir.

CORDES

tapage 1/2/3 (V*)

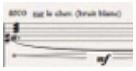
Ce n'est pas un geste mesuré, mais une texture. Tel que démontré dans les vidéos, essayer de positionner les deux mains de façon à laisser résonner au maximum les cordes. La précision de tapage sur les cordes elle-mêmes, est moins importante que le son généré.

pizz. 1/2 (*V)

pizz 1 est fait avec la colophane sur le doigt.
pizz 2 est simplement le geste pizz. 1, mais avec une transition vers un pizz. à deux doigts pour augmenter l'énergie/amplitude

col legno battuto (*V)

La durée des accélérations et ralentissements est indiquée en chiffres arabes au-dessus des notes, donnant la durée (en noires) de chaque geste.



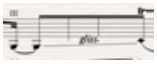
sur le chef. (bruit blanc) - toujours indiqué avec la tête de note (x) **(*V)**
Il s'agit d'un effet de bruit, la hauteur est indiquée simplement au cas où ressortiraient les hauteurs
Cet effet est utilisé sur une gamme des nuances allant de *niente* jusqu'à fff (avec pression d'archet exagérée). Plus la nuance est forte, moins il est important de rester parfaitement sur le chevalet. Il est acceptable que l'archet glisse légèrement d'un côté ou de l'autre.

trilles /trémolos :
* Les trémolos sont écrits suivant la convention normale des trilles et ce, dans le but de rendre le plus clair possible la durée de ceux-là.

trémolo normal écrit comme une trille

un trémolo entre deux harmoniques artificiels

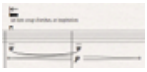
un trémolo entre un harmonique artificiel et une corde à vide



les notes sans tête indiquent le temps du glissando

vibrato large et exagéré

pression de l'archet exagéré **(*V)**



l'archet sur le chevalet créant un vrai bruit blanc, et synchronisé avec la respiration.

PERCUSSION

1: TIMBALES (sur deux jeux, I: 32" et II: 28"): 2 maillets doux, 2 maillets dures moyennes, 2 super balls
2: MARIMBA (5 OCTAVES): 4 maillets doux, 2 maillets dures moyennes, 1 archet (idéalement de vlc ou cb)
3: MARIMBA (4.5 OCTAVES) / **VIBRAPHONE**: 4 maillets doux, 2 maillets médium, 1 archet (idéalement de vlc ou cb)

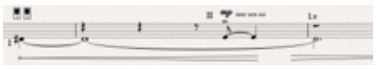
archet

maillets doux

maillets moyennes dures

super ball

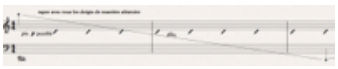
TIMBALES



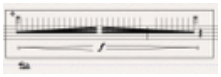
2 gestes avec super ball: le premier lent, constant et circulaire, **(*H)**, et l'autre plus bref, en tirant le maillet ver soi
Laisser résonner le son

trémolos: toujours le plus vite possible, et pas mesurés

PIANO



taper avec tous les doigts de manière aléatoire **(*V).**



le note est étouffée (le plus possible) dans le piano en jouant avec l'autre main, toujours avec la pédale **(*V)**

***V -** vidéo fourni

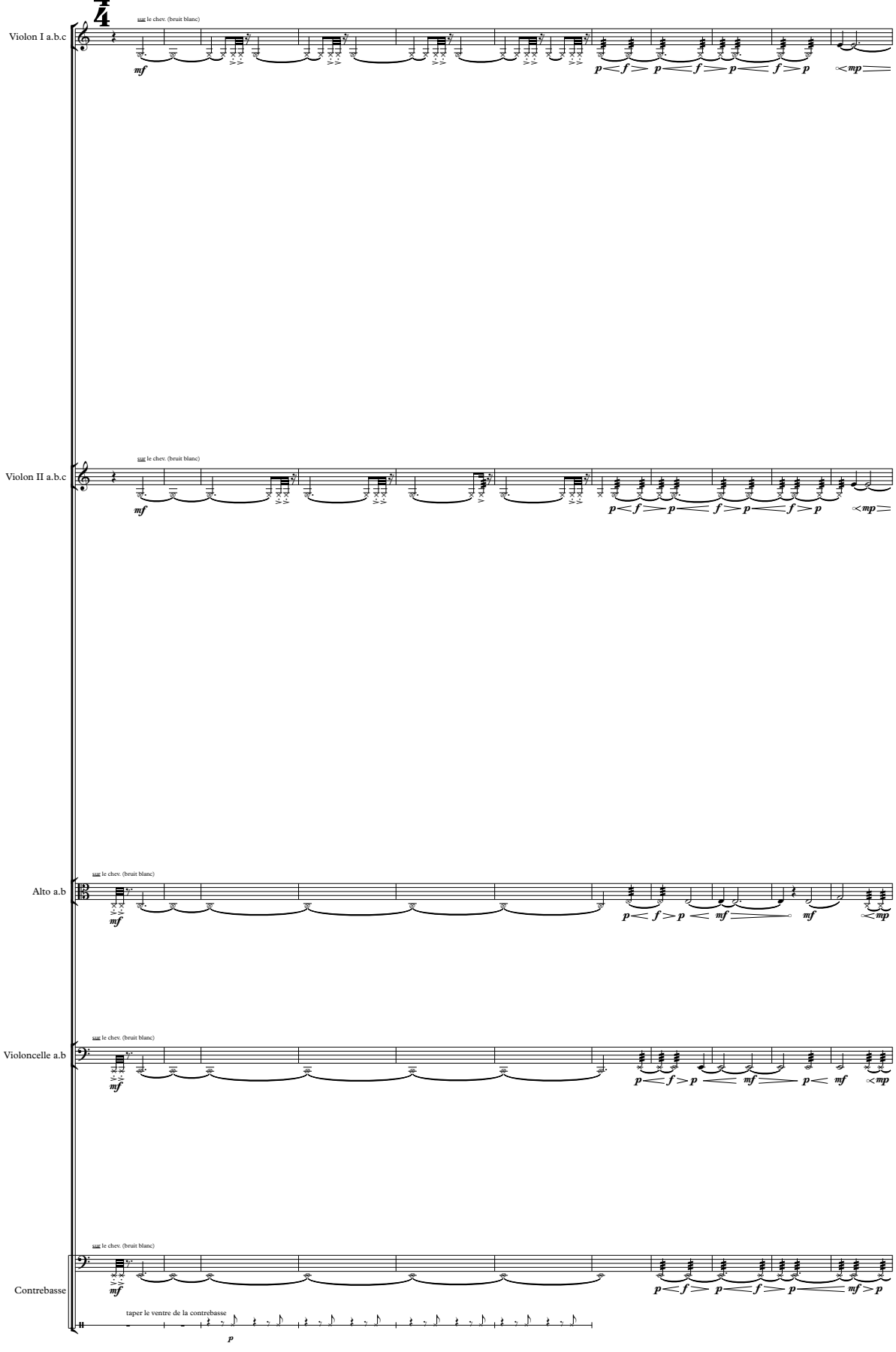
***H -** hyperlien fourni

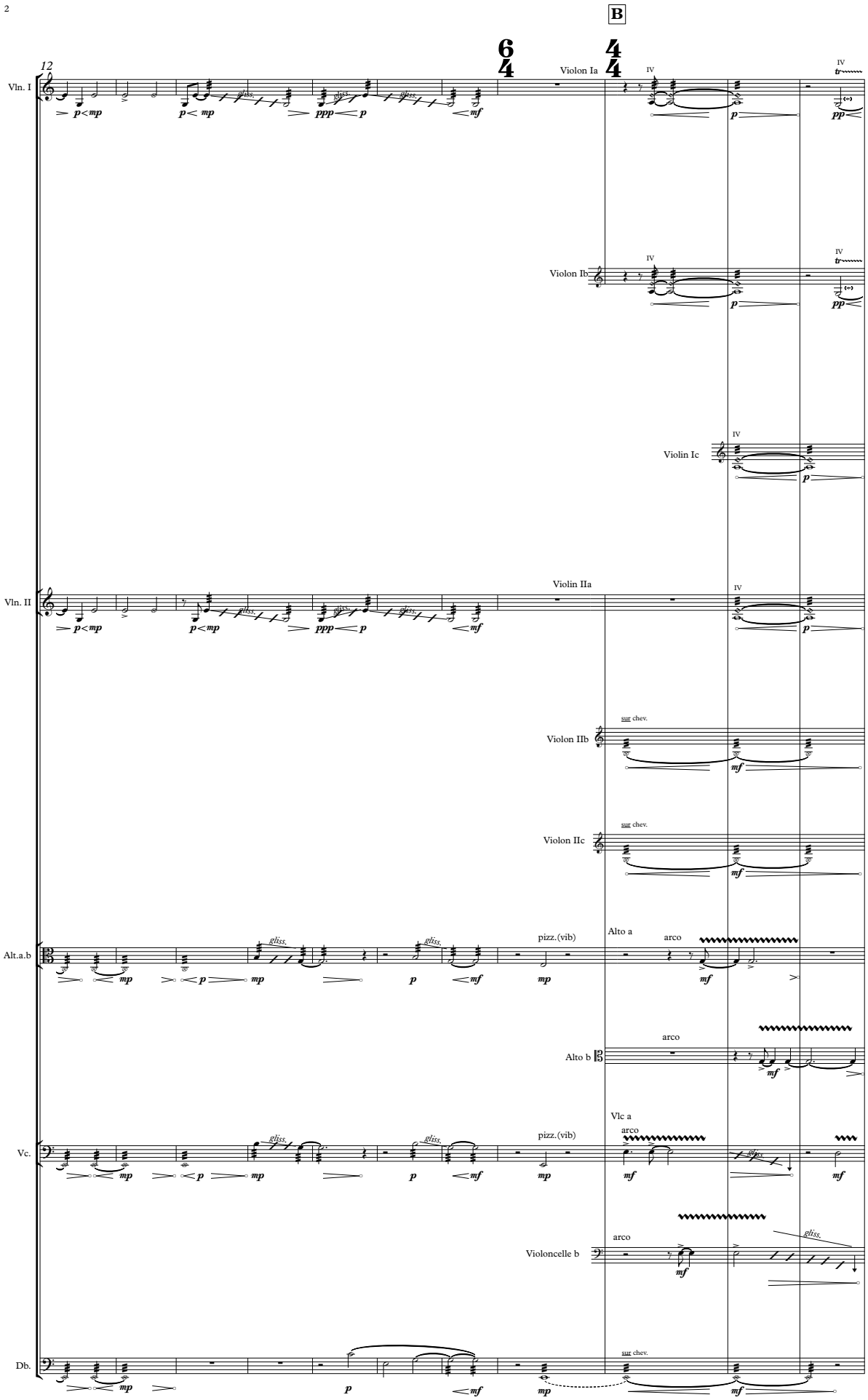
f o r e s t f o r t h e t r e e s

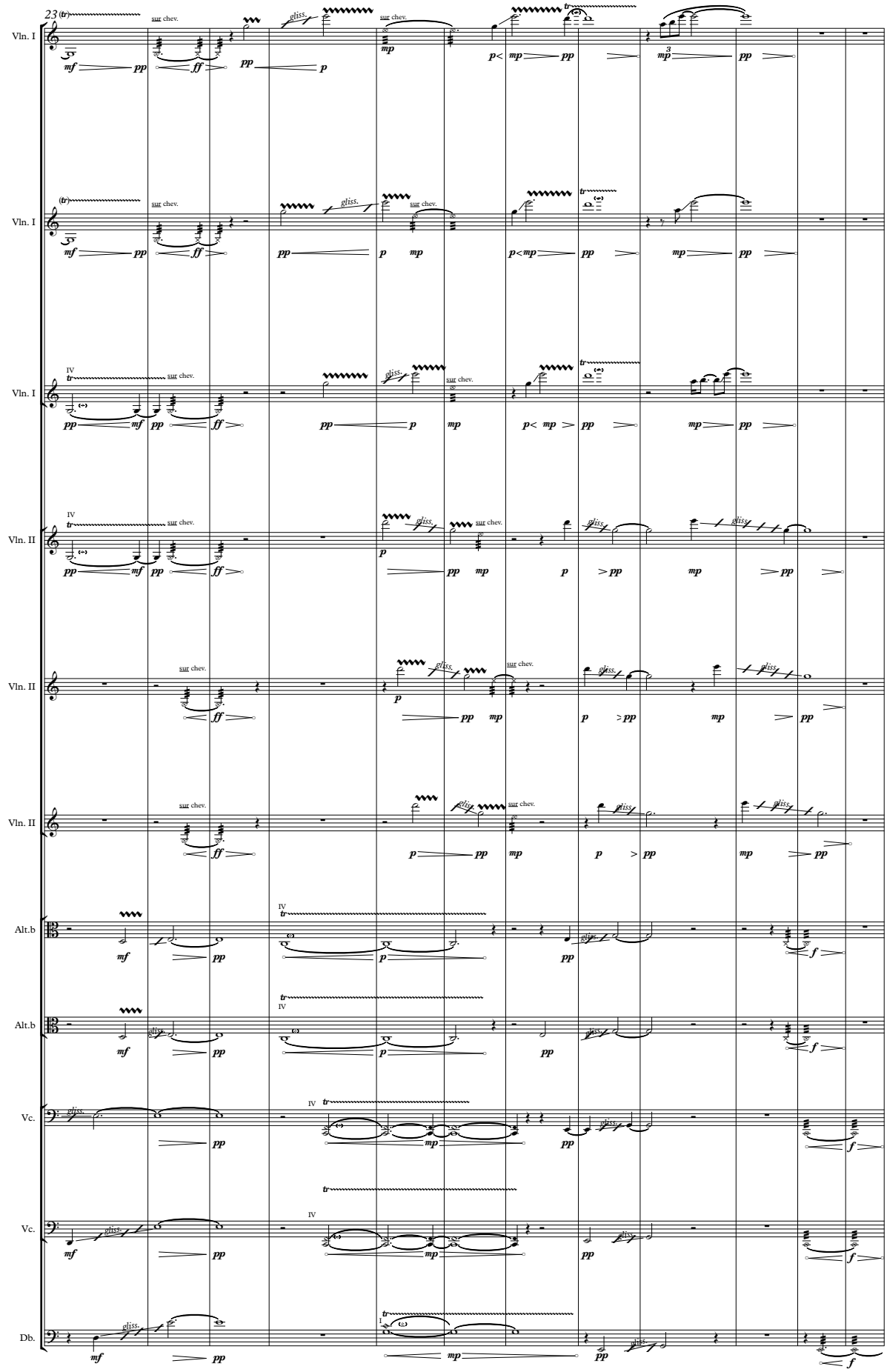
k e i k o d e v a u x

A ♩ = 6 0

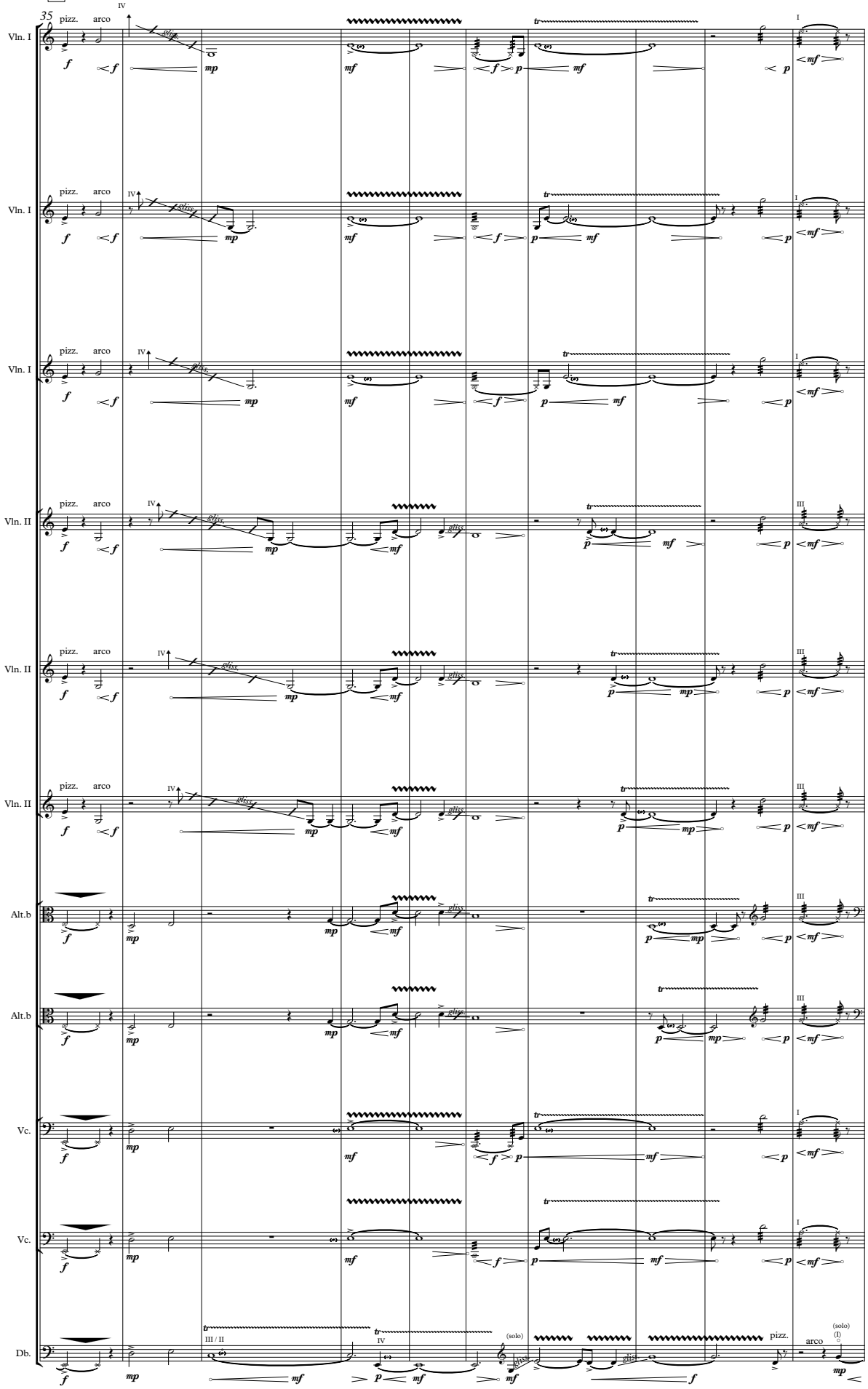
bruit blanc régulier avec les petits hoquet percutant — *dévolilent lentements des fragements de mélodies*



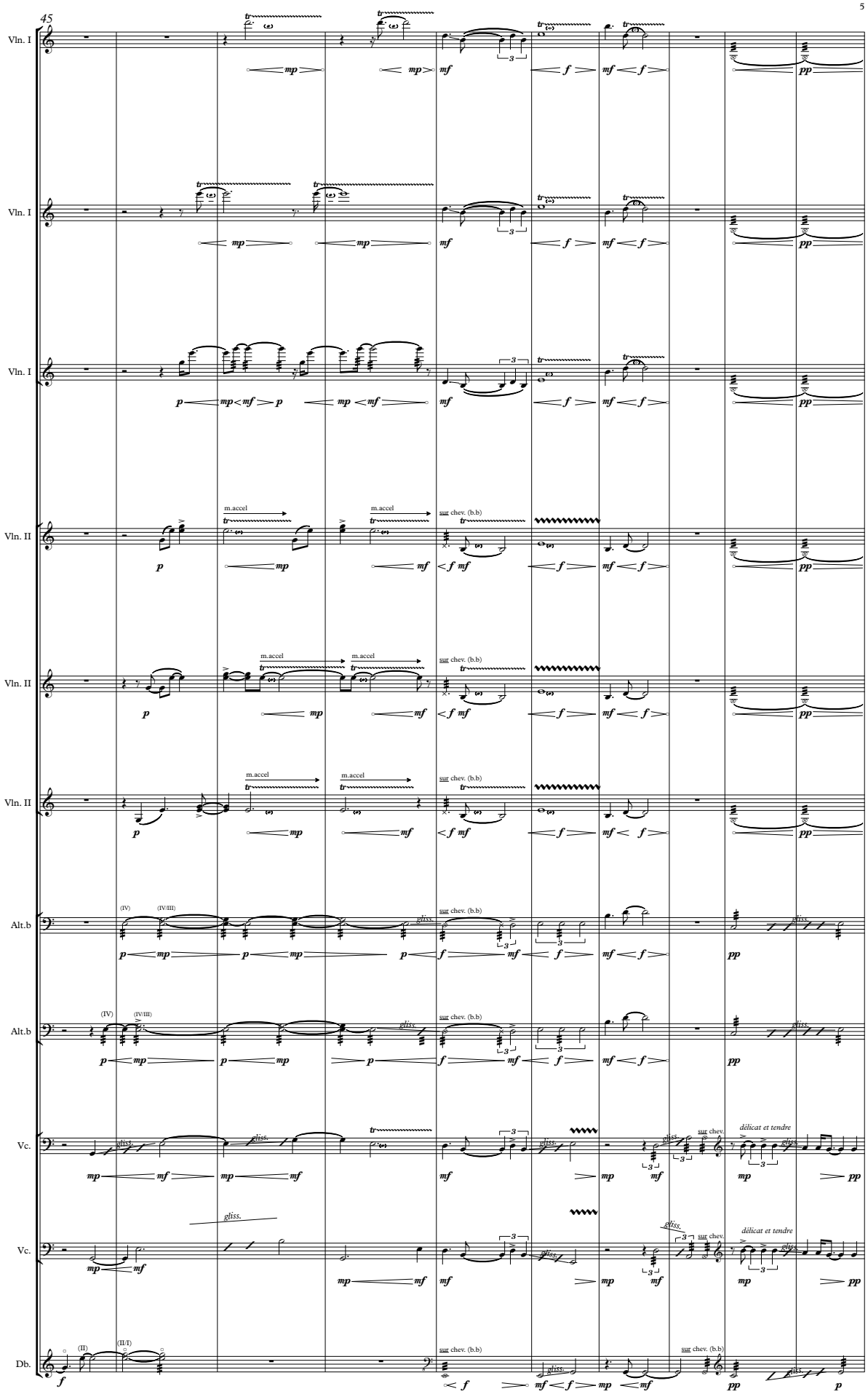

B
12
Vln. I
Violon Ia
Violon Ib
Violin Ic
Vln. II
Violin IIa
Violon IIb
Violon IIc
Alt.a.b
Alto a
Alto b
Vc.
Vlc a
Violoncelle b
Db.
pizz.(vib)
arco
sur chev.
gliss.

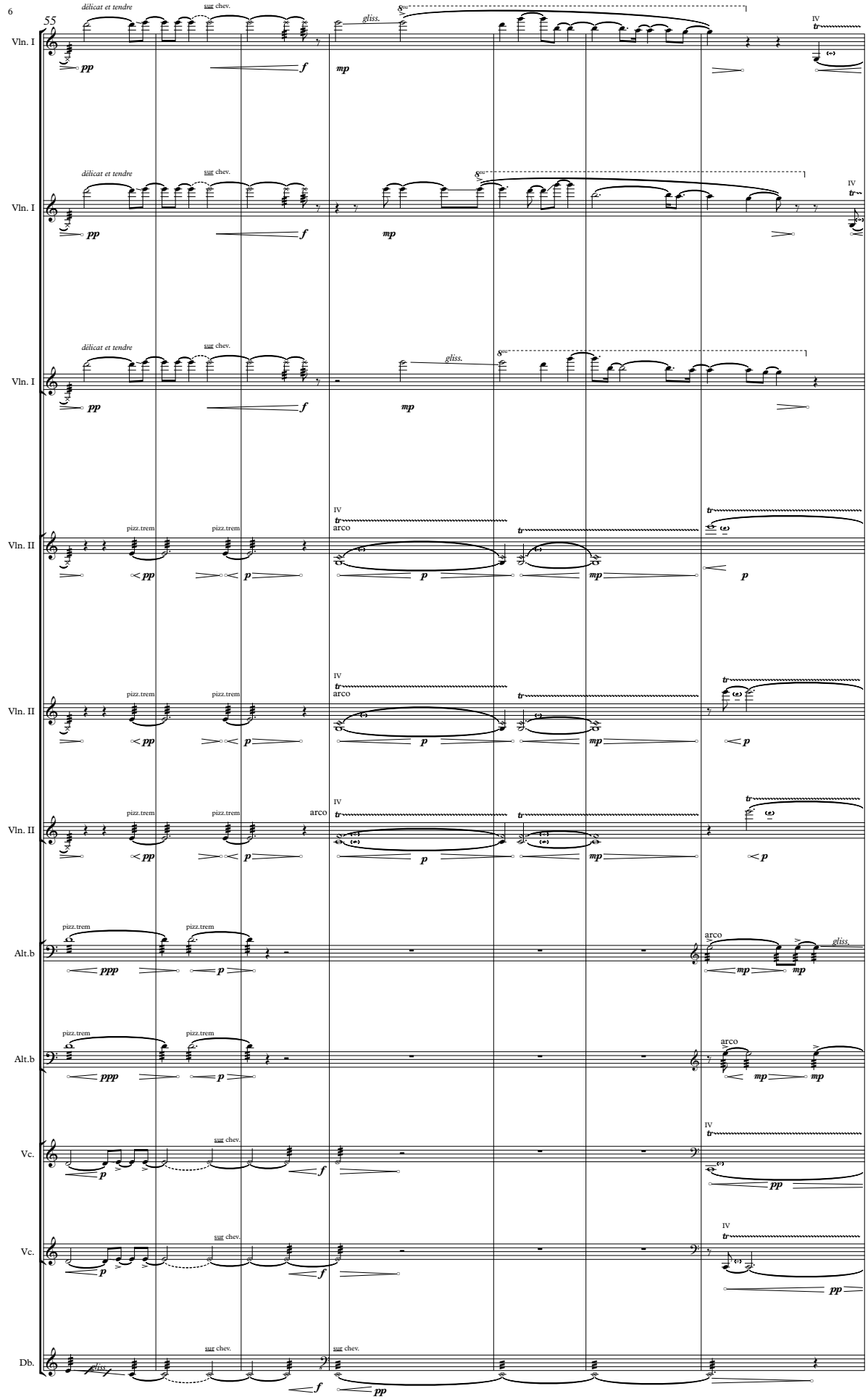

23
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Alt.b
Alt.b
Vc.
Vc.
Db.
sur chev.
gliss.
tr
IV

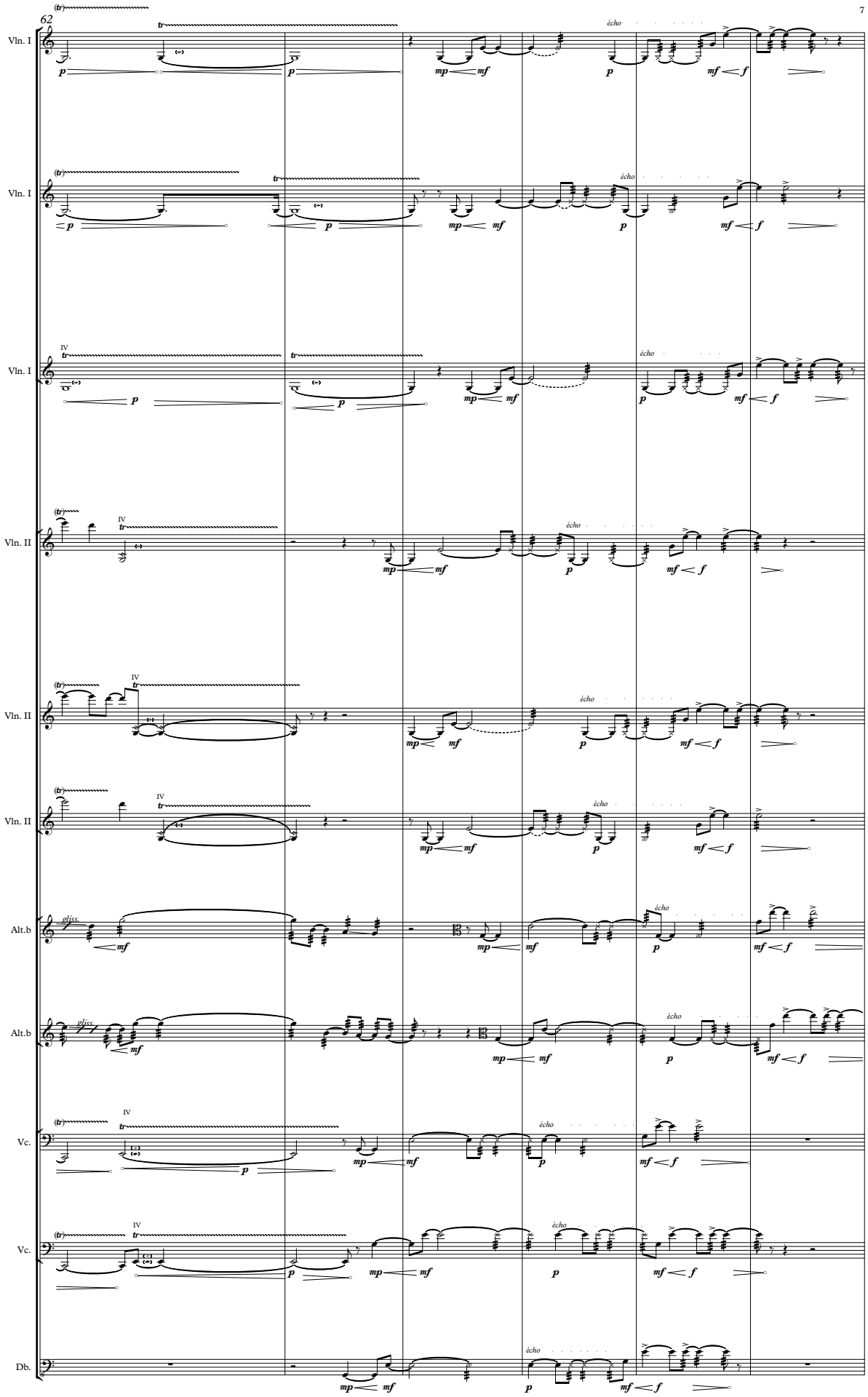
C *les dynamiques plus exagérées*

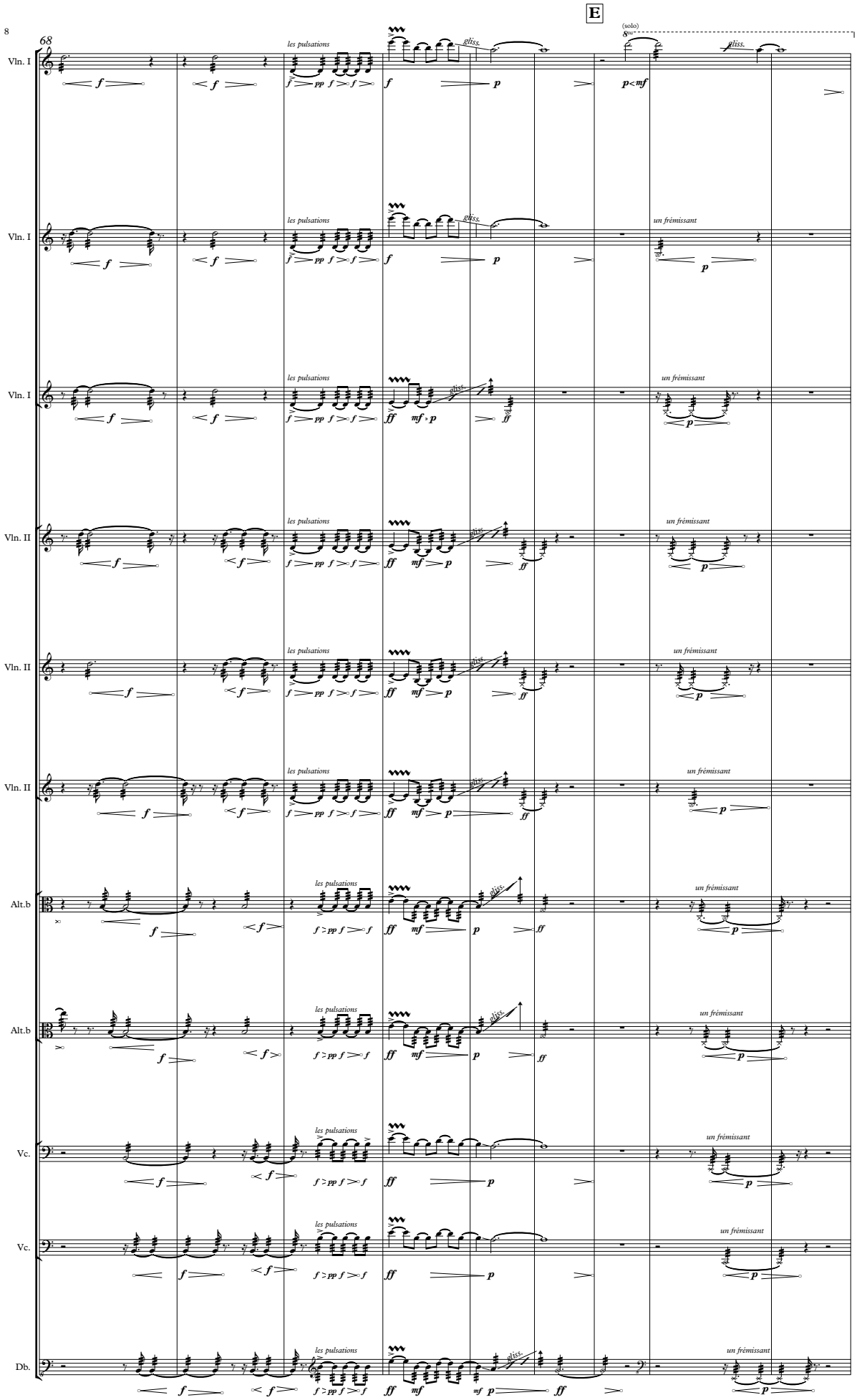


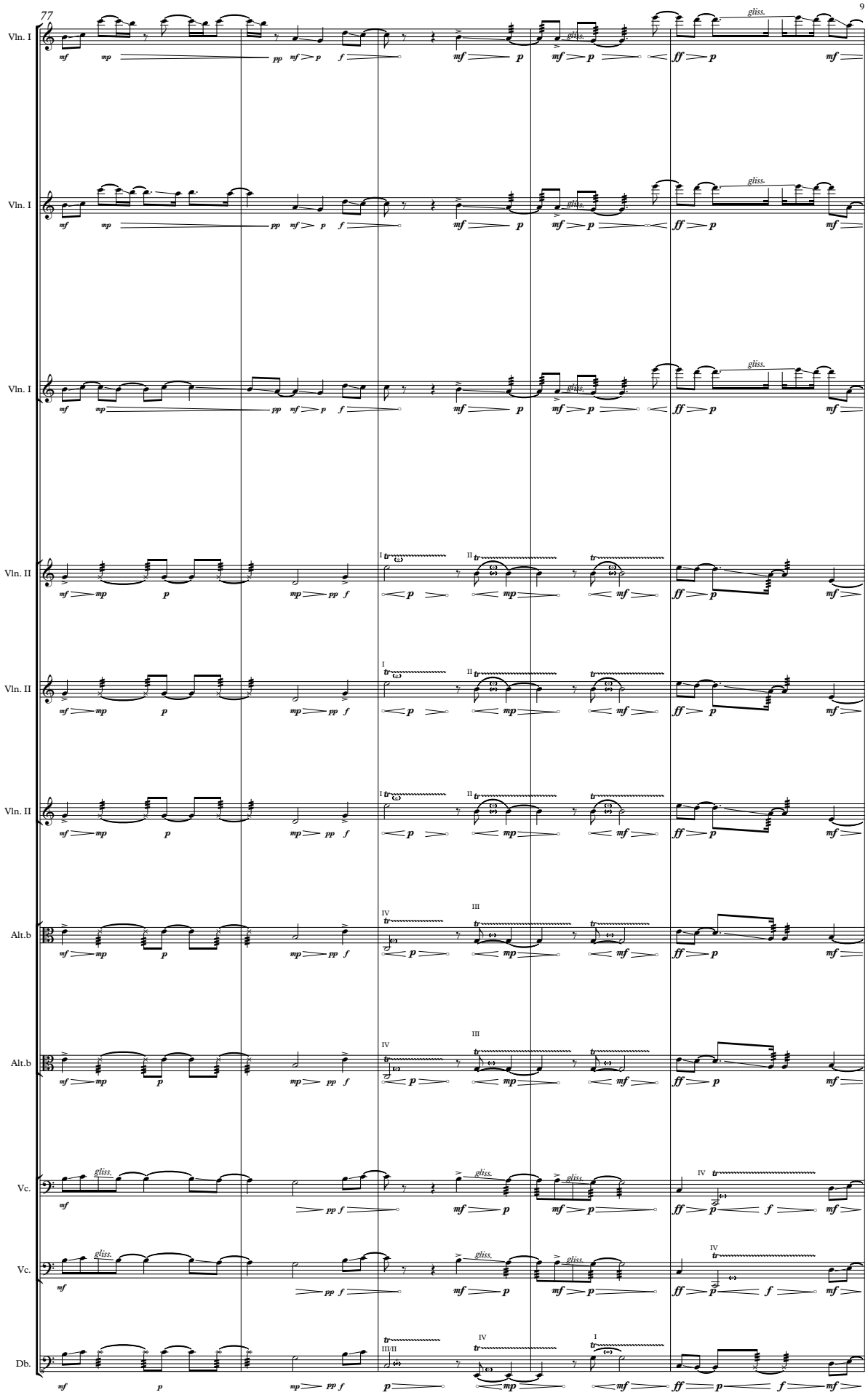
D

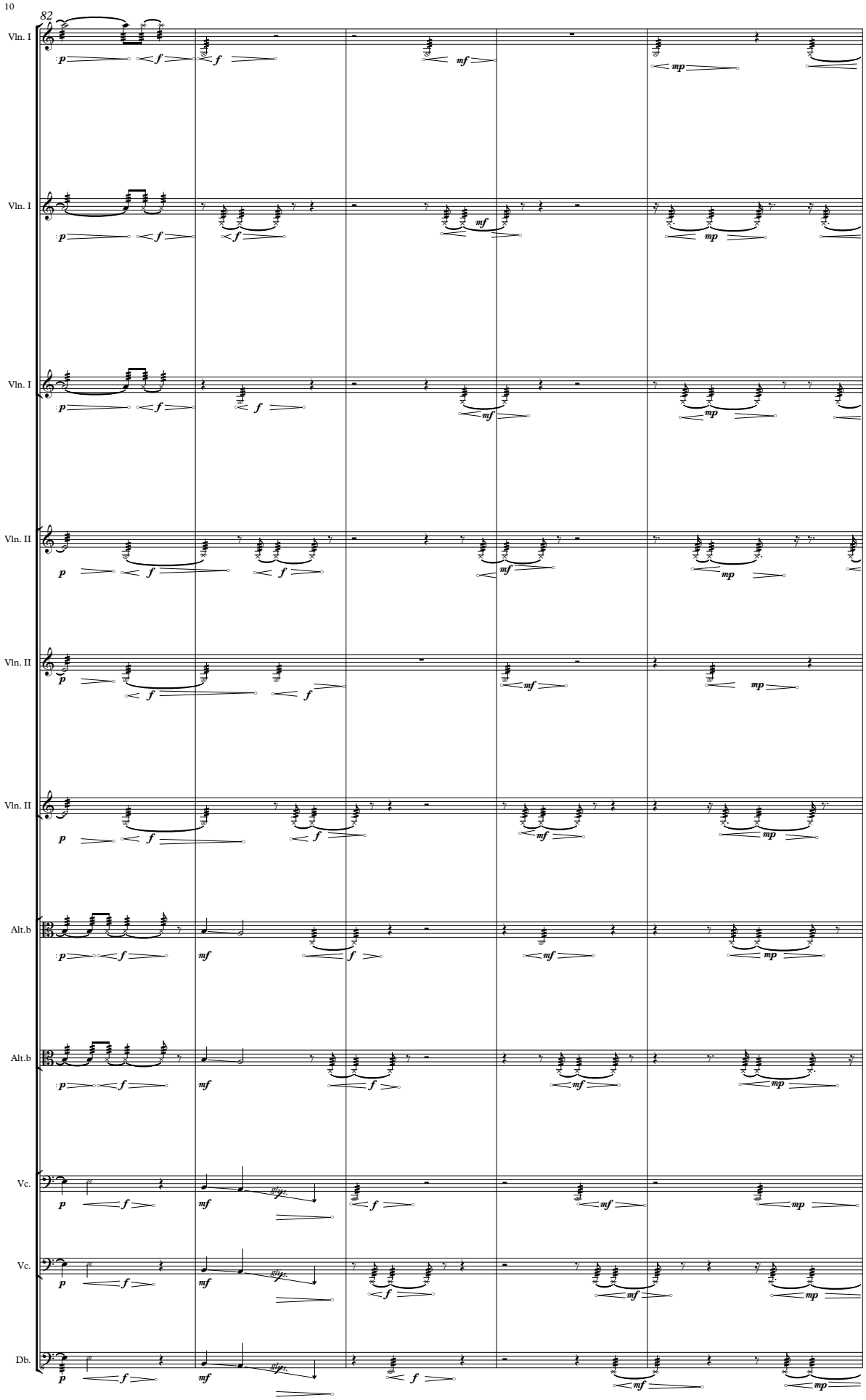

45
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Alt.b
Alt.b
Vc.
Vc.
Db.
m.accel
sur chev. (b.b)
(IV)
(IV/III)
(II)
(II/I)
gliss.
sur chev.
délicat et tendre


55
Vln. I
délicat et tendre
sur chev.
gliss.
IV
Vln. II
pizz.trem
arco
Alt.b
Vc.
Db.


62
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Alt.b
Alt.b
Vc.
Vc.
Db.
écho
gliss.


E
68
(solo)
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Alt.b
Alt.b
Vc.
Vc.
Db.
les pulsations
un frémissant
gliss.


77
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Alt.b
Alt.b
Vc.
Vc.
Db.
gliss.


82
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Alt.b
Alt.b
Vc.
Vc.
Db.
p
f
mf
mp
gliss.

87

lever brusquement,
et tenir l'archet au dessus
de la corde

Vln. I

Vln. I

Vln. I

Vln. II

Vln. II

Vln. II

Alt.b

Alt.b

Vc.

Vc.

Db.

p

let (in)

carry other names

2017

[for flute, 2 violins, viola, and cello]

Keiko Devaux

General

m.v – molto vibrato
(m)sp – (molto) sul ponticello
sp (with X note head) – play directly on the bridge (producing white noise)
(m)st - (molto) sul tasto

 fig 1. – slow vibrato

Strings

fig 2. – 2 finger tremolo (by tapping lightly on the pitched string)

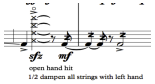


fig 3. – with ½ dampened strings (on harmonic) with left hand, strike the strings with right hand open palm

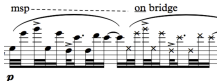


fig 4. gradual transition from playing molto sul ponticello to directly on the bridge (white noise)

fig 5 – with right hand, pizz on fingerboard right beside stopped note

fig 6 - dampen strings with left hand while playing col legno battuto

Flute

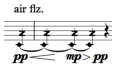


fig 7. – air flutter tongue

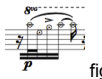


fig 8. ½ air, ½ pitch

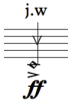


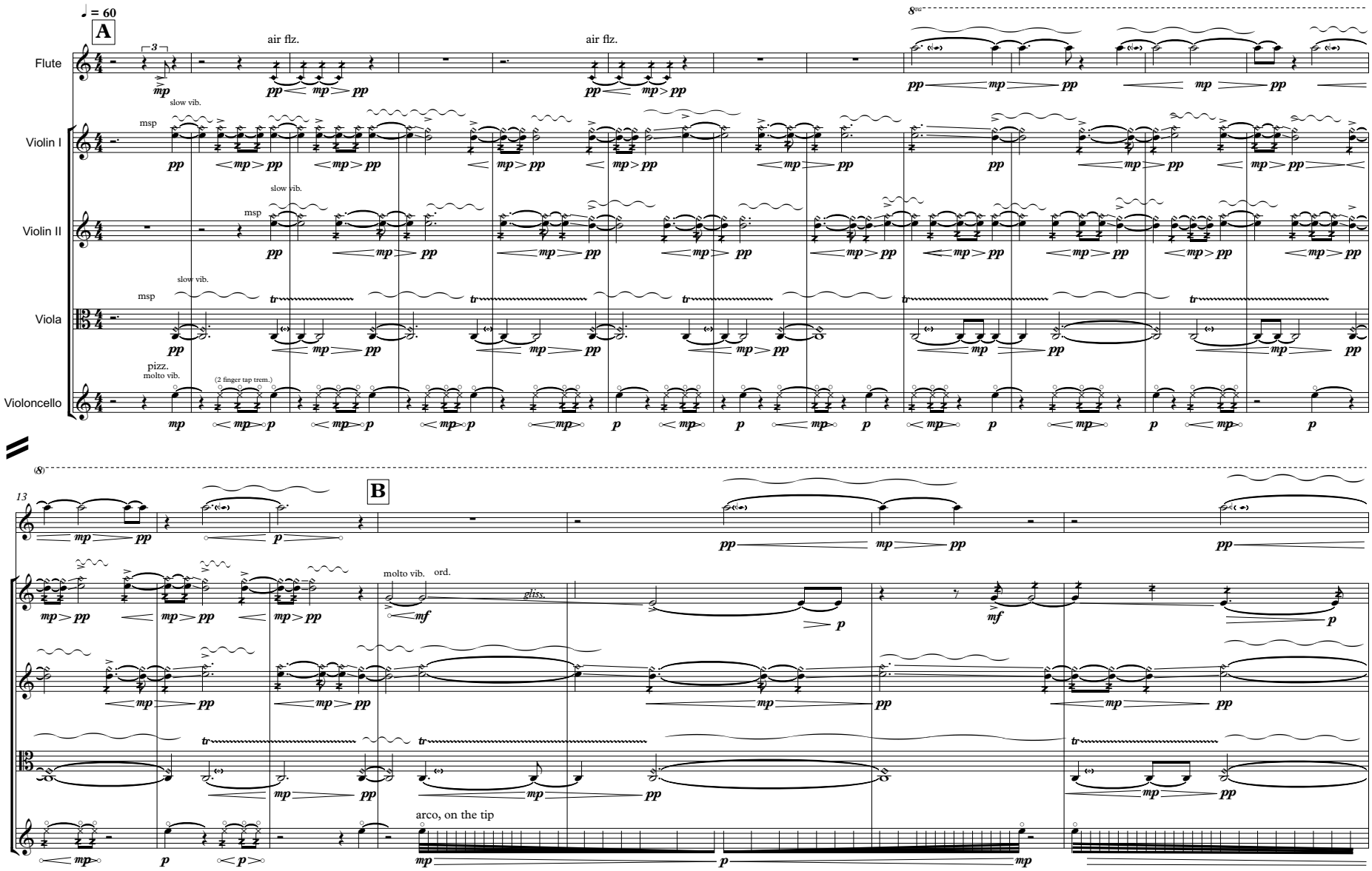
fig 9 jet whistle

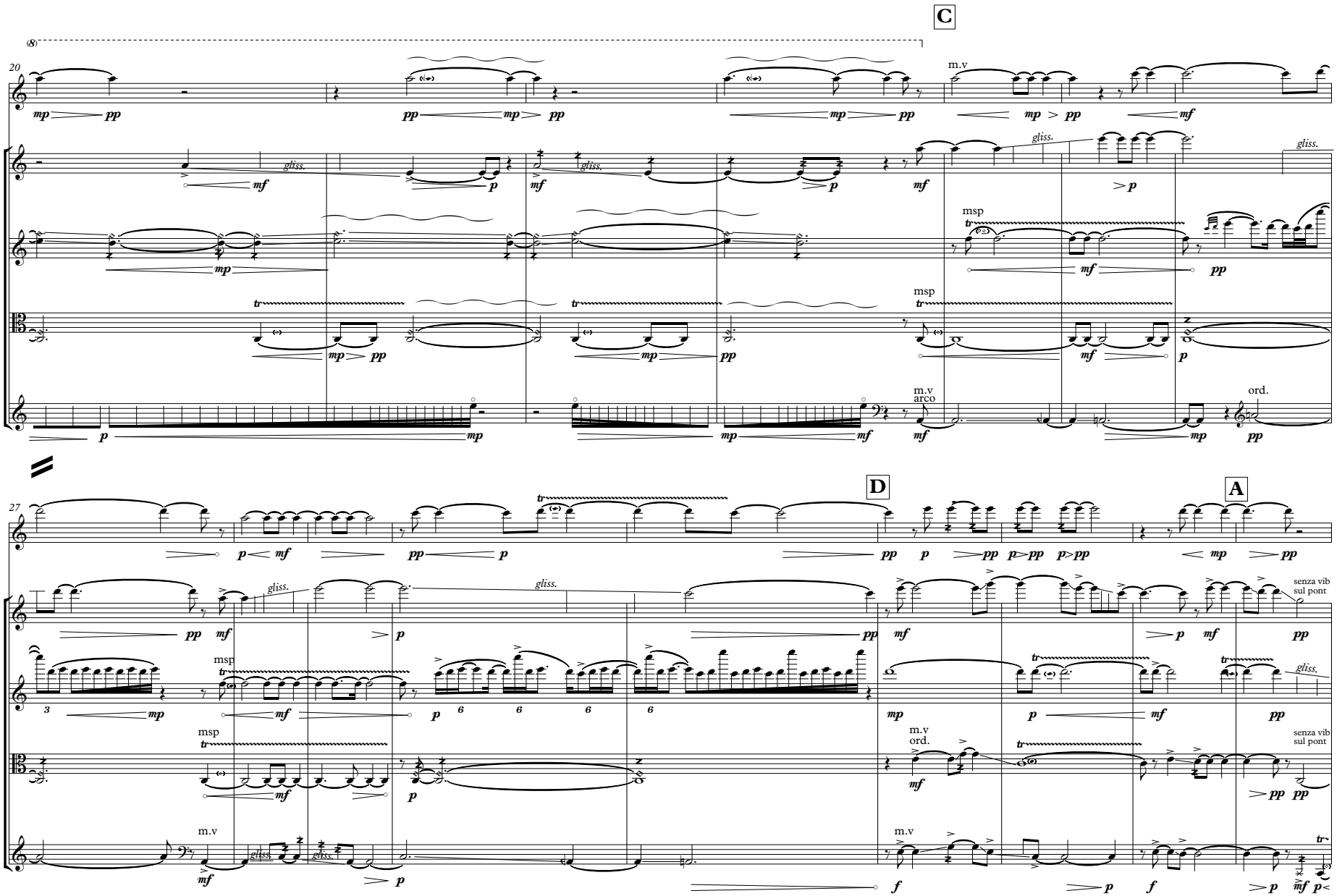
fig 10. tongue ram

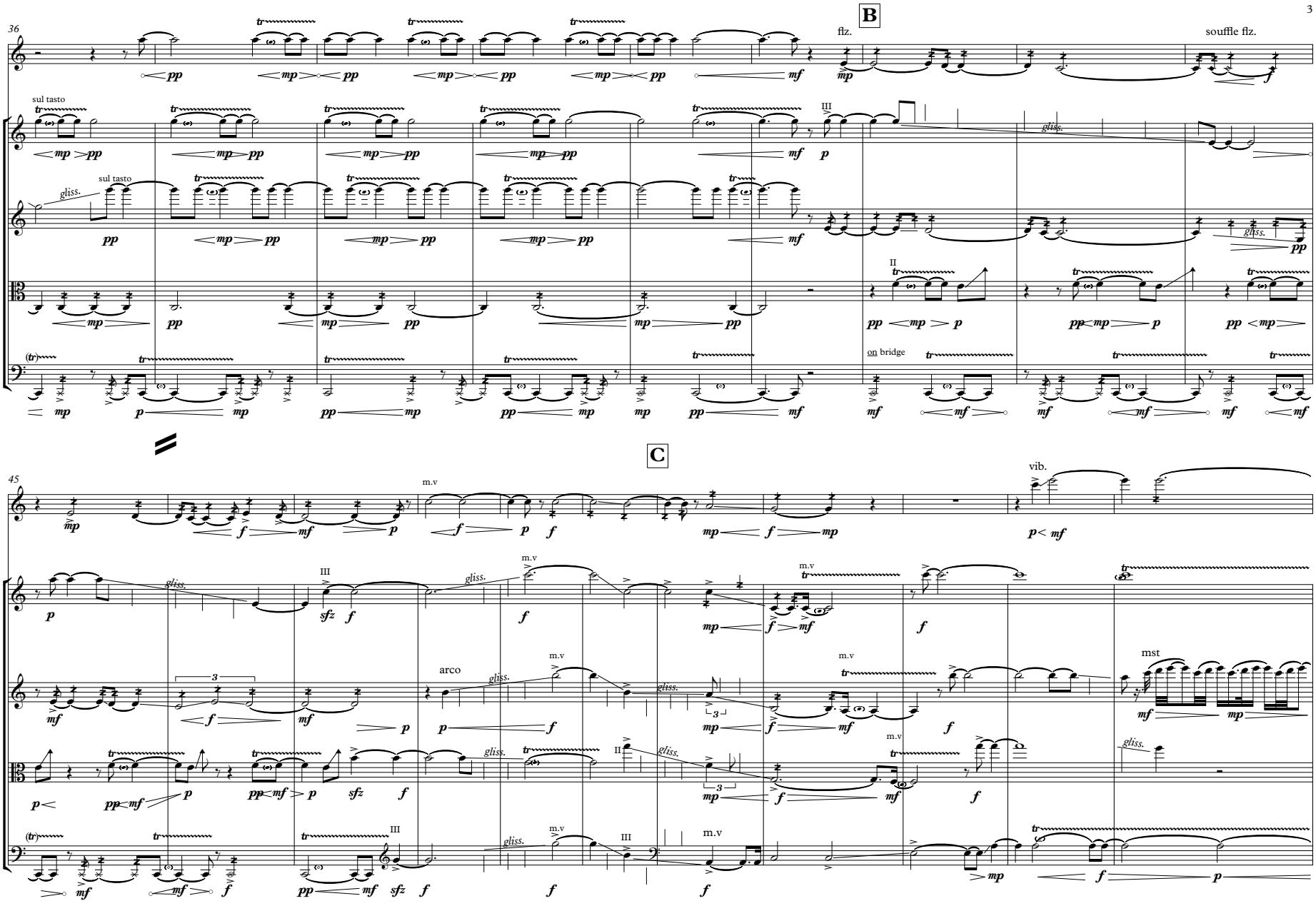
let (in)

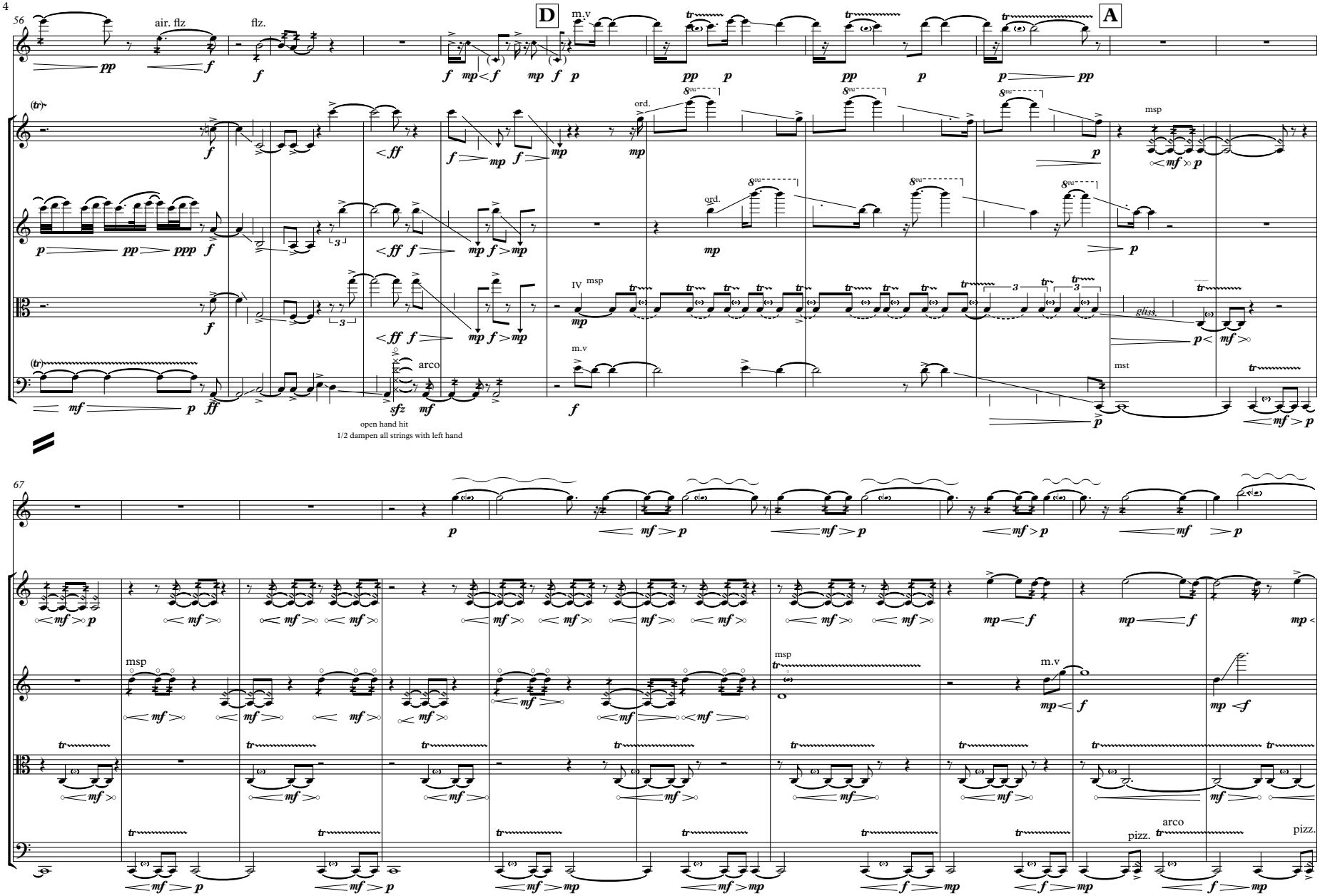
carry other names

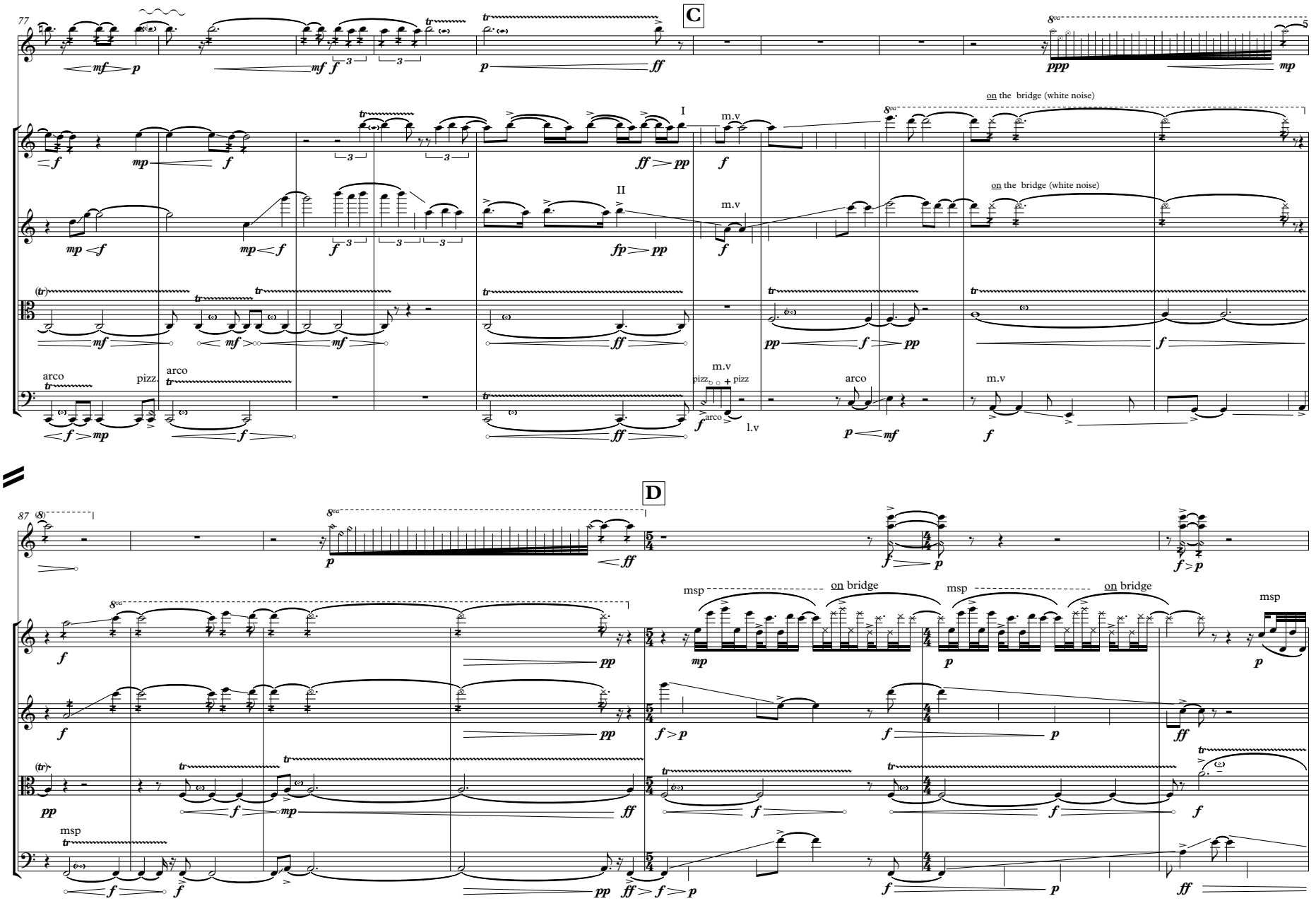
Keiko Devaux

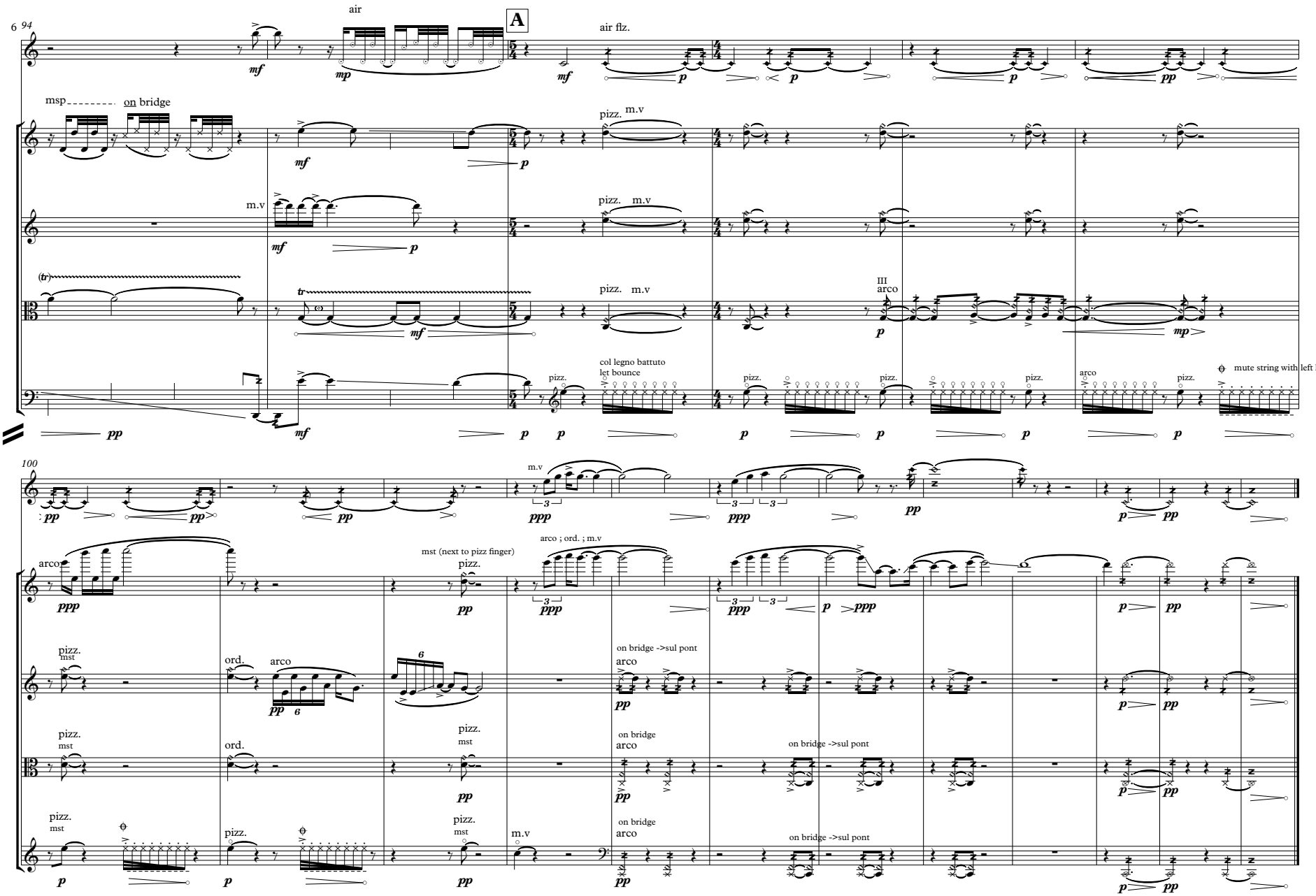



C
D
A
20
27
(8)
m.v
gliss.
msp
tr
arco
ord.
senza vib
sul pont


36
B
flz.
souffle flz.
sul tasto
gliss.
III
II
on bridge
45
C
m.v
vib.
arco
mst


56
air. flz
flz.
D
m.v
A
ord.
msp
IV
gliss.
arco
mst
open hand hit
1/2 dampen all strings with left hand
67
pizz.


77
C
I
II
m.v
on the bridge (white noise)
arco
pizz.
l.v
87
D
msp
on bridge


6 94
air
A
air flz.
msp
on bridge
pizz.
m.v
III
arco
col legno battuto
let bounce
mute string with left hand
100
mst (next to pizz finger)
ord.
on bridge ->sul pont
on bridge