Composition Commentary

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This thesis is dedicated to the memory of my great friend Keith Murphy.

ABSTRACT

In an attempt to provide an analytical entry point into my compositional practice, I have identified eight themes which are significantly recurrent: reduction – the selection of a small number of elements; imperfection – a damaged or warped characteristic of sound; hierarchy – a concern with the roles of instruments with regard to their relative prominence; motion – apparently static sound masses consist of fine internal movement; listener perception – expectations for change influence the experience of affect; translation – the transitioning of electronic sounds to the acoustic realm, and vice versa; immersion – the creation of an accommodating soundscape; blurring – smearing and overlapping sounds or genres.

Each of these eight factors is associated with relevant precedents in the history and theory of music that have been influential on my work. These include the minimalist compositions of Steve Reich and Arvo Pärt; the lo-fi aesthetic of Boards of Canada and My Bloody Valentine; concerns with political hierarchy in the work of Louis Andriessen; the variations of dynamics and microtonal shifts of Giacinto Scelsi; Leonard B. Meyer's account of expectation in music; cross-fertilisation of the acoustic and electronic in pieces by Gérard Grisey and Gyorgy Ligeti; the immersive technique of Brian Eno's ambient music; and the overlapping sounds of Aphex Twin.

These eight factors are variously applicable to the eleven submitted pieces, which are individually analysed with reference to the most significant of the categories. Together they form a musical language that sustains the interaction of a variety of techniques, concepts and genres.

INTRODUCTION

At the outset of my PhD I was interested in a number of styles of music: most notably Minimalism, the pared down approaches of Steve Reich and Arvo Pärt, the ambient soundscapes of electronic artist Aphex Twin, and microtonal music by artists such as Boards of Canada and My Bloody Valentine. I had been writing music that contained minimal traits, such as focusing on a few pitches or staying within one tonality, and I used musical processes to produce and develop material for my pieces. I became interested in writing music that causes an immersive aural effect on the listener and was attempting my first ambient works, bearing in mind Brian Eno's definition of ambient music as that which allows 'space to think'.[1] I was also concerned with notions of purity versus corruption, exploring noise-based timbre versus pure tone.

Since that time, I became interested in the micropolyphonic textural work of Ligeti, and in Scelsi's use of colour and his preoccupation with sound properties. I began to write music that was more concerned with sound itself rather than with external changes, and started to explore the many colours that can be produced from combinations of instrumental tone, and the diversity of timbres achievable from a single pitch by using various instrumental techniques. I began to write for larger ensembles, thus allowing me to create denser textural sound masses. I investigated crossovers from instrumental music to electronic music and vice versa. I wrote work that examined the utilisation of motion in music, where the structure of a seemingly static texture is inherently moving.

I have identified eight themes, trends or ideas that are useful in taking an analytical approach to my music and situating it in a contemporary context. They may be referred to as reduction, imperfection, hierarchy, motion, listener perception,

[1] Brian Eno, liner notes from *Ambient 1: Music for Airports*, 1978.

translation, immersion and blurring. Here, I describe the nature of each of these factors in brief, making reference to the work and ideas of others that have been relevant to my own and broadly outlining the manner in which each theme is manifested in my music. I then consider the relationship between each factor and its precedents in the history and theory of music with particular regard to work that I have found influential to my own practice, thus situating my work in a contemporary context. This is followed by extensive analyses of televen pieces, for a range of instrumental, vocal and electronic forces. These are presented chronologically and demonstrate in detail how the eight factors have emerged in my work.

Reduction refers to the reduction of a particular parameter within composition such as colour, harmony, timbre and texture, to its very essence. This is most notable in the minimalist music of Arvo Part and Steve Reich, where their use of minimal resources creates expansive works. It is evident in my own work in the selection of a particular timbre or tonality. Reduction has featured in all eleven pieces, to varying degrees.

My usage of imperfection as a technical term is to denote music that is recognisable to the listener as featuring some or all of tonal, melodic and rhythmic qualities which are deliberately roughened or abstracted. The utilisation of this imperfect or damaged sound is exemplified in the work of Boards of Canada and My Bloody Valentine, whose sound attempts to exploit the relationship between the beautiful and the disturbing. Imperfection is created in my work in the form of microtonality, granular synthesis, distortion and the roughening of instrumental tone. Imperfection features in seven of the pieces discussed here, but most notably in *Miniatus, For de ereprijs,* and *Stórr.*

Investigations of hierarchy or anti-hierarchy in my work relate to issues with instrumental roles and equality. These notions arose in Andriessen's contentious relationship with the orchestra, and in Ligeti's micropolyphonic works where there is clearly a sense of equality between parts. My work is often concerned with a balance of

sound, where every sound is important in creating the overall texture, while none is permitted prominence. Alternatively, instrumental roles may be reversed, where instruments that would perhaps traditionally be considered foreground are moved into the background, and vice versa. The issues of hierarchy are considered in *Forth, Stórr* and *Miniatus,* where an anti-hierarchial approach is favoured.

I have explored motion in music in pieces that are apparently static but in fact consist of deep internal movement. This is evident in the work of Scelsi and Ligeti. Scelsi constructed entire pieces around single pitches, which are restated through variations in dynamics and timbre, and through the use of microtonal shifts and harmonic overtones. Ligeti used micropolyphony to create subtle inner movement in sounds that are otherwise seemingly motionless. In some of my pieces, internal movement is achieved by creating different tone colours at a very detailed, micro level, eg; through the use of alternate fingering in strings, woodwind and brass to vary the timbre. This is most evident in *Miniatus.* A sort of motion is also manifested in the beating that is created between closely-tuned pitches, as heard in *Evolution of close double stars*.

Listener perception refers to a playing with the listener's expectations. When expectation is deviated from, it causes an affective experience and functions as a stimulus. The idea of expectation in music is explored in Leonard Meyer's *Emotion and Meaning in Music.* Meyer's main concern is that "emotion or affect is aroused when a tendency to respond is arrested or inhibited."[2] I take advantage of this phenomenon in pieces such as *Miniatus* and *Evolution of close double stars,* where major changes are withheld until late in the piece. This is exemplified by the harmonic shifts that occur in both, thus prolonging the listener's expectation for change and instigating a heightened affect at its eventual delivery.

I use the term translation to denote the translation of music from the electronic to the acoustic, specifically how acoustic instruments may emulate the sounds associated with electronic music, and vice versa. This has been attempted within the

[2] Leonard Meyer, *Emotion and Meaning in Music,* (Chicago, The University of Chicago press, 1956), p. 14.

work of the Spectral composers, in particular the music of Grisey and Murail. Grisey's orchestral compositions such as *Partiels* and *Modulations* are directly related to research developments within the realm of acoustics and electronic music, for example, harmonic spectrum analysis. Ligeti has referred to some of his instrumental works as being influenced by his electronic work in his Cologne studios. In my own work I explore the cross-fertilisation of these methods of production in two pieces, *For de ereprijs* and *Stórr.*

Immersion in music refers to the experience of being surrounded by sound: the listener feels submerged. This could be physically represented through a mutli-channel spatial array, or the impression of immersion can also be achieved within a stereo presentation. Much of the work by the artists and composers I have already mentioned could arguably be considered immersive at times, one such example demonstrated within the ambient work of Brian Eno. I have employed a number of techniques in facilitating an immersive experience for the listener, including the creation of a dense texture that is fully saturated, as well as the use of repetition and homogeny. In addition the use of blurring enhances the feeling of immersion, where the smooth beginnings of sounds are not always discernible, perhaps contributing to a relaxed and calm state for the listener. Immersion has featured in all of my pieces to varying degrees.

Blurring can be described as the blurring and smearing of actual sounds, but also as the blurring of approaches and genres. Ligeti, in his use of micropolyphony, overlaps sounds. Aphex Twin is an artist whose ambient work, incorporating blurring sounds, has been an influence on my approach. Blurring occurs at a sonic level in much of my work with the overlapping of sound and the removal of sharp attacks, and at a conceptual level with the blurring of acoustic and electronic timbres and approaches.

It is clear that these eight categories refer to various concepts, themes and techniques that are interrelated in a complex fashion. In an effort to describe the processes by which my work has come into being - from the influence on the work of others that I have enjoyed and been stimulated by, through the intricate navigation of a maze of technical, conceptual, emotional and aesthetic concerns that is the writing

process, to my projection of what must be the listener's experience of the finished work – it may be the case that many of the categories overlap in meaning or extent, have fuzzy boundaries that are difficult to delineate or have varying connotations in different contexts. Nevertheless, I have found them useful in providing an entry point into my work, and its location relative to historic and contemporary practice, classical and popular.

Each of the categories can be associated with the history and theory of music, and my selection of each reflects not only the trends, techniques and tendencies that are characteristic of my own work, but also elements of the history and theory of music that have had a significant influence on the formation and development of my approach to composition. The following sections describe my understanding of the nature of each factor, theme or category by identifying their emergence in the work of others that I have found important for my own. Here, I examine each factor in turn with regard to various pieces, movements, composers, concepts, theories, genres and styles that I have found to be conceptually significant, stylistically influential, or aesthetically pleasing and therefore stimulating to my compositional practice.

EIGHT FACTORS

1. Reduction

Reduction can be seen most significantly in the genre of minimalism. The term Minimalism originated in the visual arts and was first used in relation to music by Michael Nyman in *Experimental Music: Cage and beyond* (1974). Composer Tom Johnson in his collection of articles entitled *The Voice of New Music*, describes his notion of minimalism.

> The idea of minimalism is much larger than most people realize. It includes, by definition, any music that works with limited or minimal materials: pieces that use only a few notes, pieces that use only a few words of text, or pieces written for very limited instruments, such as antique cymbals, bicycle wheels, or whiskey glasses. It includes pieces that sustain one basic electronic rumble for a long time. It includes pieces made exclusively from recordings of rivers and streams. It includes pieces that move in endless circles. It includes pieces that set up an unmoving wall of saxophone sound. It includes pieces that take a very long time to move gradually from one kind of music to another kind. It includes pieces that permit all possible pitches, as long as they fall between C and D. It includes pieces that slow the tempo down to two or three notes per minute.[3]

This inclusive definition of minimalism describes a variety of diverse and eclectic techniques that can be considered minimal. All of them involve the creation of a set of parameters or the selection of a small number of elements which are reduced to their essence. This is an approach that I have appropriated for a number of pieces, and normally manifests itself in the selection of a reduced number of pitches.

The work of Arvo Pärt has been a significant influence on mine. His music is characterised by the use of minimal materials to create expansive works and this simplicity of means challenges us to listen differently. With his use of sparsity and stillness this music allows us to listen more deeply. He states:

[3] Tom Johnson, *The Voice of New Music, New York City 1972 – 1982, A collection of articles originally published in The Village Voice,* (Holland, Apollohuis, 1989) p.5.

> The complex and many-faceted only confuses me and I must search for unity….I have discovered that it is enough when a single note is beautifully played. This one note, or silent beat, or a moment of silence, comforts me. I work with very few elements – with one voice, with two voices. I build with the most primitive materials – with the triad, with one specific tonality.[4]

It is clear that Pärt's minimalism is not a cold, intellectual sort. I appreciate how his approach of using a reduced number of elements embraces and, indeed, augments the emotive, affective and spiritual aspects of his work, as these qualities are sometimes evident in my own.

2. Imperfection

The work of Scottish electronic duo Boards of Canada illustrates the concept of imperfection. The idea for their work arose from the soundtracks of the National Film Board of Canada's educational documentaries on 16mm film. They began to imitate the characteristically warbling, damaged sound of the medium. Their sound consists of melancholic melodies, deliberately made rough and dissonant in production. In an interview with *New Musical Express*, member Mike Sandison states,

> We love the sound of music that seems to be barely under control. We love music that's out of tune in a beautiful way, or dissonant, or damaged…It's okay to be imperfect - in fact the imperfections are where the magic is. To us, perfect music sounds sterile and dead.[5]

A group whose work is also characterised by imperfection is the Anglo-Irish band My Bloody Valentine. Their seminal album *Loveless* (1991) uses swirling distortion and dense textures that warp and drift. Lyrics are indistinctive as vocals are used merely as an additional layer of colour. In *Rolling Stone,* Ira Robbins relates how some listeners, upon hearing *Loveless* on vinyl, were under the impression that the physical record was in fact warped. He goes on to describe the album as:

[4] Paul Hillier, *Arvo Pärt,* (Oxford, Oxford University Press, 1997), p.87.
[5] John Mulvey, "The Most Mysterious + Revered Men in Electronica" *NME,* 2002, pp 24 - 25.

> a roiling sea of melodic dysfunction. A challenging storm of bent pitch, undulating volume and fractured tempos, *Loveless* has a calm eye at its center, an intimate oasis from which guitarists Belinda Butcher and Kevin Shields gently breathe pretty tunes into the thick, sweet waves of droning distortion. Despite the record's intense ability to disorient – this is real do-not-adjust-your-set stuff – the effect is strangely uplifting. *Loveless* oozes a sonic balm that first embraces and then softly pulverizes the frantic stress of life.[6]

The music of both these artists straddles the arenas of popular music and critically acclaimed independent music, and was influential on me initially as a teenager and later as a young composer. I have carried their influence with me and have developed digital and acoustic techniques that emulate the warped and damaged sound of Boards of Canada's low fidelity sampling and My Bloody Valentine's feedback distortion.

3. Hierarchy

The concept of equality has been noted in the work of Louis Andriessen. In an interview with Robert Adling, Andriessen describes his issues with the symphony orchestra in relation to his piece *De Staat* (1976):

> In the first case of course, the choice of instruments. That is very clear. But at that time I meant it also in a more profound, philosophical way of thinking about musical communication. What I found important in *De Staat* is that there is not a hierarchy in the parts. That means everyone is justified in doing what he does. You don't have parts that are more interesting or less interesting, or more important or less important.[7]

While Andriessen's approach to the hierarchy of instruments can be seen to have an overtly political slant, I am more often concerned with a balance in sound between instruments than any notions of political democracy, but not always. In one piece, *Forth*, a struggle for dominance between two parts is dramatised in an exaggerated

[6] Ira Robbins, *Loveless review, Rolling Stone,* March, 1995.
[7] Robert Adling, *Louis Andriessen: De Staat,*(England, Ashgate Publishing Limited, 2004), p. 140.

fashion.

Ligeti's music also incorporates a balance of sound between instruments, eg; in works such as *Lux Aeterna* and *Atmosphères.* Renaissance polyphony was a major influence on his micropolyphonic works where there is clearly a sense of equality between parts. As an undergraduate I developed a love for Early music and have sung in a number of Early music choirs. I appreciate the unshowy, non-virtuosic form of this singing, where each voice is as relevant as the rest. In this respect my sensibilities are similar to the democratic concerns of Andriessen, and this has been influential in the development of some of my compositions, particularly those for large ensemble.

4. Motion

Italian composer Giacinto Scelsi contrasts internal complexity and external simplicity and has constructed entire pieces around single notes, his seminal piece being *Quattro pezzi chiascuno su una nota sola (Four pieces each one on a single note)* written in 1959. However, he restates the single note through variations in dynamics and timbre, and the use of microtonal shifts and harmonic overtones. Scelsi's interest in Eastern philosophy and spirituality affected his compositional approach. He was concerned with focusing the attention inwards, connecting to a universal consciousness, which was manifested through the endlessly changing sound of a single note. Musicologist Harry Halbreich discusses Scelsi's Music in the liner notes of *Giacinto Scelsi – Aion– Pfhat - Konx-Om-Pax:*

> Sound lives and moves: it oscillates in space, it vibrates and quivers like plasma, it is filled with depth and breadth. This inner vibration of spheric sound is made audible by clusters, trills, tremelos, glissandos, by various articulations, by contrasts in the "grain" such as rough or smooth, but above all by the rapid and broad vibrato widening the pitch's trail from a linear ray into a large beam.[8]

In recent years I have become enamoured of Scelsi's work. His restating of individual pitches, which are altered in dynamics, tone and microtonality with each

[8] Harry Halbreich, liner notes from *Giancinto Scelsi – Aion– Pfhat - Konx-Om-Pax , 1988.*

repetition, demonstrates an influence of Eastern spiritualism which informs his work. This is evident in the singular focus inherent within the repetition of mantras, associated with some Eastern spiritual practice. Given the apparently underdetermined nature of the music, the listener is free to enter into the rich, detailed centre of the piece. That which appeared to be static is revealed to be full of internal movement. I have employed techniques to create similar effects, such as alternate fingering for strings, wind and brass, where a note is repeated but with slight shifts in colour and pitch, creating internal movement in *Miniatus*.

In Richard Steinitz's book *Gyorgy Ligeti: Music of the Imagination,* he discusses the idea of stasis and internal movement in pieces such as *Apparitions* and *Atmosphère*s. He states,

> The microscopic activity of each player's part is mapped out with immense care; but instead of single lines, we hear only the homogeneity of the whole. Sometimes the resultant cloud hangs motionless; elsewhere it trembles with energy, buzzing like a beehive. Ligeti moulds its inner detail to achieve effects of growth and decay, contrasts of register and timbre, moments of wild violence next to others of mysterious, echoing stasis. [9]

Ligeti's piece *Atmosphères* could perhaps be considered a static composition, but it has much inner subtle movement in the detail of the sound. He used micropolyphony, where orchestral *divisi* are used to create a dense sound mass. Micropolyphony was a term coined by Ligeti himself, referring to the use of microscopic canons, where layers of musical material are constructed with a slight time lag between them. This results in a density of sound mass, which obscures the functions of melody, harmony and rhythm, producing a slowly shifting texture. David Cope further illuminates by describing this technique as, "Micropolyphony resembles cluster chords, but differs in its use of moving rather than static lines".[10] Micropolyphony is characteristic of another form of singing that has suggested composition techniques on me: Gaelic Psalmody. Here, a degree of individual improvisation on behalf of the singers creates a micropolyphonic

[9] Richard Steinitz, *Gyorgy Ligeti: Music of the Imagination,* (London, Faber and Faber Limited, 2003), p. 98.

[10] David Cope, *Techniques of the Contemporary Composer,* (New York, Schirmer Books, 1997), p. 101.

texture that is due to the varying entry and exit points of lines. This energetic sound mass consists of various subtle, detailed internal changes, and what may appear to be a relatively static line is in fact composed of a multitude of internal movements. I have attempted to recreate some of the energy of Gaelic Psalmody singing in a piece for large orchestra, *Stórr*, where extensive orchestral *divisi* and a dovetailing of lines create a vibrant micropolyphonic texture and an internal motion.

5. Listener Perception

Leonard B. Meyer, in his book '*Emotion and Meaning in Music*', discusses the processes by which an emotional or aesthetic experience in music can be communicated. Drawing on the social sciences, he explores the phenomenon of expectation in music. How the unfolding of successive events determines their experience of affect is one of Meyer's considerations.

> The customary or expected progression of sounds can be considered as a norm, which from a stylistic point of view it is; and alteration in the expected progression can be considered a deviation. Hence deviations can be regarded as emotional or affective stimuli. [11]

In many of my pieces a recognisable pattern is created at the outset, which gradually evolves as the piece progresses. The evolution is slow, however, and may prolong the listener's expectation for change. In a number of pieces, a significant shift in the pattern occurs towards the end of the piece, which is often climactic and may function as an affective stimulus for the listener, having been primed for such an event through the slow development of the pattern. This, I imagine, is how the listener could experience a number of my pieces, which however is open to individual interpretatation and a matter of subjectivity. In composing them, however, I am less concerned with the reactions of an imaginary listener than I am with writing the kind of piece that I would find affective.

[11] Leonard Meyer, *Emotion and meaning in music,* (Chicago, The University of Chicago press, 1956), p. 32.

6. Translation

Translation here refers to the mutual emulation and cross-fertilisation of the sounds created by electronic techniques and those by acoustic instruments. In the liner notes of *Gèrard Grisey: Les Espaces Acoustiques,* Grisey states that his musical language includes the exploration of "phenomena that have long been studied in electronic studios to the area of instrumental sound."[12] The album consists of six pieces for various ensembles written in the period from 1974 to 1985. Two of these, *Partiels* and *Modulations,* sound as if they are of electronic origin, but in fact are based on a Spectralist analysis of the note E, which is distributed among the instruments.

Ligeti's orchestral piece *Atmosphères* originated as an electronic composition, originally entitled *Pièce electronique no. 3.* He had created a score that was intended for electronic sounds but decided it would be more suitable for instruments. It became *Atmosphères.* Although it does not sound electronic, it functions as an early example of the cross fertilisation of the electronic and the acoustic.

In my own work, I have utilised both of these approaches: an acoustic piece may sound electronic, or had as its basis an electronic or digital composition. *For de ereprijs* emulates the electronic techniques of delay, reverse, granular synthesis, distortion and filters for a large ensemble by experimenting with mutes for brass instruments, reversal of attack and roughening of tone, among other techniques. *Stórr* originated as an electronic piece based on samples of string instruments to which I subsequently applied a number of digital effects. My interest here was in experimenting with, and ultimately finely controlling, the compositional process in a manner which a digital workflow allows. Once the final structure was in place, I decided to translate the digital version of the piece (which remained more or less sonically true to its acoustic beginnings) for large orchestra, using analytical software.

7. Immersion

[12]Gérard Grisey, liner notes from *Gérard Grisey:Les Espaces Acoustiques,1998.*

Geeta Dayal in her book *Another Green World* discusses how Brian Eno created an immersive experience in his music. One way he did this was by using long fade-ins and fade-outs, therefore pieces do not start or end abruptly, helping to lure the listener in. Referring to his piece *Spirits Drifting* from the album *Another Green World*, she states,

> The long fade-out, another signature Eno touch, gently transitions the listener back to reality after having been immersed, for the past hour or so, in another sonic world. Artful uses of fade-ins and fade-outs can make you feel as if you're stepping into a scene that's still happening when you leave it.[13]

Dayal also states how his music often has no beginning/middle/end in a traditional sense, thus adding to the immersive experience. Eno states in his essay *Generating and Organizing Variety in the Arts*,

> The music is a section from a hypothetical continuum and that it is not especially directional: it does not exhibit strong 'progress' from one point (position, theme, statement, argument) to a resolution.[14]

The concept of immersion is further evident in his ambient pieces *Music for Airports* and *Discreet Music*. The purpose of *Music for Airports* was to diminish the stressful atmosphere of an airport terminal. This piece, which is sparse and evolves slowly, was designed to be a continuously looped sound installation. Eno used phasing, a technique where loops of tape of different lengths generate sound patterns that shift gradually. This has the desired effect of lulling the listener into a calm and contemplative mindset. *Discreet Music* uses slow fade-ins, where soft, mellow tones slowly float and shift over time. Eno states that "immersion was really the point: we were making music to swim in, to float in, to get lost in".[15]

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[13] Geeta Dayal, *Another Green World,* (New York, The Continuum International Pulishing Group Inc, 2009) p. 69.

[14] Brian Eno**,** *Generating and Organizing Variety in the Arts*, *Studio International* 984 (Nov./Dec.1976), p.7.

[15] Brian Eno, edited by Christoph Cox and Daniel Warner, "*Ambient Music*", *Audio Culture: Readings in Modern Music*, (New York, The Continuum International Publishing Group Inc, 2006), p. 95.

I feel that most of my pieces offer an immersive experience for the listener, due to a number of characteristics, shared with ambient music, that may be present in various pieces to varying degrees: slow fades, smooth textures, gradual but slow evolution, repetition of patterns, the absence of abrupt events. The experience of immersion in music is one that I value, with its associated feelings of comfort and security, as the attention is directed inwards and the physiological state becomes relaxed.

8. **Blurring**

Blurring may refer to the intermingling of genres, as outlined in the translation section above, or it may refer to the blurring of actual sounds, be they electronic or acoustic. In the work of Aphex Twin, I have found his technique of the overlapping of sounds significant for my own work, best exemplified in *Selected Ambient Works Volume II* (1994). This album has been influential in the development of sub-genres such as 'ambient electronica', 'ambient techno' and 'dark ambient' music, and has been similarly influential on my compositions, both electronic and acoustic. Blurring of sounds can be achieved in either context by slow fades, dovetailing of lines, reverb and granular synthesis.

For example, Ligeti tends to begin instruments or voices on the same note or in close succession and usually at a very quiet dynamic. This gives an illusion of notes appearing out of nowhere. He states,

> … you hear an interval that gets gradually blurred and in the ensuing mist another interval appears,… 'Mistiness' actually means a contrapuntal texture, a micropolyphonic cobweb technique; the perfect interval appears in the texture first as a hint and then gradually becomes the dominant feature. [16]

By utilising blurring techniques, whether acoustic or electronic, colour is smudged as each sound blends into the next, instruments become unrecognisable as

[16] Gyorgy Ligeti, Várnai, P., Häushler, J. & Samuel, C., *György Ligeti in Conversation with Péter Várnai, Josef Häushler, Claude Samuel and Himself.* (London: Eulenberg., 1983), p. 60.

their initial attack is depleted and they fade into a murky sound mass; all the while the immersive experience for the listener is enhanced.

ANALYSIS

ESCALATE (2005)

This piece is for pre-recorded media and was written for an ambient music competition, *The Varese Award*. The title refers to the soaring quality of a glass elevator in a large building. This elevator runs through the centre of the building leading to the concept of a music, which would have a soaring and rising quality.
Escalate is characterised by imperfection, blurring and immersion. Imperfection is in the form of granular synthesis to affect the purity of the sound. Blurring is evident in the overlapping of sounds. Immersion is evident in creating an immersive experience for the listener.

The compositional process proved challenging throughout, as I attempted to take into consideration the possible definitions of ambient music, which were included in the competition guidelines. This was in the form of a Brian Eno quotation from the liner notes of his album *Ambient 1: Music for Airports*:

> An ambience is defined as an atmosphere or a surrounding influence: a tint. The intention being to produce pitches ostensibly (but not exclusively) for particular times and situations. The music is intended to induce calm and space to think. It must be able to accommodate many examples of listening attention without enforcing one; it must be ignorable as it is interesting.[17]

My reponse to this quotation was to create a piece that does not impose conditions on the listener, and they can choose to listen to this music or not. This approach has proved influential to me, as listener and composer. It is appealing as a listener to wander freely in a sound environment and it is appealing as a composer to create a piece that does not impose conditions on its listener. The requirements of the competition were to write a piece of 'ambient' music and identify a location for which the music is composed, such as a shopping centre or a factory floor. I chose the Guinness Storehouse in Dublin, which has an open-plan layout.

[17] Brian Eno, liner notes from *Ambient 1: Music for Airports, 1978.*

Escalate was constructed using a single sound source - a recording of an extract from a string quartet piece I wrote for a play. The string sound is mostly used in its unprocessed state, retaining much of its original sonic character. However, granular synthesis is used at times to roughen the edges of the sweeping string sound. Granular synthesis is an electronic technique where tiny millisecond components of the sound, known as grains, are extracted from a sound source and recombined to form different textures. The use of granular synthesis to affect the purity of the string sound exemplifies a dichotomy of purity and corruption in my musical language. I have also used panning extensively in this piece. This was to create a feeling of movement within the atrium inside the building, which stretches up seven floors. Horizontal panning is used to represent the idea of looking around the huge atrium, while the vertical movement of the escalator itself is represented by a slow increase in volume from the beginning of the piece, by the rising nature of the sound source itself and by removing attacks to produce a feeling of smooth motion.

I was concerned with the concept of immersion in this piece. The conditions for immersion of the listener in *Escalate* were created through the blurring and merging of sounds. By removing sharp attacks from sounds there is less potential for localisation (where one sound or instrument could be pinpointed) , and an environment conducive to immersion could be sustained. Sounds are overlapped to produce a smeared quality. Textures are built up and massed together to produce a sea of sound within which the listener may be immersed and surrounded.

REQUIESCAT (2005)

Requiescat, for baritone and organ, premiered at the First Presbyterian Church, Brooklyn, New York and was performed by baritone Corey Dargel and organist Wil Smith. It had its origins in a compositional exercise where I tried to create a work from minimal materials, using just four pitches. The title of the piece refers to Oscar Wilde's *Requiescat*, a five stanza eulogy to his younger sister Isola, who died as a young girl. I chose this text because of its sparseness, gentle pace and poignant evocation of the sadness of a lost loved one.

Requiescat began its life as a compositional exercise in which I endeavoured to develop something from very few elements. The piece contains four pitches (three in the organ part: A, B and C) and one in the vocal part (the note E). Three short cells were composed and are heard simultaneously. As shown in Fig. 1, Cell 1 contains a continuous repeat of the note pattern BAC. Cell 2 consists of the note pattern CBCA, BBB, CBCA. Cell 3 contains the note pattern BBC, BBCA, BBC. These cells are the foundations and create the entire piece. However, they are not recognisable to the listener as three separate discernible lines, the clarity of which may often be associated with contrapuntal writing. These three cells are very much interwoven (Fig. 2).

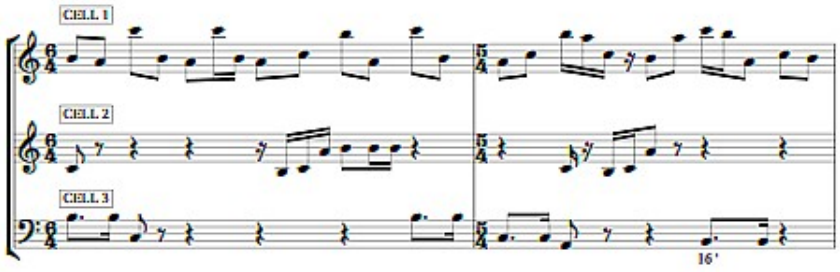


Fig. 1. Three cells contained in *Requiescat.*

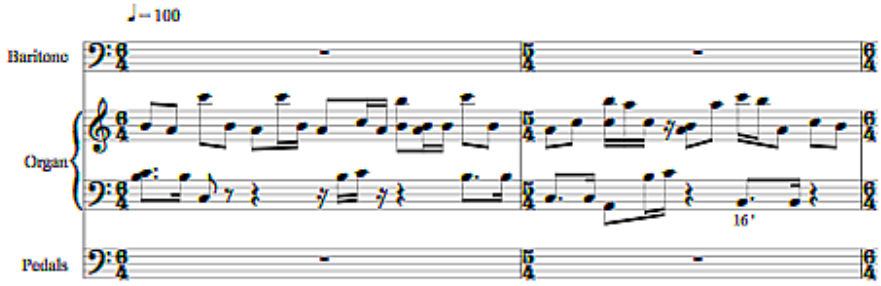


Fig. 2. Three cells intertwined, opening 2 bars, *Requiescat.*

The cells are put through a musical process, in which they are subjected to various rules. One rule strips away notes from the pattern, resulting in the thinning out of materials as the piece unfolds, with the texture becoming increasingly sparse. Cell 2 begins a quaver later than Cell 1 at every repeat while Cell 3 begins a crotchet later than Cell 1. This causes these patterns to run out, leaving Cell 1 to finish alone. In addition, both Cell 2 and Cell 3 begin a note later in the pattern at every repeat causing these patterns to slowly rotate.

A process is also applied to the vocal timing. A line entry occurs every eighteen beats. The words within each phrase slowly become separated with bigger gaps between each word as the piece progresses. This becomes most apparent at the climax in the fourth verse: '*Coffin board, heavy stone, lie on my breast, I vex my heart alone, She is at rest.*'[18] Here, separating each word accentuates the despair of the text, creating a stilted effect associated with choking. The climax of the poem and the organ is also conveyed by the interruption of the process by jumping back and forth within the pattern. This scrambled effect portrays a frantic loss of control of emotion.

A pedal tone occurs every thirty beats, but is never heard simultaneously with the voice, except at the climactic section, where it is sounded in conjunction with the word 'alone'. Here, the pedal tone changes to a dissonant minor 2nd, a dramatic departure from the previous A, thus heightening the frantic nature of the emotion (See figure 3). It returns to A at the word '*rest*', conveying a sense of resolution and closure.

[18] Oscar Wilde, "*Requiescat"* taken from An Anthology *of Modern Verse,* (London, Methuen + Co.. 1921).

Toward the end of the piece, the gradual omission of notes from Cell 1 creates much wider gaps, and results in moments of complete silence. The voice continues unaccompanied, until the piece ends with a final pedal tone. In *Requiescat*, the process that is set up allows for the texture to thin out as the piece progresses.[19] .

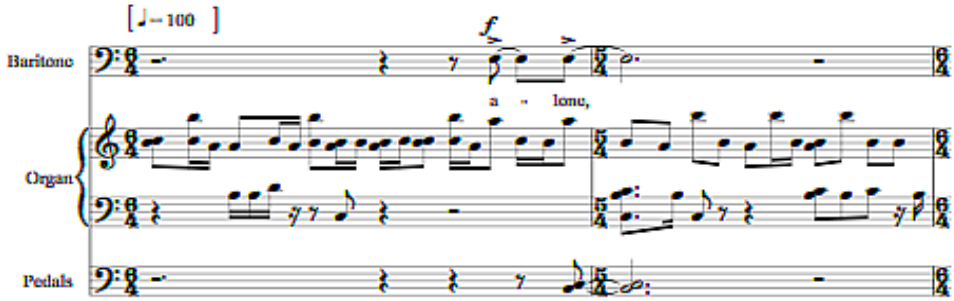


Fig. 3. Dissonance at the climax, bars 75 -76, *Requiescat.*

Although the piece uses processes, they are not rigorously adhered to, as I felt free to modify and interrupt the resultant patterns for dramatic effect, and to convey the emotive quality of the text. David Lang has commented on the importance of emotion in his own music[20] – this is something which I also feel is a significant part of my own compositional process – where the creation of music is a highly personal and emotive undertaking. This differs from much early minimalist music, where processes were strictly observed and dramatic emotive musical aspects were perhaps of secondary importance. Steve Reich notes:

> Though I have the pleasure of discovering musical processes and composing the musical material to run through them, once the process is set up and loaded it runs by itself. [21]

[19] Steve Reich does the opposite of this at the opening of his piece 'Drumming' where drum beats replaces rests, building up a more active pattern from sparse to dense.
[20] David Lang speaking at a composition seminar at the *Bang at a Can Summer Institute of Music,* Massachusetts Museum of Contemporary Art, 2005.
[21] Steve Reich, edited by Christoph Cox and Daniel Warner*, "Music as a Gradual Process", Audio Culture: Readings in Modern Music, (*New York, The Continuum International Publishing Group Inc, 2006), p. 305.

While systems and processes play a significant role in this piece, the emotive impact of the resulting music is lent greater weight through a flexible approach to their implementation.

FORTH (2006)

Forth is a 20 minute piece for viola, violin, tape and video. It was written for the Tasmanian violist William Lane, and premiered at the lunchtime concert series at University College Cork where Marja Tuhkanen played the violin. The video was created by Mike Hannon. The title of the piece refers to the concept of a continuous band of sound that moves forward. This piece explores the concept of intuition versus intention in the compositional process. *Forth* is characterised by hierarchy and imperfection. Hierarchy is explored in the notion of instrument roles - the viola is the solo instrument here and the violin is very much in the background, a reversal of the norm, and imperfection is acheived with the use of granular synthesis to roughen the tone.

From 2004 to 2006 I experimented with the use of compositional processes to varying degrees. While this had been a fruitful area of exploration, I felt a compulsion in 2006 to attempt to return to the elements of instinct and intuition, which had been more prominent in my earlier way of working. *Forth* attempts to return to a more intuitive approach.

At the outset, *Forth* had no pre-compositional plan, nor was it underpinned by a philosophical concept. However, I allowed the approach I was taking to be influenced and guided by themes inspired by interpersonal relationships. One prevalent thought was based on the ways in which individual personalities may compete for attention, and I allowed this idea to inform the relationship between the viola and violin. Traditionally, the violin may have been considered as being suited to a solo foreground role, with its penetrating resonance, while the viola has had a more subservient, accompanying role. My intention was to invert this relationship, by moving the violin towards the background and the viola to the foreground. The violin is muted for most of the piece and has a limited output not only in terms of volume, but also in its lack of musical material. Its suppressed nature, where it is constantly struggling to be heard, allows for the dark, veiled sonority of the viola to pervade.

A game is played out between the viola and violin. As shown in Fig. 4, the viola begins with a four-note pattern that centres in the key of d minor and is the basis of the whole piece. The viola begins low and gradually rises in register as the piece progresses.

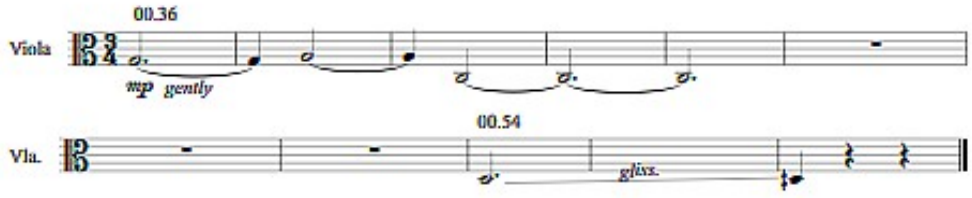


Fig. 4. Opening line, Viola, *Forth* (bars 17 to 27).

The violin's first entry at bar 136, is a 'flashy' display of rising and falling fourths (moving onto larger intervals later on in the pattern), a pattern that is perhaps associated with a virtuosic Baroque concerto (Fig. 5). The viola continues to play, but seems unperturbed and unaffected by the violin's showy statement. The viola playing without the use of vibrato helps to achieve this.

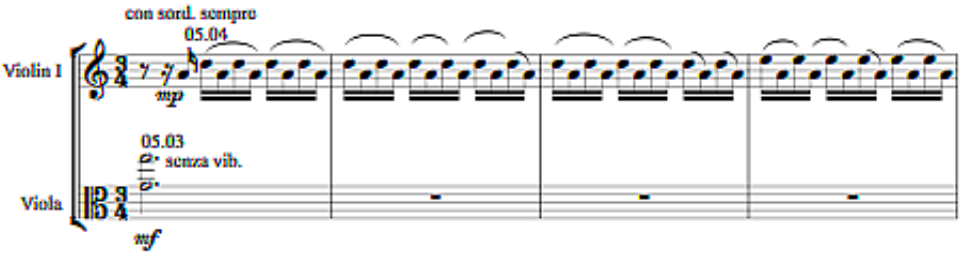


Fig. 5. Violin entry, *Forth* (bars 136 to 139).

Calmness and stillness ensue until the viola mimics the violin line at bar 123, as if looking for a reaction. The violin suddenly begins the pattern two bars later as if woken up, and then is quickly joined by the viola. They both continue to play this pattern, trying to be heard over one another (Fig. 6). The violin finishes the pattern this time, outplaying the viola. Calmness follows.

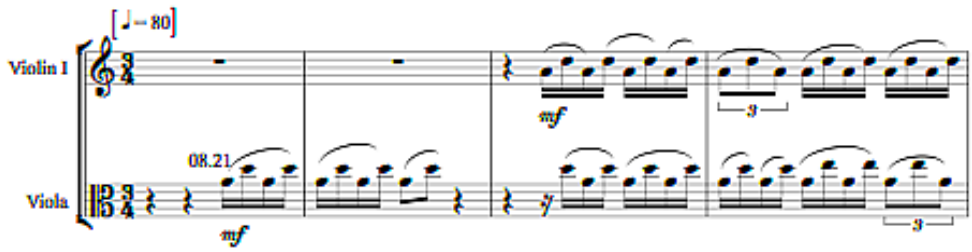


Fig. 6. Viola and violin mimicking each other, *Forth* (bars 223 to 226).

In the tape part, a violin sample plays a passage of rising and falling fourths at bar 266 but at a much slower speed of crotchets, compared to the viola and violin's semiquaver pattern. Shortly afterwards, the viola plays this pattern again, attempting to rise above the violin. The next time we hear this pattern, the violin begins, this time *sul ponticello* at bar 316*,* closely followed by viola, also *sul pont.* The tone here is more aggressive and harsh, to dramatise frustration in a mutual struggle. The viola finishes with a strong *marcato* affirmation of its position. This stage is followed by quietness, until at bar 386, the viola enters with double-stops played *senza vib*., oblivious to the violin's staggered and agitated phrases. From this point the viola becomes more composed, while the violin becomes more fervent. As the tape part builds into a climax, the patterns and roles are swapped and the violin comes to the fore, leaving the defeated viola to end the piece. (Fig. 7)

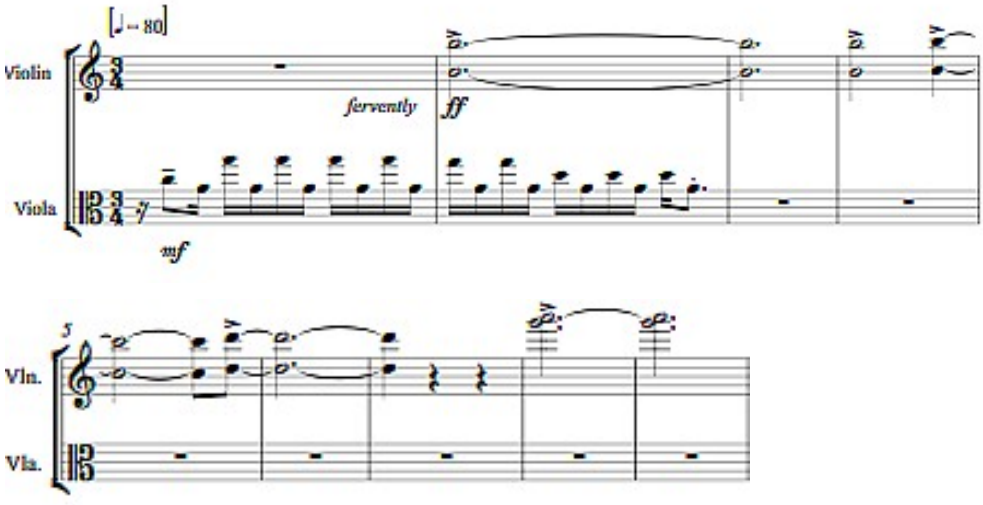


Fig. 7. Pattern reversal and climax, *Forth* (bars 495 to 503).

The tape part contains violin layers, voice and a Javanese gamelan instrument, the kenong. The kenong is a bronze pot that is suspended on cords on a rack. Here it is used mostly in its unprocessed state, although I have on occasion applied distortion and delay. The violin layers and voice, however, go through many transformations using various electronic techniques, such as granular synthesis, delay and band-pass filters.

Granular synthesis is used in the tape part where tiny components of the sound are taken from the original sound source and redistributed and reorganised to form different textures. The speed at which these sound components or grains are triggered can be altered, as well as the length of the grains and the length of the cross fades between each grain. The result is not a single tone but a sound-scape or a cloud-like texture, which can range from gritty to smooth, and from dense to sparse. In *Forth*, considerably increasing the grain length produced drone–like sonorities. The speed at which the grains re-enter is slow, producing an active sounding, pulse-like drone. A feedback delay is used to achieve a smooth, blurred effect across the grains. For a more extreme granular sound, used towards the end of the piece, the grains trigger more frequently and are of a shorter duration. The modification of these parameters creates a more damaged, staggered effect whilst keeping the overall melodic content intact.

Another electronic technique used in this piece is a band-pass filter. This is a device that passes frequencies within a certain range and rejects frequencies outside that range. I used this to extract and focus on certain frequency ranges within the tape part. This is a form of subtractive synthesis. I am interested in the notion of extracting relatively pure tones from an already complex timbre. This isolation of particular components of the sound spectrum contributes to the perception of harmonic change or movement within the piece, at a very subtle level.

Electronic artist Aphex Twin, whose approach to music has been a significant influence on mine, creates a unique sound often using various forms of granular synthesis. At times, his rapidly shuffling asymmetric drum beats almost venture into the realm of texture, transporting them from their original rhythmic context. While his work

often explores sharp transient percussive sounds, my approach differs in *Forth,* since I use smooth, flowing acoustic sounds such as strings as my preferred sound source.

The working method behind this piece was exploratory. What began as a process guided by intuition and instinct gradually became more reasoned with each refinement. The creative process became careful and controlled, with meticulous remodelling of sounds. I did have a sense of the overall structure of the piece slowly evolving, where the ear is led into a new sound world without necessarily knowing how it got there. There was no conscious reasoning behind the order of these slowly evolving events, yet logic prevailed at the latter stage on the process, perhaps a case of intention following intuition.

FOR DE EREPRIJS (2008)

For de ereprijs was written for the ensemble Orkest de Ereprijs as part of the International Young Composers Meeting in Apeldoorn, 2008, where it was awarded a prize. The instrumentation is for a large ensemble, dominated by brass and including three singers. For this piece I explored the idea of using techniques derived from electronic music, without the use of electronics. Since my compositional output has encompassed both instrumental music and electronic, I wanted to marry the two. *For de ereprijs* is characterised by translation, blurring and imperfection. Translation is evident here by the translation from the acoustic to the electronic. Blurring manifests itself in the form of the merging of sounds but also the blurring of approaches, that being electronic and acoustic music. Imperfection occurs in the form of microtonality and roughened instrumental tone. I used various methods to produce an electronic-sounding effect using acoustic instruments and the human voice, including delay, reverse, filters and distortion.

The first of these techniques, delay, is produced by the sopranos, who shadow and echo one another. As shown in Fig. 8, three singers sing the same line but at a delay of a quaver at each of their entries. The approach is technically the same as a delay used in electronic music, where a sound is repeated back or echoed. However, upon listening, this could also be heard as reverb because the entry points are in quick succession, thus making it difficult to hear them as being separate. The line gives the illusion that it is a single source that has been made strange by applying an effect. The *glissandi* also help to obscure the melody.

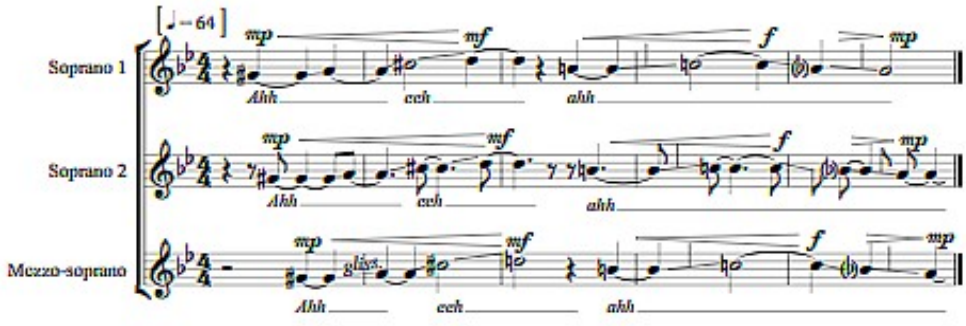


Fig. 8. Delay/reverb technique, *For de ereprijs.* (bars 2 to 6)

Reverse was achieved by reversing the attack of instruments from extremely quiet to loud. The notes appear out of silence and have an abrupt ending, the loudest part only occurring at the very end of the note. A symbol was used to indicate this, a niente symbol with added lines at the end, distinguishing it from a regular *niente* symbol (Fig. 9). The character of sound of the instrument is changed by this manipulation of its attack. The entry and exit points occur at different points and this overlapping of lines helps to create the murky and disorienting sound often associated with music that is reversed. Towards the end of the piece at bar 34, when abrupt, sharp attacks occur in the clarinet and saxophones and in brass, they are used for additional timbral variety and effect.

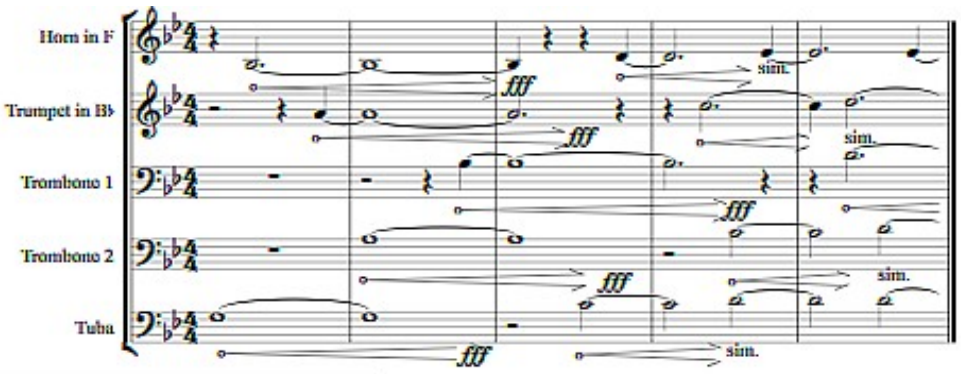


Fig. 9. Reverse technique, Brass section, *For de ereprijs.* (bars 1 to 5)

As an effect used in electronic music, a filter is an electronic circuit that attenuates or enhances certain frequencies from a signal. In this piece, mutes perform a filtering function, by removing a band of sound or frequencies. Different mutes produce a diversity of timbral effects. For example, a harmon mute removes the fundamental and most of the lower harmonics, thus acting like a high-pass filter; a bucket mute removes high frequencies, thus acting like a low-pass filter; a cup mute removes both the lower and upper ends of the sound spectrum, thus acting like a band-pass filter. A straight mute also acts like a band-pass filter but produces a nasal tone. When to use mutes was specified in *For de ereprijs*, but types of mutes were left to the discretion of the performers. This was to achieve internal variation of timbre as well as indeterminacy; every time the piece is performed the pattern of changes in timbre will be different. Another result of using filters is a decrease in volume, due to the narrowing of the

harmonic spectrum. This section, in the middle of the piece, is a quieter one and the use of filters helps to achieve this.

As an electronic effect or technique, distortion is produced when an input signal becomes clipped or compressed due to an increase in gain. This compression adds harmonics and overtones to the signal and produces a rich sustained tone, ranging from warm to noisy. In this piece, distortion was created by roughening the instrumental tone using various techniques. I give instructions at the beginning of the score for players to use a combination of techniques during the section that calls for ‘grittier tone’. These are flutter-tongue, altering embouchures to produce a rasping brass tone, and a quick stop/starting of notes during long pitches to produce a sound that is broken. If many instruments decide to perform the technique of ‘broken sound’ at the same time, the resulting sound could be similar to that of granulation. All these combinations can be alternated with using pure tone so that the texture is constantly changing. Although unrelated to electronic distortion, microtonality could also been seen as a form of distortion as it is a deviation from the equal temperament of the twelve-tone series. Instructions and indications always occur in succession to achieve the feeling of morphing and gradual change. (Fig. 10)

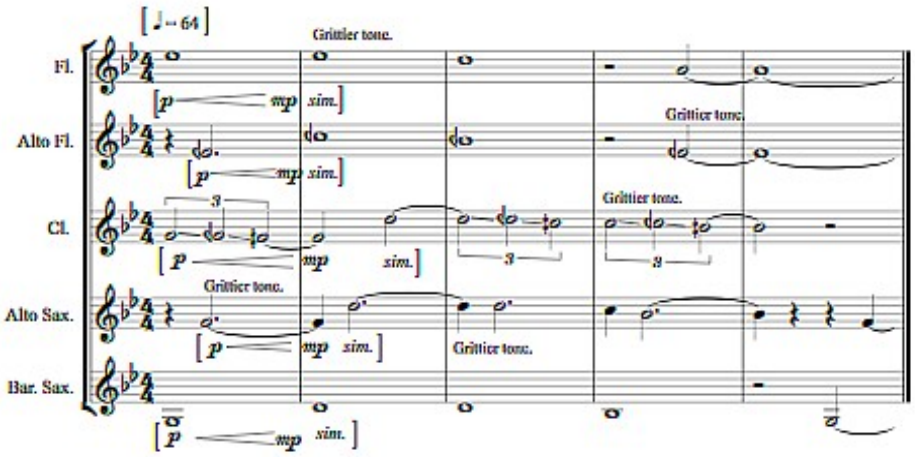
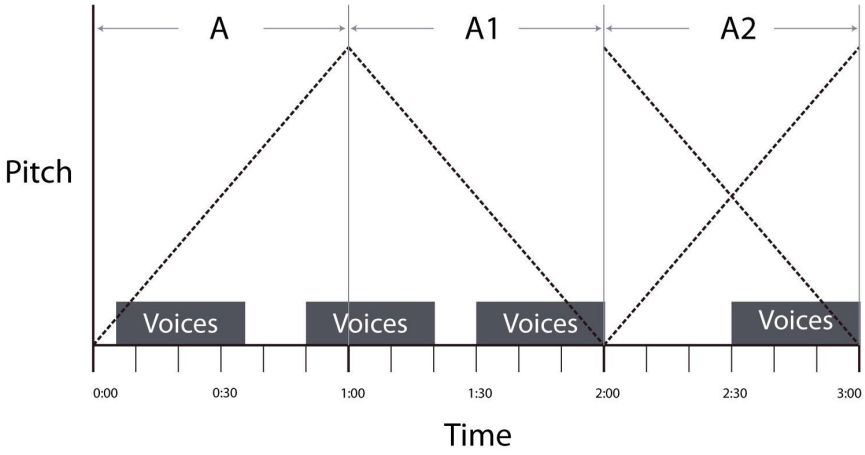


Fig. 10. Distortion technique, Wind section, *For de ereprijs*. (bars 26 to 30).

The structure of *For de ereprijs* consists of three sections A, A1, and A2 of equal duration. Pitch ascends in A; A1 is a retrograde of A, therefore the pitch descends; and A2 is a superimposition of A and A1 (pitch ascending and descending simultaneously). This apparently simple structure, however, is difficult to discern, given that voices are heard four times over the duration of the piece, interjecting into and displacing the symmetrical nature of the three even sections. Electric bass and bass drum are always heard in pairs and act as punctuation points throughout the entire piece. This also help to obscure the listener's perception of the even form as they occur at uneven intervals (Fig. 11).

Fig. 11. Structure of *For de ereprijs.*



EVOLUTION OF CLOSE DOUBLE STARS (2008)

Evolution of close double stars, a piece for pre-recorded media and video, was written for the Quiet Music Festival in Cork. The video was created by Mike Hannon. The title refers to the movement and interaction between stars that are close together. The piece also explores the psychoacoustical properties of sound. Minimal resources are used for the sake of coherence. The entire piece is based on a combined organ and string sample. The composition is characterised by motion, listener perception, immersion and reduction. Motion is in the form of the internal beating within the sound that is produced from tones that are extremely close in frequency. Listener perception is achieved by deviating from the listener's expectation. Immersion is in the form of creating an enveloping experience for the listener. Reduction is manifested in the use of minimal resources.

The concept for this piece is based on the phenomenon of close double stars, where one star slowly moves towards another. A star often has a companion, and if they are close together, they can interact. The surface of the bigger star approaches that of the other, causing the former to distort and wobble. Even if their surfaces are not directly touching, the stars are in contact and can produce sounds from humming to drumming, from whistling to rumbling through their vibrations. The frequencies must be artificially boosted to bring them into human hearing range. *Evolution of close double stars* is closely related to the sound of a newly discovered star which oscillates rapidly called *HR 3831*, discovered by Astronomer Donald Kurtz.[22]

The psychoacoustical properties of sound are explored through the use of extremely close microtonal intervals, creating the phenomenon of beating, where resultant patterns can be heard. In this piece, many layers of simple material are superimposed to produce a dense textural result. Individually, each layer sounds static and pure. Here, the combination of lines produces a sonic gestalt which is greater than the sum of its parts. While *Evolution* may appear to be a static composition on the surface, the beating results in internal movement within the sound.

[22] http://www.world-science.net/othernews/060809_spheres.htm

The work is premised on an underlying drone texture, with interjections of perfect fifth harmonies. The fifth interjections are repeated in the opening minute and this sets up a pattern of expectation for the listener. This pattern is broken and deviated from at certain points when new tonal shifts occur. The predominant lower frequency drone in the piece refers to the bigger star. The shorter, higher pitched sounds refer to the smaller star. The distortion that occurs as the stars moves toward each other is expressed in the form of microtonality. In Fig. 12, a spectral analysis shows the higher pitched sounds at three different intervals during the opening minute. The x axis indicates a timeline with five second increments and the y axis indicates the frequencies in hertz. These short, higher pitched sounds are the perfect fifth interjections, that being the smaller star.

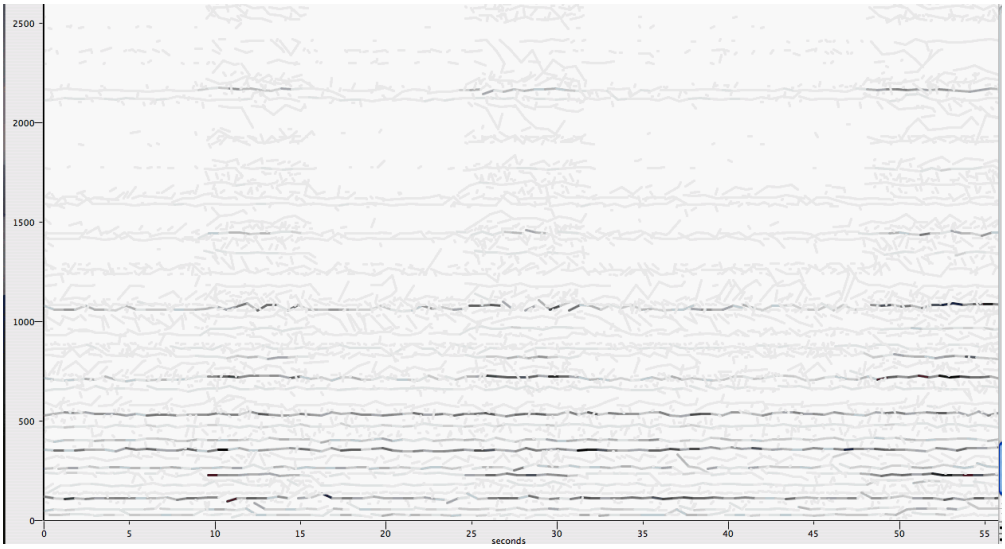


Fig. 12. Spectral analysis of *Evolution of close double stars* (opening minute).

Although the nature of the sound world initially appears to be warm, enveloping and immersive, a degree of dissonance (which may be disorienting for the listener) is incorporated through use of microtonality. Technically, the initial warmth is achieved by slow transformations, *crescendi, diminuendi* and avoidance of sharp transients, establishing a harmony that continues throughout, but is transformed by the superimposition of other harmonies. The rate at which significant changes occur increases as the piece progresses. This provides a saturation of sound which fills the harmonic

spectrum, creating a mesmerising and immersive aural experience. The texture thins out at the end, moving from dense immersion to sparsity.

STÓRR (2009)- Revised 2012

Stórr is a piece for large orchestra without percussion. The piece came about after coming in contact with Gaelic Psalmody, a form of church singing in Scotland, and the title of the piece refers to a rocky hill on the Isle of Skye in the Inner Hebrides, where I visited in 2008. The image of its most prominent peak, known as the Old Man of Stórr, stayed with me. The piece focuses on the smearing and layering of sounds. *Stórr* is also a translation from the electronic to the acoustic. It is characterised by blurring, imperfection, hierarchy, translation and motion. Blurring is evident in the overlapping of sounds. Imperfection can be seen in the form of dissonance by the use of microtonality and *glissandi*. Hierarchy is evident in that all instruments have equal roles and do not have prominence over one another thus achieving a balance in sound. Translation is manifested in the overlapping of approaches from the electronic to the acoustic and Motion is manifested in the exploration of simultaneous stasis and movement.

Recently I came in contact with Gaelic Psalmody, a musical style of singing found in the Scottish Islands of the Outer Hebrides. Psalmody is a form of unaccompanied church singing where a precentor sings a Psalm and the congregation sings it back. In secular Gaelic music, ornamentation and embellishment of the tune are important features, as they are in Psalmody, resulting in a distinctive sound where the whole congregation improvises through ornamentation. This produces a unique swell of vocalisation, a smearing and overlapping of sounds due to the congregation member's individual improvisations. After I had become familiar with Gaelic Psalmody, the overlapping of sound began to play a significant part in my work, particularly notable in *Stórr* (and in *For the ereprijs*).

I began *Stórr* by layering various asymmetric patterns, creating a dense texture of shifting entry and exit points. In the opening, the cor anglais, bassoons and violins all have a similar figure, but slightly different rhythms (Fig. 13). Soft dynamics, mutings, slow *crescendi* and *diminuendi* help to create the effect of overlapping lines, where instrumental timbres seem to melt into one another. Instruments echo and shadow each

other, achieving a reverberant blurring of sound. Their attack has been softened, to produce a sound world that is warm and immersive.

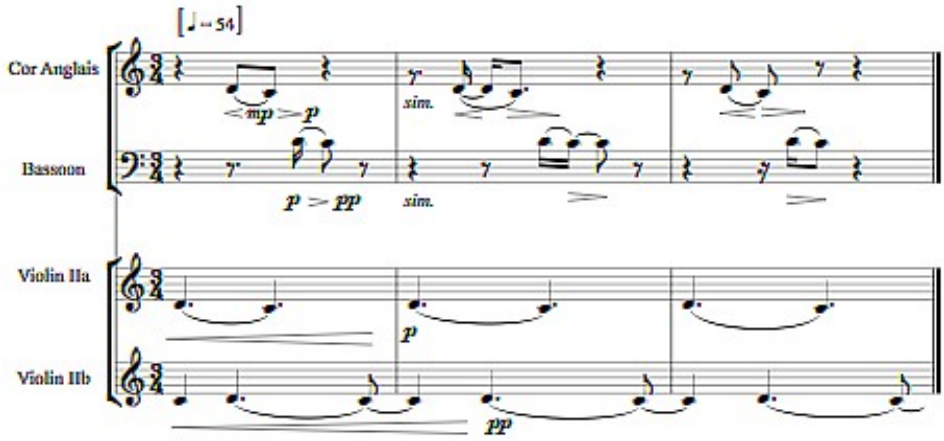


Fig. 13. Asymmetric patterns, *Stórr.* (Bars 3 - 5)

In *Stórr,* the first sudden change occurs at section B. Only strings are audible, and they are all playing *sul ponticello*. By introducing this technique the texture changes from warm, rich and full to thin, icy and quiet. The material does not change, but the sound world does, and dramatically so. To achieve these sudden changes, the piece alternates throughout between the bowing techniques of *sul ponticello, sul tasto* and *ordinardo*. Occasionally, this alternating of bowing techniques is more subtle, when only certain instruments change, embedding the sounds within the overall texture.

Strings hint at microtonality and *glissandi* which results in a damaged, warped and disorienting sound (Fig. 14). These moments of imperfection are exaggerated by the only fortissimo of the entire piece where the general overall dynamic marking is very quiet to moderately quiet. These moments or hints occur shortly after the beginning of the piece and continue from sections A through D, in preparation for section E, where microtonality comes to the fore.

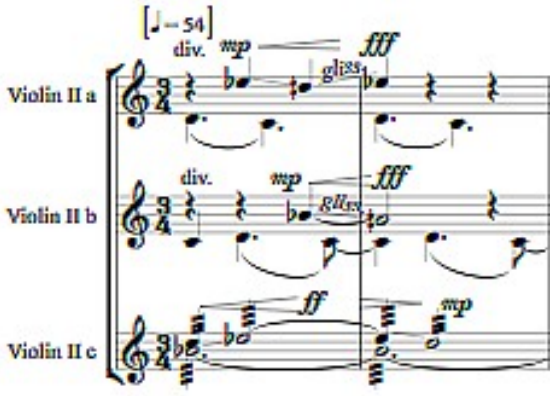


Fig 14. Microtonal hints in *Stórr,* (Bars 14 and 15).

In this piece I am concerned with relationships between instrumental roles. No instrument has prominence over another and all have equal roles where every sound is important in creating the overall texture. I am concerned with this equality among parts for aesthetic reasons where achieving a balance of sound (where sounds appear to merge into each other) is of primary importance.

Having previously written for both instrumental forces and electronic music, I was curious to explore if one could be converted or translated into the other. Sonically, my electronic music has never been too far removed from instrumental sounds. The sources for my electronic work have frequently been acoustic, such as strings, organ and voice. I wanted to explore the possibility of bringing the two sound worlds closer together. *Stórr* is a translation of electronic sound to acoustic. It began as an electronic piece, where samples of string sounds were put through various digital effects such as reverb, delay and filters. I then endeavoured to recreate these sounds with acoustic string instruments as closely as possible, employing bowing techniques such as *sul ponticello* and *sul tasto*. The translation from electronic to acoustic was mainly achieved by an aural transcription of the electronic piece. However, I also made use of the computer program Sinusoidal Partial Editing Analysis and Resynthesis (SPEAR) (Fig. 15).

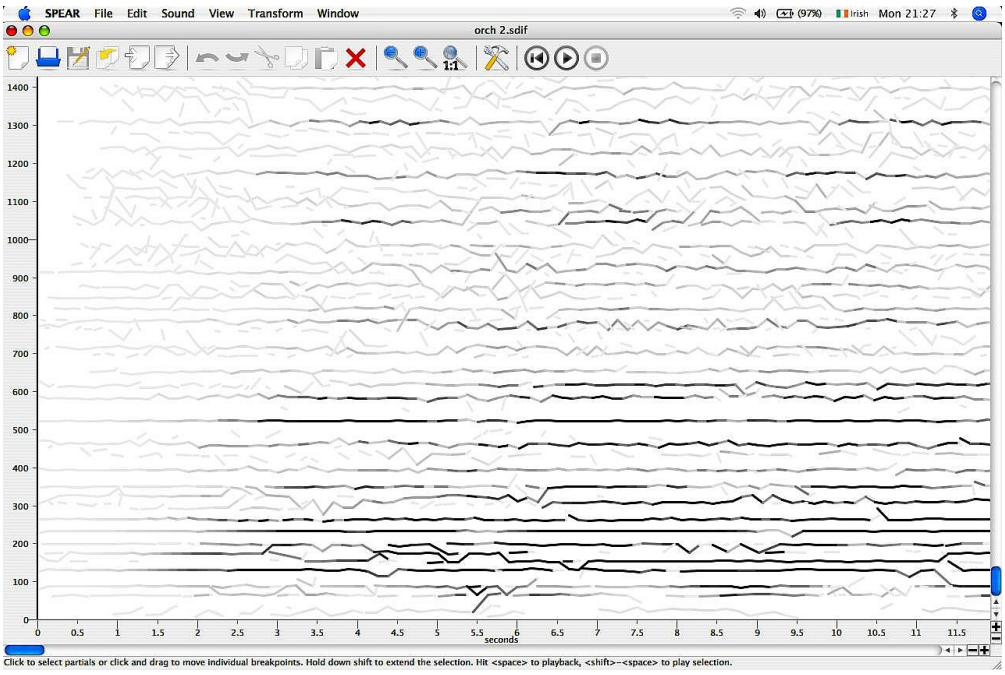


Fig. 15. SPEAR analysis of *Stórr* (Opening 12 seconds).

SPEAR is capable of analysing audio using many sinusoidal tracks, otherwise known as partials, to represent a sound. By selecting each partial and raising its volume, its pitch could be discerned. Many of the upper frequencies, which are usually difficult to pinpoint, were thus highlighted and could be added to broaden the sound spectrum. As can be seen in figure 16 below, I highlighted three upper partials and by raising the amplitude, the pitches could be deciphered. Here, the three partials, roughly speaking are: 700hz (F), 780hz (G) and 1048hz (C). As can be seen in Fig. 16, these pitches are fluctuating. To recreate this effect, I ask the string players to move microtonally above and below the pitch. Also, the lower partials have a pulsating quality to them which I have attempted to emulate by instructing the musicians to perform *tremelos* with an uneven rhythm. In this fashion it was possible to successfully recreate an electronic sound acoustically.

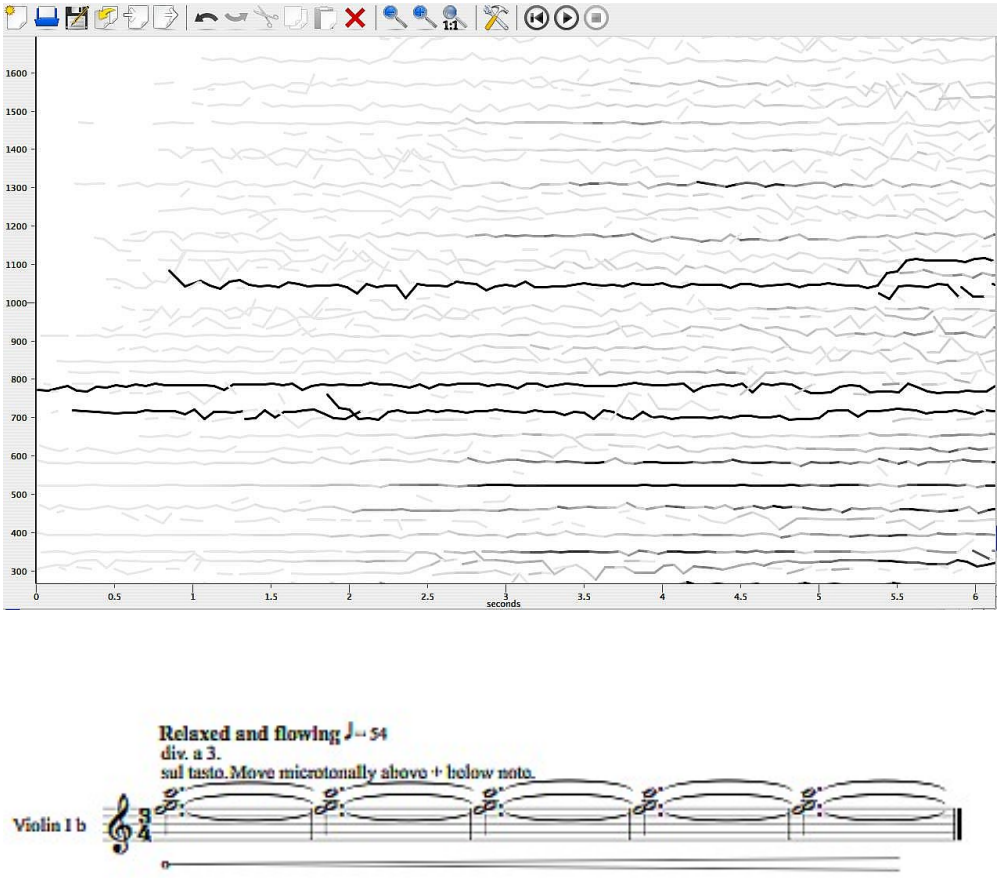


Fig. 16. Highlighted upper partials and resulting pitches in *Stórr,* (opening).

The compositional ethos behind *Stórr* was to create a piece that would move forward and remain static at the same time. The opening sound persists for much of the piece, and, aside from sudden changes in texture and transposition, remains apparently unaltered. However, subtle internal changes continually occur, including alternating bowing techniques and instrument swapping. The latter refers to the technique whereby one instrument is assigned the material from another instrument's part for a short number of bars. This changes the colour of the sound ever so slightly, and is also a literal and physical movement of the sound around the orchestra.

The feeling of moving forward in a linear fashion is achieved by the only melodic element, played by cellos. The melody is slow and difficult to discern, being

almost obscured by the texture of the full orchestra. Nevertheless, it represents a forward motion, given that everything surrounding it seems to lend itself to the feeling of stasis - particularly in the double basses where pedal notes persistently repeat, thus creating a hypnotic feel.

Another change in texture occurs at section E, where the orchestra is divided, with half playing at standard pitch and the other at a quarter tone sharper, darkening and thickening an already dense texture. The heaviness seems relentless once it begins, but shorty returns to the opening tonality and continues to the end of the piece, where it fades into nothing.

MINIATUS (2009)

This piece for chamber orchestra was commissioned by the NJO (Netherlands Youth Orchestra) as part of their summer festival, Muziekzomer, and was performed in 2009 at three concerts in the Netherlands. The piece is concerned with contrasts, exploring the notions of external simplicity versus internal complexity, and purity versus corruption. The title of the piece means damage in Latin. *Miniatus* explores issues such as listener perception, reduction, hierarchy and imperfection. Listener perception is portrayed in the deviation from the listener's expectation to cause a stimulus. Reduction is evident in the use of a narrow pitch range so subtle changes can be honed in upon. Hierarchy can be seen in the assignment of instruments, where each line or instrument is used to add colour and timbre. Imperfection is explored in the form of alternate fingerings and microtonality in woodwind and brass.

I have always been intrigued by imperfect sound and the lo-fi aesthetic. However, I am also drawn towards the purity and simplicity that is perhaps associated with some forms of Early music. The dichotomy of purity and corruption is a notable feature of my work. I am interested in the ambivalence of combining clean harmonies and purity with distortion, noise and dissonance. In *Miniatus,* the idea was to create a fundamentally 'Early' sounding piece but with slight dark, distorting deviations that disrupt the listener's perceptions. The use of slight deviations is an important feature of the piece and this is reflected in the opening. *Miniatus* begins with a very narrow pitch range with first and second violins playing E, but double stopped. Slight deviations in pitch from player to player are to be expected as unlike in electronic music, (within fixed tape presentation), there is a certain amount of indeterminacy to be expected. Perhaps in this case, subtle pitch discrepancies creates the potential for four different 'Es' may be produced. The opening can be seen as a microcosm of the entire piece. There is a dichotomy between the sound of the strings and woodwind (which begins very purely but becomes slightly damaged as the piece progresses) and that of the piano, which is deliberately murky and blurred throughout. The piano player strums a series of chords inside the piano with a soft percussion mallet. This acts as a sort of metronome, its rhythm remaining constant throughout. There is a quite noticeable shift in timbre

when the piano line moves downward in register, providing a much darker texture overall. The harmony expands after the removal of the piano line at bar 47. This delay of harmonic change may result in the creation of emotional impact for the listener (Fig. 17).

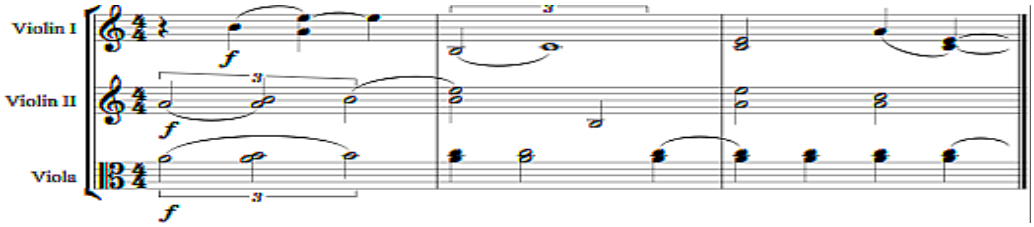


Fig. 17. Harmonic shift at bar 47, *Miniatus*.

Miniatus plays with the listener's expectations with the opening displaying a slow rate of change. Major harmonic shifts are withheld until much later in the piece, which may inhibit the listener's expectation for change, and when change occurs, it has much greater impact. *Miniatus* initially fosters a sense of familiarity and security. Later in the piece the listener is subjected to change that functions as an emotional stimulus.

This piece exemplifies the notion of internal complexity and external simplicity. The use of minimal and simple resources allows one to hear the subtle inner movement. By using minimal external changes in texture, minute changes can be honed in upon. I am interested in using few elements in my work, by limiting myself to specific pitches or by honing in on a particular timbre.

In this piece, a kind of melody is created from changing instrumentation. The term *Klangfarbenmelodie* was coined by Schoenberg to describe an approach to composition that distributes a pitch or pitches among several different instruments, achieving several different kinds of tonecolours. In certain sections of *Miniatus* the pitch remains constant throughout, but colouration of the timbre is created by using different instrumentation. With this, the listener's attention is drawn to the subtle details and nuances within the instrumental timbres, away from harmonic and melodic change. An example of the use of *Klangfarbenmelodie* can be seen in the string sections from

bar 90 onwards (Figure 18). The notes of a repeating melodic are divided between the string instruments at a different distribution at every repeat.

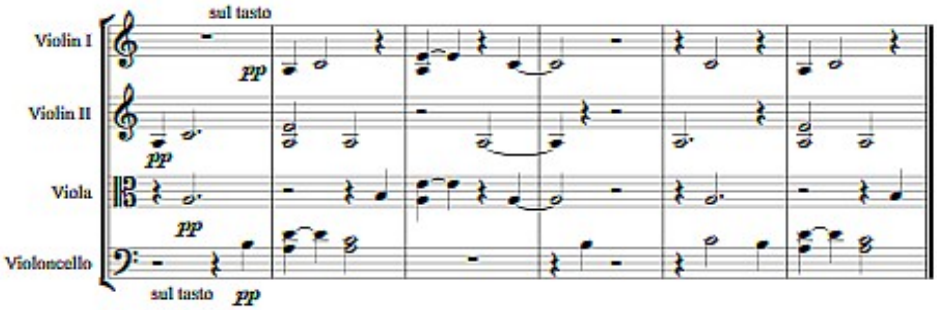


Fig. 18. Use of *Klangfarbenmelodie* in *Miniatus* (bars 90 to 95).

I have taken an approach to the orchestration where individual instruments are not treated in a hierarchical fashion. Traditionally orchestration may often be discussed in terms of foreground, middleground and background, where a particular instrument may be given more or less prominence, for example, in a violin concerto where the solo violin plays melodic material (high register) in the foreground with mid-register viola accompaniment, which recedes into the background. I negate the idea of the concerto in *Miniatus*. Here, each instrument is assigned a line to thicken the colour of the overall texture where there is no sense of thematic or motivic lines in any traditional sense. Despite the fact that cello and double bass are used less often than the upper strings there is an overall sense of equality of lines assigned to instruments, just as in Renaissance polyphony where there is an equality of roles assigned to voice parts.

In *Miniatus*, there is much employing of double stops, firstly to achieve more overlapping of pitches - but more importantly, to produce the strained sound that is often associated with the viol. For this piece, I wished to achieve a sound that is associated with Early music. This effect may not have been achieved if the double stops were divided between more string players as this sound would have become too full and resonant.

Bassoon and trumpet enter with pure tones initially, but gradually use alternate

fingerings whenever there are repeated notes. This changes the colour of the tone and slightly alters the pitch. Similarly, the rest of the woodwind instruments use alternate fingerings, then move to more dramatic and obvious microtonality using embouchure to create full quartertones. Microtonal movement adds further density and saturation of sound but ends at the beginning of the climax. Therefore, a sort of resolution occurs during the climax. After the intensity of the climax, there is a return to the sparse texture of the opening, providing a sense of calm and contemplation.

SUAIMHNEAS (2009)

Suaimhneas, for organ, was written for the organist Wil Smith and premiered at First Presbyterian Church, Brooklyn, New York. The title means 'peace' or 'quietness' in Irish. The piece explores changes in sound at a very subtle level. This piece is characterised by reduction, blurring and immersion. Reduction can be seen in its repeating rhythm and patterns. Blurring is in the form of morphing one chord into the next. Immersion is in the form of a continuous, smooth, layered sound.

I became interested in writing for organ for various reasons, primarily because the timbral variety of organ stops can be analogous to additive synthesis or filters in electronic music. It is the only acoustic instrument that has such a wide frequency range. A second consideration was that the organ is generally performed in a church, where reverberant acoustics add to the blurring of sounds.

Suaimhneas explores changes in sound at a very subtle level. The piece uses three sounds that differ in timbre from each other: the flute stop produces a warm and hollow sound, the oboe stop a nasal and reedy tone, and the haupt mix stop a rich and layered sound. These three sounds, each with its own distinct colour, weave in and out from one another. Each sound was chosen for its individual colour and also for the resultant blend achieved by its combination with the others.

The rhythm is constant throughout most of the piece, apart from the rhythm of the pedals which becomes a drone towards the end. Each line has its own pattern and this pattern repeats every two bars. A slow pulse is produced not only by this rhythmic repetition, but by the nature of the rhythm itself. The haupt mix line does not add anything rhythmically to the flute line as it also occurs on the downbeat, but functions as a change in harmony, as well as a layer of colour. Despite the repetition, there is an internal asymmetry built into the lines in the pedal part, where notes occur on the offbeat (Fig. 19). A resultant pattern is audible between the upper line and the pedal line (Fig. 20). The pedal line is heard an octave higher than written and therefore in the same range as the upper line. Even though this may sound like one melodic and

rhythmic line, there are two sounds blending here, the flute sound and the oboe.

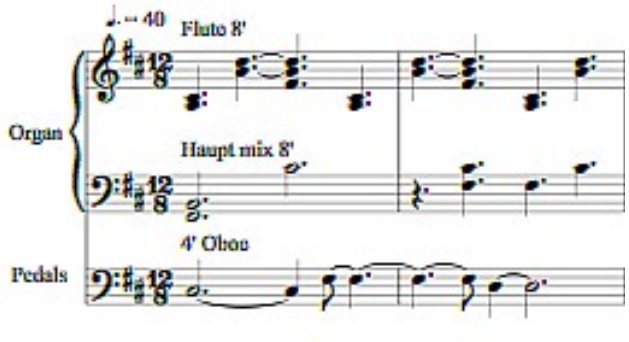


Fig. 19. Opening 2 bars, *Suaimhneas.*

Fig. 20. Resulting audible rhythm, opening, *Suaimhneas.*

During the repeating two bars, every chord is overlapped, resulting in a constant change of sound, where one chord morphs into the next. The flute line uses this technique throughout the duration of the piece, with each chord blurring into the next. At the climax at bar 33, the Haupt mix line also begins to morph from one chord to the next, echoing the flute line in a canon-like fashion (Fig. 21).

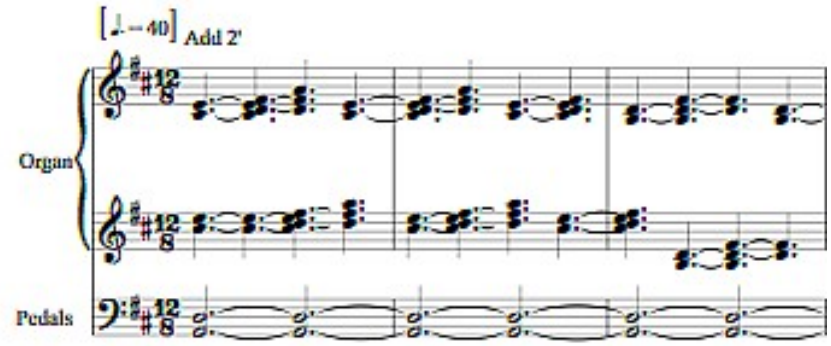


Fig. 21. Morphing of chords, bars 33 - 35, *Suaimhneas.*

When new pitches are introduced into the texture, they can be heard as a separate stream, discernible from the inner stasis of the repeated line. Because of the prior repetition of pitches, any new added pitches seem emphasised and highlighted. In Auditory Scene Analysis (ASA) this is referred to as stream segregation or 'lines of sound'. ASA refers to a psychoacoustical process, whereby the listener organises sound, by segregating or integrating it into meaningful events. Albert S. Bregman, from *Auditory Scene Analysis: The Perceptual Organization of Sound*, discusses how the ear can analyse a signal and separate one sound source from another. Therefore, how the listener perceives sounds can be quite different from the notes given to us by a score.

An example of auditory streaming can be heard in Ligeti's *Continuum* for harpsichord. Here, his alternating rapid notes can be organised by the listener and heard as independent lines or streams. In Fig. 22, the listener could perceive the opening of *Continuum* as integrated, then followed shortly by segregated streams when new pitches are heard. [23]

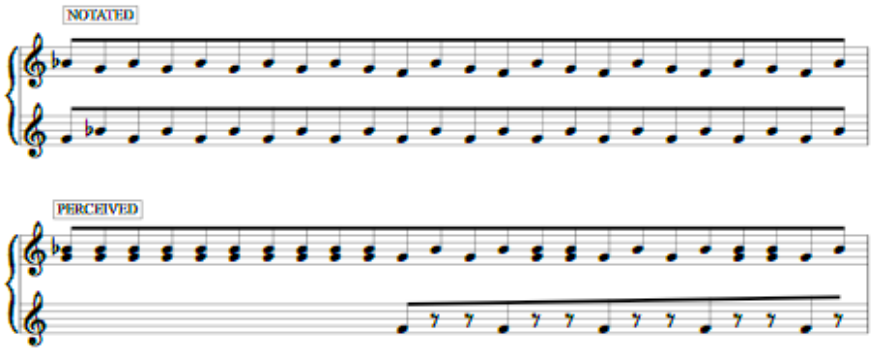


Fig. 22. Auditory streaming in the opening of Ligeti's *Continuum.*

An example of streaming can be seen in *Suaimhneas* when new pitches are added. As

[23] Emilios Cambouropoulos and Costas Tsougras, *Auditory Streams in Ligeti's Continuum: A Theoretical and Perceptual Approach,* (Journal of interdisciplinary music studies, 2009), p. 128.

shown in Fig. 23, the introduction of the pitch A in the upper line, is emphasised when the previous upper note was a repeated F. The new A note is continued and could be heard as a separate stream.

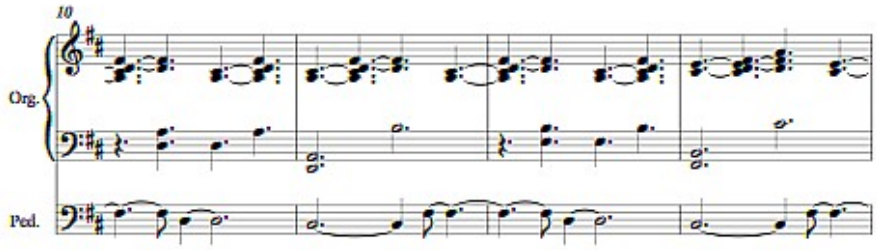


Fig. 23. Streaming in *Suaimhneas,* bars 10 – 13.

Additional organ stops are added as the piece progresses to thicken the texture but also to create timbral interweaving. These stops are octave and two octave doubling above and below which provide a bigger and brighter sound for the climax and widens the harmonic spectrum. The building up of sound mass is not merely textural, as harmony is an important factor. Chords change and are picked for their aesthetic value but also used to achieve a sense of rising in sound. There is a sense that the piece is climbing, as in some other works of mine, most notably *Escalate.* The sense of ascension is constant until the final section at bar 31, where there is a significant landing point as the pedal becomes static, lending a sense of closure to the ending of the piece. The stops are pushed back in towards the end of the piece, also helping to achieve a sense of closure by returning to the opening sound.

ROTATION OF THE EARTH (2010)

This piece is for pre-recorded media with the title referring to Foucault's Pendulum, housed in Paris's Pantheon where I visited. This piece explores deviations from regular patterns. *Rotation of the Earth* is characterised by immersion, in the use of slow fades, smooth yet dense textures and a slow, repeating pattern. Blurring is manifested in the layering of sound and use of reverb. Imperfection is in the form of granular synthesis and microtonality.

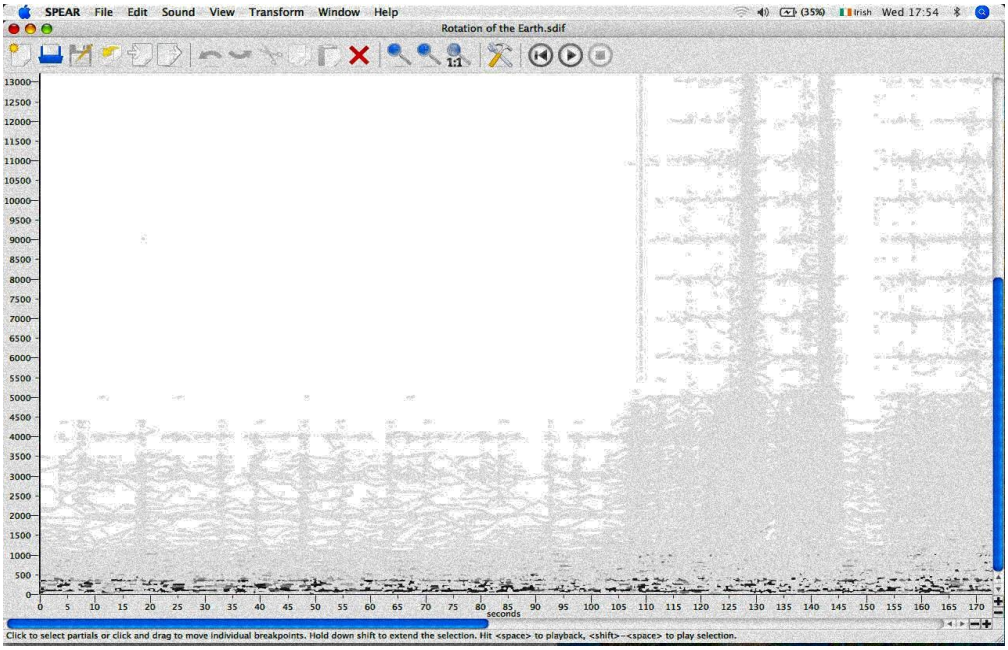
The sound source for the composition is an extract from a flute piece that I wrote for a film soundtrack. This extract contains a motif of layers of flutes, which is pitch-shifted down a considerable amount. At this low pitch, the resulting sonority is similar to that of an organ. In fact, it could be considered an organ piece for electronics, as the timbral changes that slowly emerge throughout the piece could be associated with pedal tones and pulling out of stops. Sounds are soft, smooth and merge into one another. This was achieved using slow fades and the use of reverb.

At the opening the ascending flute motif or pattern is repeated at irregular points and layered, continuing for the duration of the piece. This apparently steady, pulse-like pattern may have the effect of luring the listener in to its world, but is inherently asymmetrical and provides change and deviation. This idea of a disruption of a steady pattern arose from my visit to Foucault's Pendulum in Paris and upon close inspection, I noticed how this apparently steady movement of the pendulum seemed in fact, somewhat unpredictable and uneven. This is because the pendulum is free to swing in any vertical plane, but this plane is actually fixed in space and swings in the same plane while the earth rotates underneath it, taking one day to complete the rotation.
A clear account of this is provided by Russell, Dugan and Stewart in *Astronomy,*

> The northern edge of the floor of a room in the northern hemisphere is nearer the axis of the earth than it its southern edge, and therefore is carried more slowly eastward by the earth's rotation. Hence the floor must skew around continually, like a postage stamp gummed upon a whirling globe, anywhere except at the globe's equator. The pendulum is constrained by the force of gravity to follow the changes

> in the direction of the vertical, but is otherwise free. Its plane of vibration, therefore, will appear to deviate in the opposite direction from the real skewing motion of the ground, and at the same rate. In the northern hemisphere it apparently moves in the same direction as the hands of a watch; in the southern hemisphere, in the opposite direction.[24]

Rotation of the Earth uses a wide spectrum of frequencies. In the beginning there is a low fundamental frequency from which upper harmonies emerge. The flute motif is in the mid-frequency range thoughout the entire piece, although it is masked at times While the only sounds used are flute samples, a varied soundscape is created from using an electronic technique called spectral delay. This effect is capable of creating a wide palette of sounds by dividing incoming audio into numerous frequency bands. Each of these bands has its own delays, filters, modulation effects and feedback. At 1.46, mid-frequencies come to the foreground with microtonal, detuned glissandi of varying speeds, from slow long glissandi to faster, more intense ones (Fig. 24). There is a slow rate of change in low and high frequencies, and this provides the listener with space within the frequency range, wherein the mid-spectrum comes to the foreground.



[24] As quoted from W. B. Somerville, *The Description of Foucault's Pendulum*, Q. J. R. Astron. Soc. 13, 40 (1972), p. 42.

Fig. 24. Opening 3 minutes, and entering of mid-frequencies in *Rotation of the Earth.*

At 3.00 there is a further widening out toward high end of the spectrum, with pulsing, spatialised upper harmonies created by granular synthesis. Here, there is a thickening the overall texture. Withholding density of texture until a later point in the piece provides for a greater arousal of emotion and intensity at the climactic point. Aspects of the piece could perhaps be disorienting for the listener. This was achieved by granular synthesis and by extensive use of microtonality created by the spectral delay. At 4.20, there is a stripping back and a slowing of the rate of change (Fig. 25).

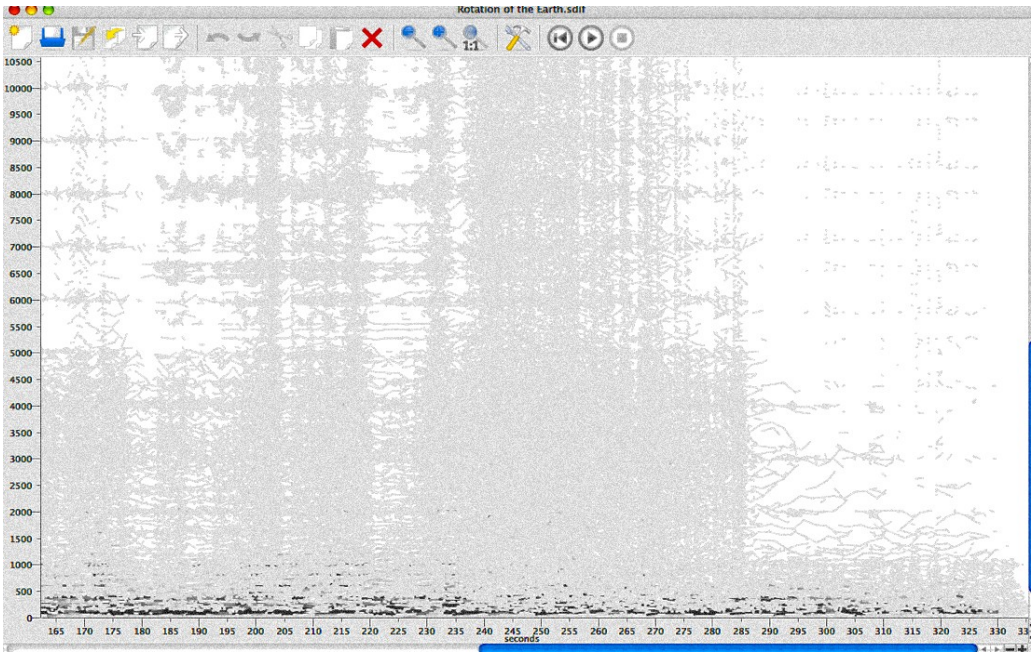


Fig. 25. Ending of *Rotation of the Earth.*

Using the cosmos as an basis of inspiration for some of my pieces is an appealing one, as it is endlessly fascinating and filled with mystery. This elusive element of the mysterious or unknown, perhaps echoes the challenges inherent when attempting to verbally describe the emotive and sensual power of the musical experience itself. The musicologist Joscelyn Godwin comments,

> ...the celestial harmony of the solar system... is of a scope and harmonic complexity that no single approach can exhaust. The nearest one can come to understanding it as a whole

is to consider some great musical work and think of the variety of analytical approaches that could be made to it, none of them embracing anything like the whole. [25]

[25] Joscelyn Godwin: *Harmonies of Heaven and Earth* (Thames and Hudson 1987), p.130.

STRING TRIO NO.1 (2011)

This piece is for violin, viola, cello and tape, and was performed in October 2011 at UCC's Friday lunchtime concert series. The performers were Larissa O' Grady (violin), Karen Dervan (viola) and Kate Ellis (cello).

In *String Trio no.1,* the initial ideas were derived from the textures and harmonies created in the electronic component. I created a quite ambient texture using a sound processing program called 'Sound Hack', mostly employing a process referred to as convolution. Convolution cross-synthesizes or morphs two sounds together. This effect multiplies the spectra of the two sound files, while reinforcing the common frequencies between them. Convolution can result in immersive and hypnotic timbres. The electronic part is structured so that the sounds move in waves that almost appear to float in the air. I felt this resulted in a soundworld that was akin to breathing, particularly in its pacing, that of a slow inhale and exhale.

Structurally, I became more interested in unexpected shifts, where I explore quite sudden and unusual changes. In *String Trio no.1*, I alternate between two different sections of material and while the timbral characteristics are very similar, the abrupt or unexpected shift here is the unusual key change, from f sharp minor to g minor and back again. These two keys have no relation to each other and this is obvious each time we hear the transitions from one to the other. This technique of tonal centre shifts also occurs in the work of Steve Reich, most notably in some of the early works, such as *Music for Mallet Instruments, Voices and Organ*. Here there is a good example of the interplay between consistency and change – while the pattern content may remain from section to section, the key shifts provide a sense of playing with listener expectation, with the new keys bearing very little close relation to their predecessors.

The instrumental part consists of a very simple idea, a melodic line played an octave apart by two instruments, on violin and viola. Simplicity and sparsity reign throughout this piece, I wished to create a flowing and warm quality, but also to speak directly. This direct approach is evident in the clarity of the motivic instrumental

writing, which recurs throughout. This contrasts with the dream-like character of the electronic component. The string melody consists of short phrases of roughly two bars in length, which are separated from each other in time, using rests to punctuate these phrases. It felt natural to have the instruments also occurring in waves which is related to the tape part. This manifests itself in the shape of the phrasing, with crescendi and diminuendi, and in the peaks and troughs created by occurrence of events alternating with rests, like the inherent movement of a wave in the ocean. It was a desired effect to create a sense of two 'waves' which ebb and flow against each other. The melody may seem to sound as if it is repeating exactly but there are subtle changes in rhythm, dynamics, bowings and accents. This again plays with listener expectation, where the reiteration differs slightly from its previous occurrence.

There is also an added element of performance indeterminacy within the work and this was discovered during rehearsals of the piece. I had set the metronome mark to 60 beats per minute but because of the free flowing nature of the piece, it was suggested by one of the performers that it would feel more natural to play at their own pace, in a rubato fashion, without having to count so rigorously. This meant that they could concentrate on the 'feeling' of the piece, the emotive intention itself, which resulted in a performance which was closer to the original musicality of its inception. A slight change in the concert setup needed to be made, whereas before, the tape part could run from start to finish by itself - now the tape part should be run manually using separate triggers to ensure that the key changes occur at the right place, in other words, when the players arrive at these particular points in the score. I would fade the alternating tracks into each other at the appropriate moment, using a patch created in MAX/Msp to trigger two separate sound files of material. An interesting byproduct of this technique is to observe how the phrases end and synchronize with certain harmonies in the tape part, which changes throughout, everytime it is played. This creates resultant harmonies which will differ upon each performance, depending on the speed of the player's performance.

String Trio no.1 was created in the memory of a dear friend of mine, Keith Murphy.

THE PASSION OF JOAN OF ARC (2012)

Introduction

This score was commissioned by the Cork French Film Festival, and premiered at Triskel's Christchurch, Cork in March 2012. My initial brief was to create a live score for the 1928 silent film *The Passion of Joan of Arc,* directed by Carl Dreyer. After some consideration I chose a soprano to represent the voice of Joan, and pipe organ due its obvious connotations with the church, but also for its ability to produce ominous deep rumbles and low drones live. Electronics were incorporated to serve the dual purpose of creating an immersive sound world (warm and enveloping), alongside the potential to create non-pitched sounds appropriate to specific scenes (akin to sound design). I chose the Requiem Mass as a framework for the entire piece. The voice of Joan was originally performed by soprano Emma Nash, the organ performed by Rhoda Dullea and the electronics are pre-recorded.

It was an aesthetically engaging challenge to embark on a project such as this, as all of the elements combined are areas which personally interest me: film, the French language, composing for voice, organ, electronics. This was quite a large-scale project, with careful consideration of how the various elements would influence and interact with one another. I have had extensive experience composing music for film prior to *The Passion of Joan of Arc,* but had mainly focused on documentaries and short films. Another component of the film which resonated with my own compositional interests was having the opportunity to not only write a film score, but to also work with a setting of the Latin Mass. It was felt that the setting of Requiem Mass text would be an appropriate choice for this film. I had become familiar with many masses from various eras throughout musical history, having sung religious music in choirs for several years. Many of the musical works which I feel most connection to are sacred in nature, from Bach's *St. John's Passion* to Stravinsky's *Symphony of Psalms*; from Szymanowski's *Stabat Mater* to Duruflé's *Requiem*. Within my own work, I feel a kinship to the intention and musical language of these works – as well as the immediacy of their emotive power and harmonic beauty.

Background to Film

In the *Passion Of Joan of Arc,* Danish director Carl Dreyer recreates the trial of Joan from the official minutes which are contained in the Library at the Palais Bourbon in Paris. This film was believed to be lost forever when the original version was destroyed in a fire. Decades later, a copy of this film was discovered in a closet of a mental institution in Oslo. This film has been regarded as one of the most influential films ever made. [26] In 2012, this film reached number nine in a poll of the top ten films by film publication *Sight and Sound*. Joan is played by French actress Maria Falconetti and her performance in this film has been hailed as one of the finest of all time.[27] At the time of its release, film critic for the New York Times Mordaunt Hall describes Falconetti's performance:

> She, it is true, has been guided with veritable genius by Mr. Dreyer, but as one witnesses her eyes filling with tears or perceives a faint grateful smile crossing her appealing countenance, one feels that it would be difficult indeed to elicit from any other actress such an eloquent interpretation as she gives in this production, which deals only with the trial of Jeanne d'Arc and her terrible fate.[28]

Other scores

Since its rediscovery in 1981, many artists have created music for this film, from composers to rock groups to electronic artists. In 1994 the American composer Richard Einhorn created a piece based on the film entitled *Voices of Light* which is now included as an optional accompaniment to the Criterion Collection's DVD release of the film. This version is for four solo voices, chorus and orchestra. Others include a version from rock group Nick Cave and the Dirty Three which was performed live at 'Screenage Kicks', a collaboration between London's National Film Theatre (NTF) and New Musical Express Magazine in 1995; and in 2010 electronic producers Adrian Utly

[26] Ranked no. 8 in 100 Best Films of the 20th Century – Village Voice Critic's Poll 2000, http://www.filmsite.org/villvoice.html

[27] Her performance has was ranked at number 26 in the 100 Greatest Performances of all time in film magazine *Premiere,* 2006.

[28] Mordaunt Hall, New York Times, published March 31, 1929.

(Portishead) and Will Gregory (Goldfrapp) created a score for six electric guitars, harp, voices, percussion, horns and keyboards. These are just a few amongst many scores written for this film, each one with its own interpretation, thus allowing the audience or spectator to experience the film in a different way. For example, the use of instruments such as electric guitars immediately recontextualises the film into a contemporary setting, and has a significant effect on how we view the film by providing a more modern instrumentation.

Einhorn composed an oratorio based on *The Passion of Joan of Arc* film, and employed the medieval idea of layering different texts simultaneously. This recalls the combination of texts one may find in a motet from fourteenth century France (eg. Guillaume de Machaut). His libretto, which incorporates both languages of Latin and medieval French, was created from excerpts of writings from various female mystics, including Hildegard Von Bingen and Joan's own words from the transcripts of the trial. As the appearance of Joan is not clear, Einhorn felt the need to portray Joan's voice as neither soprano nor alto, but both simultaneously. These quotations of Joan are sung by members of the female a cappella vocal group Anonymous 4.

Upon my own analysis, there are some dissimilarities evident between my own and Einhorn's aesthetic, since the latter is predicated on restating and emphasising the dramatic narrative of the film. As there is such inherent drama already present from Dreyer's direction and depiction of the trial, I felt that it was not necessary to overemphasize this turmoil. Film composers have often played with the tension between pre-empting or drawing attention to the emotion of a character or situation, or the opposite to this - working against the apparent atmosphere or narrative of a scene. This could entail the juxtaposition of quite light-hearted music underscoring dark or violent imagery (seen in Cliff Martinez' score for the film *Drive*), or vice-versa, where a seemingly benevolent visual scene is made sinister through music that acts as a dissonance to what the viewer is seeing, a technique often used in musical scoring of horror and thriller film genres. This sets up a sense of interesting ambiguity and tension, playing with the viewer's sense of expectation. Michel Chion refers to this as 'cognitive

dissonance', which can result in intriguing effects.[29] This occurs throughout my scoring of *The Passion of Joan of Arc*, where at times the music may not always exactly follow the dramatic pace of the imagery, instead acting as a commentary on the inner emotions of the character of Joan of Arc herself: determination, fear, anguish, acceptance.

From a short documentary about Adrian Utly and Will Gregory's experience of creating their score for this film, Gregory states,

> The darkness of the film actually allows the music not to be so dark. In a lot of the film there are tears running down Joan's face. If you play to that plangency as much as the film does, I think you would end up having pushed that button too many times, and you get desensitised. [30]

Upon listening, a differing approach to the dramatic nature of the Einhorn score is evident in Utly and Gregory's score, utilizing a relatively unusual combination of instruments, incorporating synthesizers, brass, voice, harp percussion and massed electric guitar layers to create a unique soundscape. Utly (one of the six guitarists on stage) explores different effects and contemporary extended techniques on guitar, such as rubbing the strings of the guitar with a piece of wood to create a high pitched sound similar to the timbral quality of bowed strings. He also strikes the body of the guitar and uses this to dramatic effect during the torture scene, where it produces a terrifying screech. The massed guitar sounds create a heightened tension, building to a climax where "a distorted rising explosion of electric guitars accompanies Joan's execution"[31]

Nick Cave and The Dirty Three's score displays another approach, where they performed live to a screening of *The Passion of Joan of Arc* at London's National Film Theatre. This was part of the 'Screenage Kicks' series, where notable performers were invited to write and perform new music for films that inspired them. It was Cave's suggestion to compose a score for Dreyer's film. It took several months of rehearsing to produce a one-off performance for this event, comprising of Cave on vocals and piano,

[29]Michel Chion 'Audio-Vision: Sound on Screen, Columbia University Press New York, 1990/94
[30]Interview with Will Gregory, http://www.thepassionofjoanofarc.com/ (accessed 20 April 2013).
[31]Thomas H Green, *The Passion of Joan of Arc, The Dome, Brighton, review,* The Telegraph 30 May 2011. http://www.telegraph.co.uk/culture/film/8546261/The-Passion-of-Joan-of-Arc-The-Dome-Brighton-review.html (accessed 18 April 2013).

accompanied by Warren Ellis (violin), Mick Turner (guitar) and Jim White (drums). Cave and Ellis have since collaborated on many more film scores, working with film director John Hillcoat on three of his films, *The Proposition, The Road* and *Lawless*. A sense of the approach undertaken and atmosphere created is provided by an audience member's account of the event:

> Here, The Dirty Three offered mostly understated background support, with smouldering violin and guitar anchored down by Jim White's steady beat. Occasionally, the boys really put their feet on the pedals, responding to Dreyer's disturbing visuals with all the brutality of prime-time Bad Seeds. However, it was the quieter moments that really left a scar: Cave's beautifully fragile piano, his wordless vocals which often mutate into a haunting 'This is my desire' refrain, and his unerring ability to correctly call when the music should stop. A prime example of this came near the end of the film, when Joan is burnt at the stake. As the flames rise, a deathly silence envelops the NFT, as we watch the crowd who gathered to witness the execution suddenly realise the enormity of this obscene act and openly revolt. It's then that Cave chooses to deliver his only song of the evening, a plaintive vocal which addresses "God's non-intervention" [32]

Historical research

Before embarking on this project, I researched the music historically connected to the year of Joan of Arc's death in 1431 and, in particular, French music of the period. French composers such as Guillaume de Machaut and Philippe de Vitry had been of musical prominence in the century prior to this. Prominent composers living and writing near the time period of Joan's death were Ockeghem, Dunstable and Dufay, marking the end of the Medieval period and emergence of the Renaissance period. I wished to make some reference to this period of musical history in my score, but without an overtly perceptible emphasis. One example of this is in the opening section of the *The Passion of Joan of Arc,* the *Introit (*which I also refer to as *Requiem Aeternam).* Gregorian chant was one of the dominant varieties of chant in western and central Europe in the Medieval era and I wished to incorporate certain elements of this chant here. A

[32] Steve Langton, The Last Picture Show*, Memento: Joan of Arc and Nick Cave* (2008) http://wwwthelastpictureshow.blogspot.ie/2008/12/memento-joan-of-arc-and-nick-cave.html (accessed 18 April 2013).

characteristic of Gregorian chant is the use of a reciting tone or a recitation tone, where a pitch is repeated and other pitches gravitate towards this particular pitch, creating the sense of modal gravity, a tonal centre. Often the entire piece may centre around one or two pitches. In the case of the *Introit,* there is a recurring pull toward the pitch A. (Fig. 26)

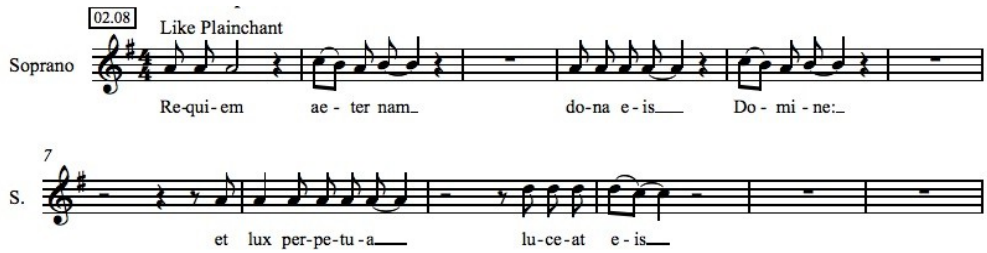


Fig. 26. Opening of *Introit,* bars 1 – 12.

Although I do refer briefly to this period stylistically, my aim was more to achieve an essence of that time - a hint of the past, an atmospheric resonance. It could be argued that a similar atavistic recollection of the past is prevalent in the work of the so-called 'spiritual minimalist' composers, such as John Tavener, Henryk Gorecki, Giya Kancheli, Valentin Silvestrov and Arvo Pärt. These composers often make references to music from the past and look towards ancient musical forms for inspiration and have in turn, been an influence on me.

Pärt's solution to a creative turning point in his career was the development of a *tintinnabuli* technique, which enabled him to create works displaying both clarity and complexity. Pärt restricted his compositional focus to the basic elements of tonality: triad and scale, and developed a highly formalised compositional system which enabled the creation of harmonic and structural complexity from these simple building blocks. Pärt's development of the *tintinnabuli* technique was influenced partially by his study of Gregorian chant and early polyphony and this debt is evident in many of his works. Pärt has further elaborated upon this, stating "I wanted to learn how to shape a melody, but I had no idea how to do it. All that I had to go on was a book of Gregorian chant, a *Liber usualis*, that I had received from a church in Tallinn."[33] This drove Pärt to meditate upon

[33] Enzo Restagno, Lopold Brauneiss, Saale Kerada and Arvo Pärt, Arvo Pärt in Conversation, Dalkey

the beginnings of polyphony and the relationships between independent musical parts, a process which, after a great number of years, led to his creation of the *tintinnabuli* technique.

The results of Pärt's immersion in chant and early polyphony were his creation of an entirely new and unique technique inspired by ancient traditions. We can detect elements or echoes of many medieval techniques within the *tintinnabuli* works. The use of the drone in his *Fratres*, for example, resembles the use of elongated chant melodies in much chant and organum music. In addition *Fratres'* two melodic lines spaced a tenth apart can be likened to the parallel organum technique in which melodies are often doubled a fourth, fifth or octave apart. The use of canon is also prominent in many Pärt pieces and forms the basis of one of his most famous pieces, *Cantus in Memoriam Benjamin Britten*, scored for orchestra and bells. *Cantus* takes the form of a mensuration canon, a type of canon most prominent in early Renaissance music of the 14th and 15th centuries, in which a main melody is accompanied by one or more imitations of that melody in other voices at different speeds. Musicologist and critic Wolfgang Sander states in the liner notes for Pärt's piece *Tabula Rasa*,

> One senses its roots and its spirit, but the structure of the music is harder to grasp. A curious union of historical master-craftsmanship and modern 'gestus', it is music that could have been written 250 years ago and yet could only be composed today.[34]

Whereas in some examples of harmonically directional music from the Classical or Romantic eras there may be expectation to hear development of musical ideas moving forward to a climactic conclusion, *Pärt's* music seems to go nowhere, and that is intentional. The purpose is contemplation. The music is meditative, hypnotic, and gently repetitive, similar to the Christian tradition of centering prayer, in which one might continuously repeat a word or two from Scripture to be drawn deeper into prayer. The gentle repetition gives the music a feeling of stasis, of being suspended in time.

Archive Press, 2010, p28.

[34] Wolfgang Sandner, liner notes for Arvo Pärt Tabula Rasa, Staatsorchester Stuttgart, Lithuanian Chamber Orchestra, Saulus Sondeckis, (ECM 78118-21275-2).

Although I was also concerned with creating a sense of the past, I wished to primarily focus on the emotion in the film; the emotion between Joan and her tormentors and the emotion between Joan and her divine love for God. My approach seemed cognate with Carl Dreyer's, who described his approach to evoking a sense of time and place like this:

> The more familiar I became with the historical material, the more anxious I became to attempt to re-create the most important periods of the virgin's life in the form of a film...What counted was getting the spectator absorbed in the past...I did not study the clothes of the time, and things like that. The year of the event seemed as inessential to me as its distance from the present. I wanted to interpret a hymn to the triumph of the soul over life. What streams out to the possibly moved spectator in strange close-ups is not accidentally chosen. All these pictures express the character of the person they show and the spirit of that time. [35]

The film critic Roger Ebert also discusses Dreyer's ability to create a film that manages to "exist outside of time".[36] With Dreyer's fascination with the naked human face, he "distorts the visual sense"[37] and scenery and background become virtually unnoticed and lessen in significance.

Musical process

My brief for this film was to create a continuous score, with very few moments of silence throughout. This provides many challenges, not only because of the length of the film (82 minutes in total), but also because of the necessity to create seamless transitions from one piece to the next. A conscious effort was made to produce a unified whole, carefully considered at the beginning of the compositional process – to avoid the effect of merely tacking one piece onto the next. Most pieces are repeated, yet never exactly – some have different accompaniments either on organ or in the electronics. As

[35] Realized Mysticism in *The Passion of Joan of Arc,* by Carl Theodor Dreyer 1928, Reprinted by permission of the Danish Film Institute, Copenhagen, Denmark. http://www.criterion.com/current/posts/69-realized-mysticism-in-the-passion-of-joan-of-arc (accessed 5 March 2013).
[36] http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/19970216/REVIEWS08/401010350/1023 (accessed 12 January 2013)
[37] Ibid.

well as that, each piece carries a different meaning, and by using variations of each piece throughout the film, I could more easily attempt to explore the complexity of emotions shown on screen.

One technique I employed to do this was l*eitmotif.* Wagner explored the concept of *leitmotifs* in his operas, where he connected a musical theme to a character or a situation in such a way that the listener associates that theme with that character or situation even in its absence. His most significant use of the *leitmotif* can be seen in his four opera cycle, *Der Ring des Nibelungen,* where more than sixty *leitmotifs* or recurring themes represent various characters and objects.

In *The Passion of Joan of Arc* there are many instances where this process is explored. One example is the scene located outdoors (00:51:50), where Joan has a last chance to save her life by signing her name. She is torn between signing to save her life, and not abandoning her faith. We hear the soprano singing *Lux Aeterna,* with only a drone accompaniment on organ and also the sound of wind. Here Joan reflects on her fate as she looks at flowers growing, at a hole being dug in the ground (possibly her grave?), and also at a skull. All these shots are of Joan, seemingly alone with her thoughts. Then, when judges and priests again push her to sign the document, we hear *Lux Aeterna* repeated, this time with a simple pattern on organ (Fig. 27). The organ pattern occurs earlier in the score where Joan is being pressurized to sign during her interrogation. By hearing the voice and the organ pattern simultaneously, the conflict of her inner voice (soprano line) and the pressure exerted on her by the judges (organ pattern) is expressed.

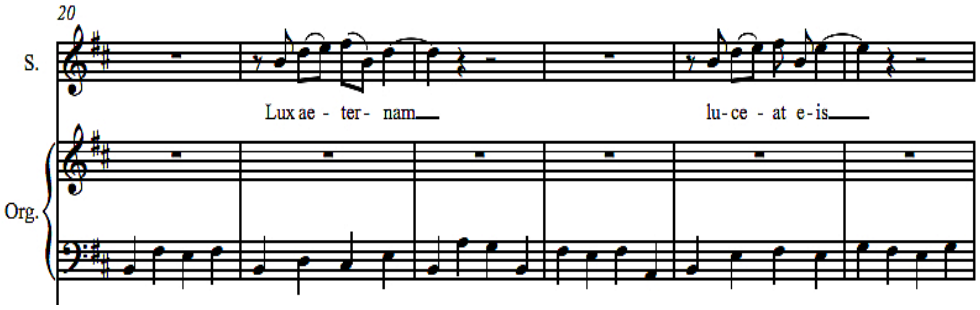


Fig. 27. Organ pattern with soprano line, *Lux Aeterna,* bars 20 – 25.

Symbolic meanings

All of the pieces in this score have different symbolic meanings. The *Kyrie* (which could be regarded as Joan's theme), symbolizes purity. When Joan is asked “Did he have wings?” as the priest opens his arms out, the electronic introduction to the *Kyrie* slowly emerges. I wished to create an electronic soundscape that was enveloping and warm, to create a feeling of protection around Joan, almost akin to a barrier against the braying Judges. Despite incessant questions from these men, Joan remains poised and calm, as if there is a halo of protection and strength around her (possibly from God). I wished to create an atmosphere of safety and serenity - an almost 'womb-like' sensation, a sanctuary - an inner voice within her own faith providing reassurance, a moment of calm at a time of such emotional and spiritual duress. The *Kyrie* is heard three times throughout the film, the last reiteration during her final moments leading up to and during her execution. Here the *Kyrie* symbolizes again not only her immense devotion to her faith, but also her great strength and courage as she tells God that she accepts death gladly. *In Paradisum* symbolizes salvation, but only a temporary one. Joan believes she can trust the priests, and there is relief momentarily which is reflected in the music, however that trust is betrayed. The second time we hear the *In Paradisum* we again have some comfort, although short-lived, when Joan signs her name and therefore saves her life.

Despite appearances, there are moments of lightness in the film. Two of these moments are when the sacraments are brought to her, where she can receive the body of Christ. There is a brightness and radiance to her face as she watches the priests (and altar boys) arrive. The *Sanctus* is heard at these moments and represents her joy as she is about to receive the body of Christ. A feeling of lightness is created in this piece by the use of a more 'major' tonality with a gentle rocking rhythm, and less use of dark pedal tones and sustained lines. A crucial moment occurs when she finally receives this communion rite (following a refusal of this on a previous occasion) and I wished to emphasise this event by reinforcing the harmony using a new pedal tone to create a sense of resolution. Here, I also used the word “Hosanna” which is a cry of adoration and a cry for salvation (Fig. 28).

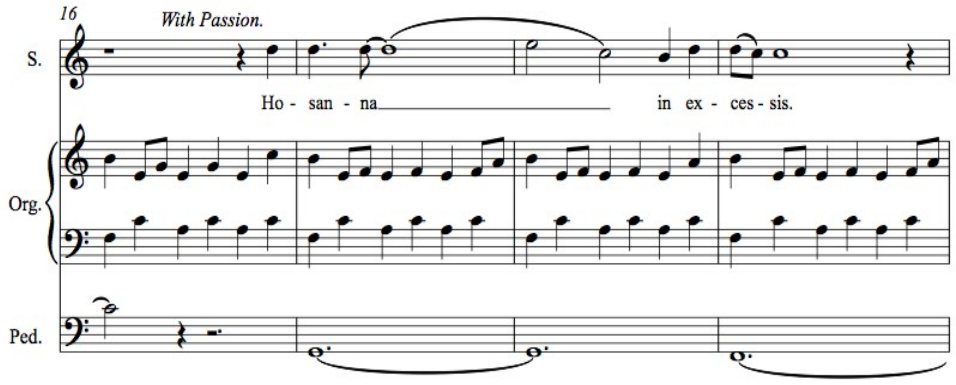


Fig. 28. Sense of resolution in *Sanctus,* bars 16 – 19.

The only piece that occurs just once is the *Requiem Aeternam* or *Introit. Introit,* derived from the Latin word *Introitus,* meaning entrance, is associated with the opening of a Requiem mass. This piece opens the entire work, with its purpose being to set the atmospheric tone, whilst also accompanying the opening credits (which seem separated from the rest of the film). I wished to create a sense of rising and unfolding within this piece, to depict the sense of wonder of the forthcoming events - how a young woman could relinquish her life for her country and remain steadfast to her faith through such adversity. I also intended to evoke the experience of a sunrise that widens out into a shimmering, shining texture within the electronics. This reflects the meaning of the text "*lux perpetua luceat eis": '*Let light perpetual shine upon them'.

Electronic score

As much of the electronic score contains dense harmonic material, I was conscious of balancing this by incorporating environmental or found sounds. One sound frequently incorporated is the sound of wind. This sound serves many purposes, and covers a variety of emotions and situations. These range from a sense of anticipation and suspense in the opening scene, where the judges mill around in preparation of Joan's arrival; to the breathy quality to depict the men's whispers to each other; to an outdoor scene when Joan's bleak situation becomes clear (00:51:50). Another point at which found sounds are used is at the torture chamber – a repeated rhythm on a drum, the churning and clanking of metal, the hiss of a machine, all combined to conjure up Joan's

feelings of utter fear and panic. Other sounds are low rumblings, where at the last scene represents fire.

Organ

The organ serves many roles. One is simply an accompaniment to the soprano, one is to function as a transitional device to link scenes together, one is to create the feeling of despair and frustration in the insistent patterns of the *Libera Me,* and one is the creation of deep and menacing drones within a live performance context. It is a much discussed aspect of musical acoustics, that low pedal notes can create beating or pulsing effects through the simultaneous combination of pitches that are close together in frequency. This effect is employed in particular scenes throughout the film, some heard alone where others are more subliminal - submerged beneath an already dense electronic soundscape. By altering the intervals in this drone between a major and a minor second, the speed of the pulse changes from a slow throb to a quicker, more fervent sounding drone respectively.

The *Libera Me* is utilized in two scenes, where it appears that Joan's spirit becomes broken. Even though she manages to remain strong and resilient throughout her trial (despite the ongoing battle between her and her tormenters), there are moments where she shows a very human frailty and weakness, falters and struggles. It perhaps conveys to us all how the human spirit can become broken, when situations become desperate and hopeless (Fig. 29).

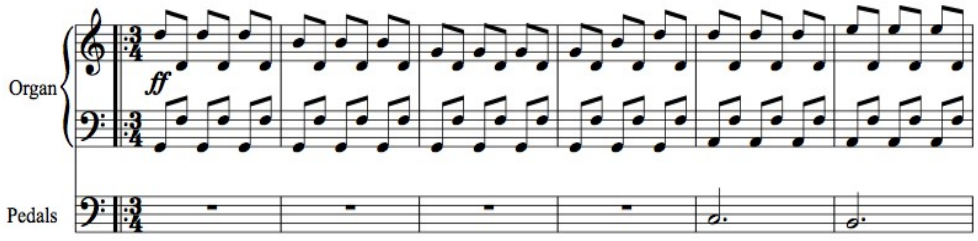


Fig. 29. Insistent rhythms in *Libera Me,* bars 1 - 6.

Conclusion

It was an immensely rewarding experience to score such a critically acclaimed and innovative cinematic work such as *The Passion of Joan of Arc.* My own personal musical interests and overall aesthetic naturally connect to the film music realm. Perhaps this is due to my previous film music experience (albeit on a smaller scale), as well as having composed music for many theatre productions in the past. Often, within composition, it can be fruitful to restrict oneself in terms of the parameters chosen to work with, the musical material itself or the process used – an element often associated with the principles of early minimalism – an act of working within certain constraints. Naturally, there are many constraints writing music for film as noted by Annabel J. Cohen in *Music as a Source of Emotion in Film:*

> Music composition for film differs from music composition for its own aesthetic sake. Typically film music is produced for the sake of the story. It is constrained by the intent of the director, narrative, time, and budget...The composer must know how shared audiovisual accent patterns can focus visual attention, how musical information avoids conscious attention, how mood is established, how musical associations provoke inferences through reinforcement or counterpoint.[38]

There are arguably fewer constraints in *The Passion of Joan of Arc* than in other films, as there is no audible dialogue. Because of this, I had free reign to a certain extent. However, it was also important to me for the narrative to take precedence, with the music integrated as one element of a coherent unified whole, rather than the primary focus. I wished to produce a score that had an understated power, to reflect Joan's character and her actions. I wished to create a voice for Joan, allowing her the space to convey a range of emotions from quiet internal contemplation to external anguish. I aimed to create a sound world that protected Joan, while on the other hand creating a claustrophobic, saturated atmosphere to magnify the intimacy and confinement of the close up shots. I drew inspiration from the psychologist Hugo Munsterburg, who discussed the importance of music in the then-new phenomenon of film in his book *The Photoplay: A psychological study*, which was written twelve years before the release of

[38] Annabel J. Cohen. (2001). "Music as a source of emotion in film." In: P. Juslin & J. Sloboda (eds.) *Music and Emotion: Theory and Research.* Oxford: Oxford University Press. P. 264.

The Passion of Joan or Arc. He said:

> ...we come nearer to the understanding of its [film's] true position in the esthetic world, if we think at the same time of...the art of the musical tones. They have overcome the outer world and social world entirely, they unfold our inner life, our mental play, with its feelings and emotions, its memories and fancies, in a material which seems exempt from the laws of the world of substance and material, tones which are flattering and fleeting like our own mental states.[39]

[39]Hugo Munsterburg, 1970, *The Photoplay: A psychological study.* New York, Arno (originally published in 1916), p. 168-9.

CONCLUSION

In the course of my PhD I have developed and augmented the concepts, techniques and references that underly my compositional practice. My early interests in the minimalist techniques of Steve Reich and Arvo Pärt, the ambient soundscapes of Aphex Twin, and the damaged lo-fi aesthetic of Boards of Canada and My Bloody Valentine have contributed to the development of a musical language that is uniquely personal. Here elements of high and low culture, the electronic and acoustic, and the contemporary and historical can coexist in a given composition. This language has expanded to accommodate explorations of sound texture and timbre, as my interest in the music of Ligeti and Scelsi grew. It encompasses an investigation of the sonic possibilities of twenty first century digital audio technology, to the appropriation of much older techniques derived from forms of singing that I love, in the pursuit of a sound world that is immersive, multi-faceted and bristling with a restraint of energy.

In analysing my work, the eight factors or categories that I have identified are useful in providing an entry point into the compositions, and situating them and my practice as a whole in relation to the history and theory of music. My application of reductive technique allows for an emotive and affective flavour of minimalism. A space is created that allows the listener to enter the work, which, although apparently static, internally consists of fine details of texture and colour that constitute a vibrant movement. A sense of immersion in the music is created through the repetition of patterns that gradually evolve, often accumulating in a delayed affective event that may be cathartic. Perhaps there is an element of imperfection, where sounds are warped or damaged. The soundscape is generally murky and smeared, as sounds overlap one another. Instruments are reconstituted in new roles as solo instruments are moved to the background, or emulate the sound of an electronic effect.

My work is the product of the exploration of these eight factors – reduction, imperfection, hierarchy, motion, listener perception, translation, immersion and blurring – and their resultant interaction. Each of them represents a significant aspect of my

musical language and is derived from my engagement with a range of types of music, and thoughts about what music can be. The ten pieces submitted incorporate old techniques done in a new way, and new techniques done in an old way. There is a cross fertilisation across mediums and genres, and across the present and past. There is the composer, and there is the listener.

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Composition Portfolio

Irene Buckley

PhD in Composition

National University of Ireland, Cork

School of Music

September 2013

Head of Department: Dr. Mel Mercier

Research Supervisor: John Godfrey

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For baritone and organ

Irene Buckley

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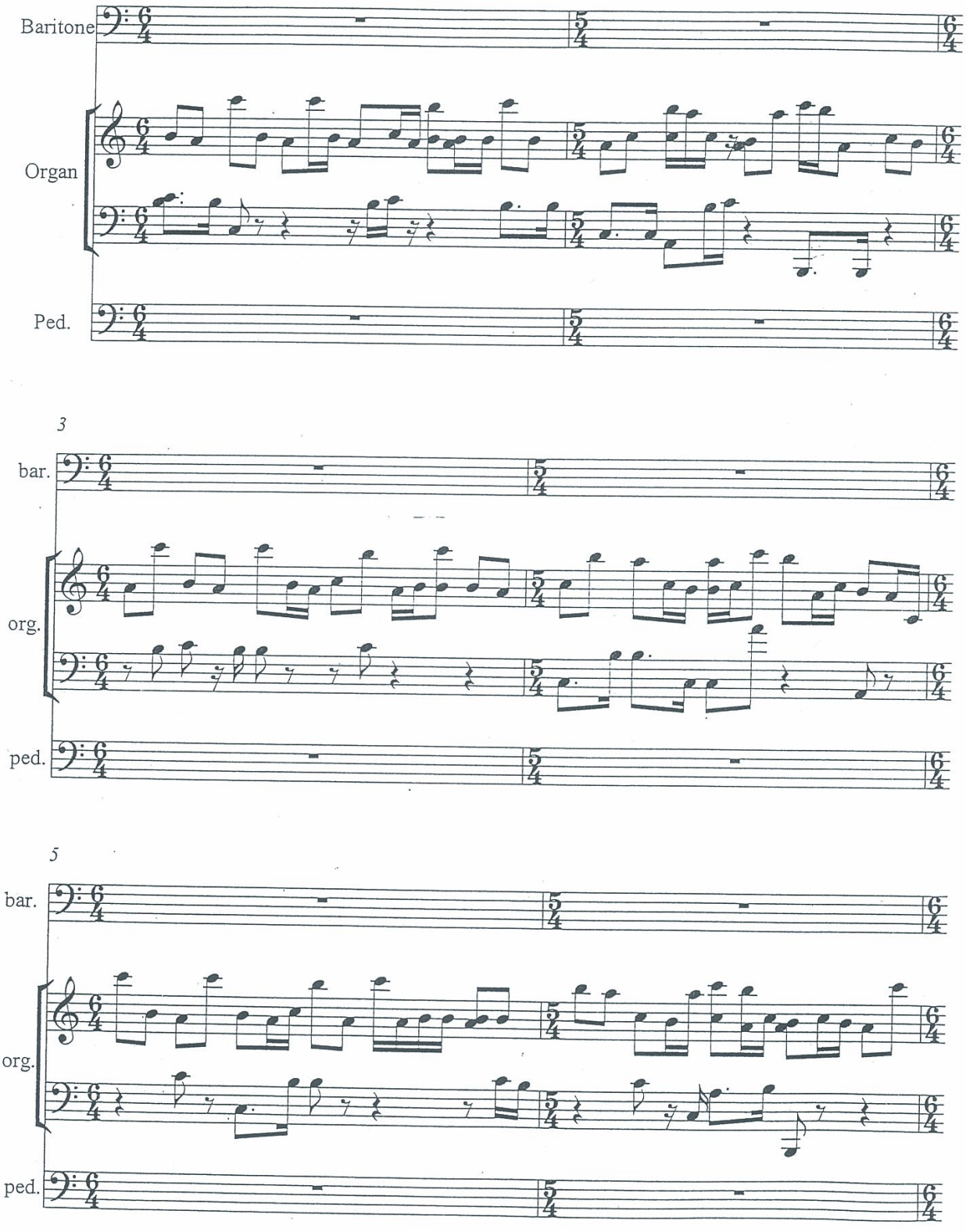

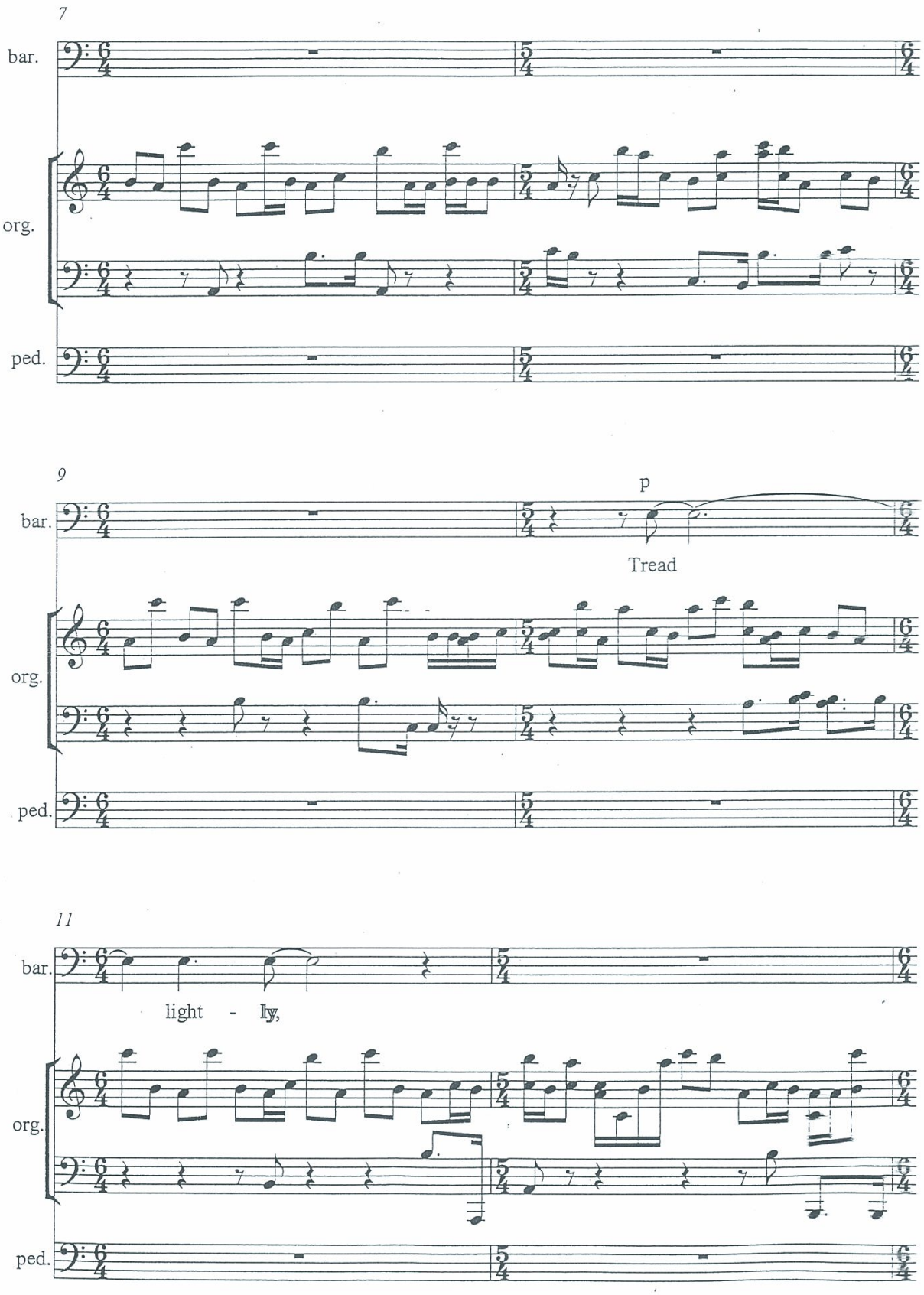
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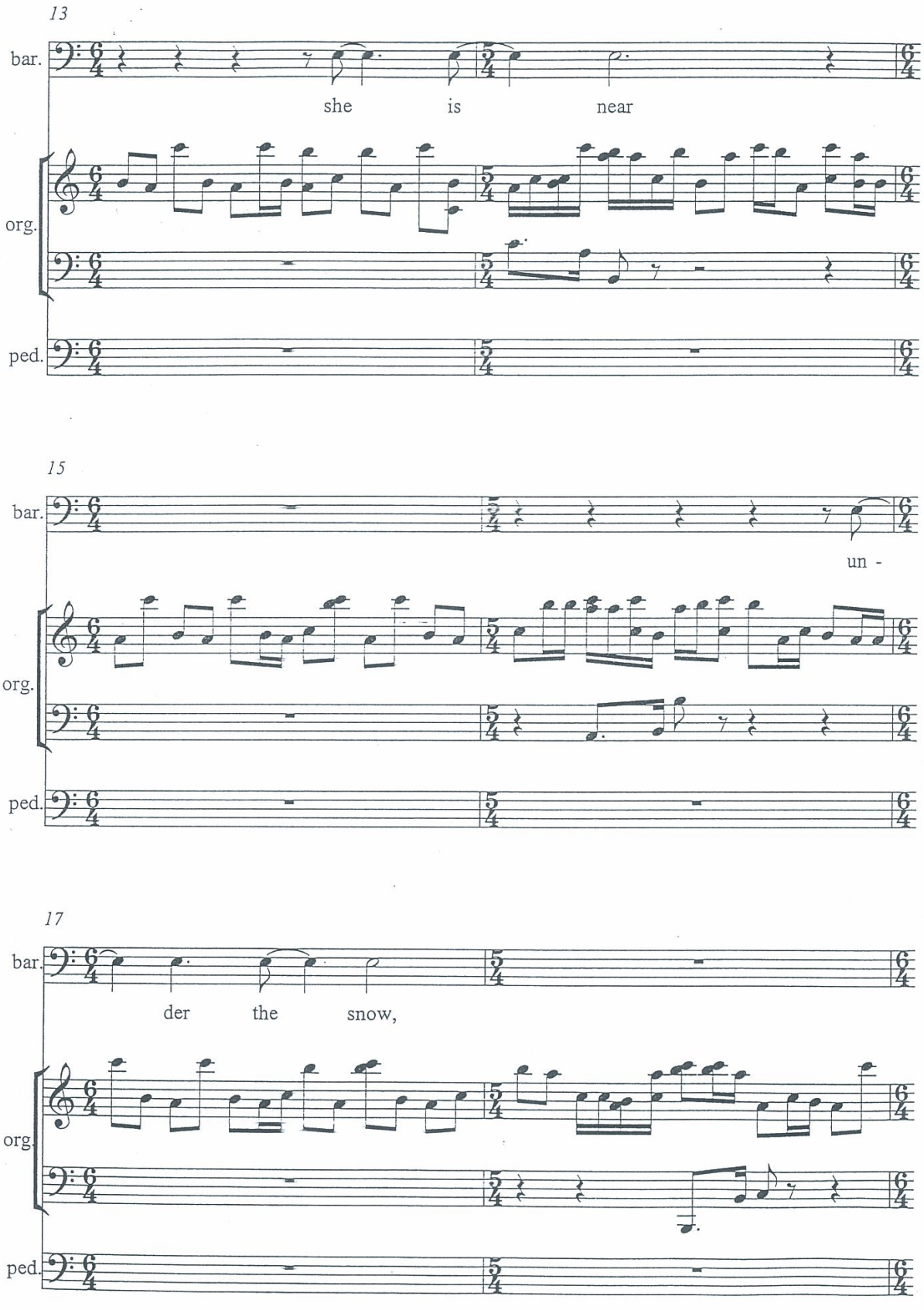
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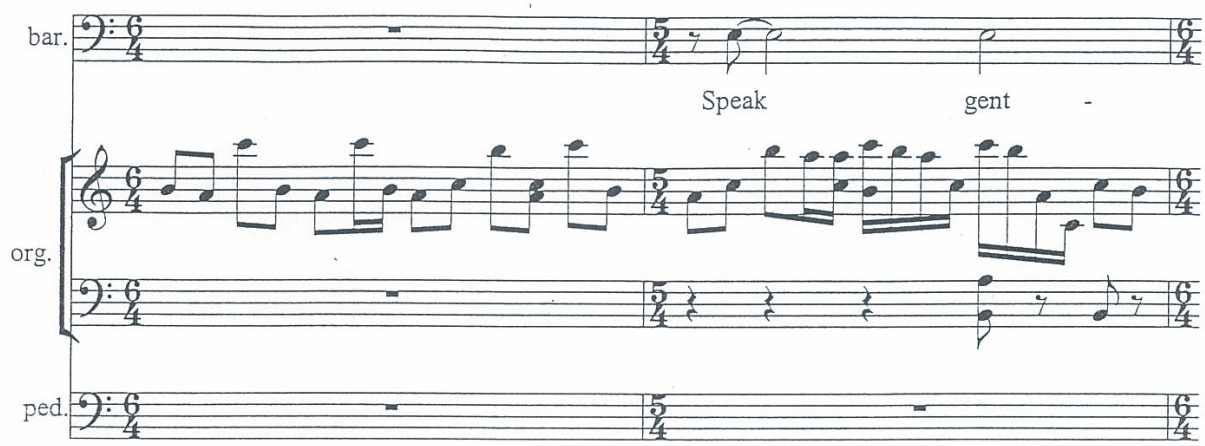

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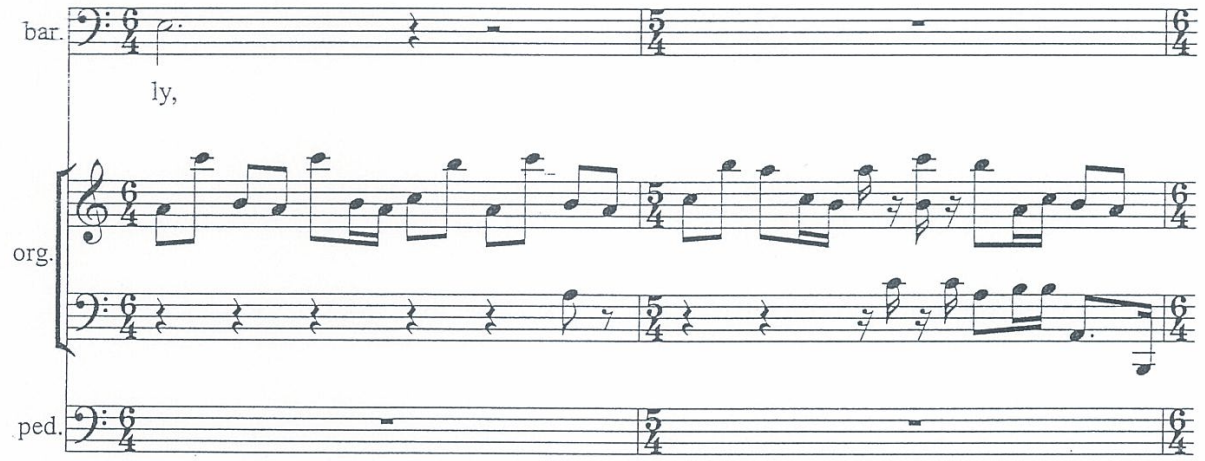
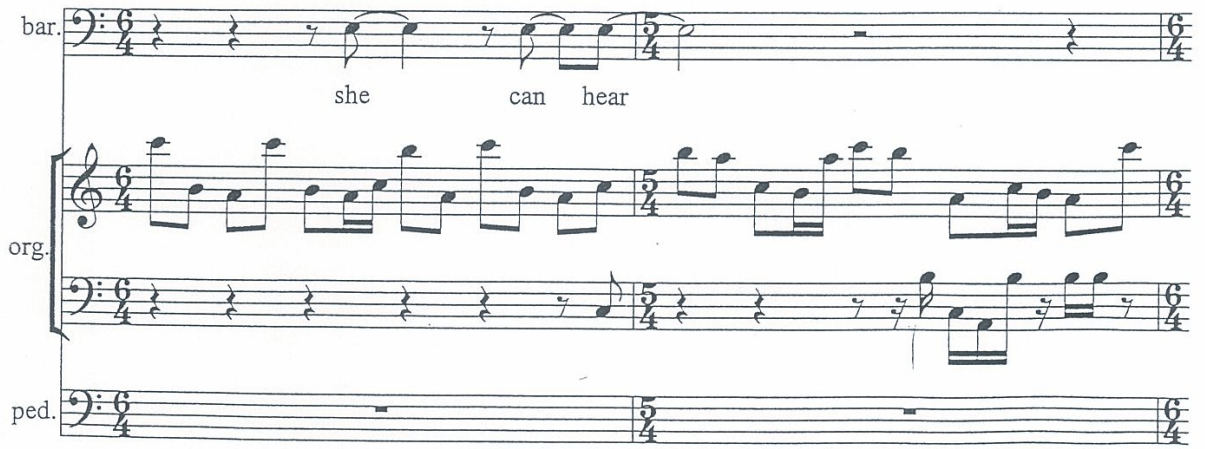
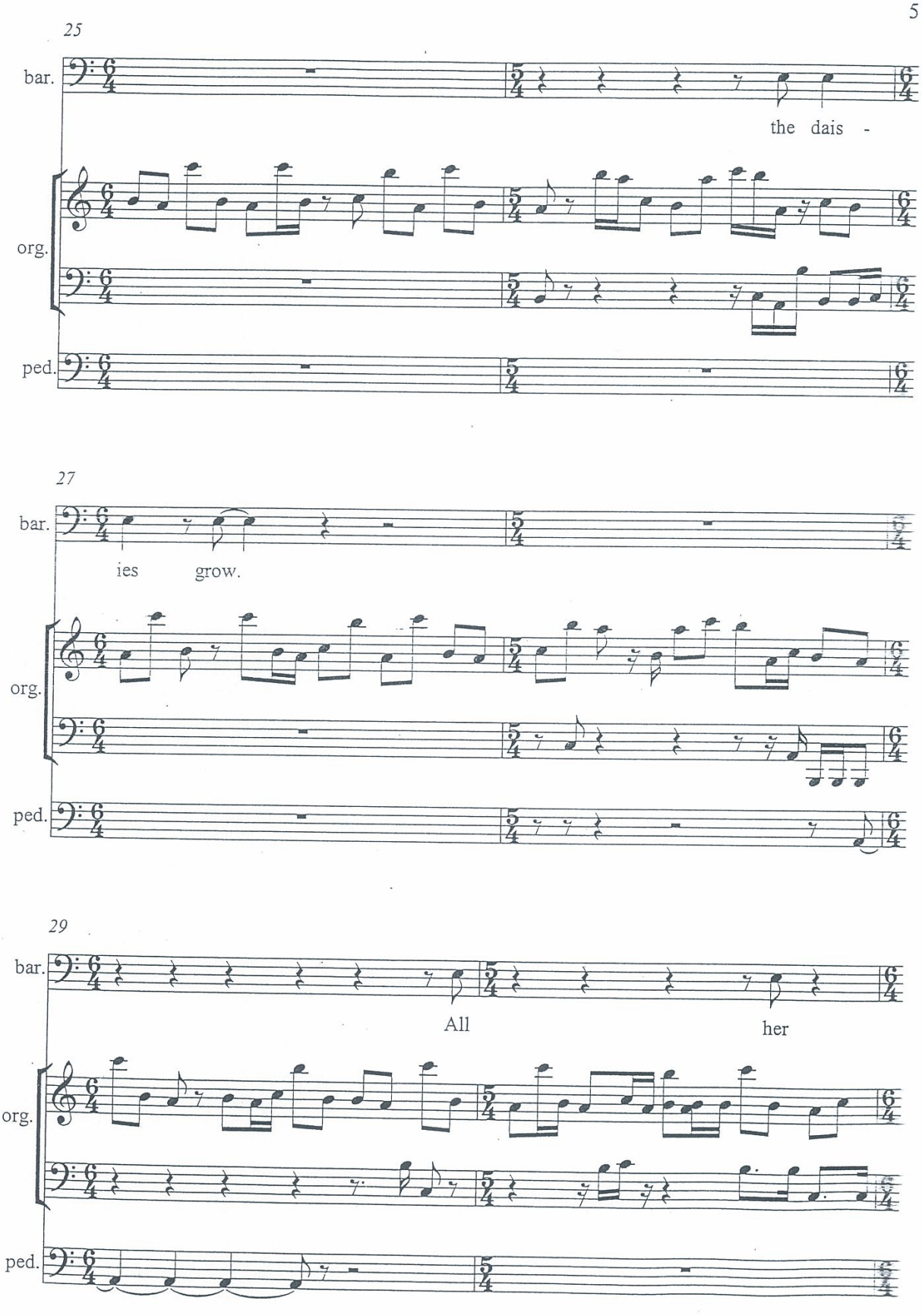
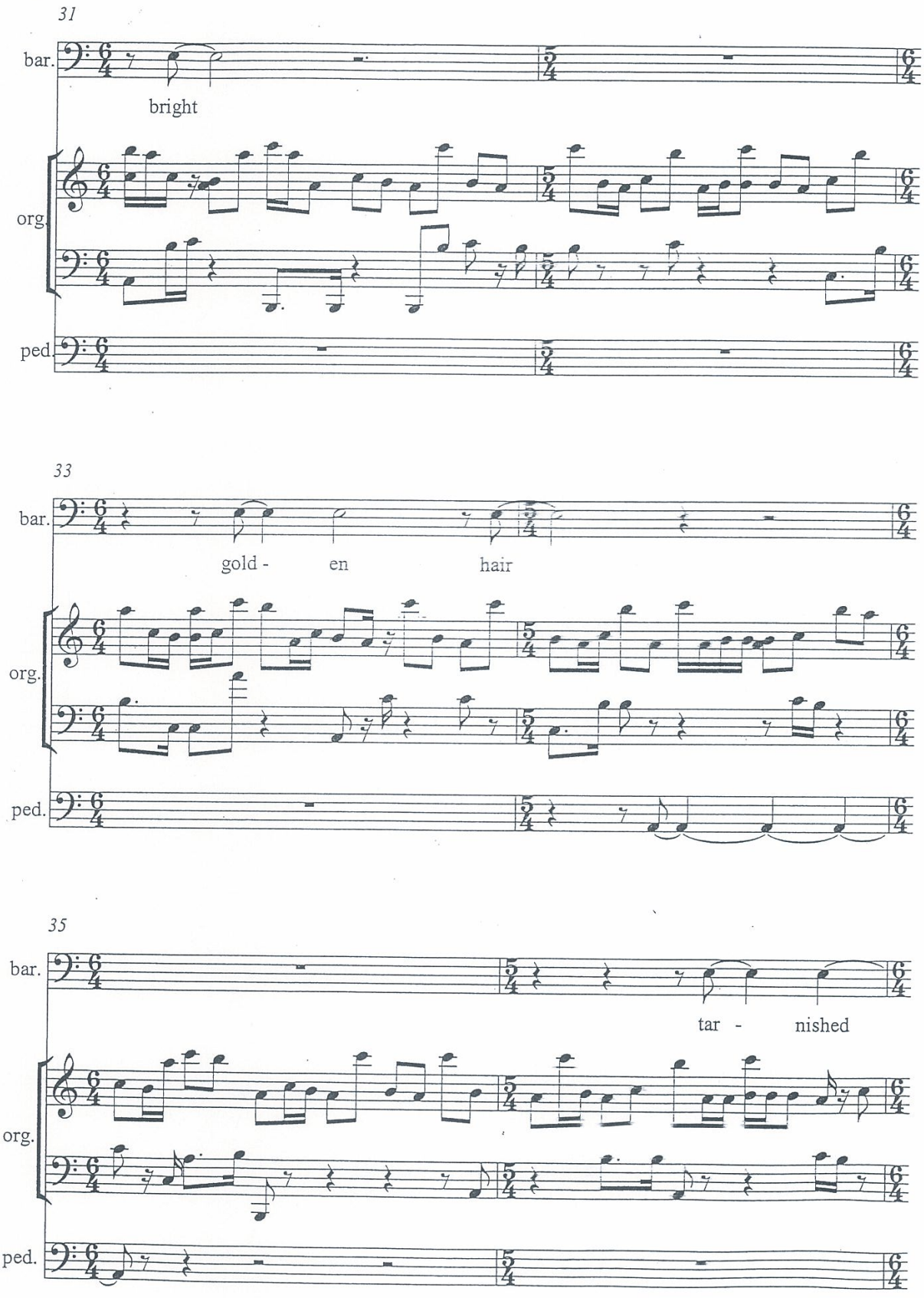
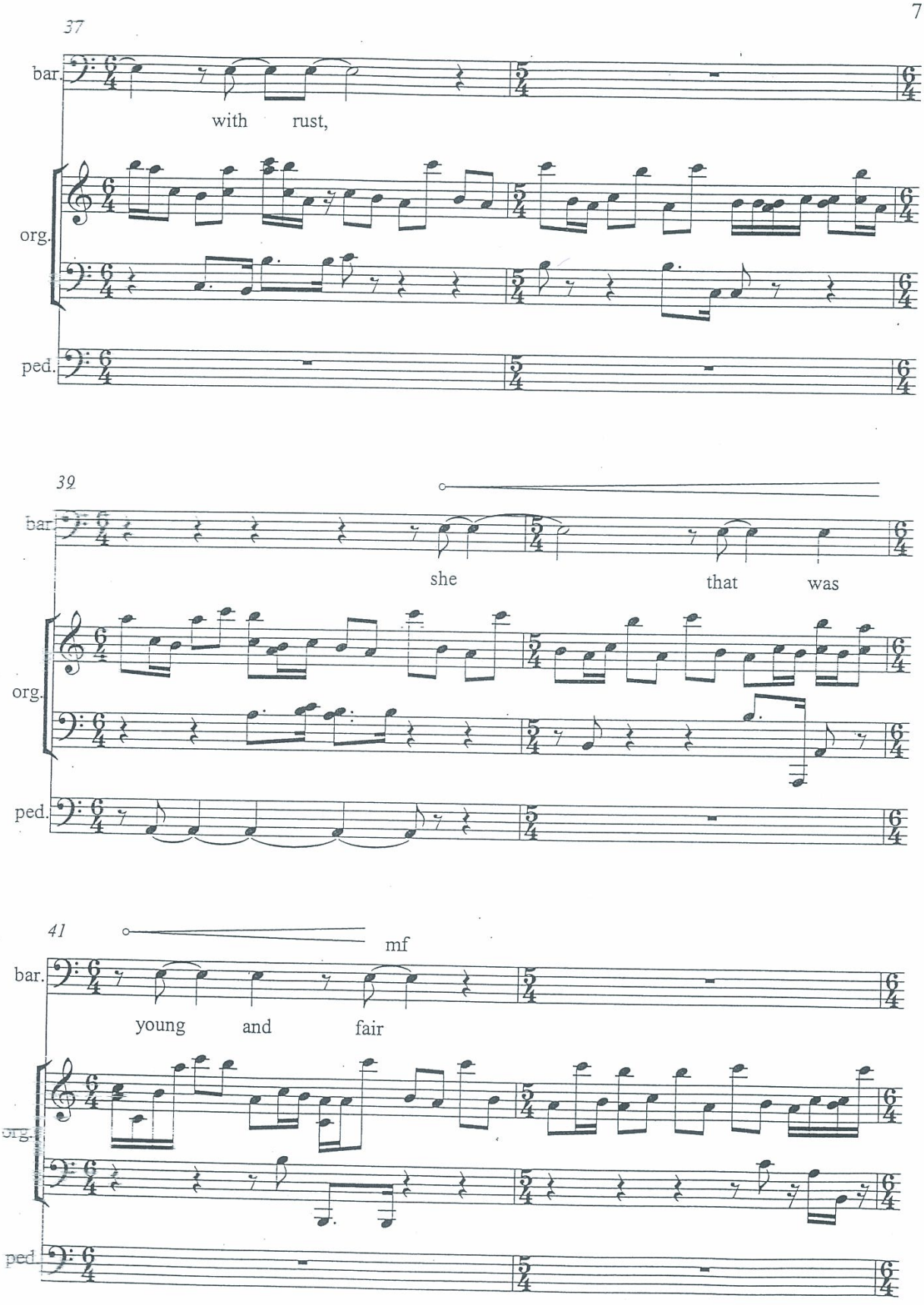


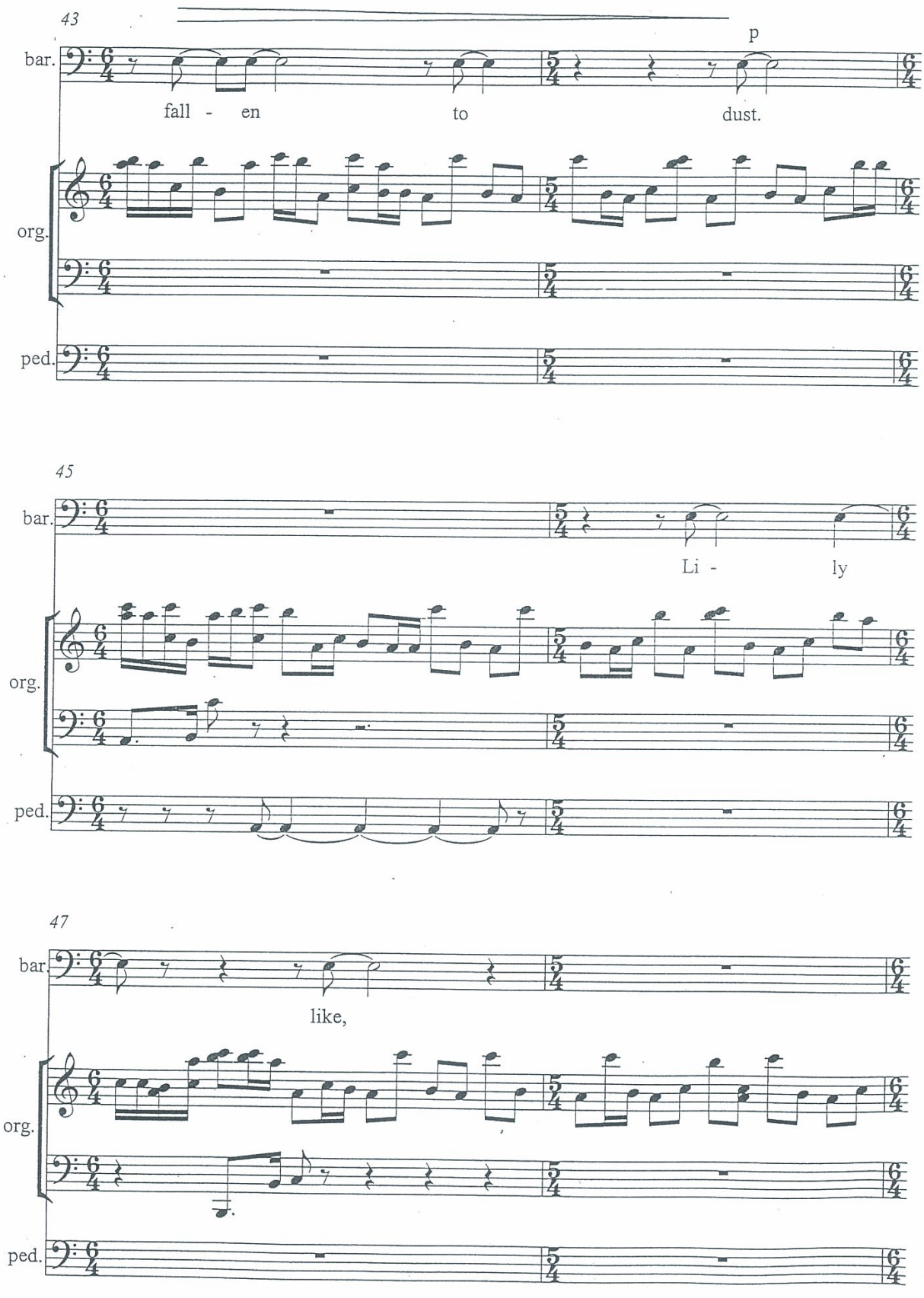
23

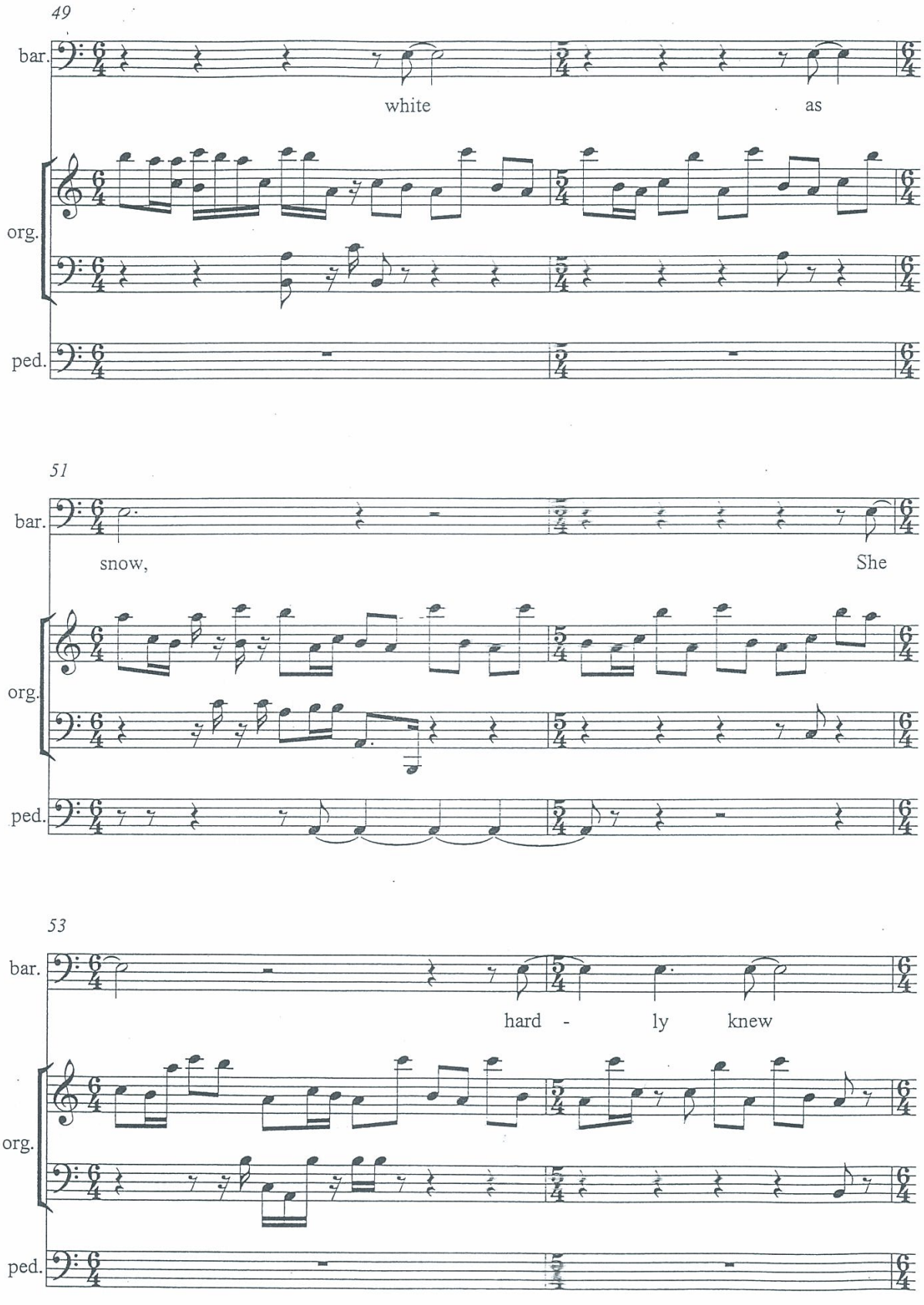


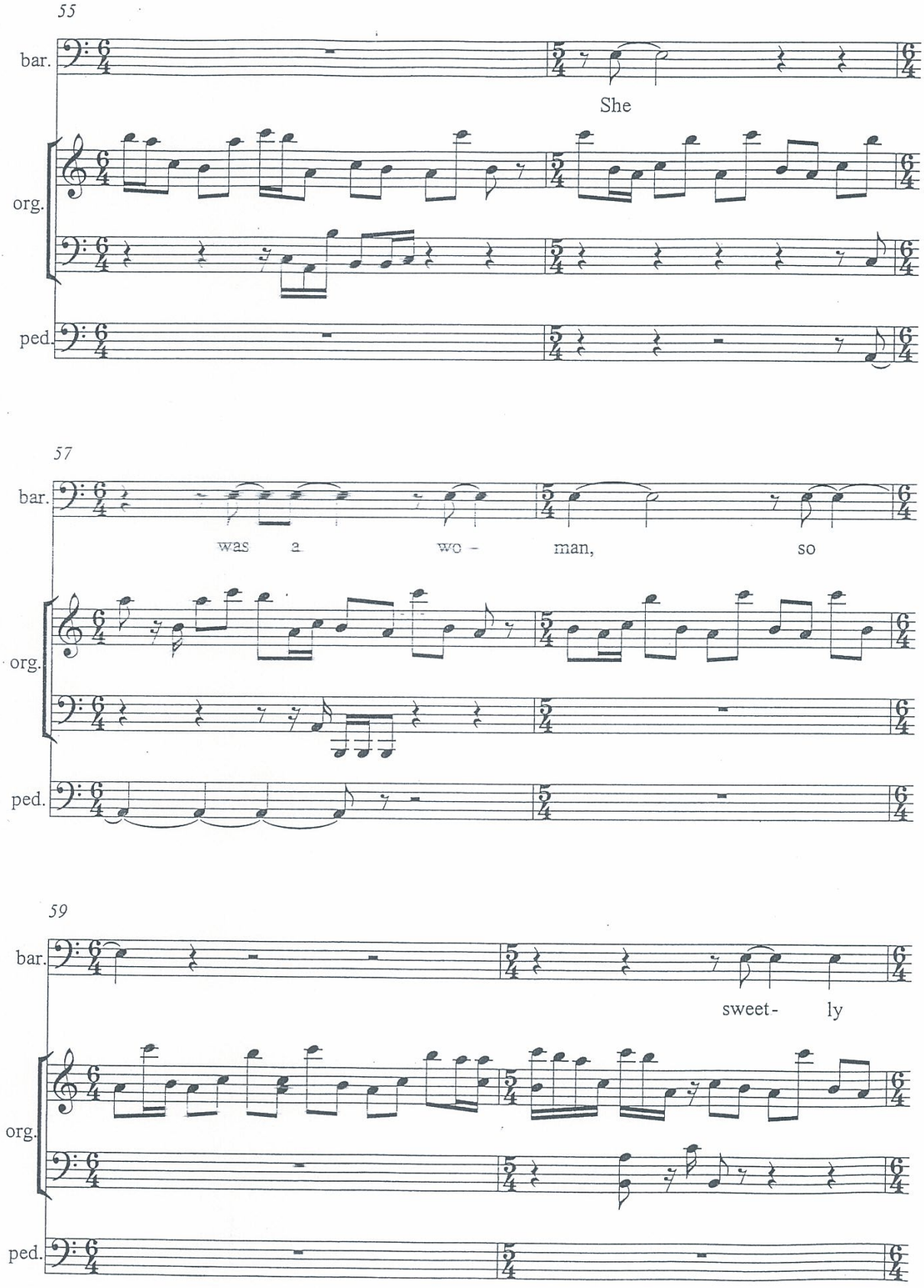

25
bar.
the dais -
org.
ped.
27
bar.
ies grow.
org.
ped.
29
bar.
All her
org.
ped.

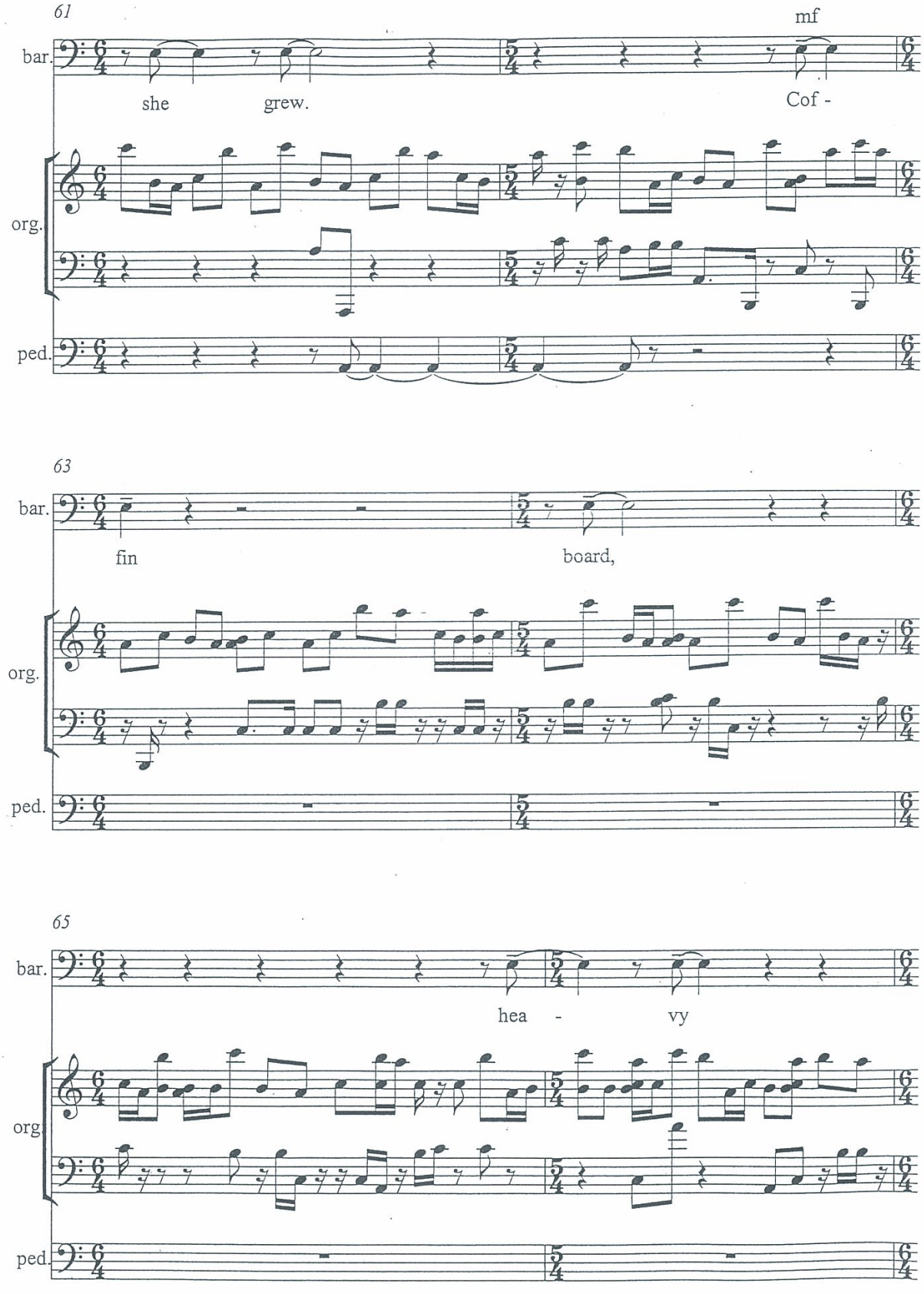

31
bar.
bright
org.
ped.
33
bar.
gold - en hair
org.
ped.
35
bar.
tar - nished
org.
ped.

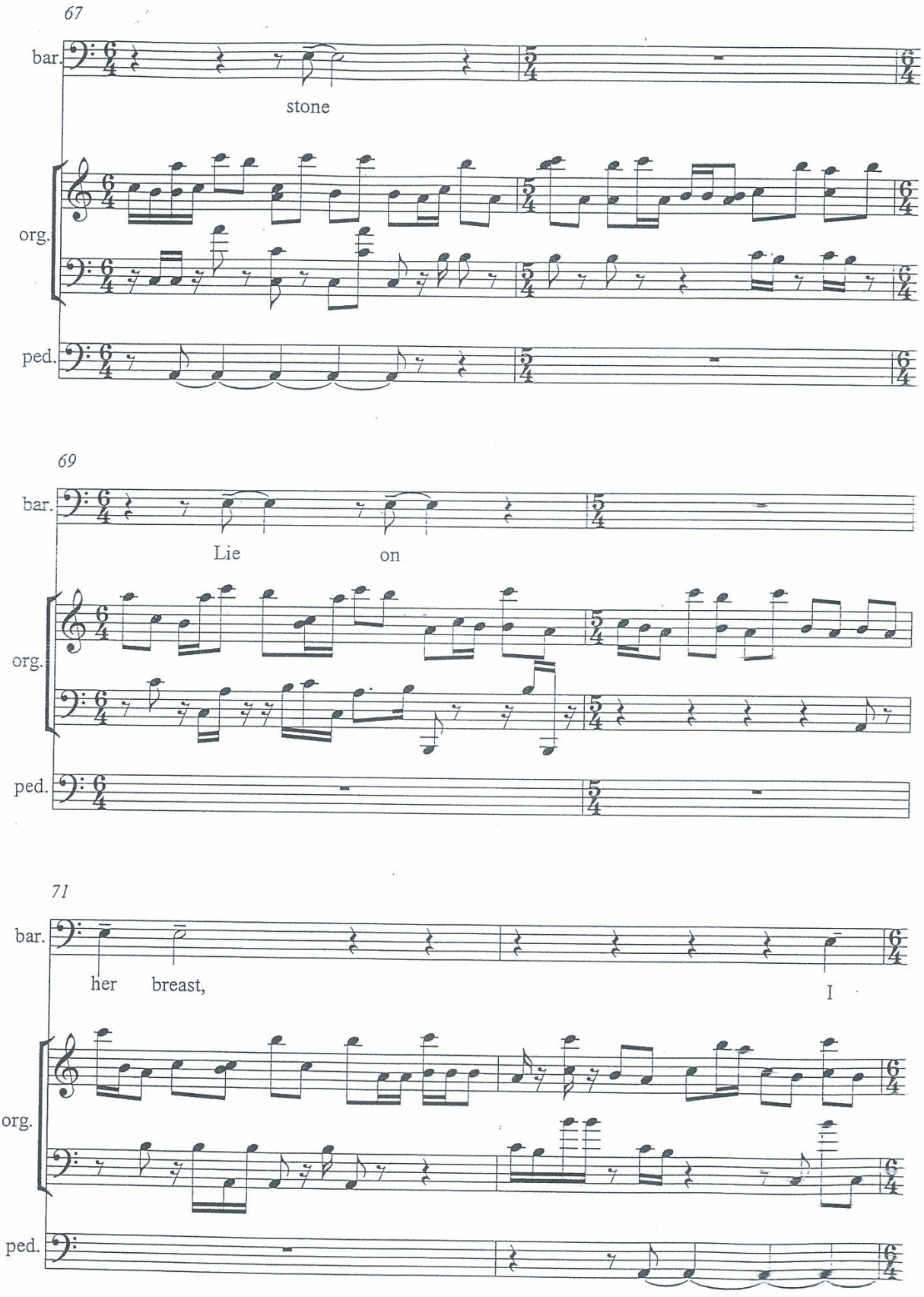

37
bar.
with rust,
org.
ped.
39
bar.
she that was
org.
ped.
41
mf
bar.
young and fair
org.
ped.

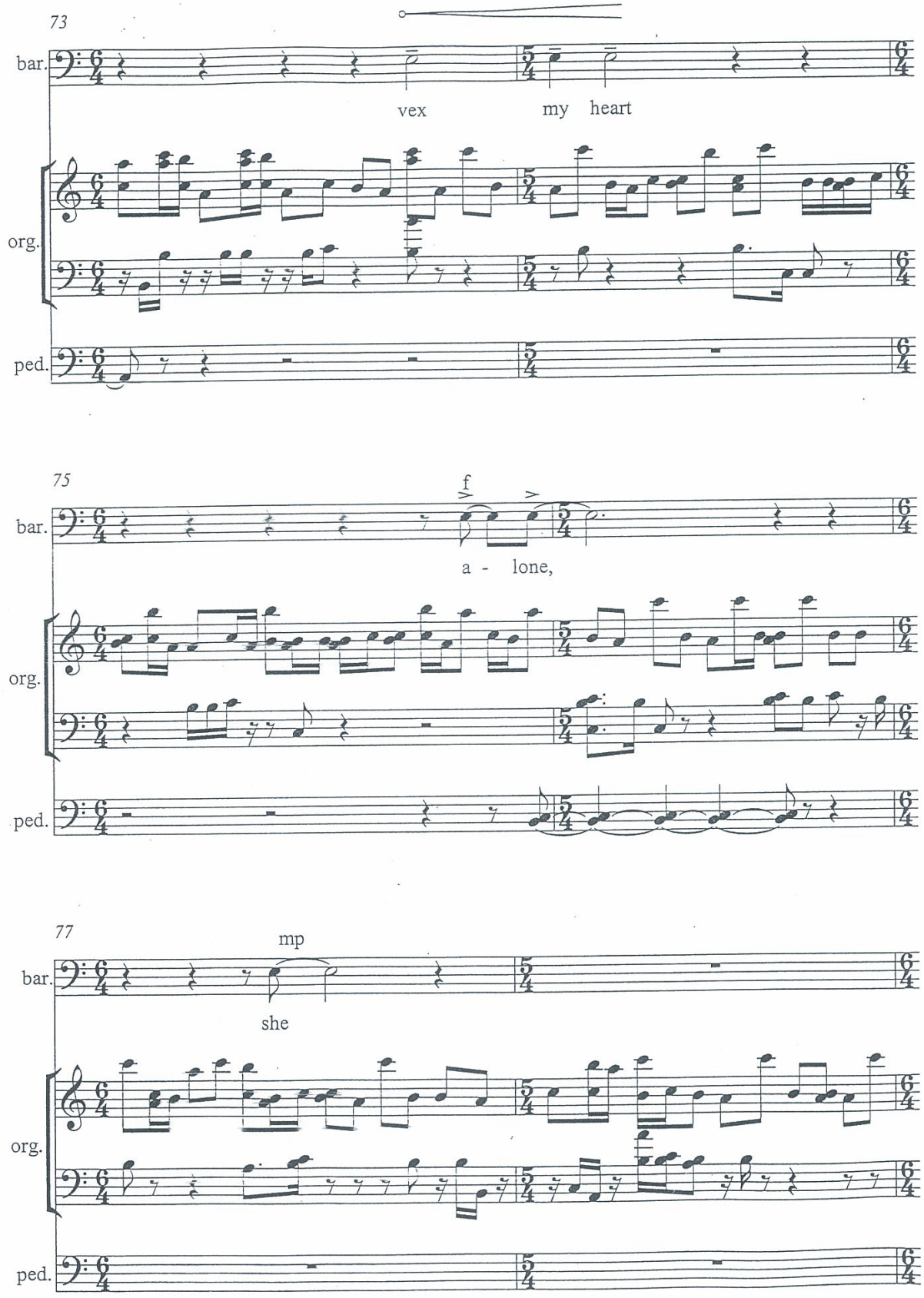

43
p
bar.
fall - en to dust.
org.
ped.
45
bar.
Li - ly
org.
ped.
47
bar.
like,
org.
ped.

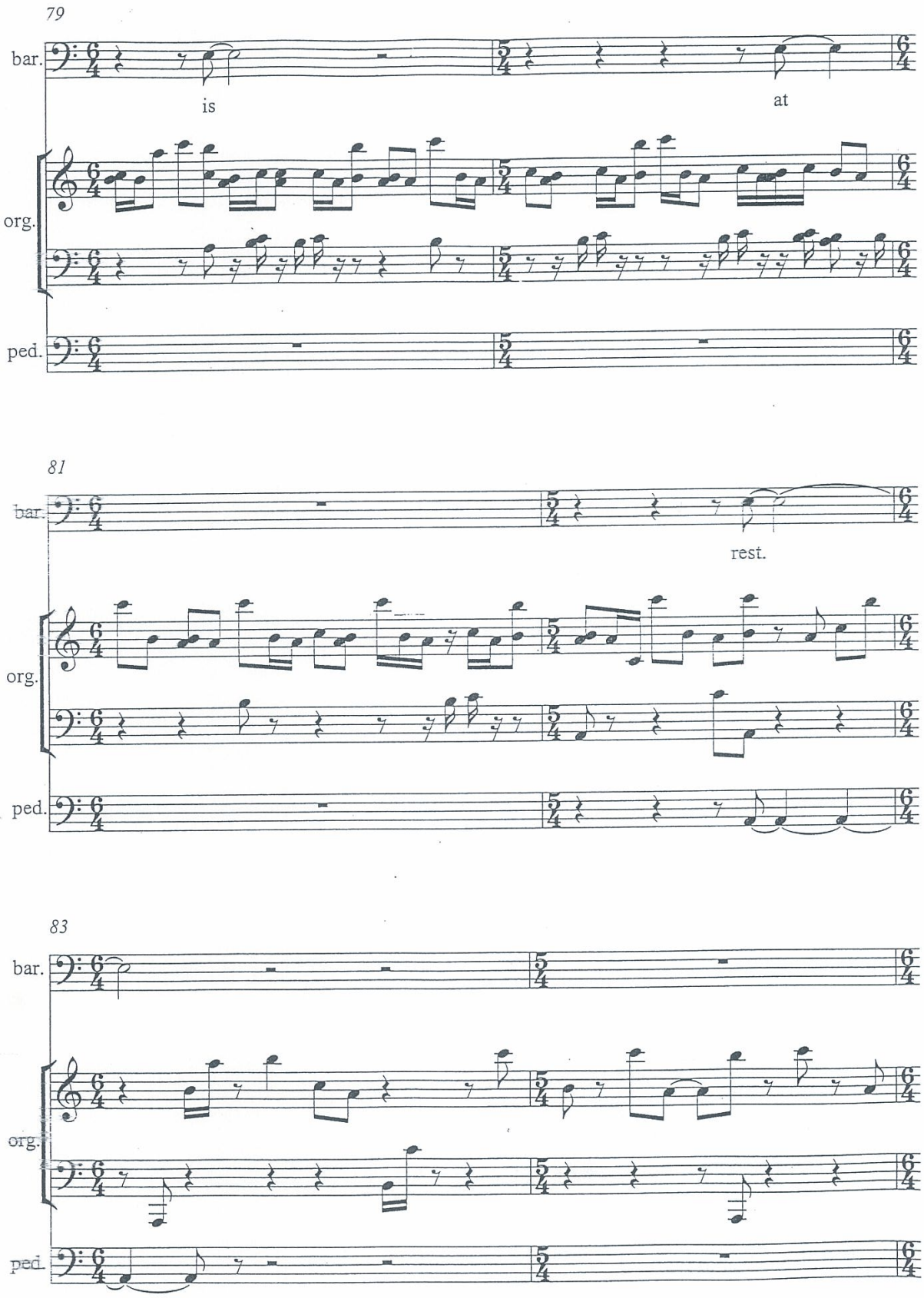

49
bar.
white
as
org.
ped.
51
bar.
snow,
She
org.
ped.
53
bar.
hard - ly knew
org.
ped.

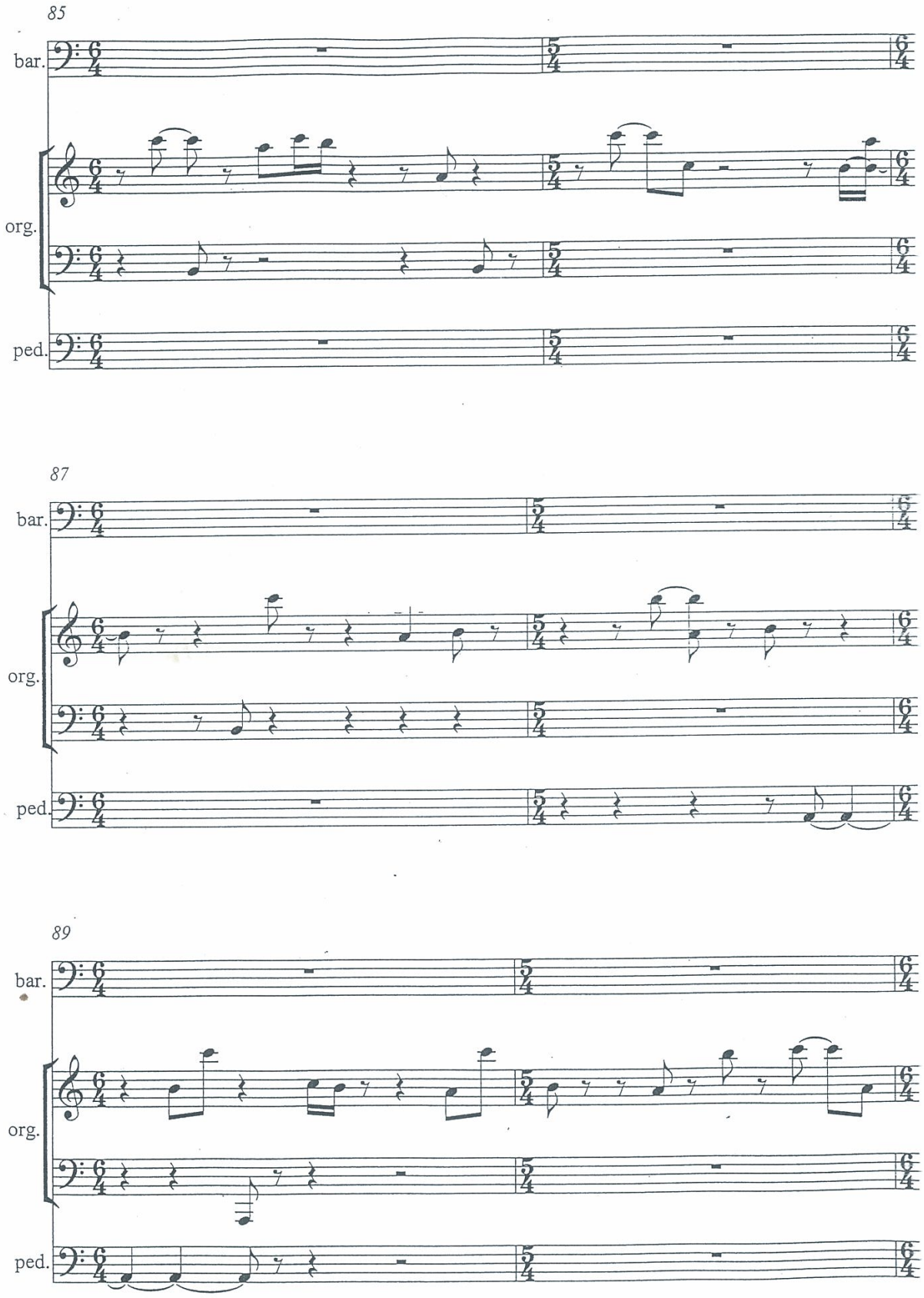

55
bar.
She
org.
ped.
57
bar.
was a wo - man, so
org.
ped.
59
bar.
sweet- ly
org.
ped.

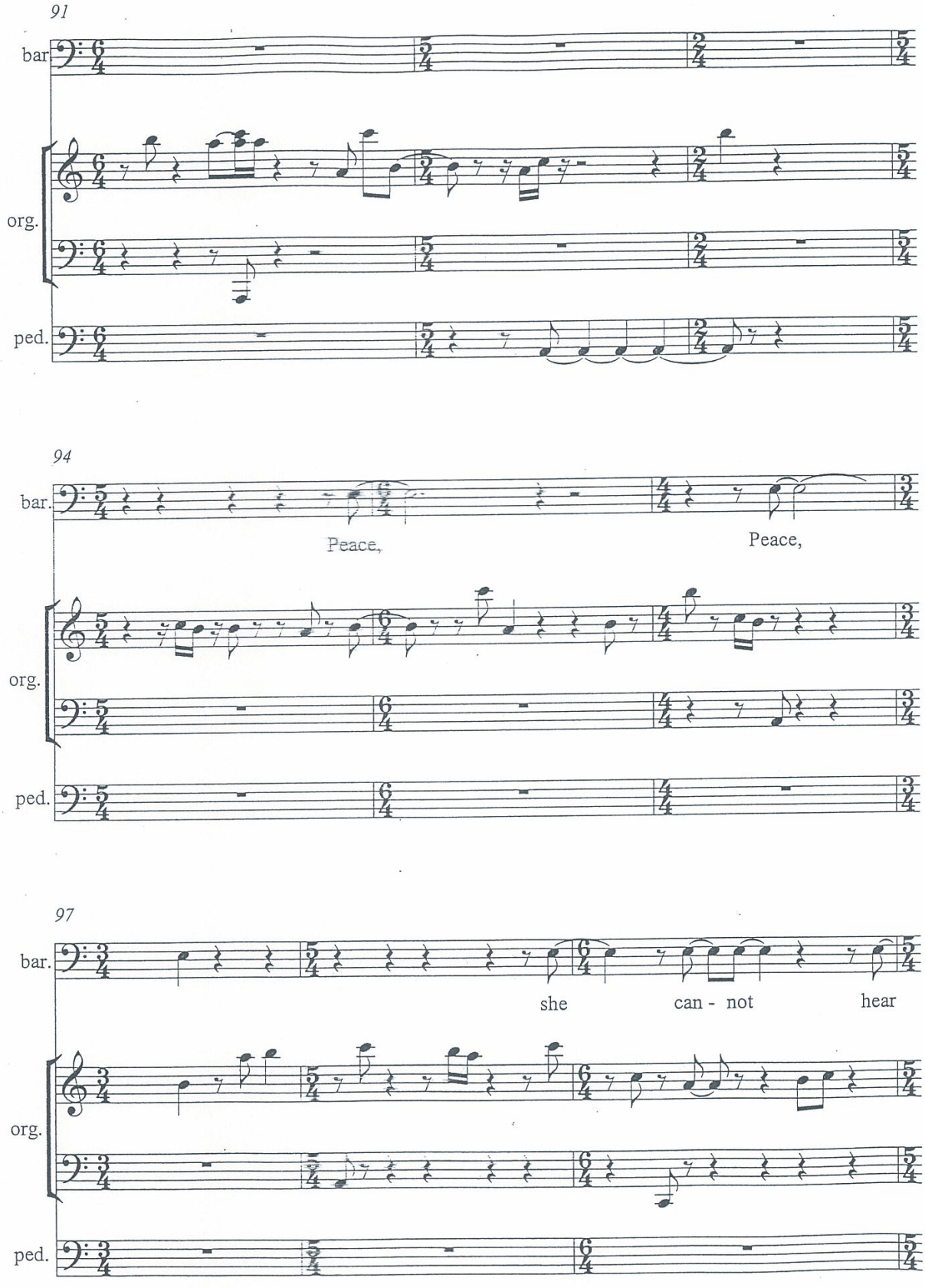

61
mf
bar.
she grew.
Cof -
org.
ped.
63
bar.
fin
board,
org.
ped.
65
bar.
hea - vy
org.
ped.

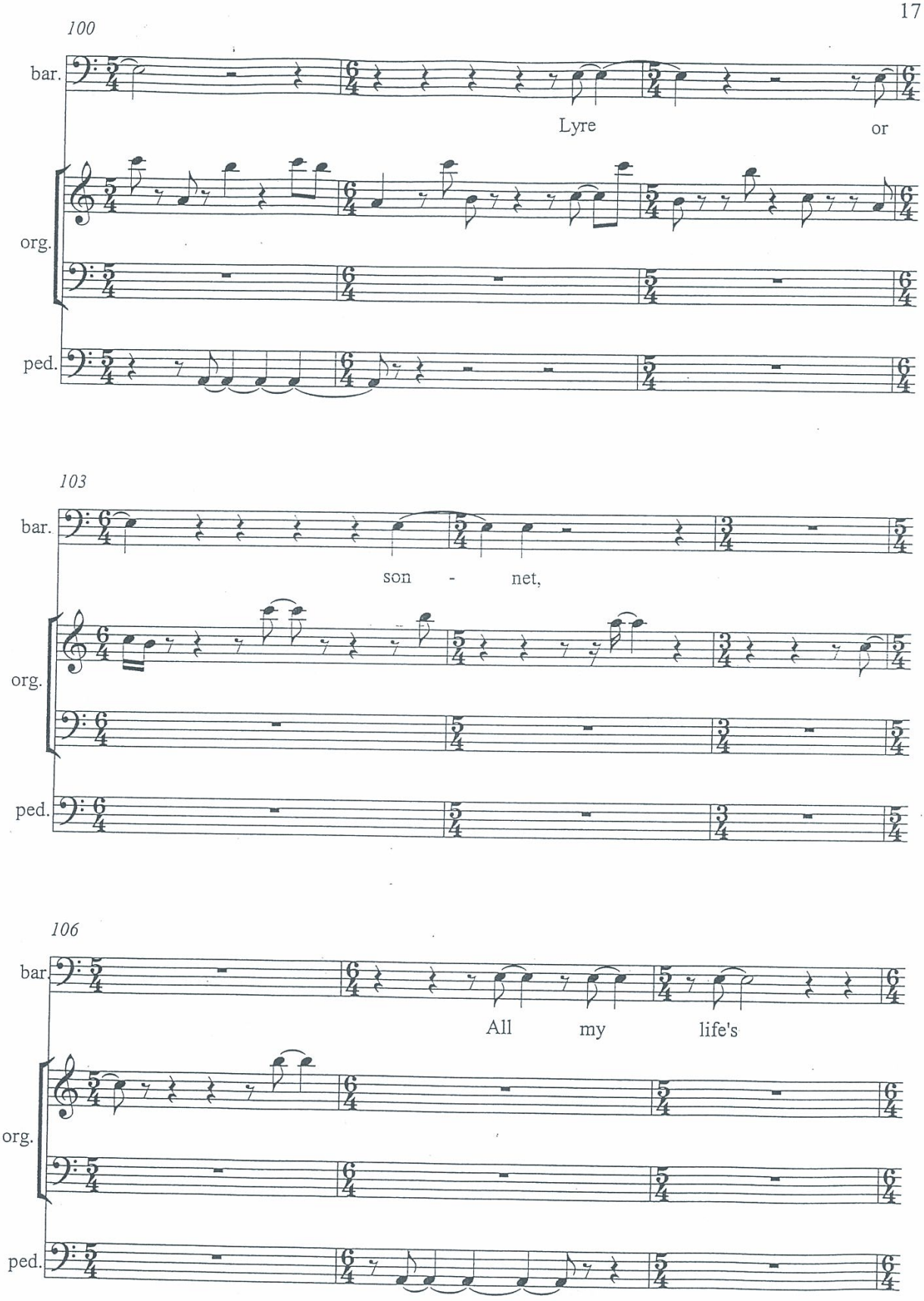

67
bar.
stone
org.
ped.
69
bar.
Lie
on
org.
ped.
71
bar.
her
breast,
I
org.
ped.

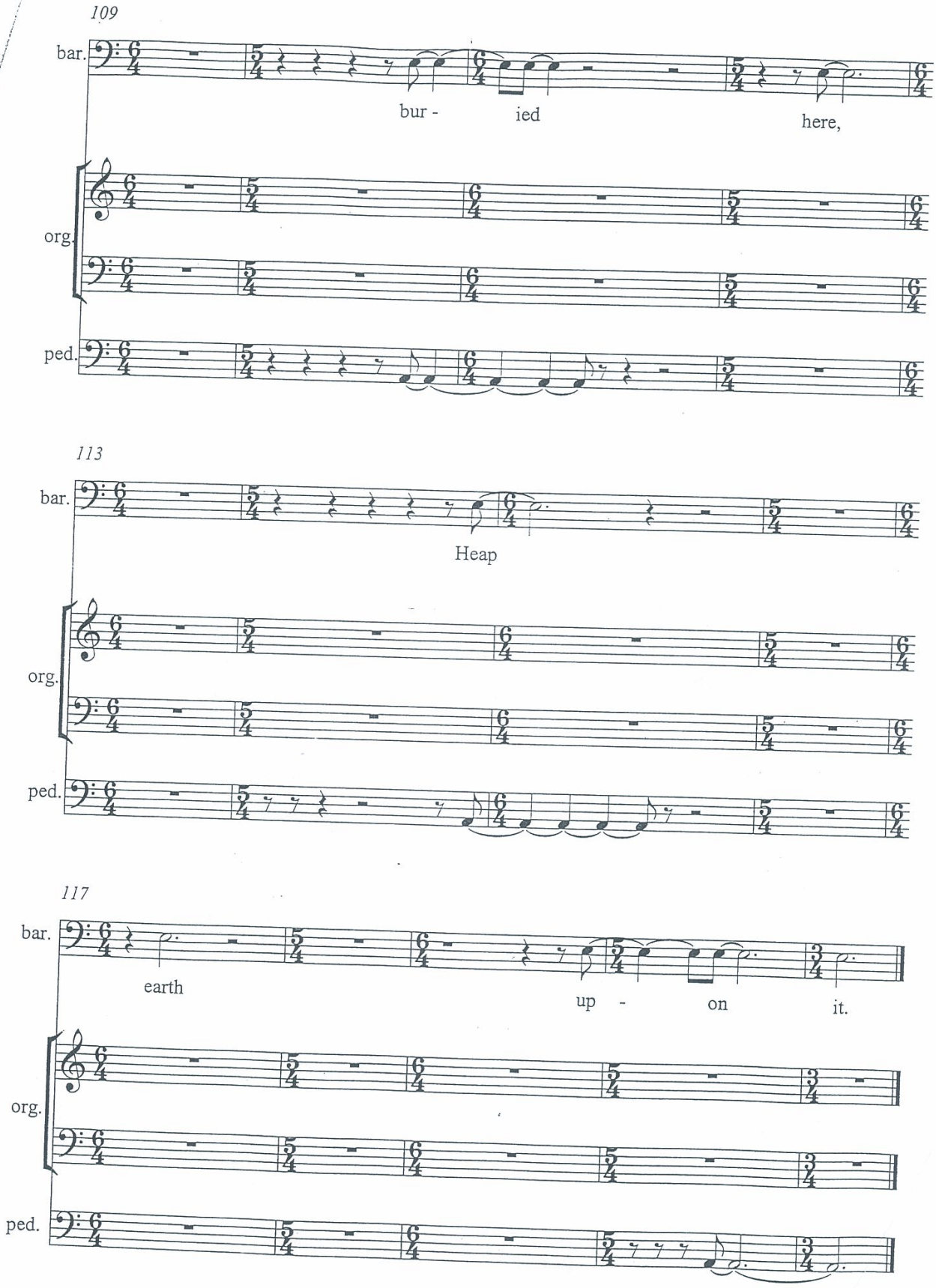

73
bar.
vex
my heart
org.
ped.
75
f
bar.
a - lone,
org.
ped.
77
mp
bar.
she
org.
ped.


79
bar.
is
at
org.
ped.
81
bar.
rest.
org.
ped.
83
bar.
org.
ped.


85
bar.
org.
ped.
87
bar.
org.
ped.
89
bar.
org.
ped.


91
bar.
org.
ped.
94
bar.
Peace,
Peace,
org.
ped.
97
bar.
she
can - not
hear
org.
ped.


100
bar.
Lyre
or
org.
ped.
103
bar.
son - net,
org.
ped.
106
bar.
All my life's
org.
ped.


109
bar.
bur -
ied
here,
org.
ped.
113
bar.
Heap
org.
ped.
117
bar.
earth
up
-
on
it.
org.
ped.

Forth

For viola, violin and pre-recorded media

Irene Buckley

2006

Forth

Irene Buckley

2006

Duration: 21. 38

Instrumentation:

Viola
Violin
Pre-recorded media (CD)
Video

Instructions:

To be performed with either a click-track or with a stop-watch.

Viola and Violin

forth

Irene Buckley

♩ = 80

Viola

8

V

15

Vla

00.36

gently ***mp***

23

Vla

00.54

gliss.

30

V

37

Vla

01.21

p

45

Vla

mp

01.50

gliss.

52

Vla

gliss.

mf

59

Vla

02.14

66

Vla

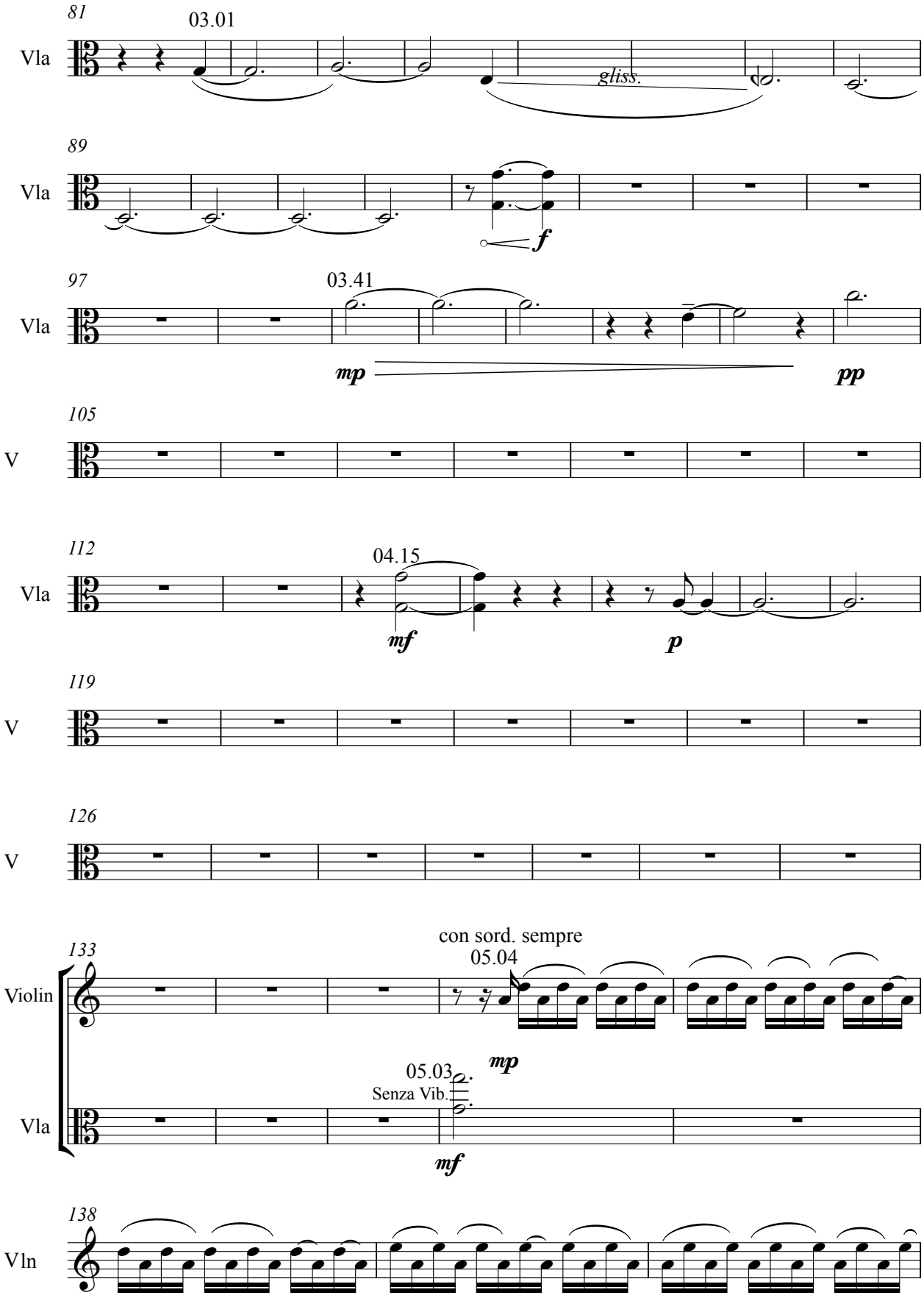
02.33

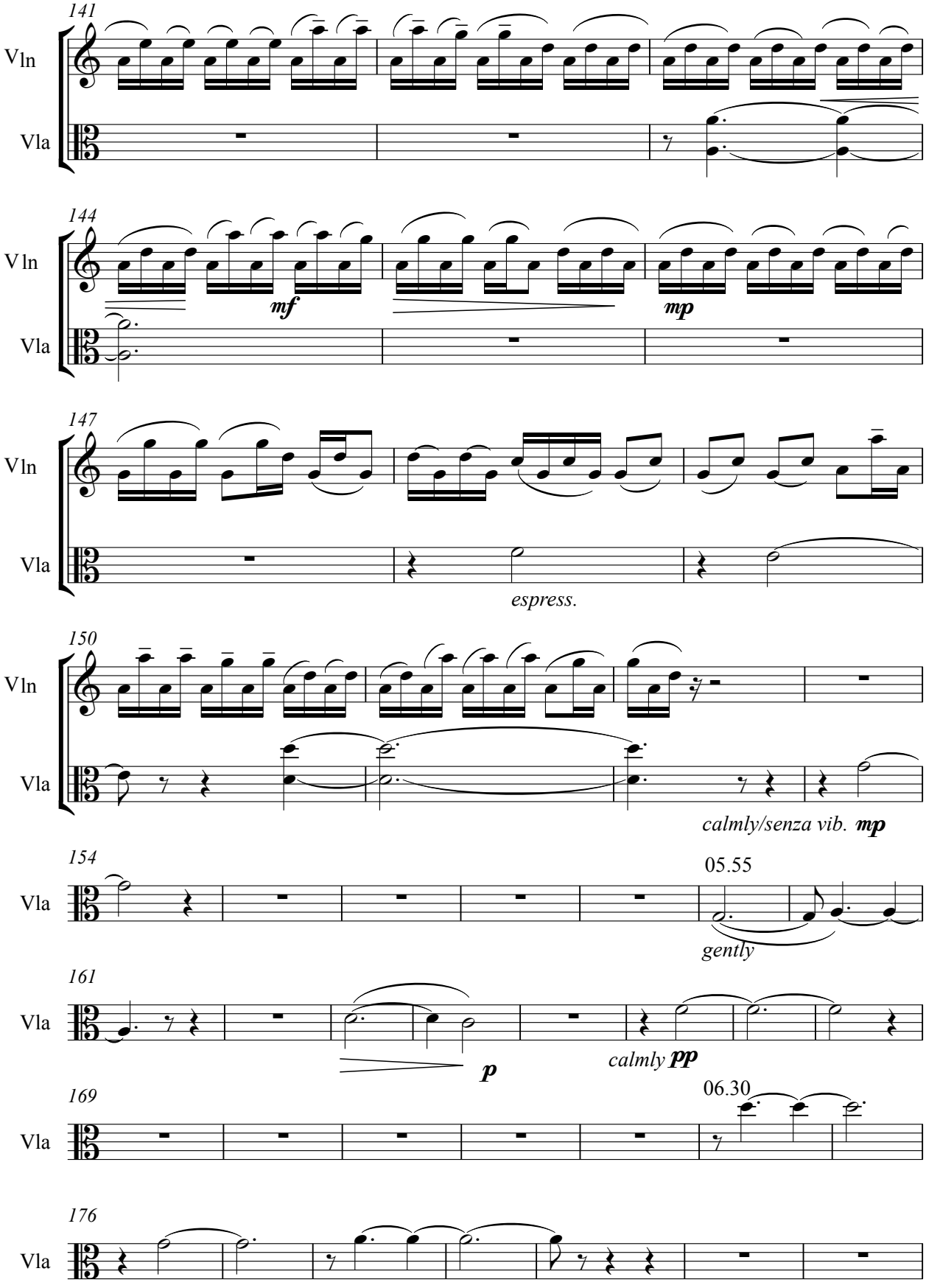
gliss.

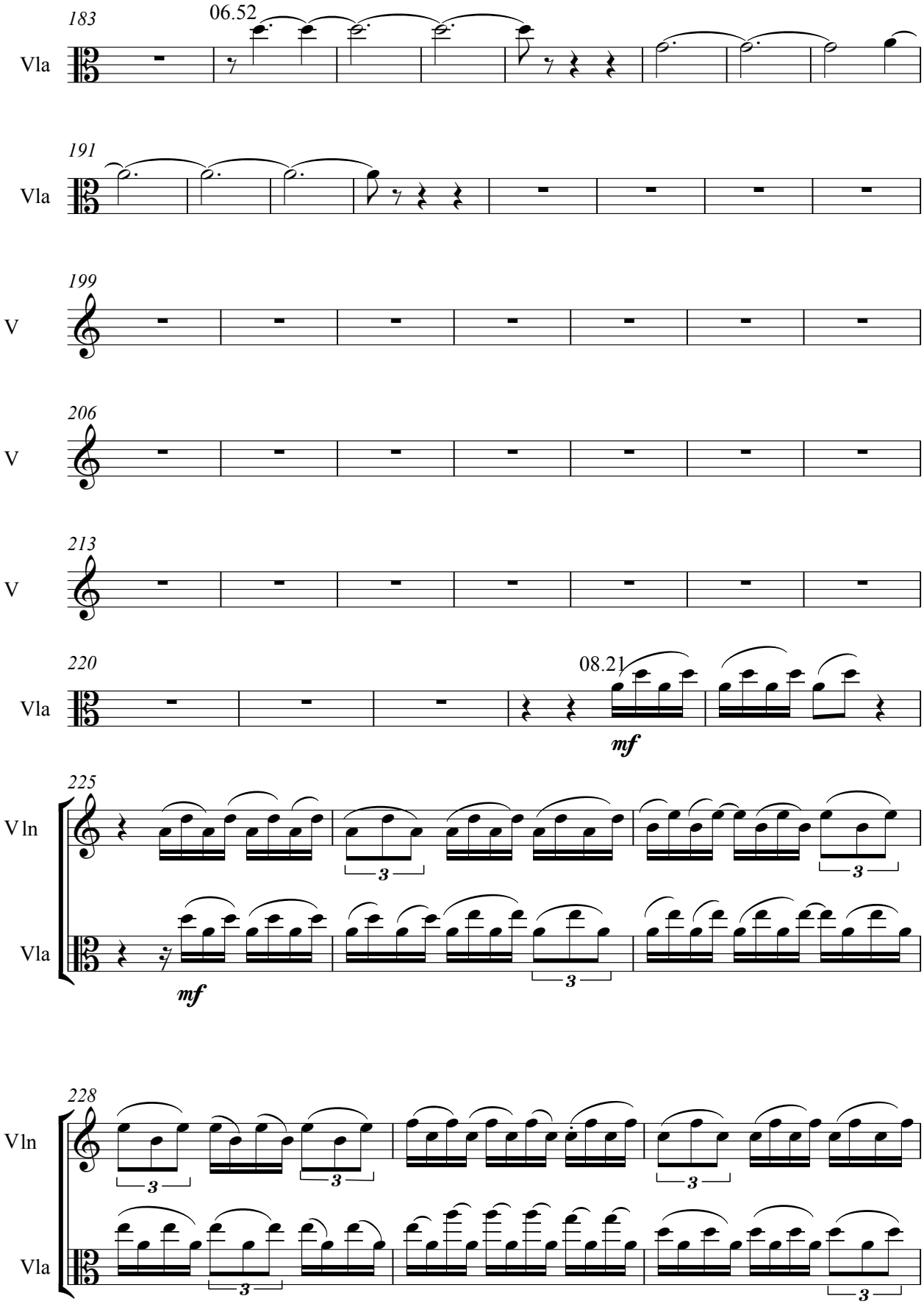
mp

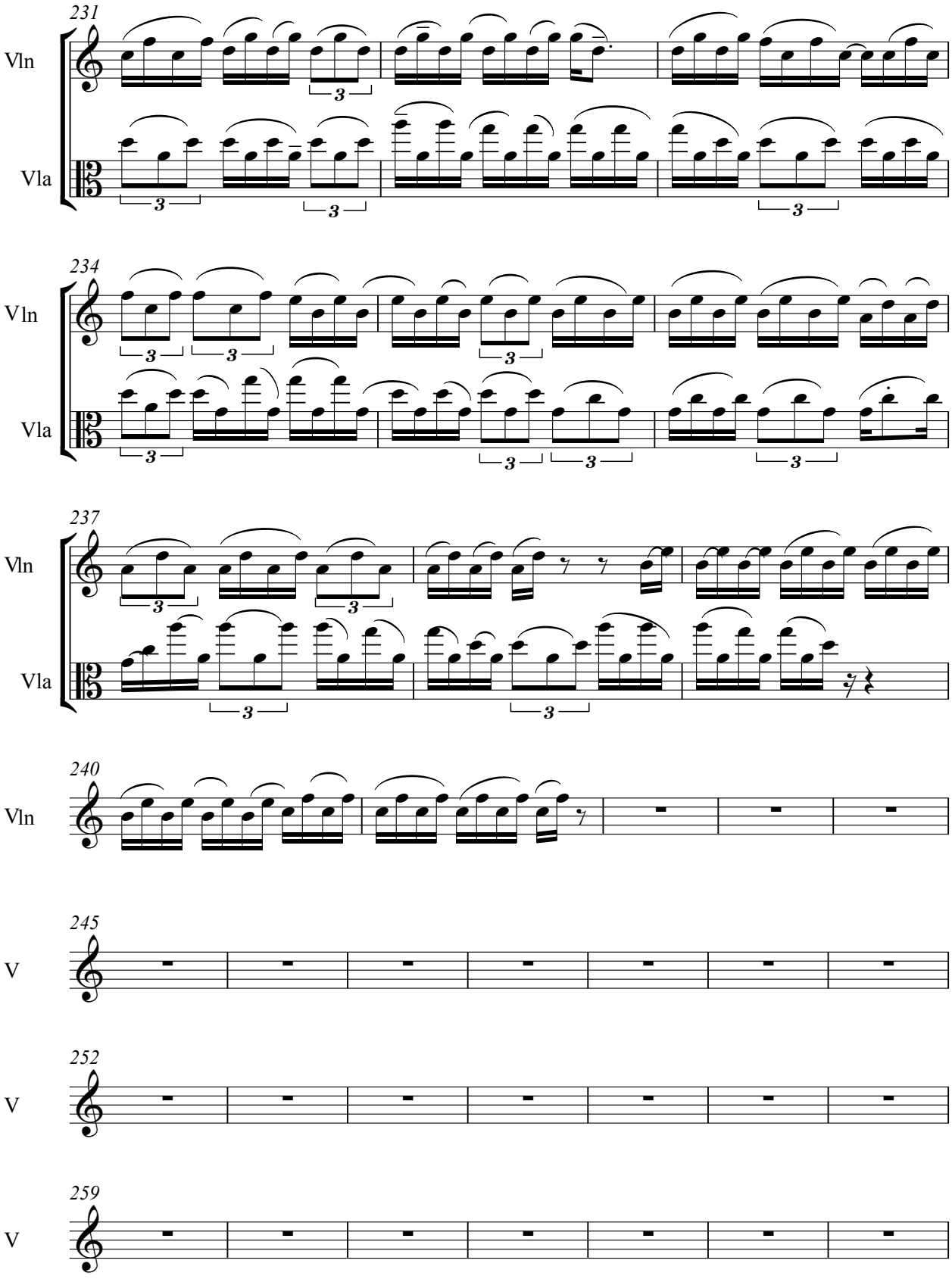
74

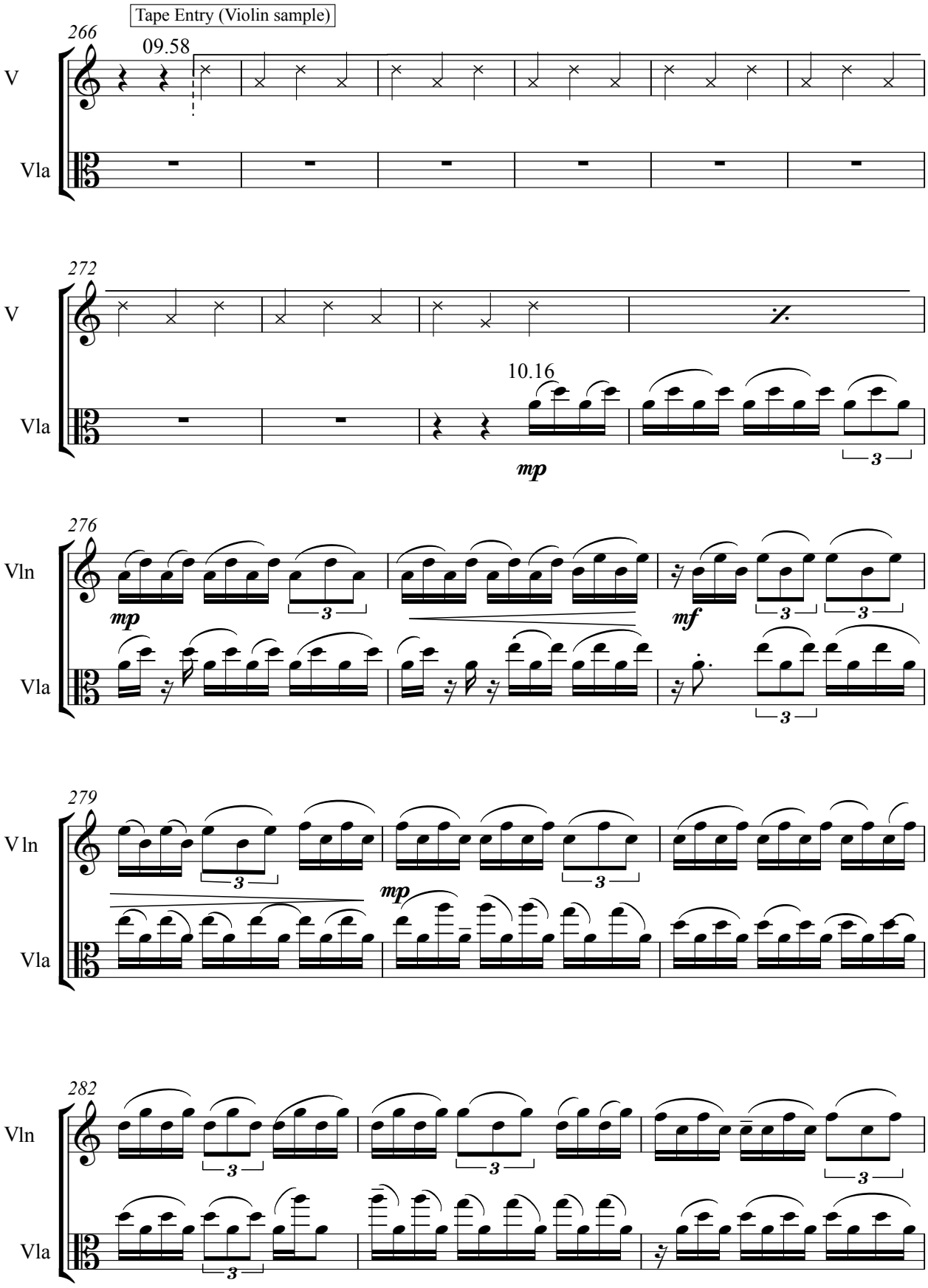
V

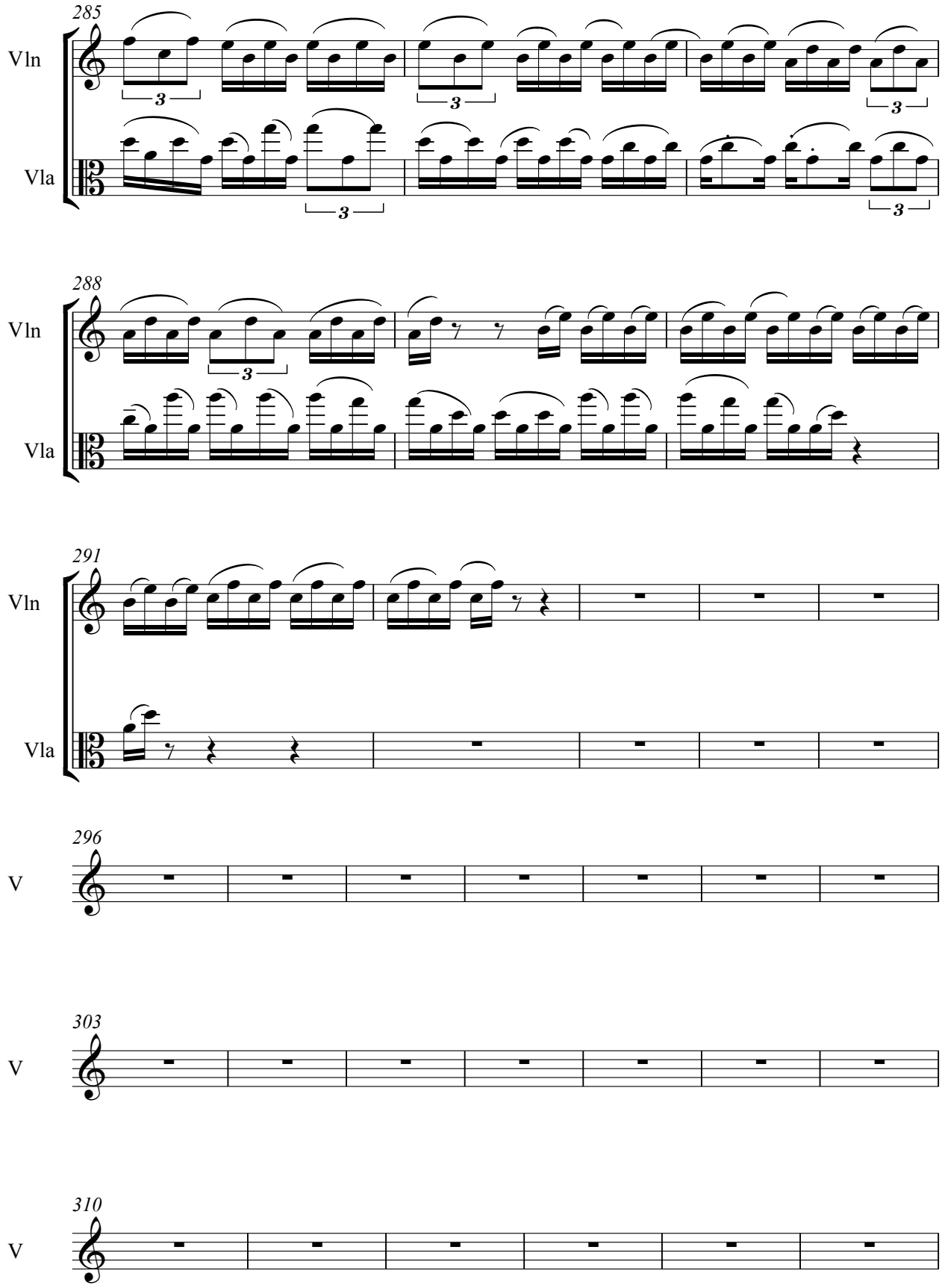

81
03.01
Vla
gliss.
89
Vla
f
97
03.41
Vla
mp
pp
105
V
112
04.15
Vla
mf
p
119
V
126
V
133
con sord. sempre
05.04
Violin
mp
05.03
Senza Vib.
Vla
mf
138
Vln

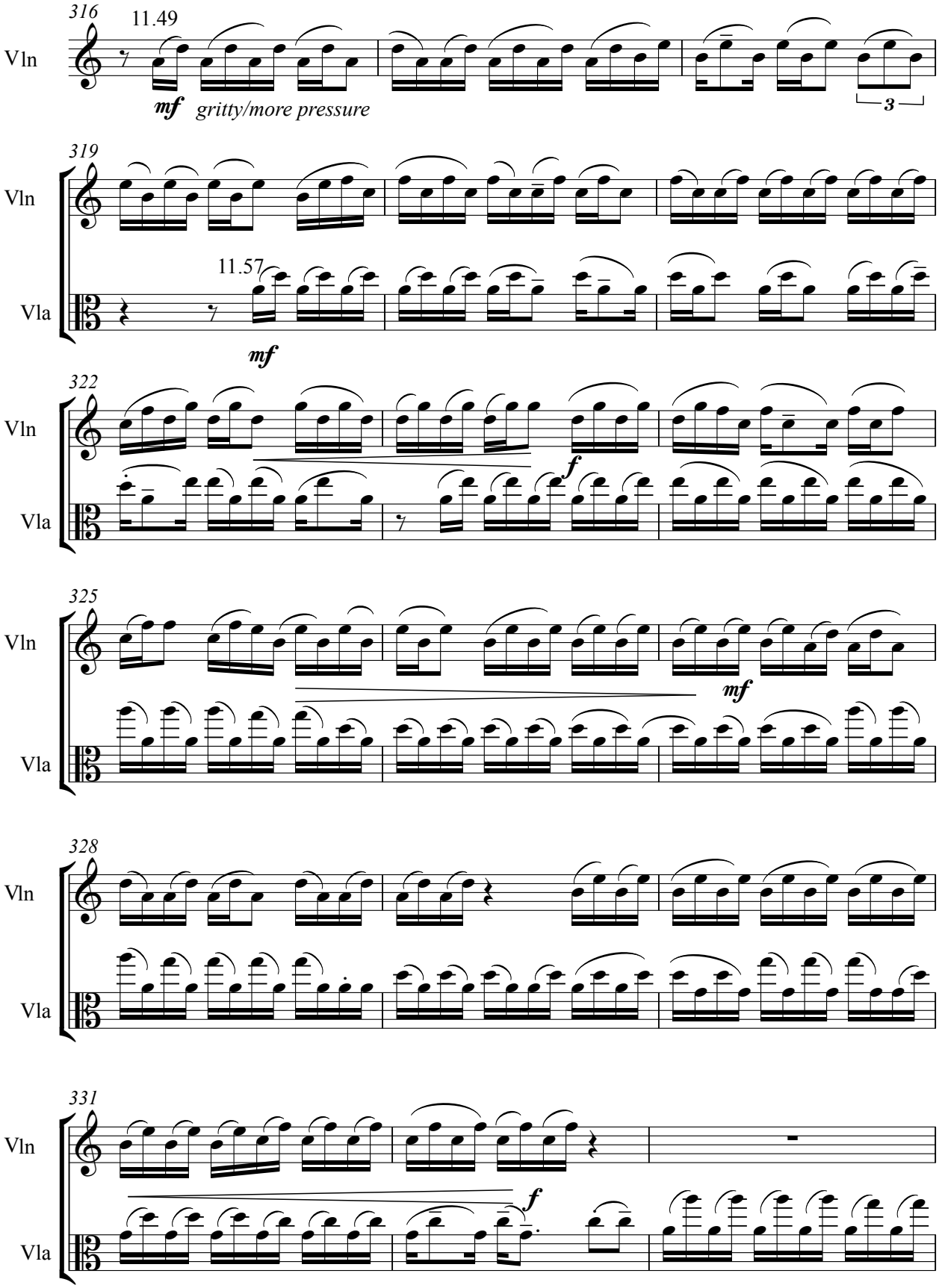

141
Vln
Vla
144
Vln
Vla
mf
mp
147
Vln
Vla
espress.
150
Vln
Vla
calmly/senza vib. mp
154
Vla
05.55
gently
161
Vla
p
calmly pp
169
Vla
06.30
176
Vla

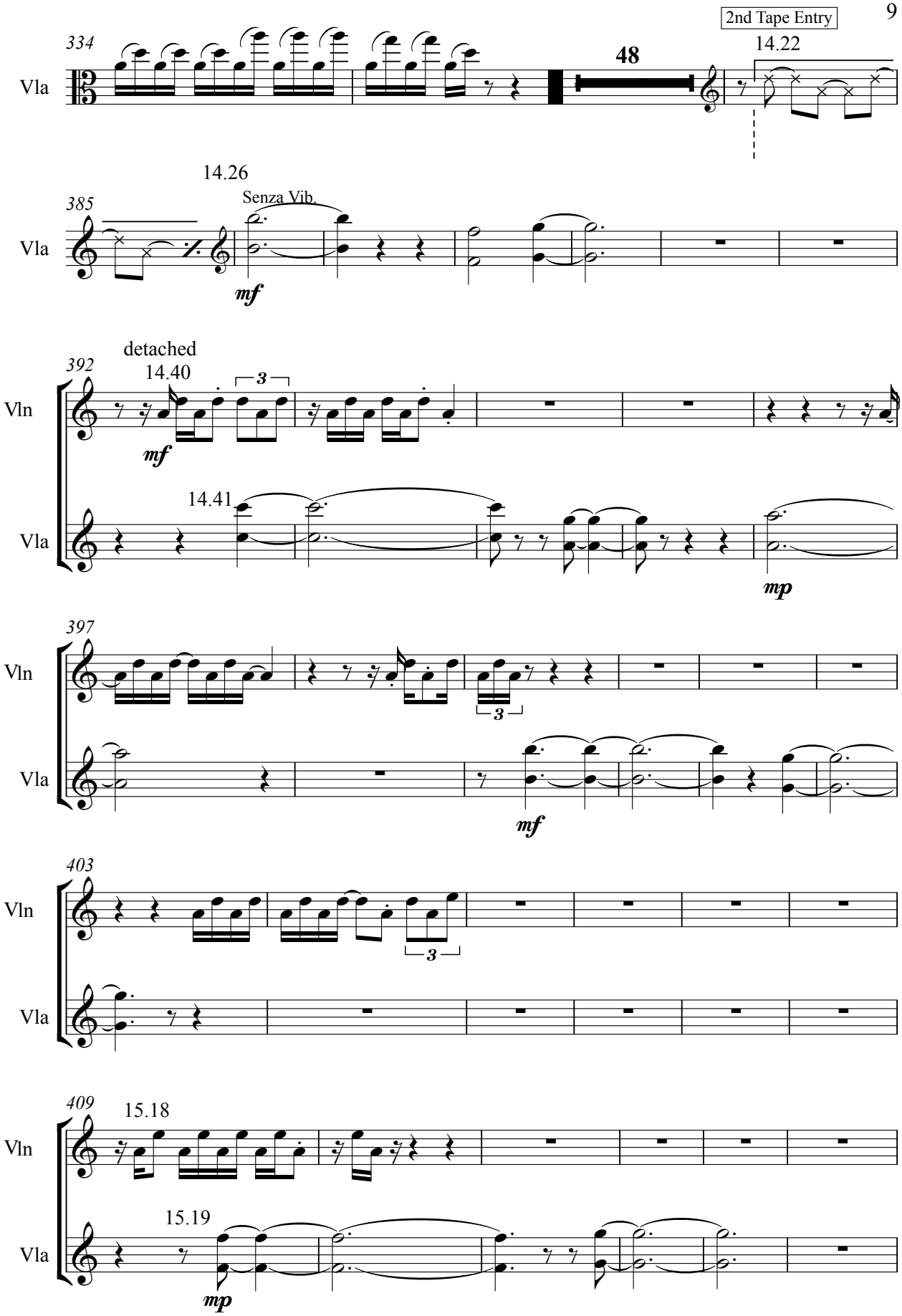

183
06.52
Vla
191
Vla
199
V
206
V
213
V
220
08.21
Vla
mf
225
Vln
Vla
mf
3
3
3
228
Vln
Vla
3
3
3
3

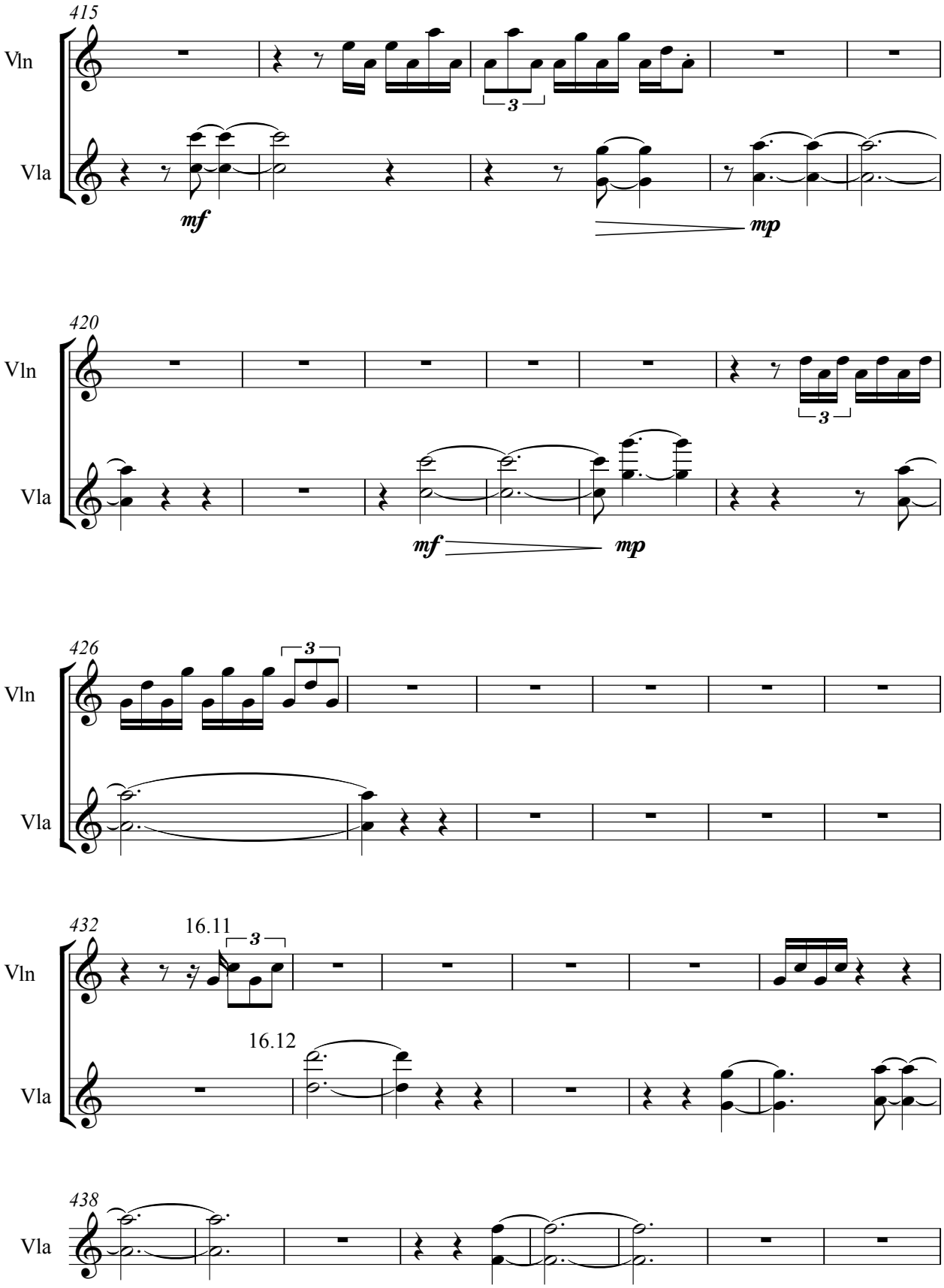

231
Vln
Vla
234
Vln
Vla
237
Vln
Vla
240
Vln
245
V
252
V
259
V

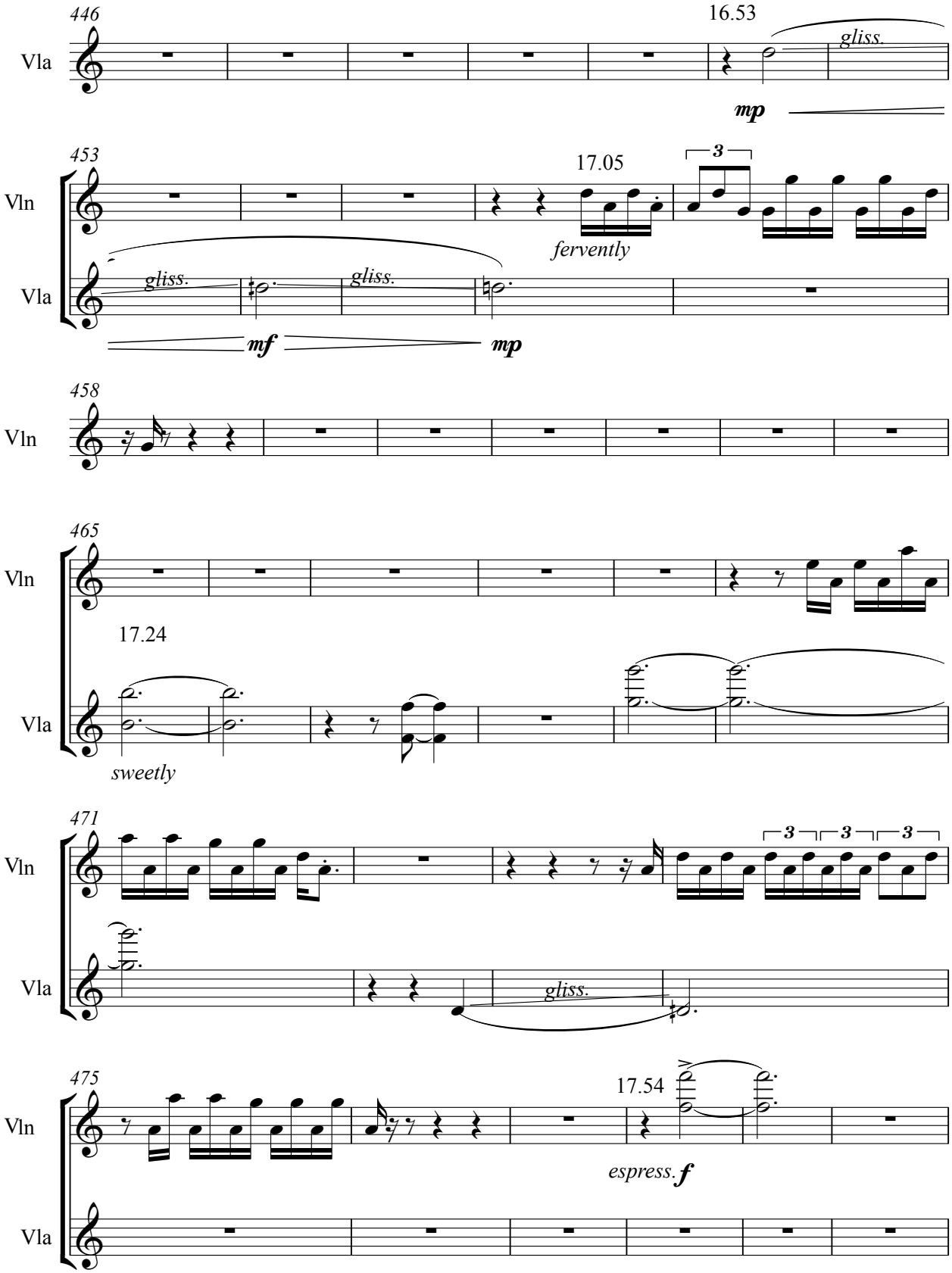

Tape Entry (Violin sample)
266
09.58
V
Vla
272
10.16
mp
276
Vln
mp
mf
279
mp
282

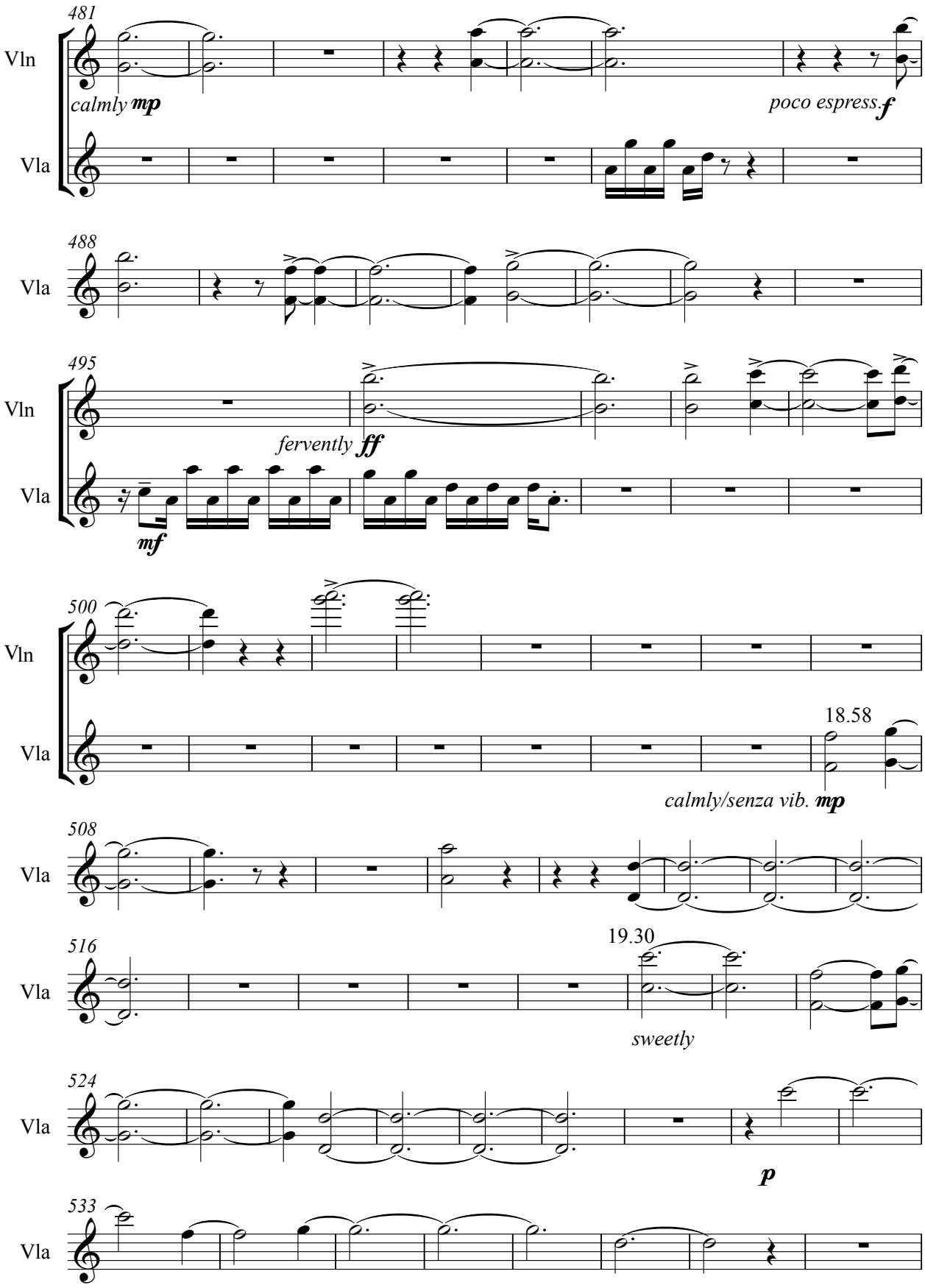

285
Vln
Vla
288
Vln
Vla
291
Vln
Vla
296
V
303
V
310
V

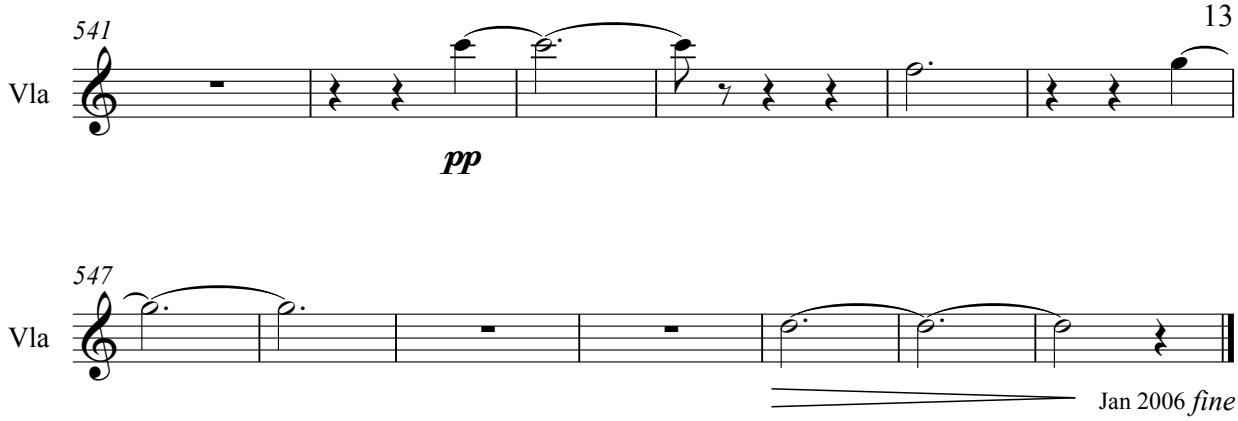

316
11.49
Vln
mf
gritty/more pressure
3
319
Vln
11.57
Vla
mf
322
Vln
f
Vla
325
Vln
mf
Vla
328
Vln
Vla
331
Vln
f
Vla


334
Vla
48
2nd Tape Entry
14.22
14.26
385
Senza Vib.
mf
detached
392
14.40
Vln
mf
14.41
Vla
mp
397
mf
403
409
15.18
15.19
mp


415
Vln
Vla
3
mf
mp
420
Vln
Vla
3
mf
mp
426
Vln
Vla
3
432
16.11
Vln
3
16.12
Vla
438
Vla


446
Vla
16.53
gliss.
mp
453
Vln
17.05
3
fervently
Vla
gliss.
gliss.
mf
mp
458
Vln
465
Vln
17.24
Vla
sweetly
471
Vln
3
3
3
Vla
gliss.
475
Vln
17.54
espress.
f
Vla


481
Vln
calmly mp
poco espress. f
Vla
488
Vla
495
Vln
fervently ff
Vla
mf
500
Vln
18.58
Vla
calmly/senza vib. mp
508
Vla
516
19.30
Vla
sweetly
524
Vla
p
533
Vla


541
Vla
pp

547
Vla
Jan 2006 fine

For de ereprijs

For large ensemble

Irene Buckley

2008

For de ereprijs

Irene Buckley

2008

Duration: 3 Minutes.

Instrumentation:

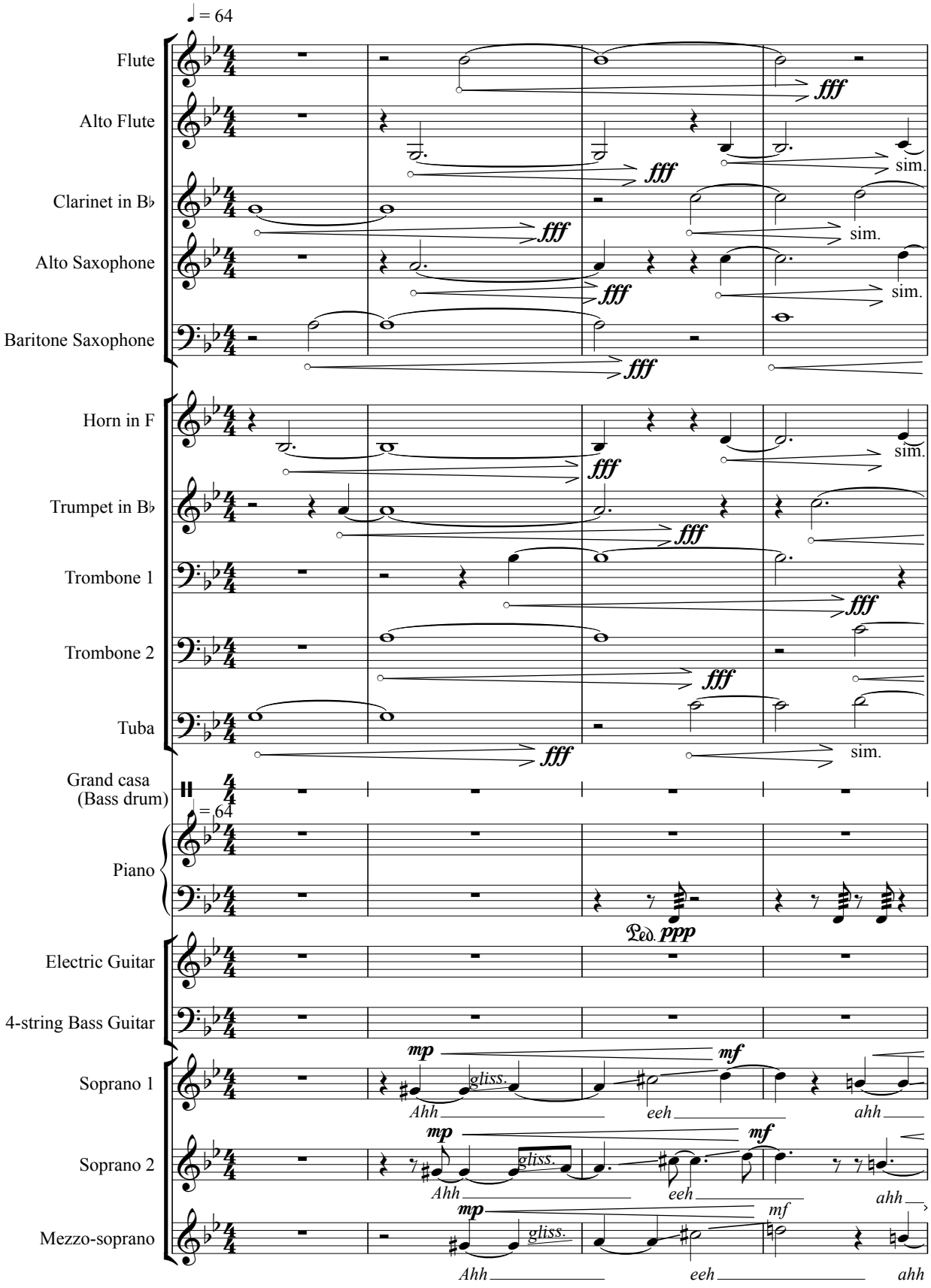
Flute.
Alto Flute.
Clarinet.
Alto Saxophone.
Baritone Saxophone.
French Horn.
Trumpet.
2 Trombones.
Tuba.
Bass drum.
Piano.
Electric guitar.
Bass guitar.
2 Sopranos.
Mezzo Soprano.

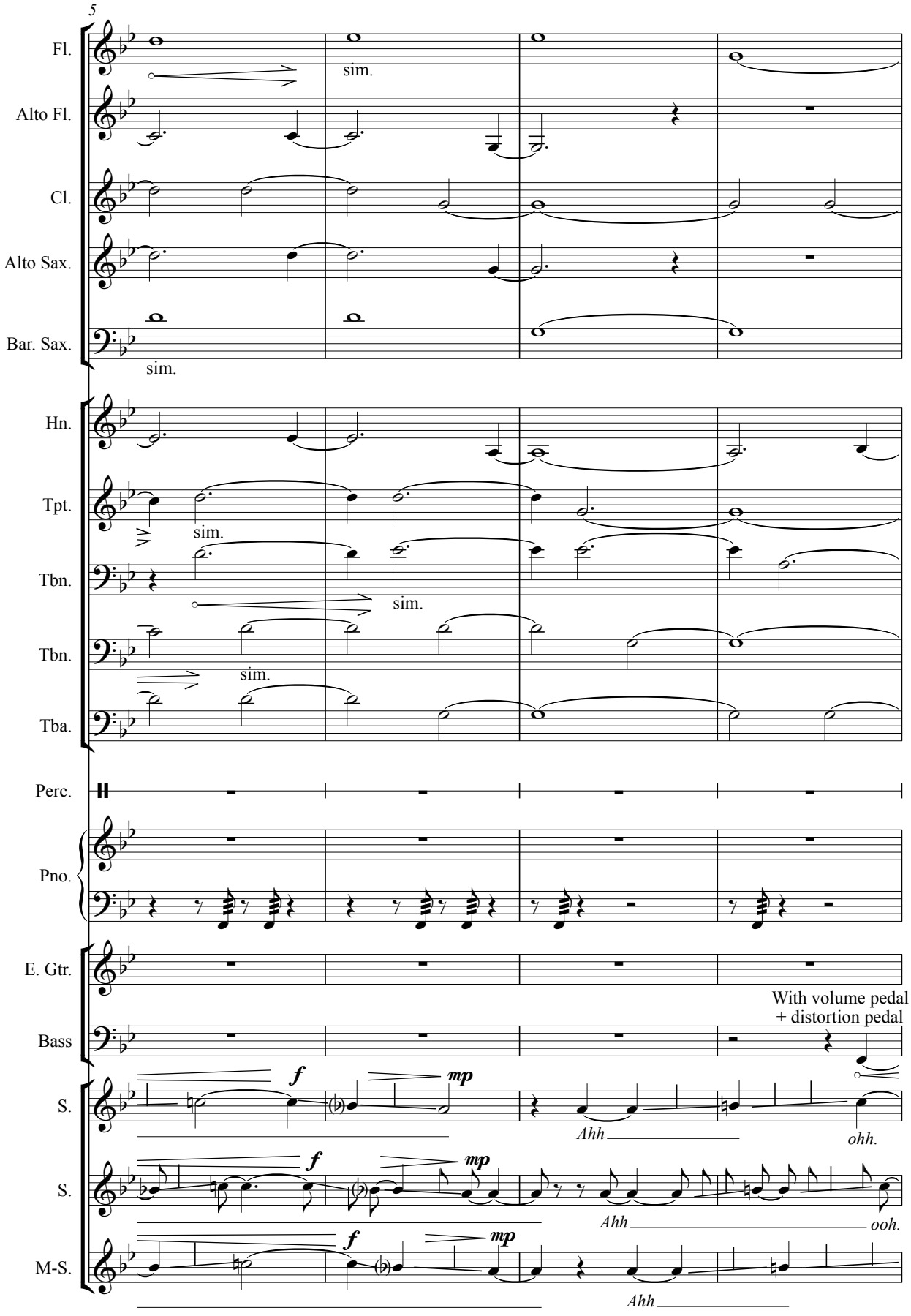
Instructions:

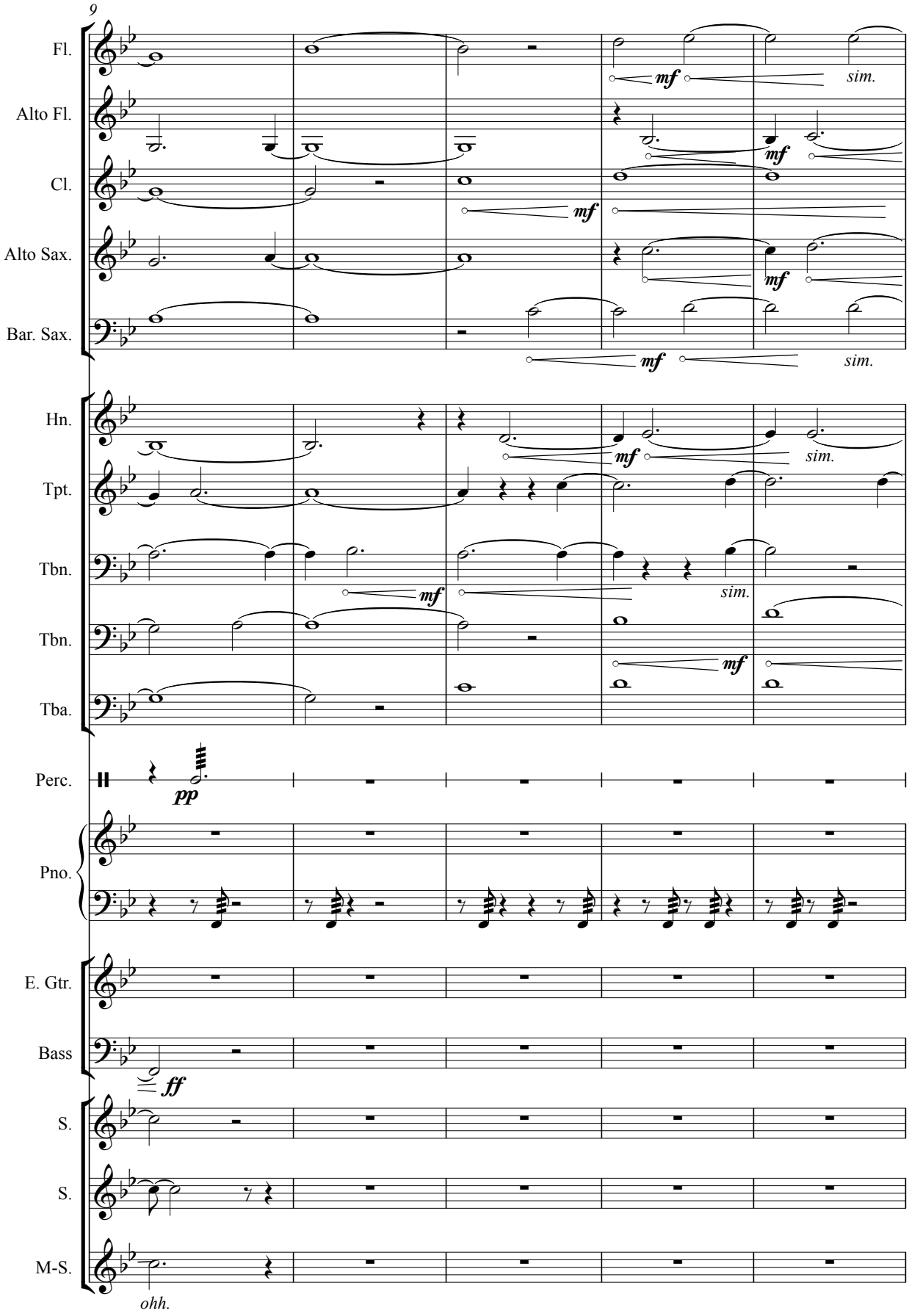
1. The symbol indicates a reverse attack. Only become very loud towards the end of the note.
2. Balance between instruments, volume wise, is extremely important for this piece to work. The instruments should blend with each other. No instrument should be more prominent than another.
3. At the 'Grittier tone' sections use a combination of the following:
Flutter-tongue.
Changing embouchure to produce different tones.
Broken sounds ie. Quickly stop/starting of notes.
Also alternate these with Pure tone so that the texture is constantly changing.

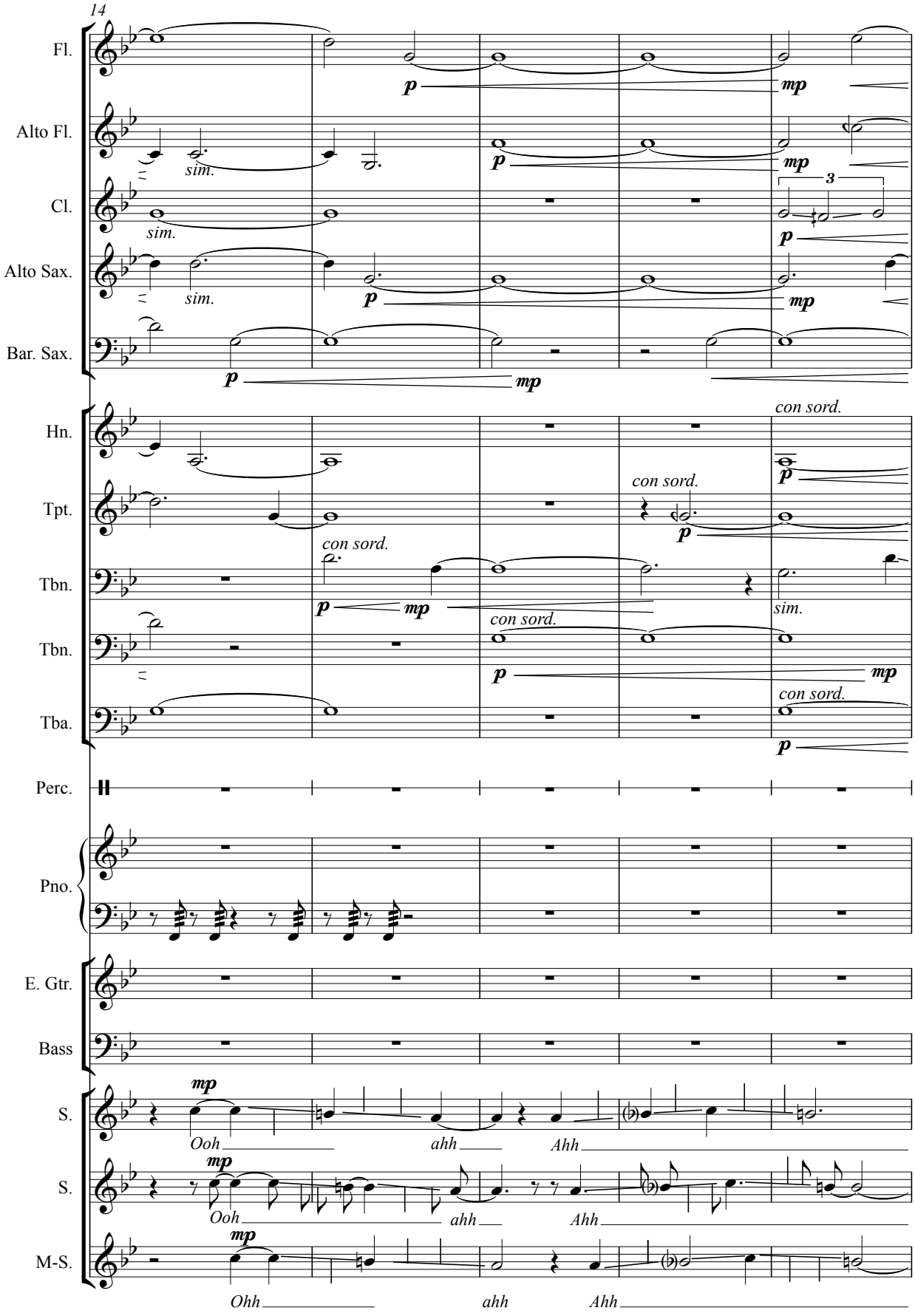
For de ereprijs

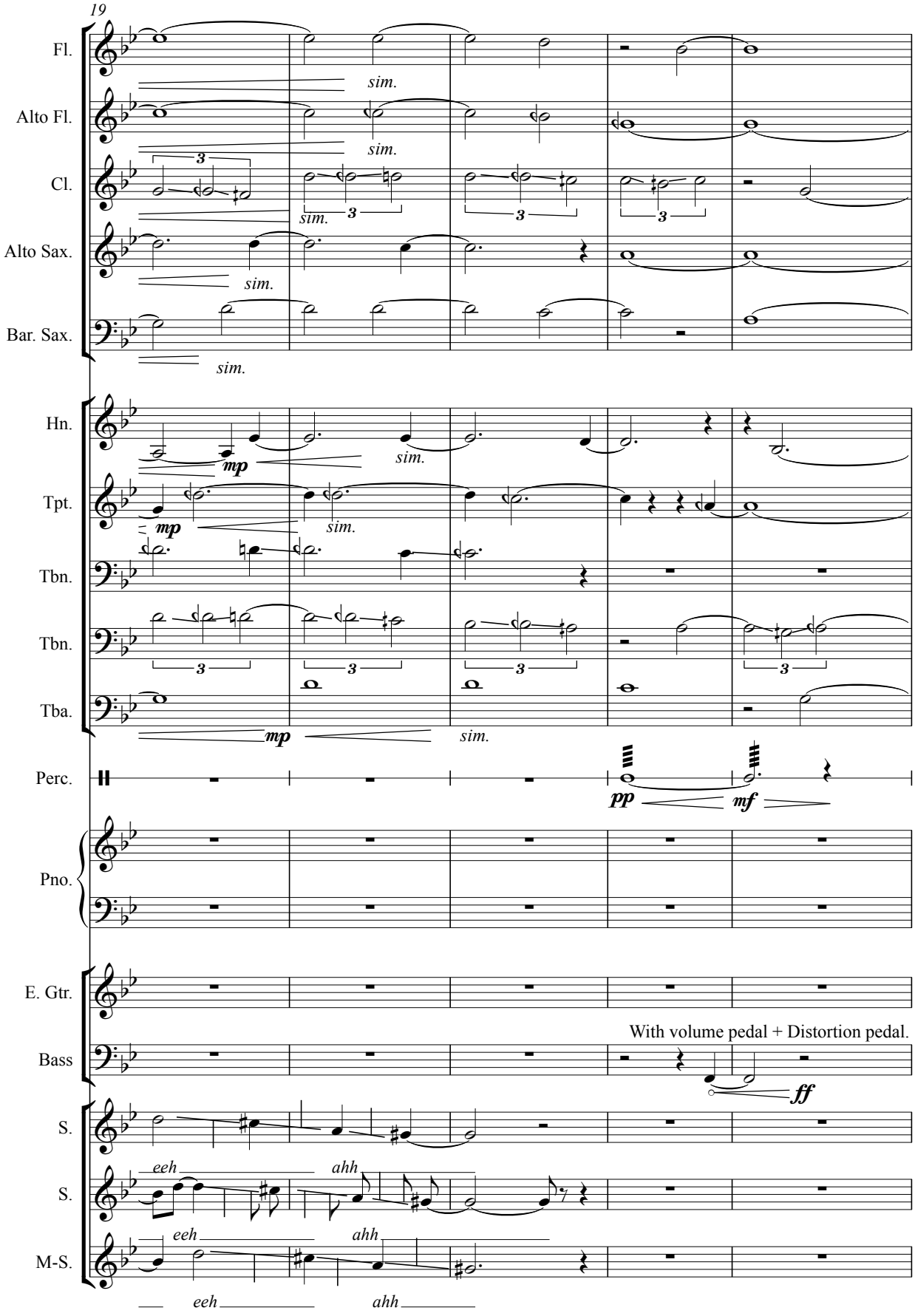
Irene Buckley

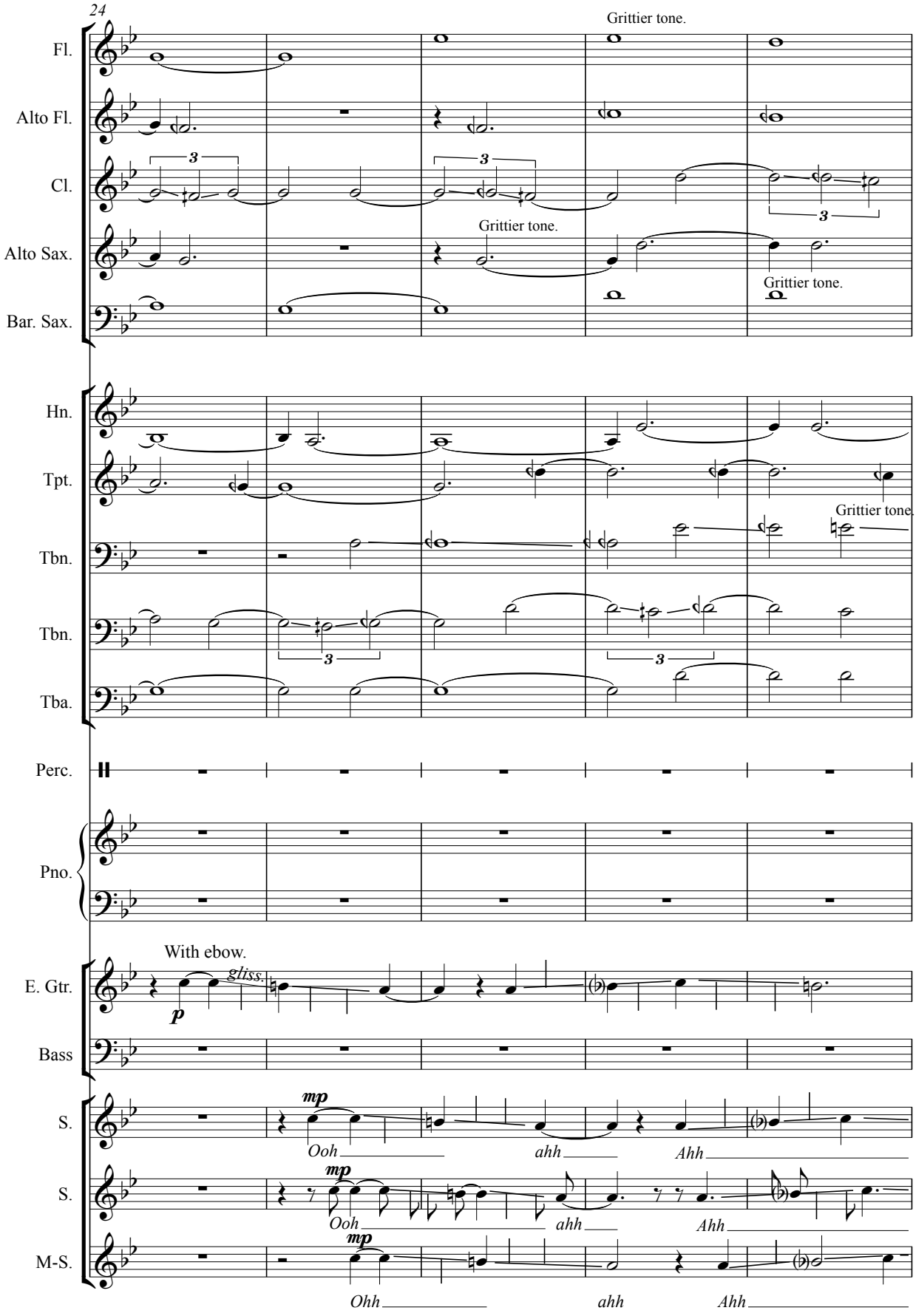


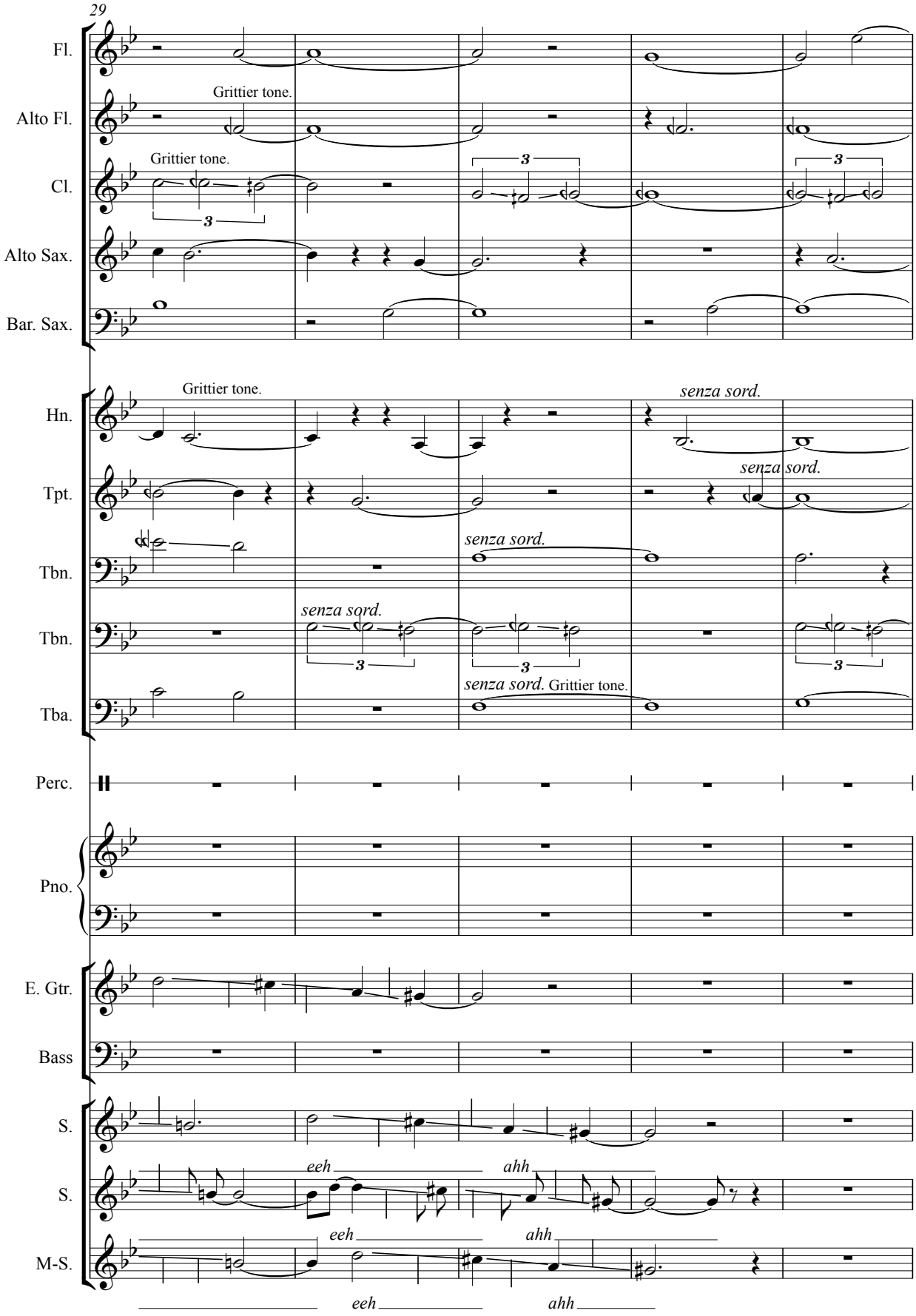

5
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
sim.
sim.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
sim.
sim.
sim.
Perc.
Pno.
E. Gtr.
With volume pedal
+ distortion pedal
Bass
S.
S.
M-S.
f
mp
Ahh
ohh.
Ahh
ooh.
Ahh

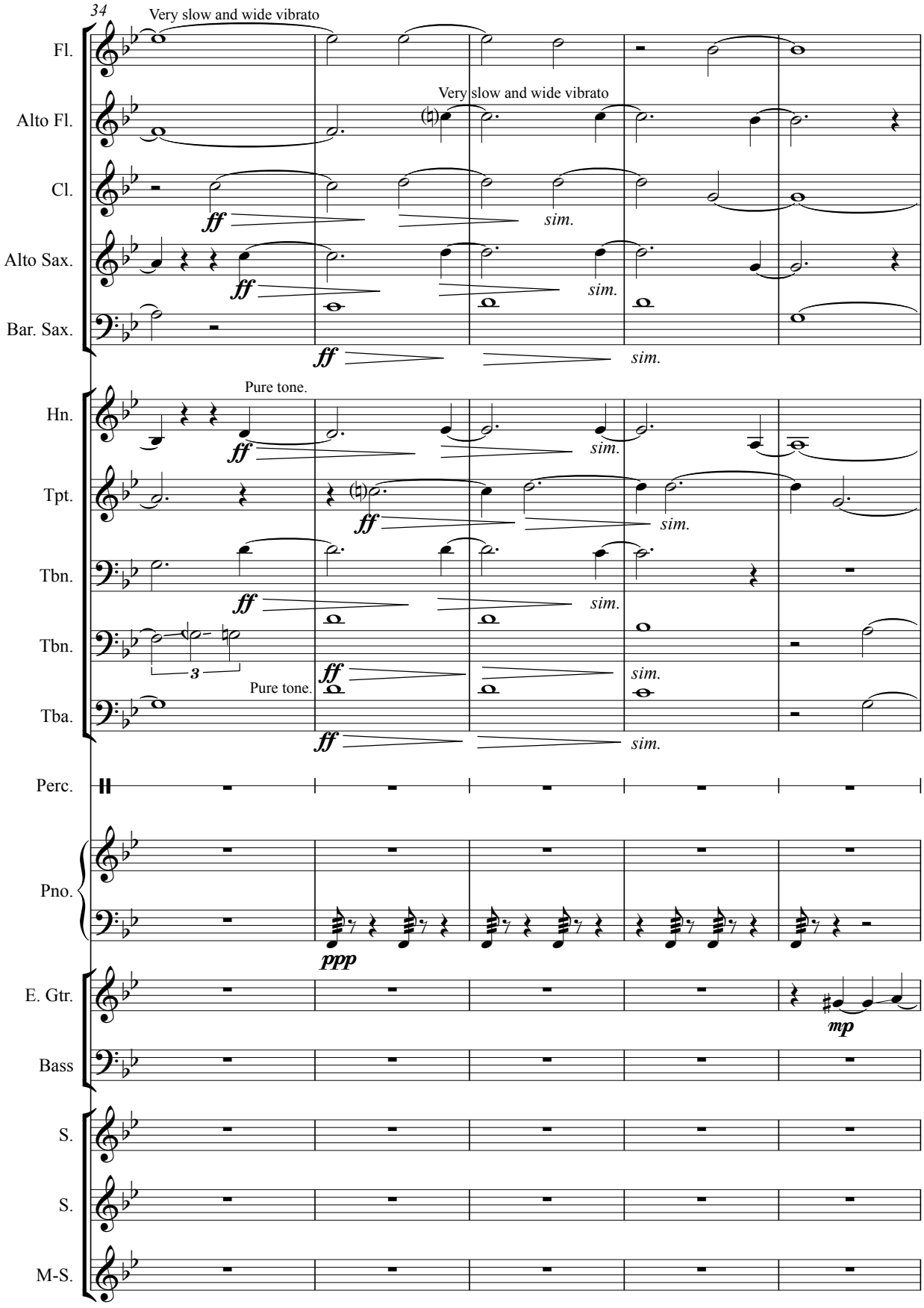

9
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
mf
sim.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
Perc.
pp
Pno.
E. Gtr.
Bass
ff
S.
S.
M-S.
ohh.

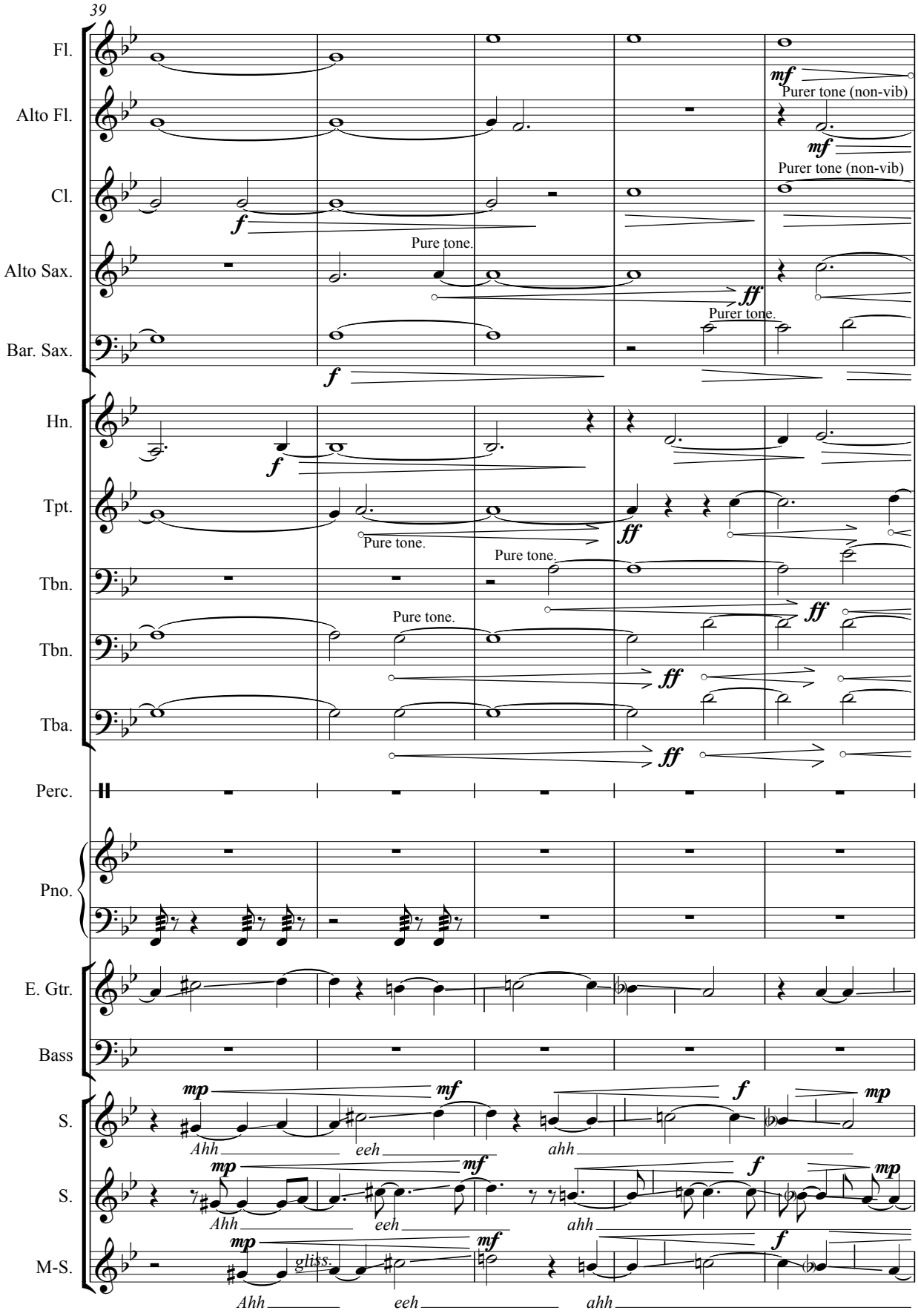

14
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
Perc.
Pno.
E. Gtr.
Bass
S.
S.
M-S.
sim.
con sord.
Ooh
ahh
Ahh
Ohh

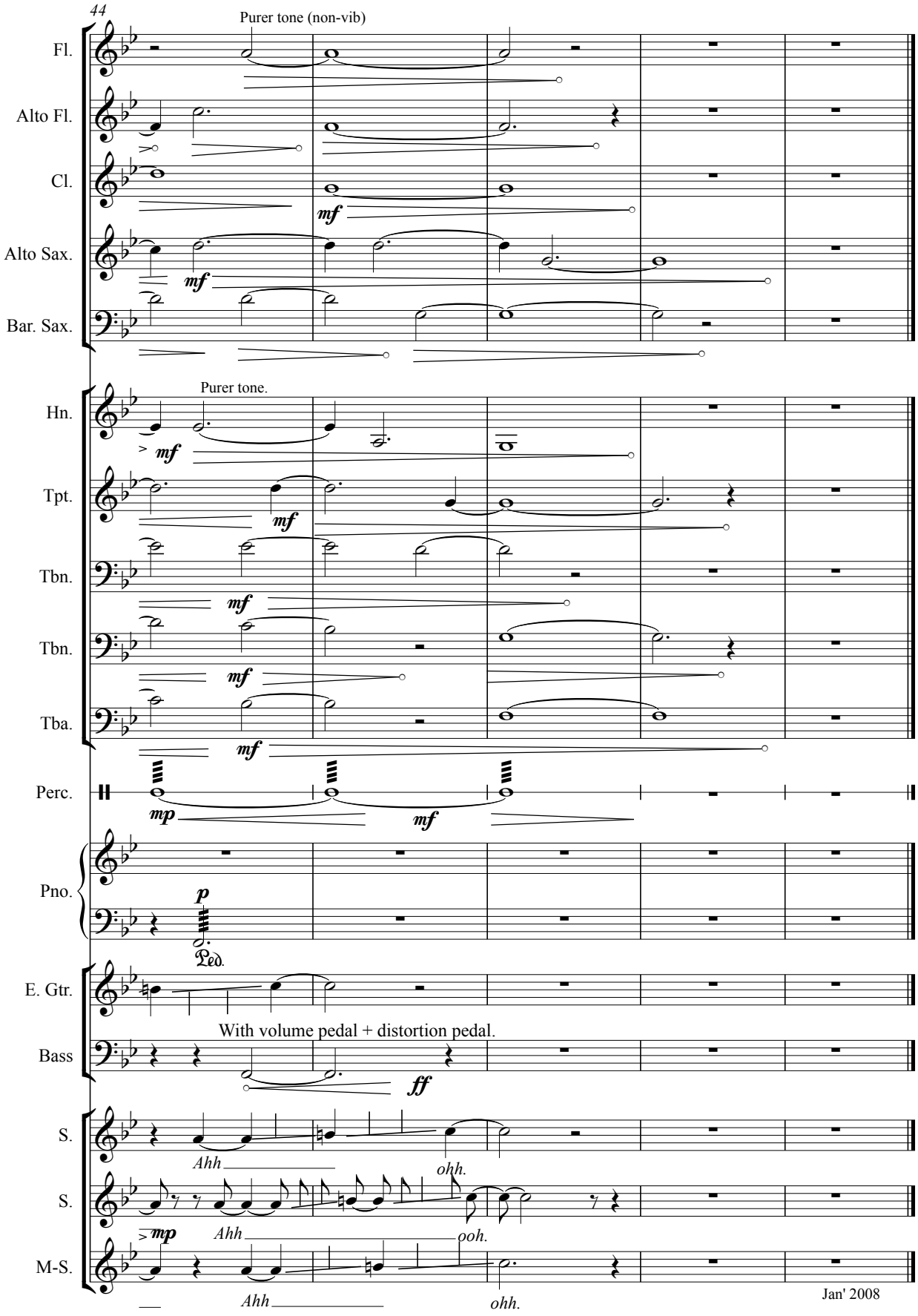

19
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
sim.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
mp
Perc.
pp
mf
Pno.
E. Gtr.
With volume pedal + Distortion pedal.
Bass
ff
S.
S.
M-S.
eeh
ahh


24
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
Grittier tone.
Grittier tone.
Grittier tone.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
Grittier tone.
Perc.
Pno.
With ebow.
gliss.
E. Gtr.
Bass
S.
S.
M-S.
Ooh
ahh
Ahh
Ooh
ahh
Ahh
Ohh
ahh
Ahh


29
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
Grittier tone.
Grittier tone.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
Grittier tone.
senza sord.
senza sord.
senza sord.
senza sord.
senza sord. Grittier tone.
Perc.
Pno.
E. Gtr.
Bass
S.
S.
M-S.
eeh
ahh
eeh
ahh
eeh
ahh


34
Very slow and wide vibrato
Fl.
Alto Fl.
Very slow and wide vibrato
Cl.
ff
sim.
Alto Sax.
ff
sim.
Bar. Sax.
ff
sim.
Pure tone.
Hn.
ff
sim.
Tpt.
ff
sim.
Tbn.
ff
sim.
Tbn.
3
ff
sim.
Pure tone.
Tba.
ff
sim.
Perc.
Pno.
ppp
E. Gtr.
mp
Bass
S.
S.
M-S.


39
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
Perc.
Pno.
E. Gtr.
Bass
S.
S.
M-S.
mf
Purer tone (non-vib)
f
Pure tone.
ff
Purer tone.
mp
Ahh
eeh
ahh
gliss.


44
Purer tone (non-vib)
Fl.
Alto Fl.
Cl.
Alto Sax.
Bar. Sax.
mf
Purer tone.
Hn.
Tpt.
Tbn.
Tbn.
Tba.
Perc.
mp
Pno.
p
Ped.
E. Gtr.
With volume pedal + distortion pedal.
Bass
ff
S.
Ahh
ohh.
S.
mp
Ahh
ooh.
M-S.
Ahh
ohh.
Jan' 2008

Stórr

For orchestra

Irene Buckley

2009

(Revised 2012)

Stórr

2009 (Revised 2012)

Irene Buckley

Duration: 9 minutes.

Score is in C.

Instrumentation:

3 Flutes
2 Oboes
Cor Anglais
2 Clarinets in B flat
Bass Clarinet in B flat
2 Bassoons

2 French horns in F
2 Trumpets
2 Trombones
Tuba

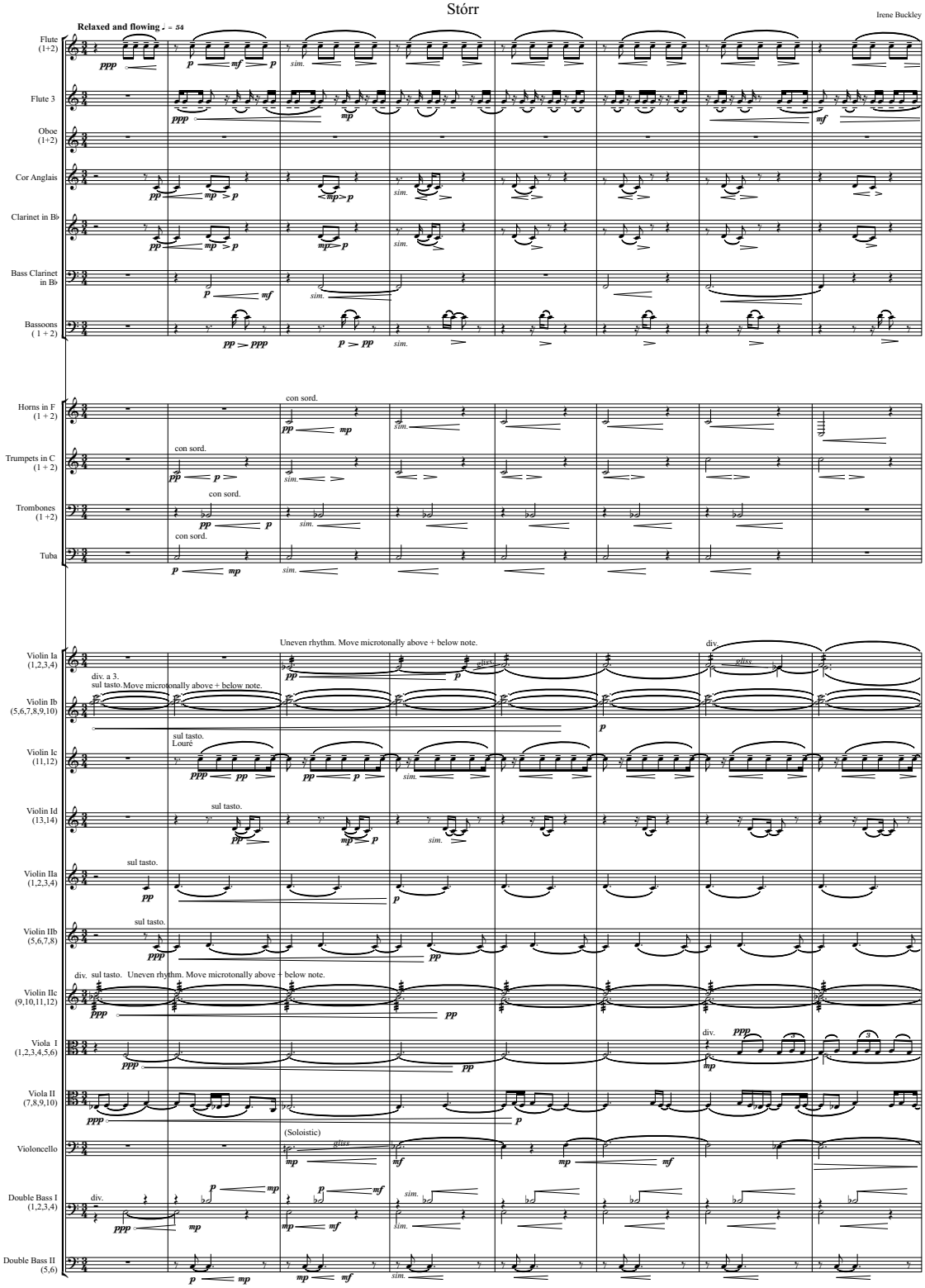
14 Violins I (or more)
12 Violins II (or more)
10 Violas (or more)
8 Cellos (or more)
6 Double basses (or more)

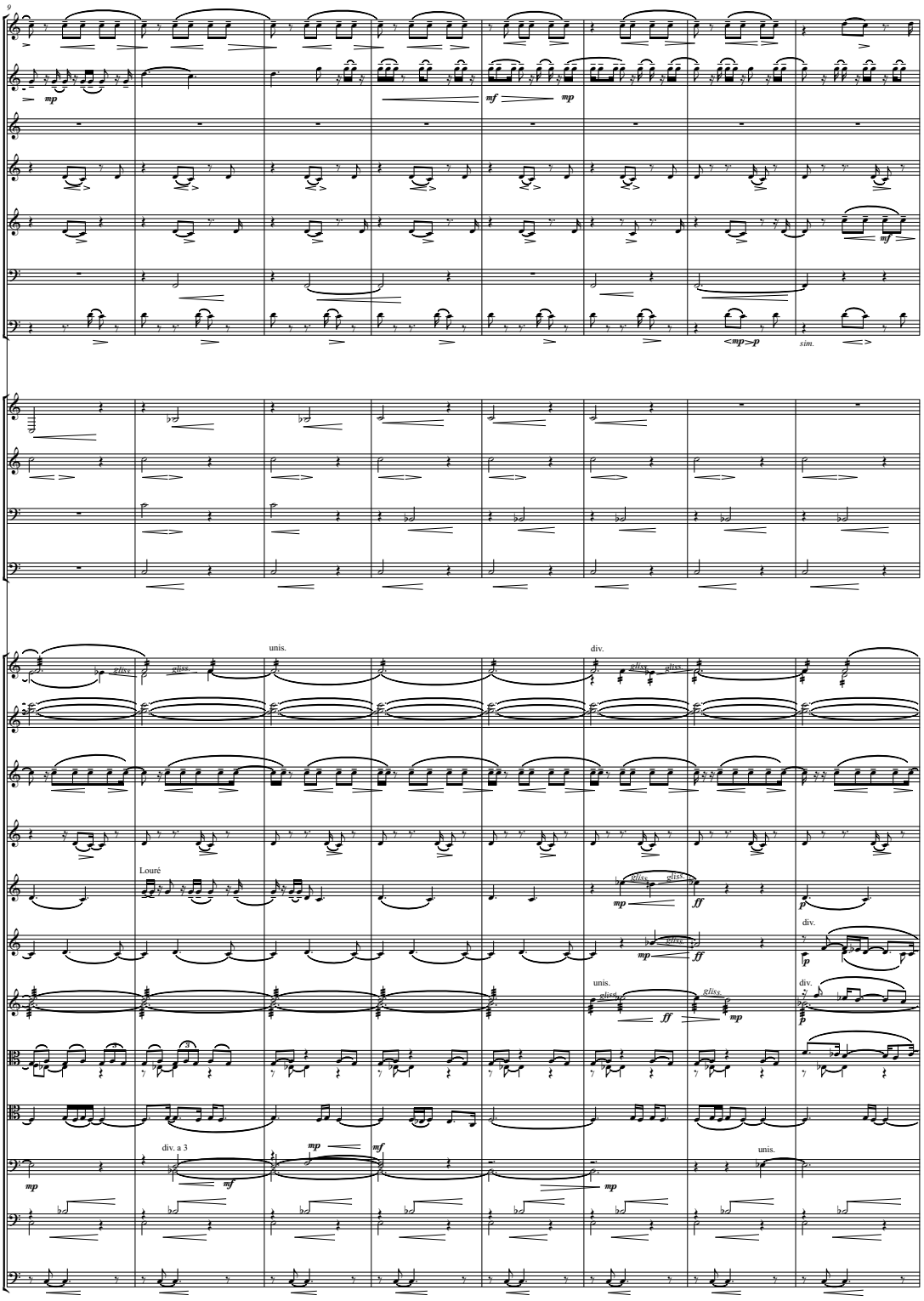
Instructions:

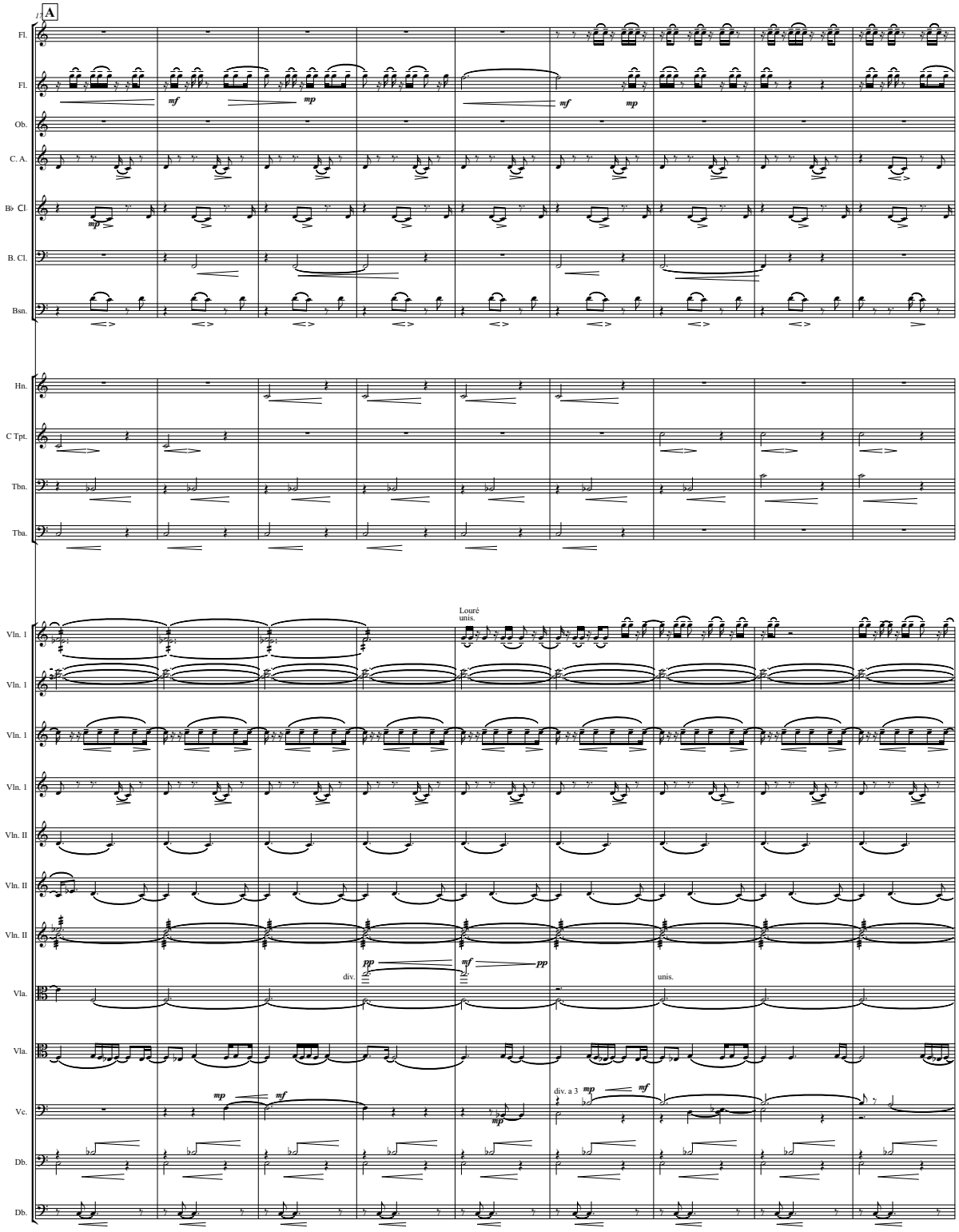
1. All instruments should blend evenly with each other and be balanced in terms of volume.
2. The music should flow smoothly and accents should be avoided (unless specified).
3. Instruments, in particular the oboes, cor anglais and brass instruments, should enter with a soft attack.
4. Long sustained notes in woodwind and brass can take breaths freely.
5. The music should sound blurred and smeared, therefore difficult rhythms can be played loosely. The overall resulting sound is more important than hearing precise rhythms.

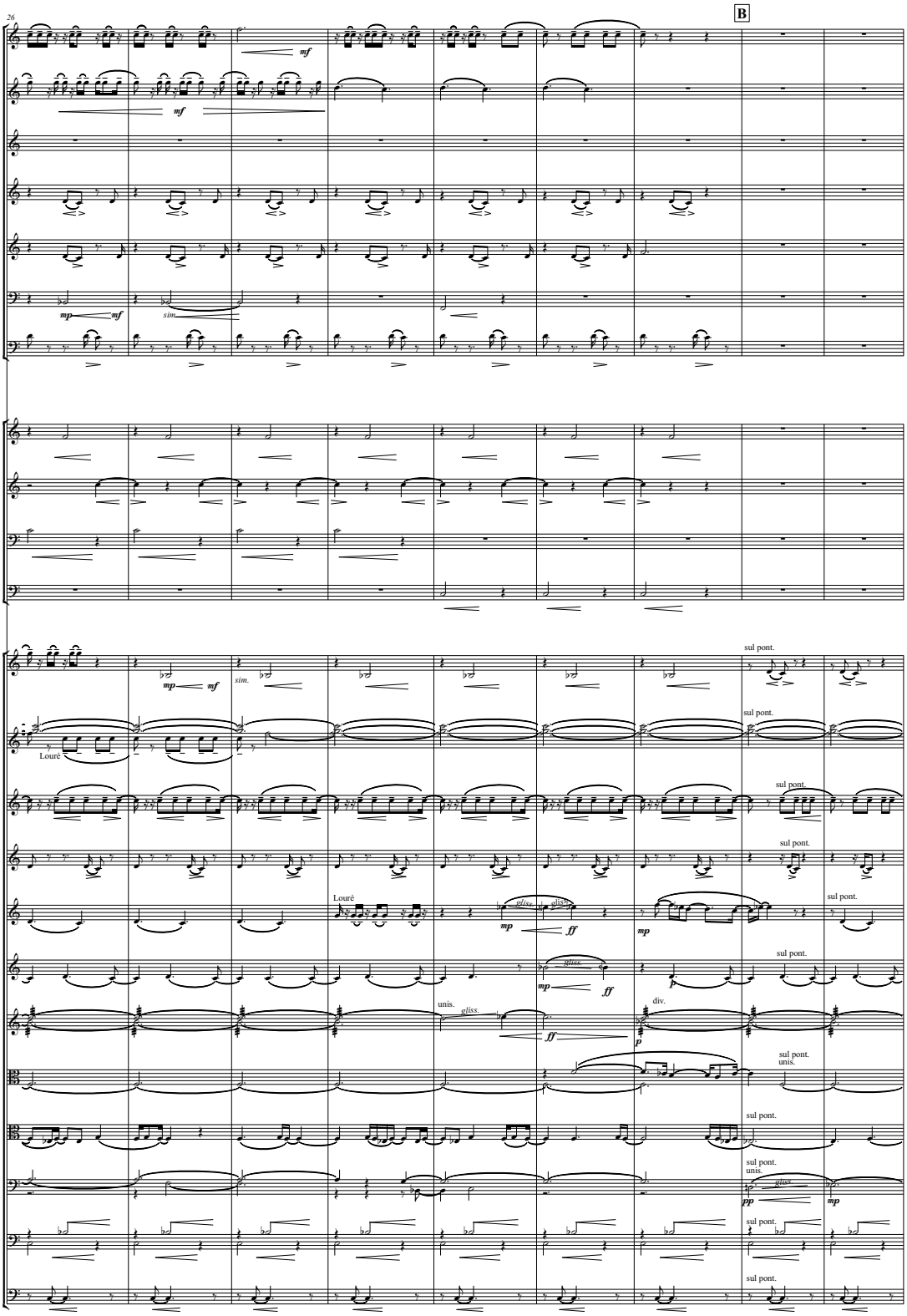
Stórr

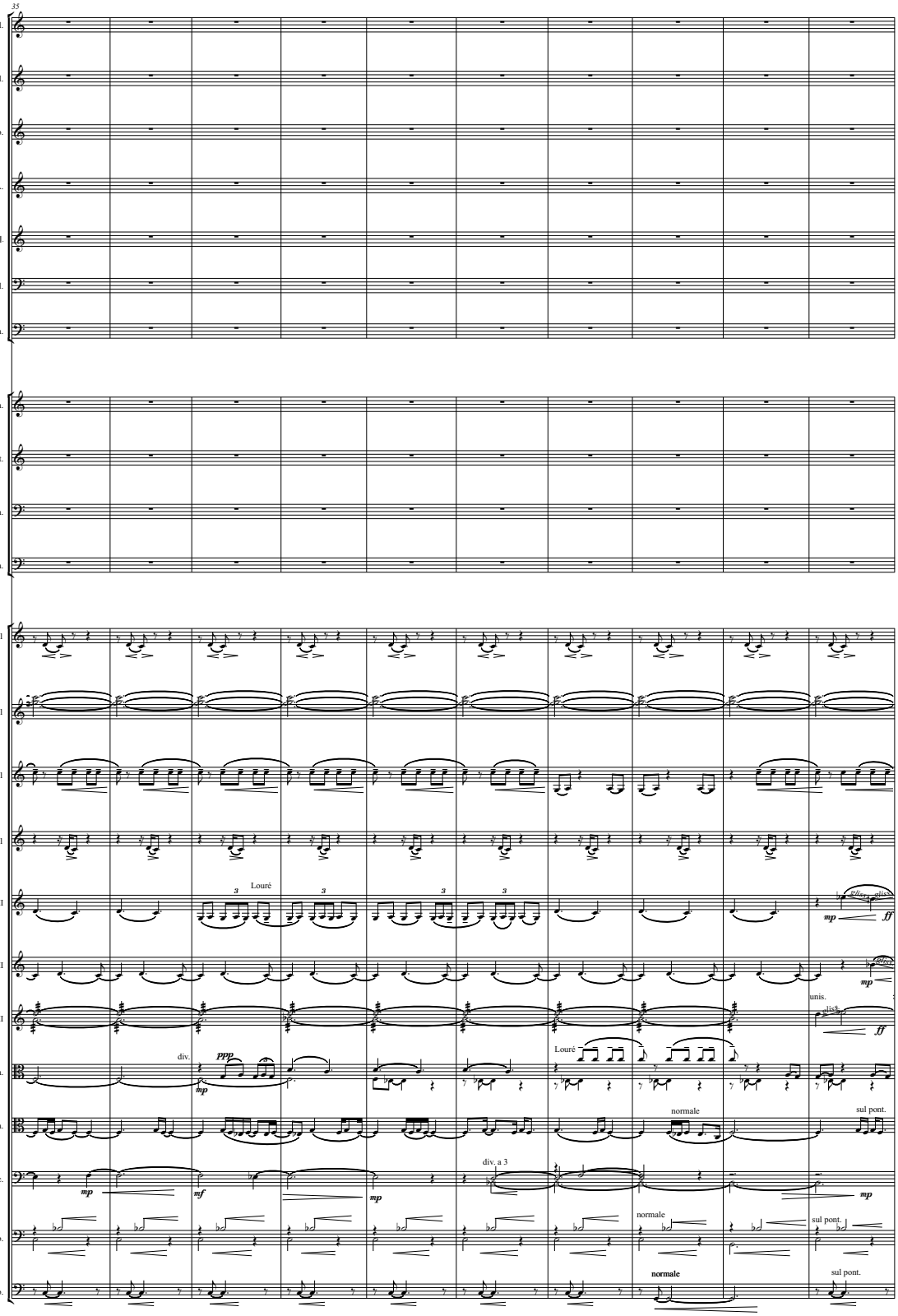
Irene Buckley

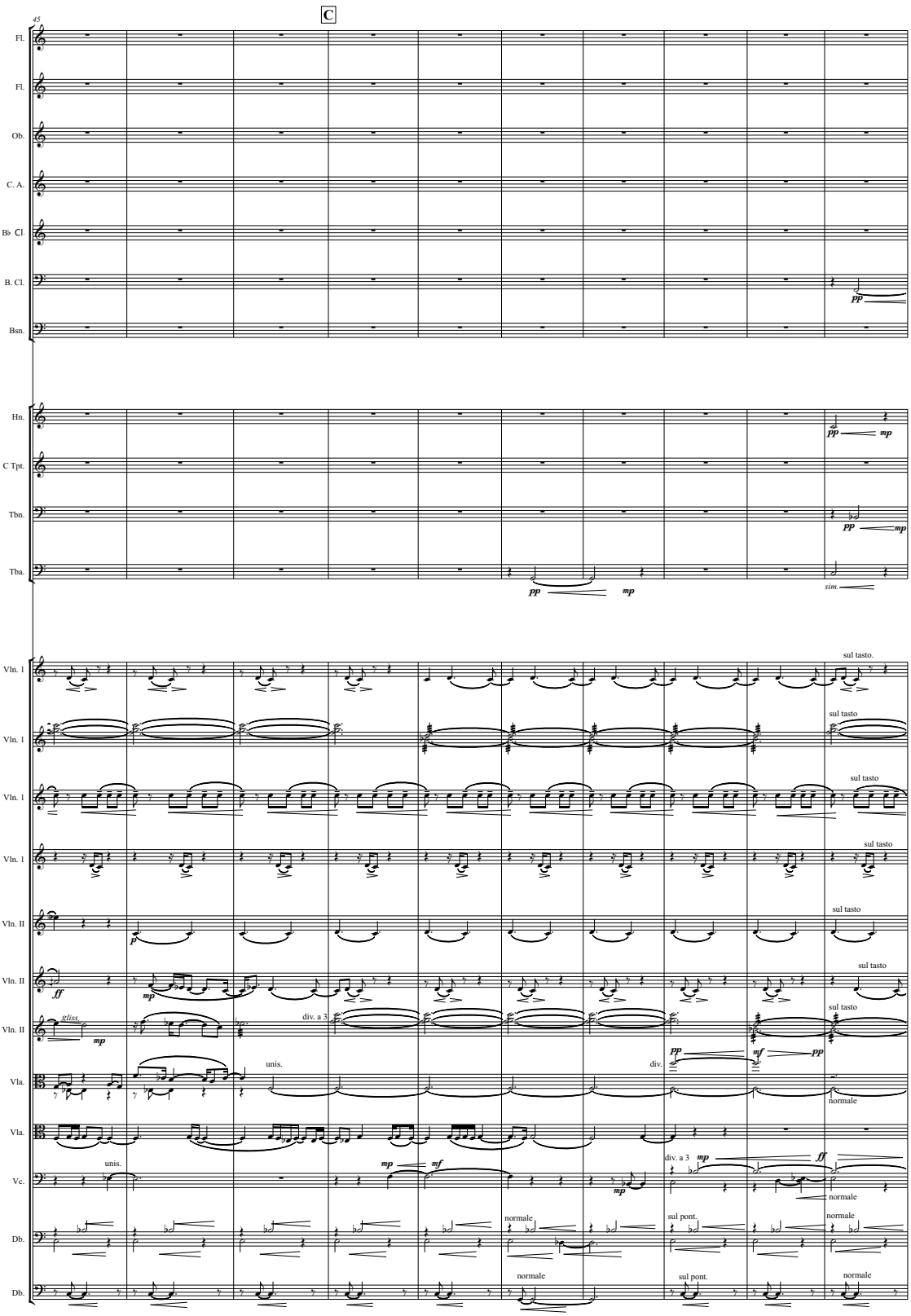


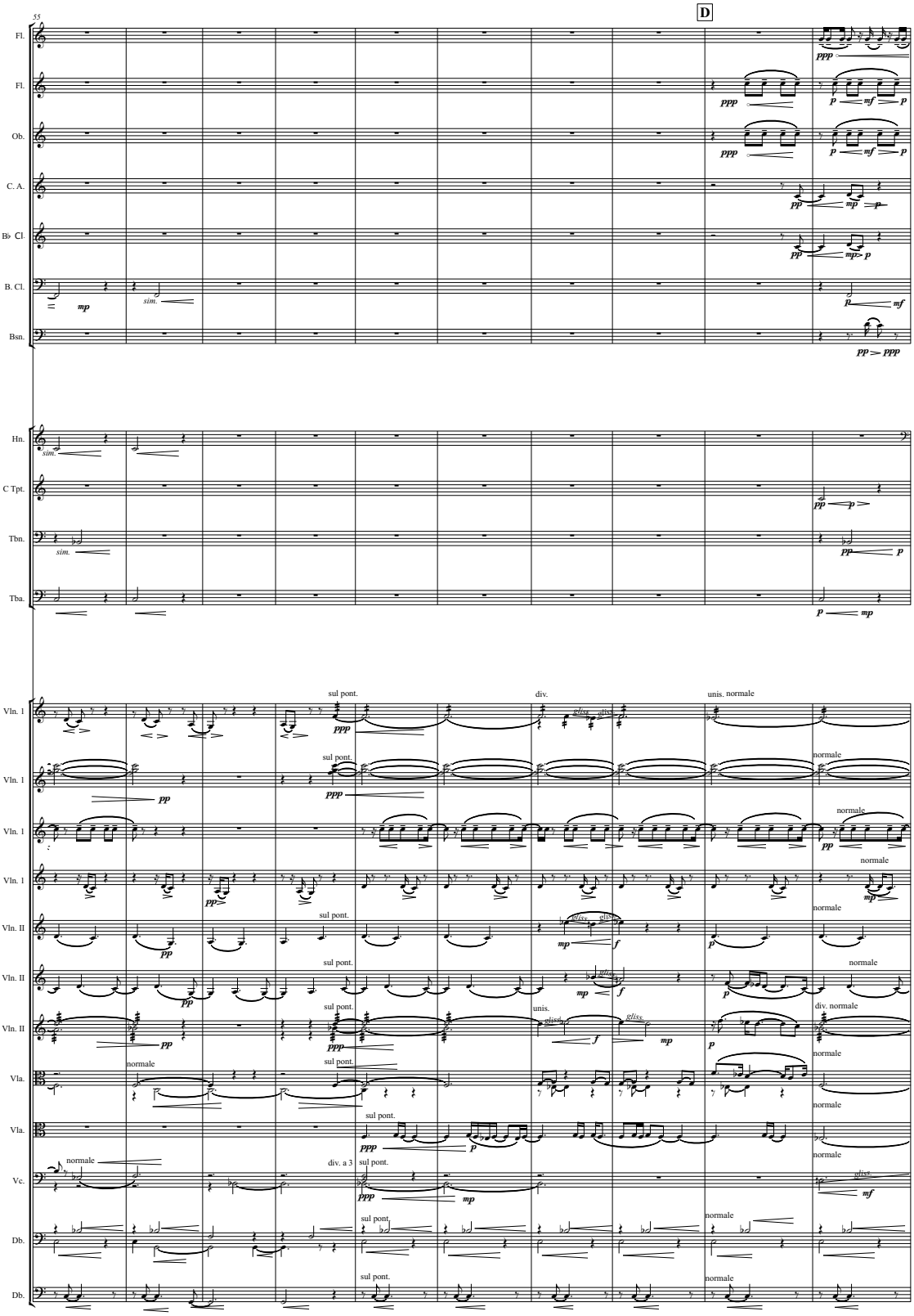

9
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
mp
mf
mp
mf
<mp>p
sim.
unis.
div.
gliss.
Louré
ff
p
div. a 3
unis.

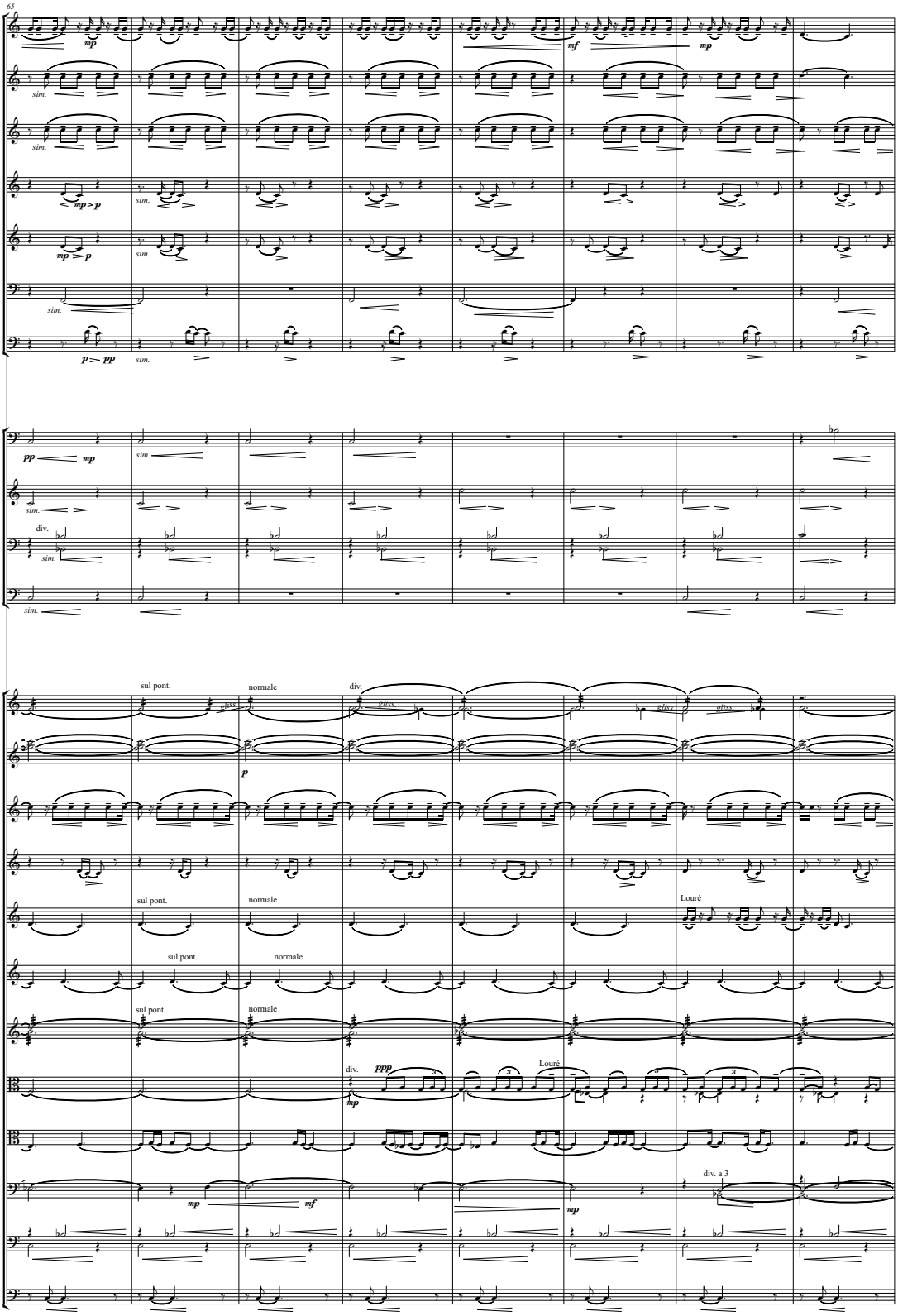

A
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
mf
mp
mf
mp
mp
Louré
unis.
pp
mf
pp
div.
unis.
mp
mf
mp
div. a 3
mp
mf

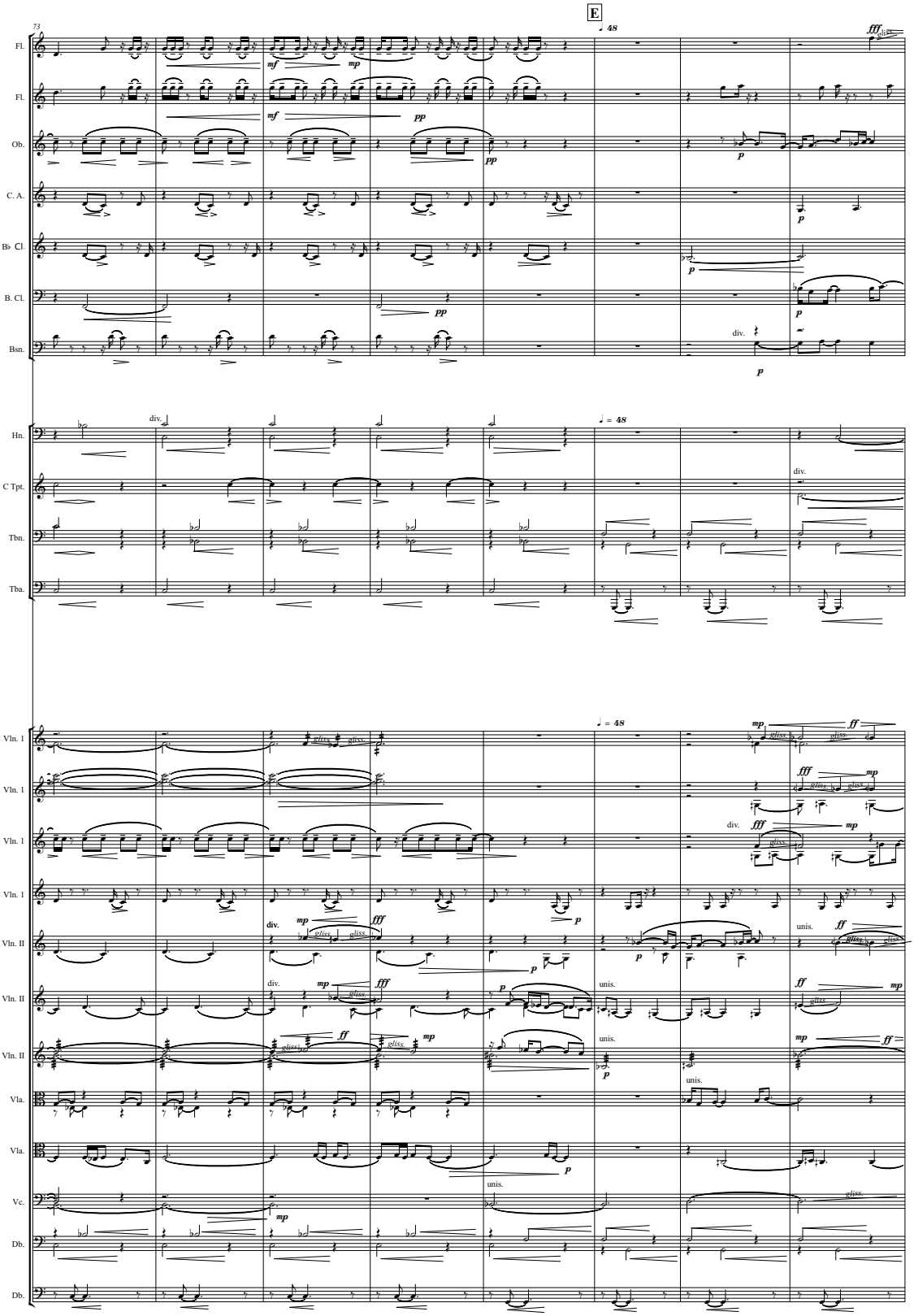

26
B
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
mf
mp
sim.
Louré
gliss.
ff
p
pp
unis.
div.
sul pont.

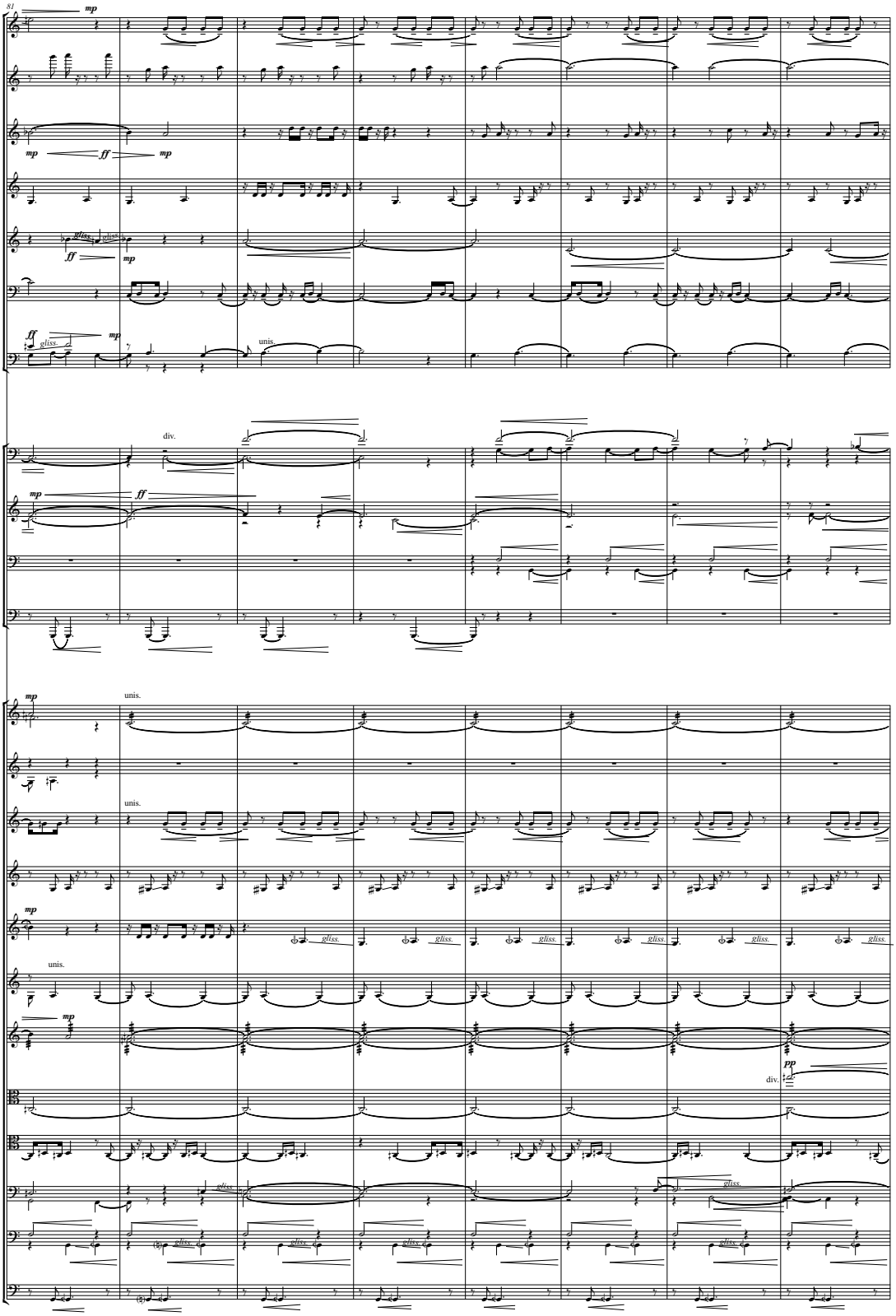

35
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. I
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
Louré
Louré
div.
unis.
normale
sul pont.
div. a 3
normale
sul pont.
normale
sul pont.

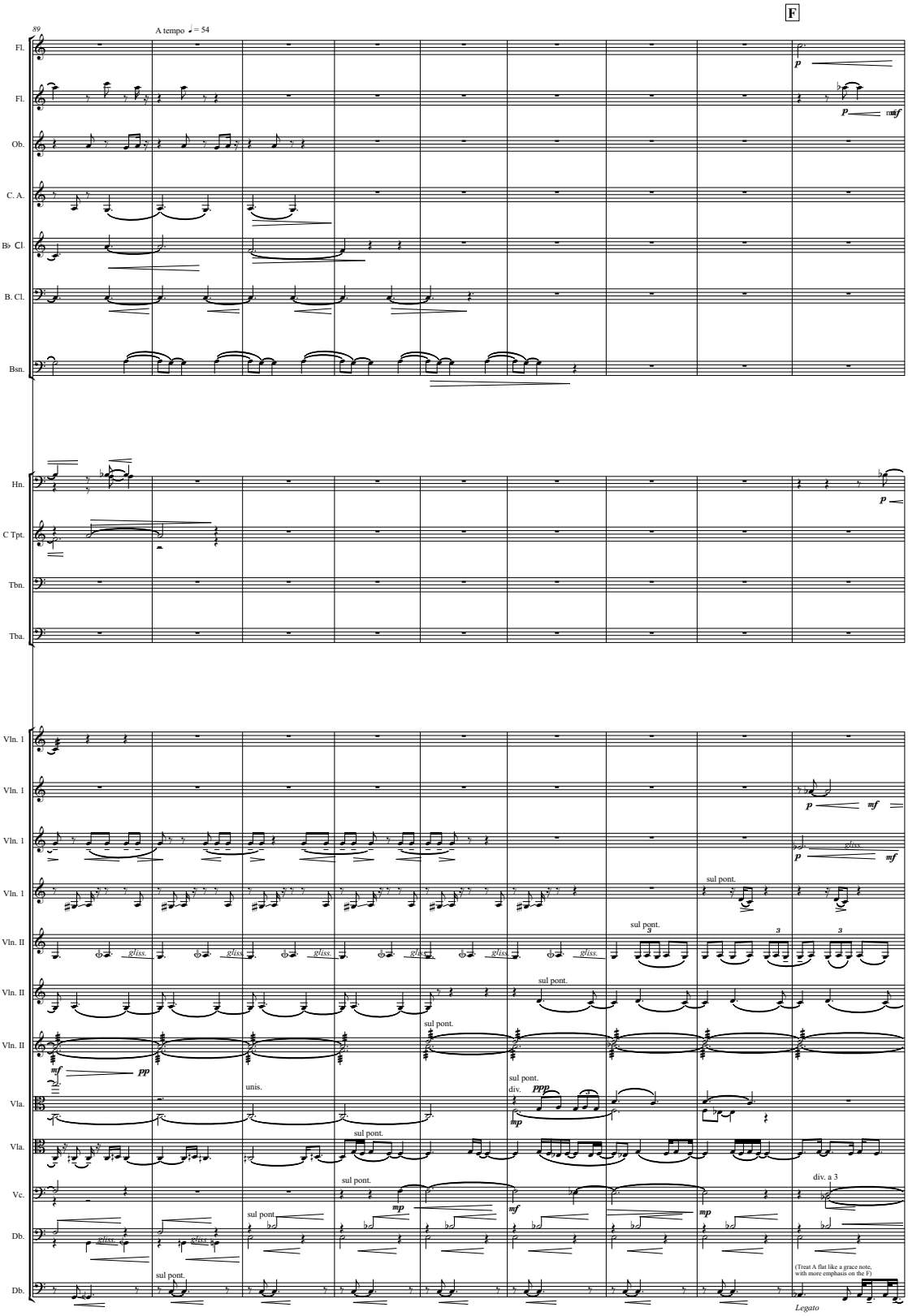

C
45
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. I
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
pp
mp
sim.
sul tasto.
sul tasto
gliss.
div. a 3
unis.
div.
mf
normale
ff
sul pont.

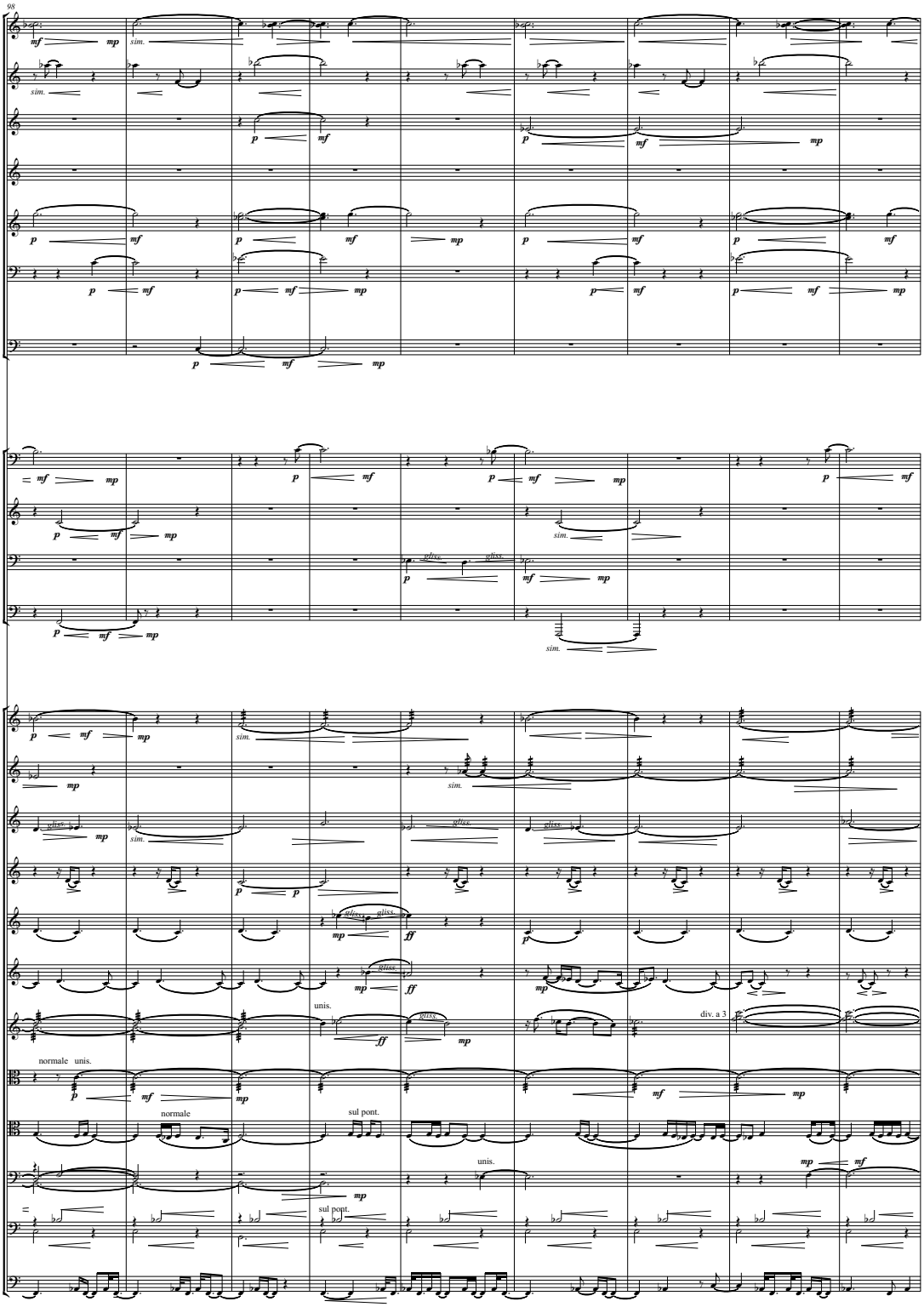

55
D
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
sim.
sul pont.
div.
unis.
normale
div. a 3
gliss.

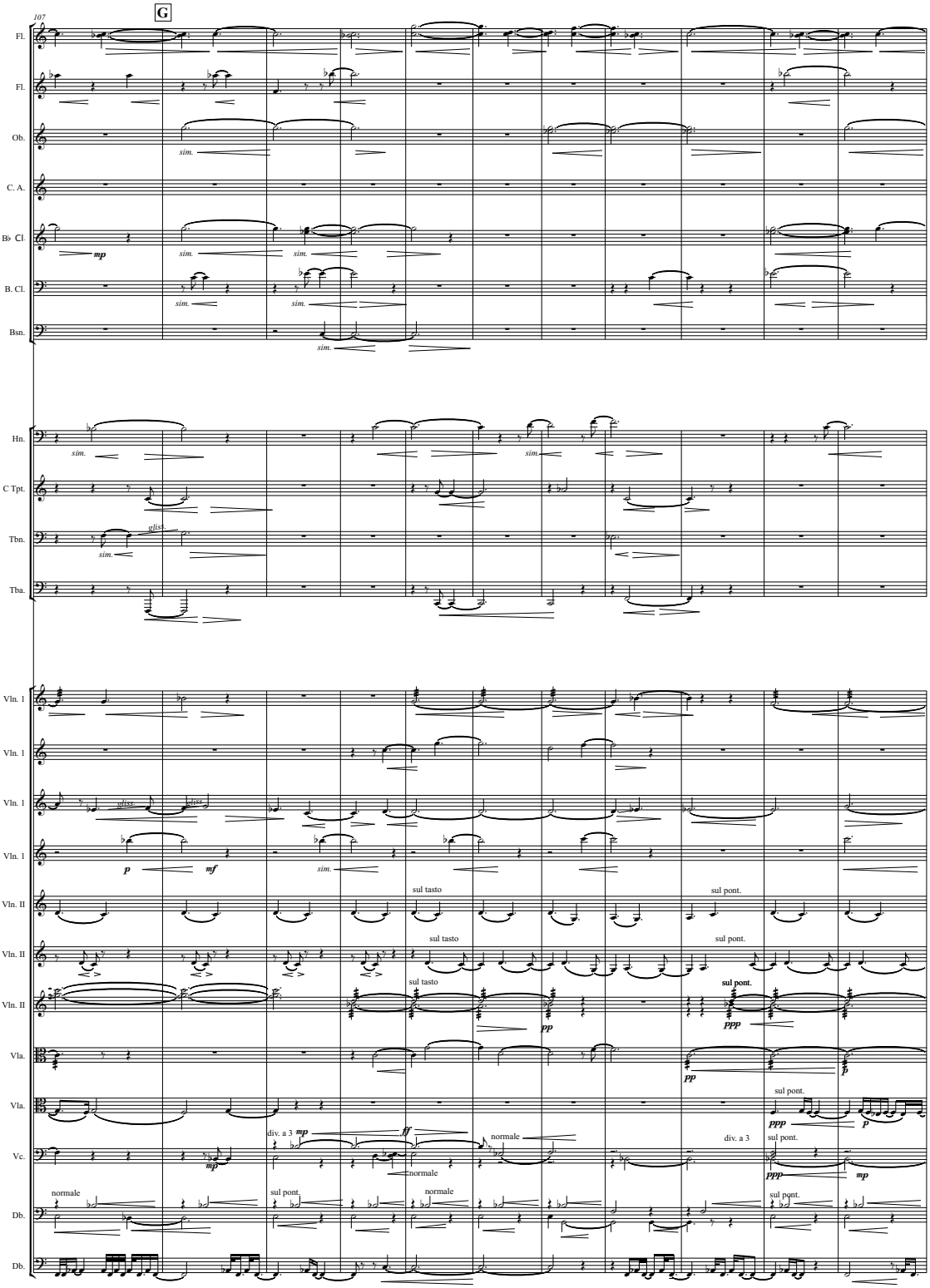

65
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
sim.
div.
sul pont.
normale
gliss.
Louré
div. a 3

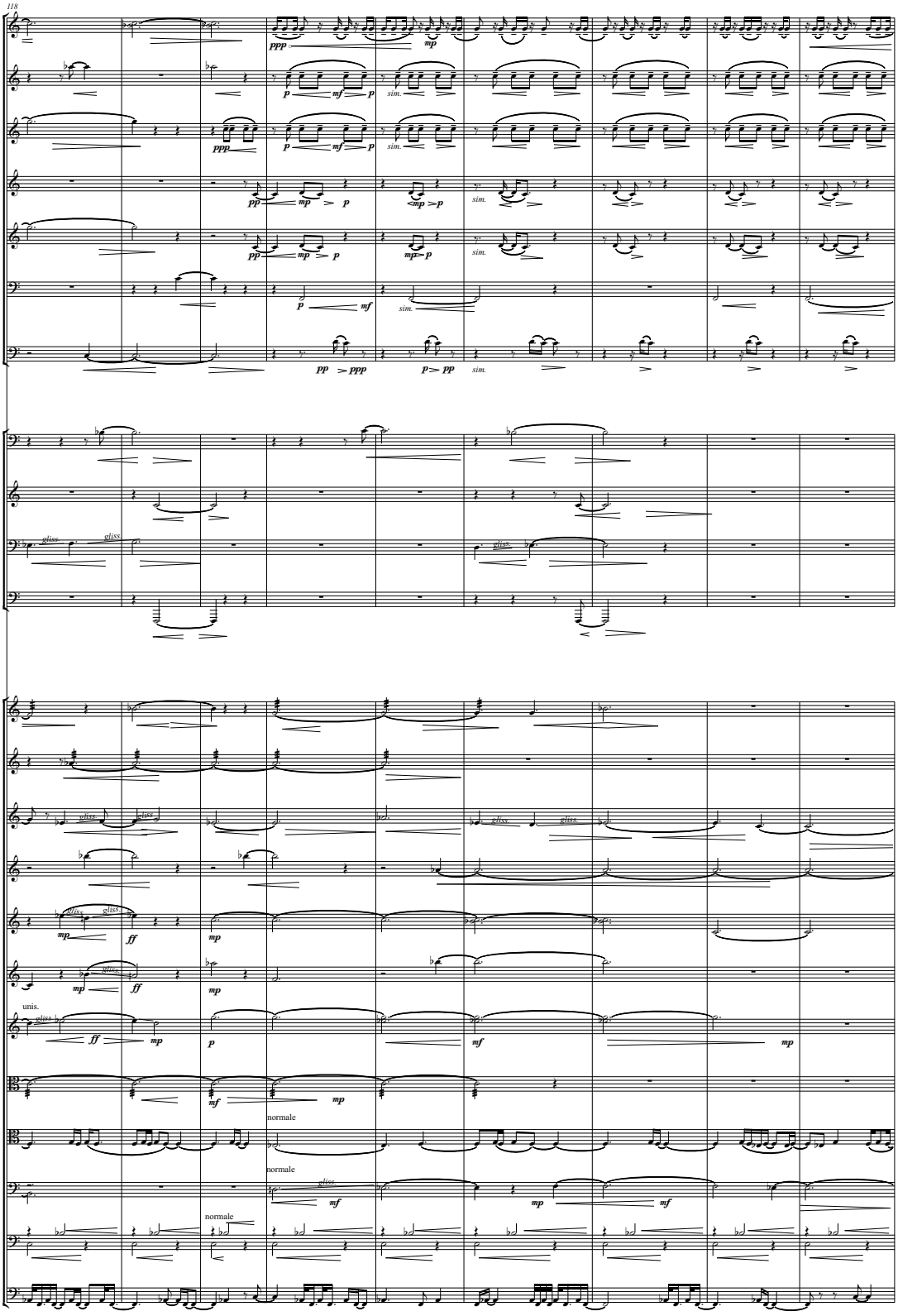

E
73
♩ 48
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
div.
unis.
gliss.

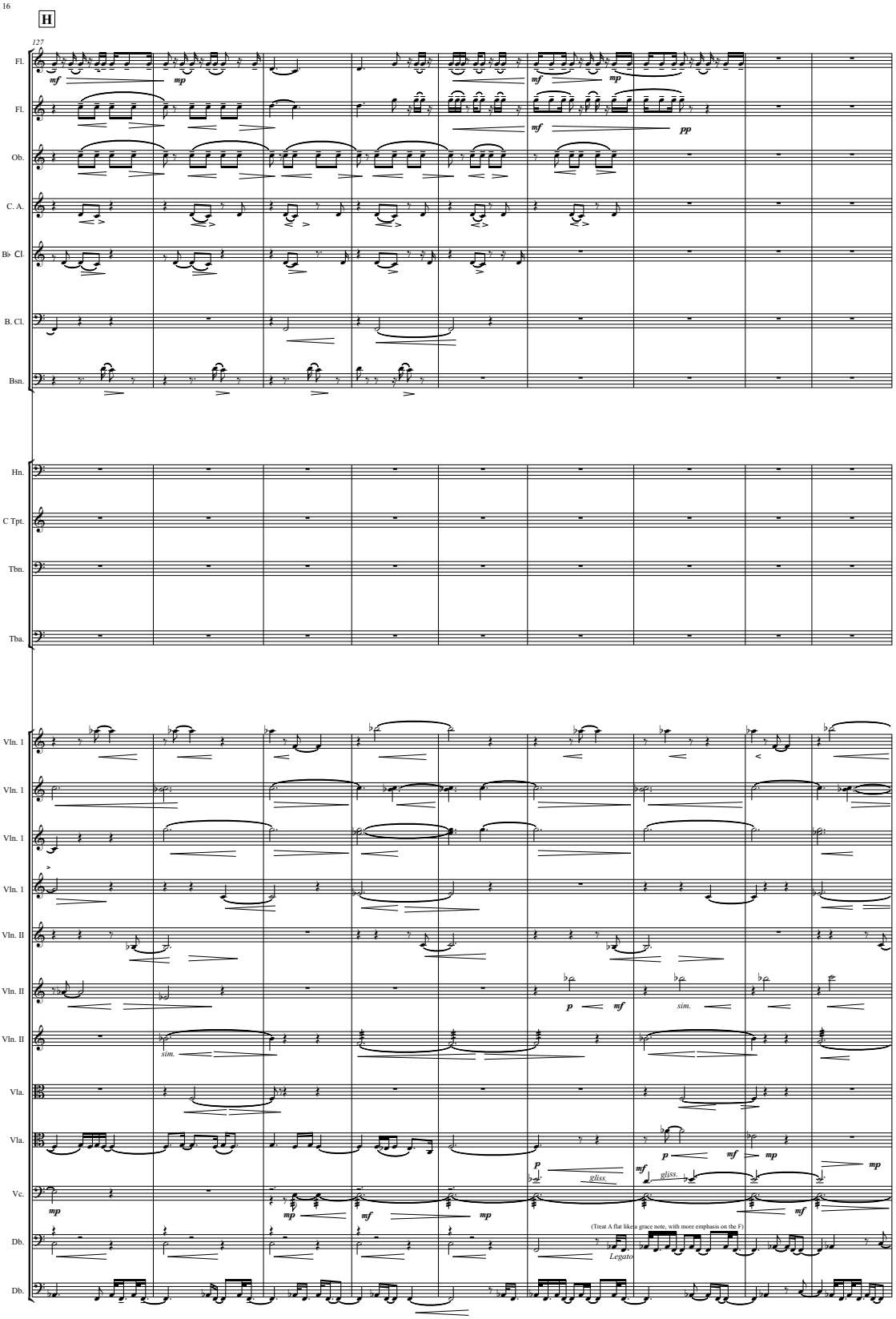

81
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
mp
ff
gliss.
unis.
div.
pp

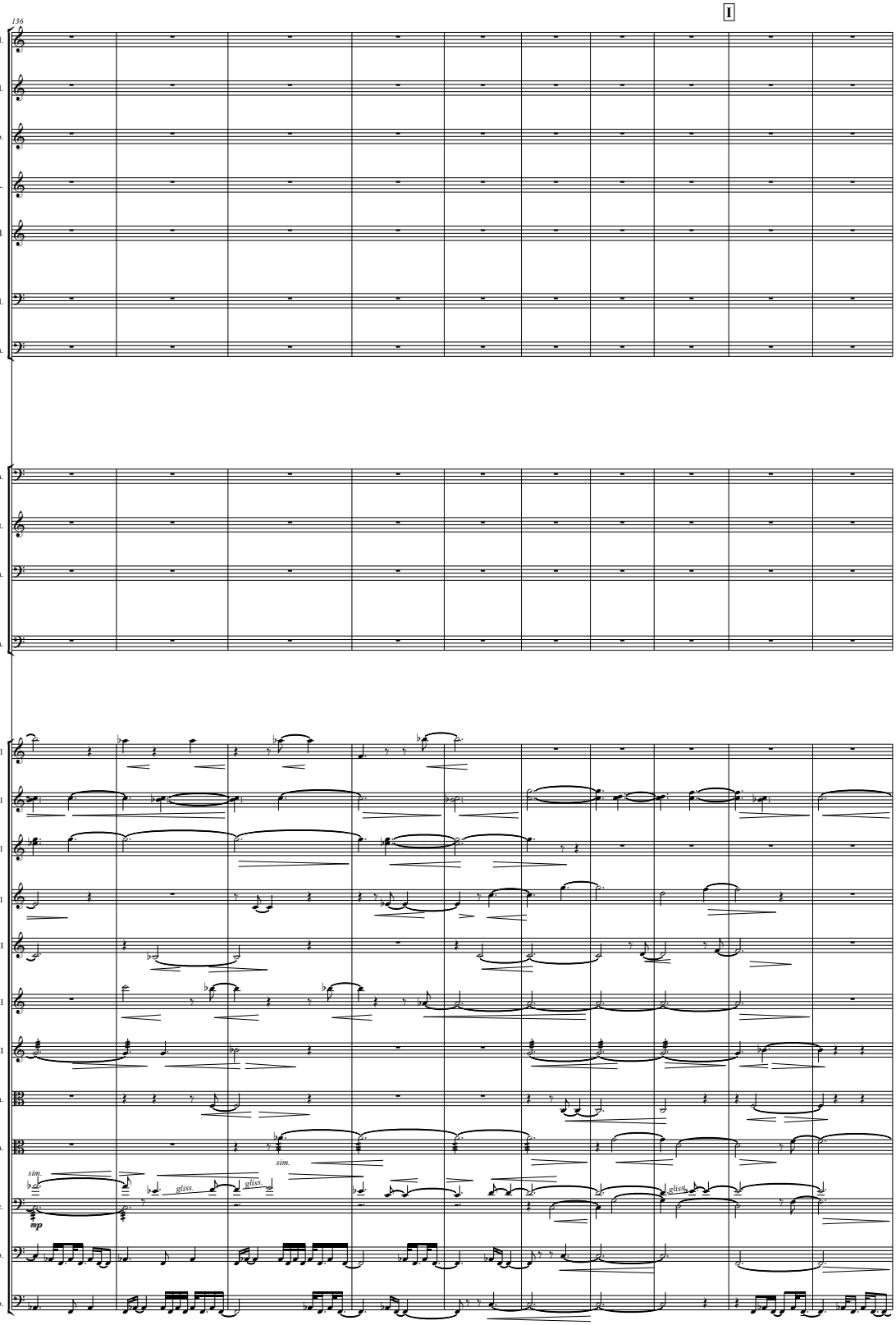

F
89
A tempo ♩ = 54
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
p
mf
pp
gliss.
sul pont.
unis.
div.
ppp
mp
div. a 3
sul pont
(Treat A flat like a grace note, with more emphasis on the F)
Legato

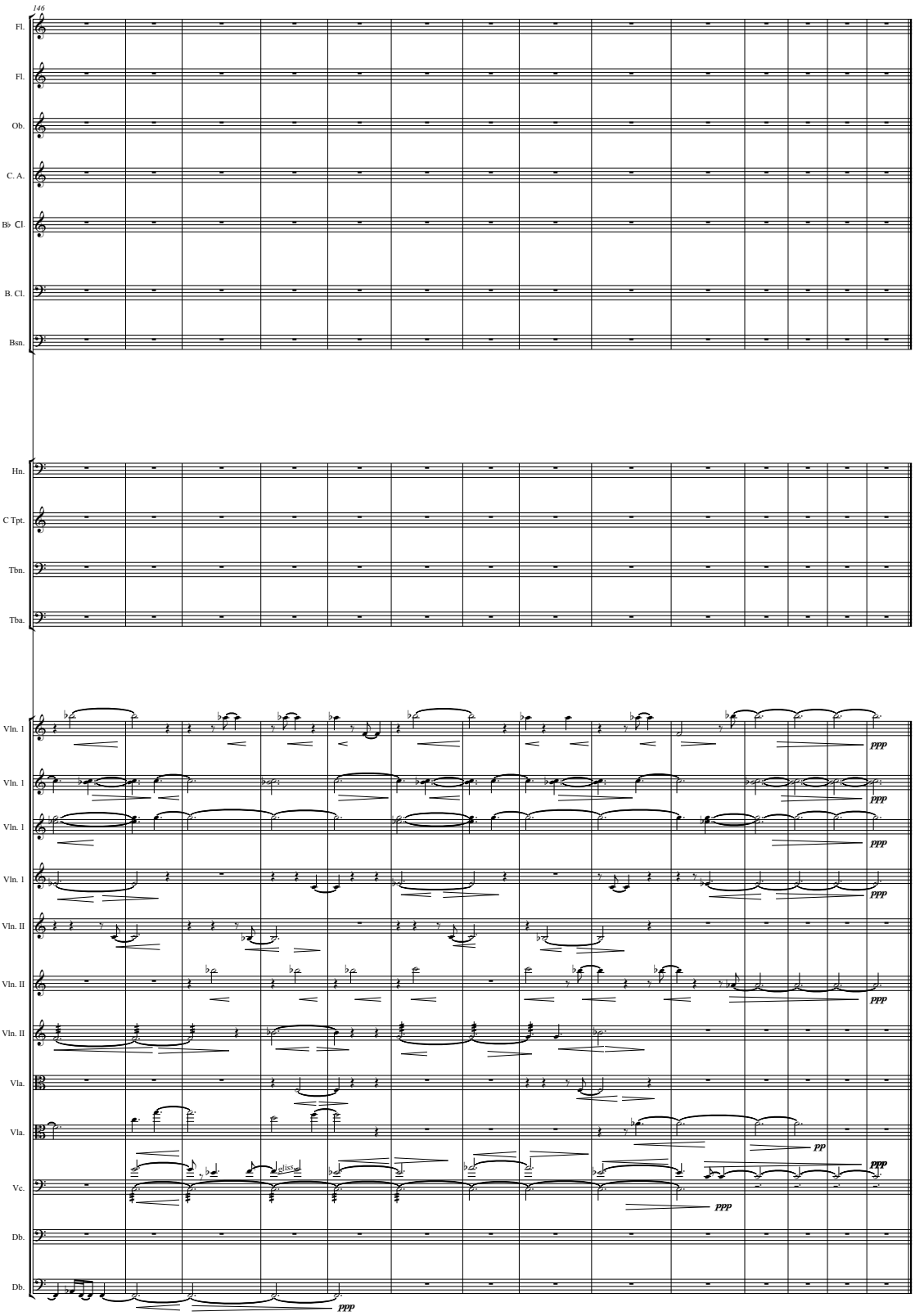

98
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
sim.
gliss.
unis.
div. a 3
normale unis.
normale
sul pont.
unis.
sul pont.


107
G
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
sim.
mp
gliss.
p
mf
sul tasto
sul pont.
pp
ppp
div. a 3
ff
normale
sul pont.
mp


118
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. 1
Vln. 1
Vln. 1
Vln. 1
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
gliss.
sim.
unis.
normale


H
127
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. I
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
mf
mp
pp
p
sim.
gliss.
Legato
(Treat A flat like a grace note, with more emphasis on the F)


I
136
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. I
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
sim.
gliss.
gliss.
sim.
gliss.
mp


146
Fl.
Fl.
Ob.
C. A.
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt.
Tbn.
Tba.
Vln. I
Vln. I
Vln. I
Vln. I
Vln. II
Vln. II
Vln. II
Vla.
Vla.
Vc.
Db.
Db.
gliss.
ppp
pp

Miniatus

For Chamber Orchestra

Irene Buckley

2009

Miniatus

Irene Buckley

2009

Duration: 9.30

Instrumentation:

Flute.
Oboe.
Clarinet.
Bassoon.
Trumpet in B flat.
Bass drum.
Tam-Tam.
Piano.
Violin I.
Violin II.
Viola.
Cello.
Double bass.

Instructions:

1. All instruments should be balanced volume-wise and blend together eg. Trumpet needs to be at the same volume as the woodwind instruments. No instrument should be more prominent than another.
2. All woodwind instruments should alternate between different fingerings when there are repeated notes.
3. Piano part: Strum strings inside of the piano. Gently press down chords on keyboard with one hand with producing a sound. Use the other hand, use a soft mallet stick (rubber) to strum back and forth the strings used in the chord. It is possible to use a second player to do this. Dynamics wise: feel free to swell in places.

Irene Buckley

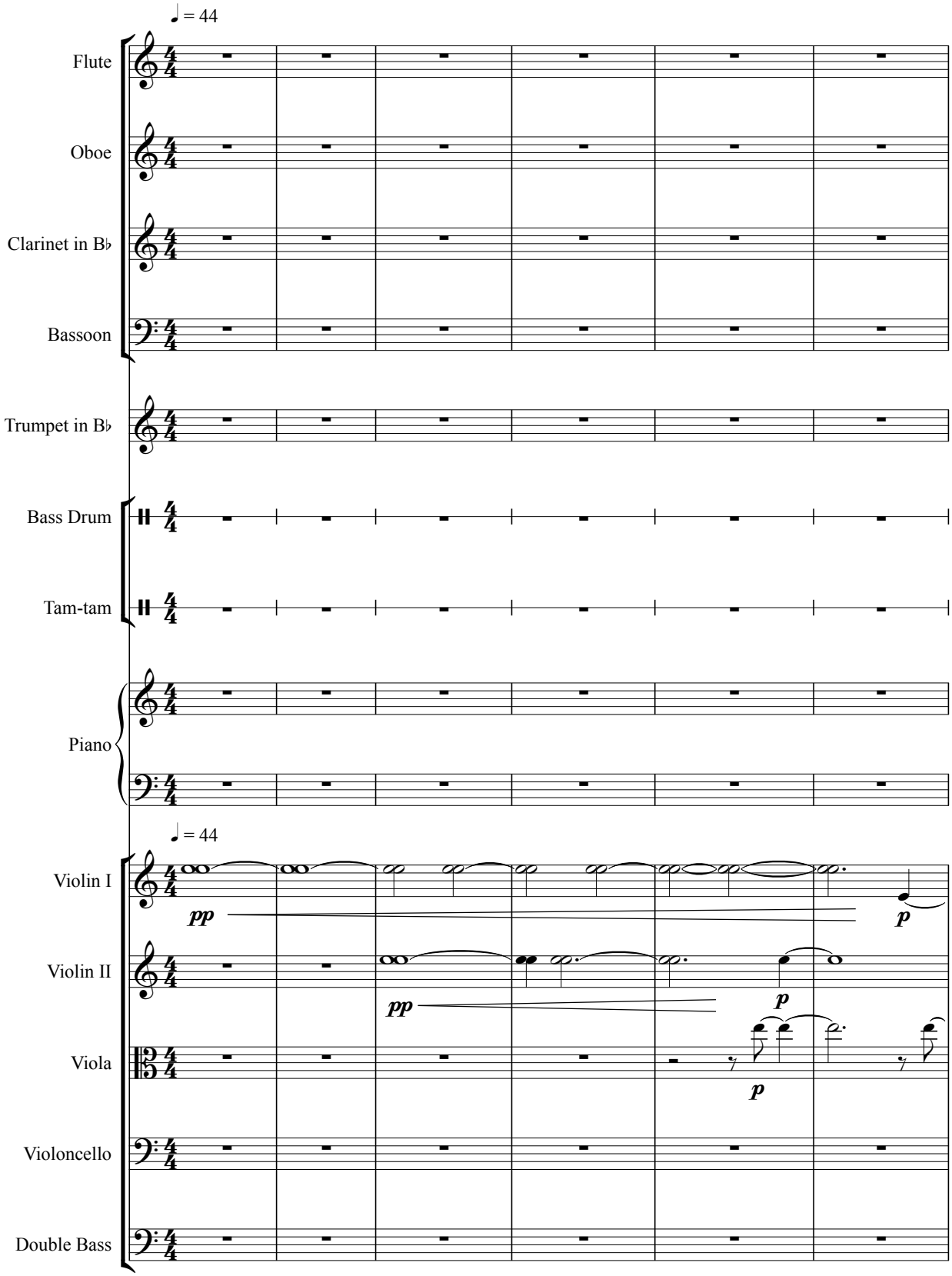
Miniatus

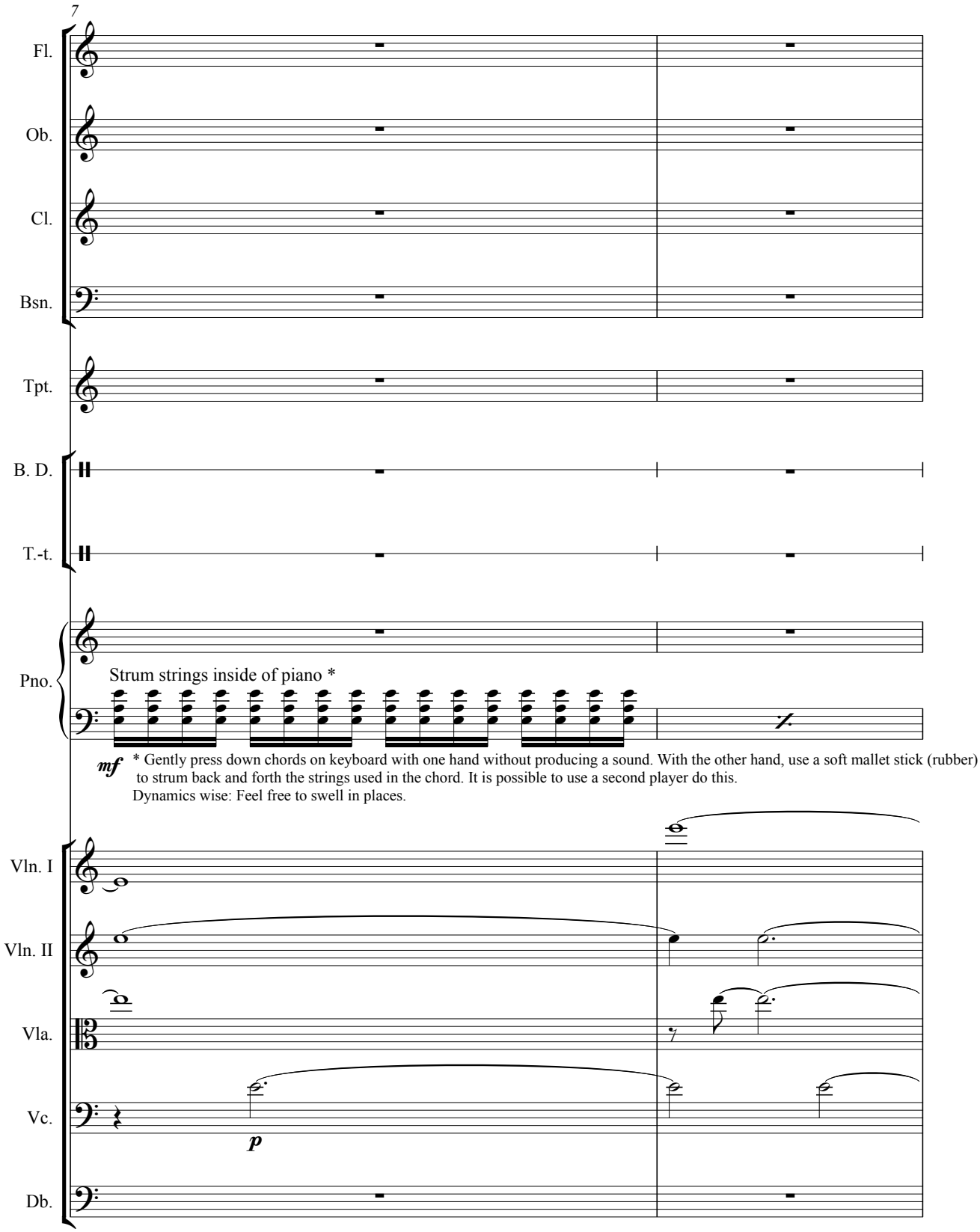
for Chamber Orchestra

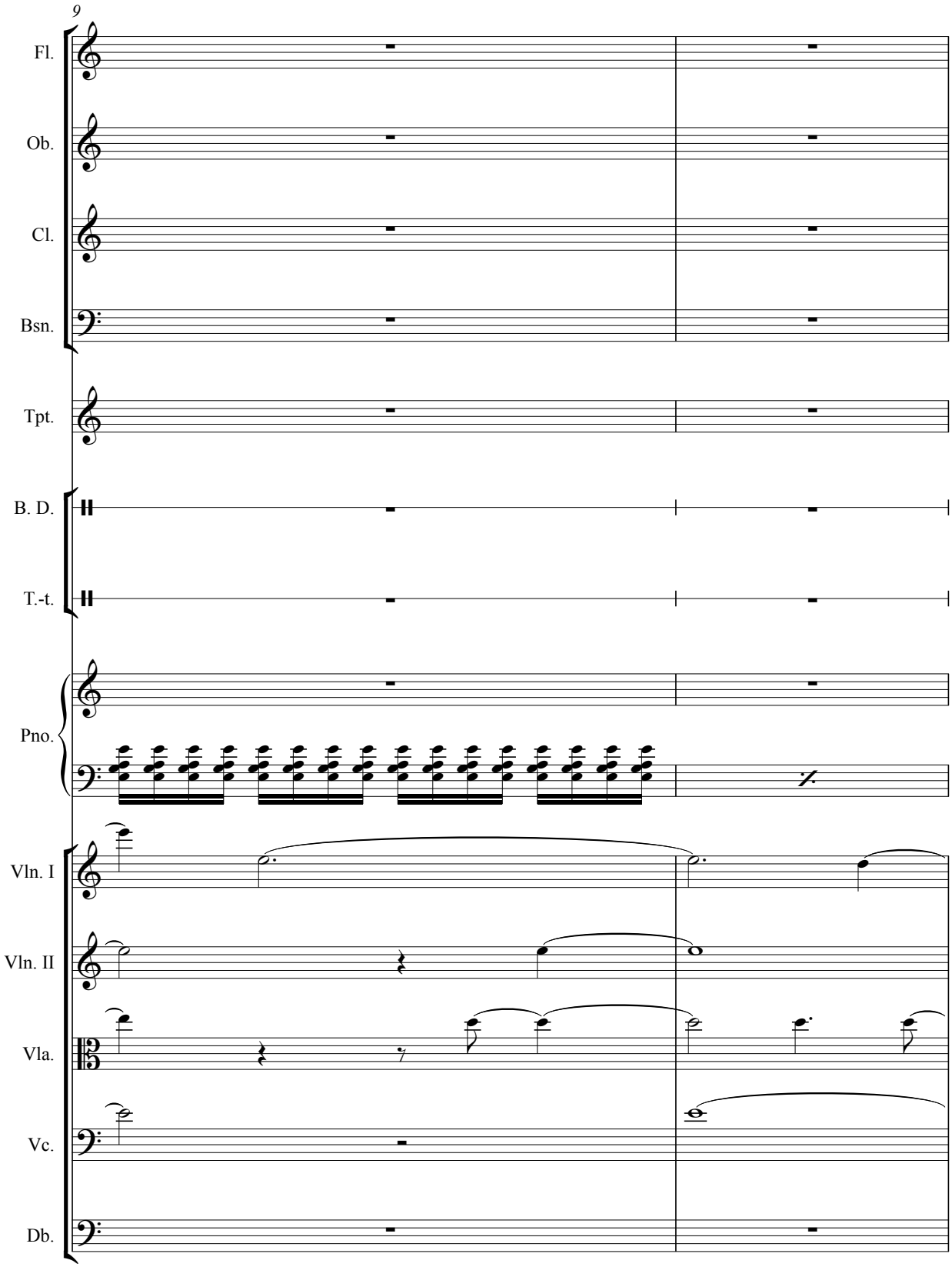
2009

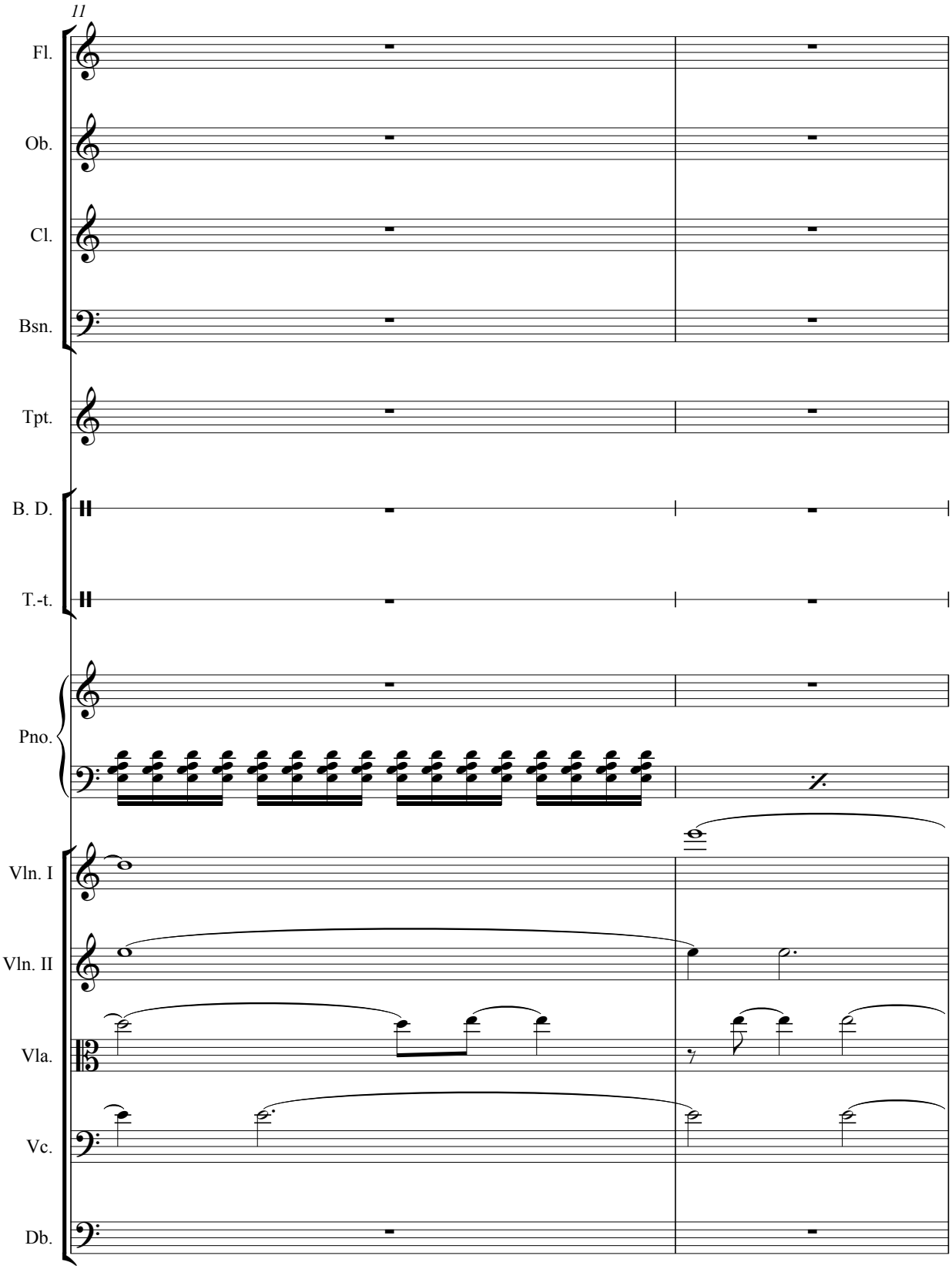
Miniatus

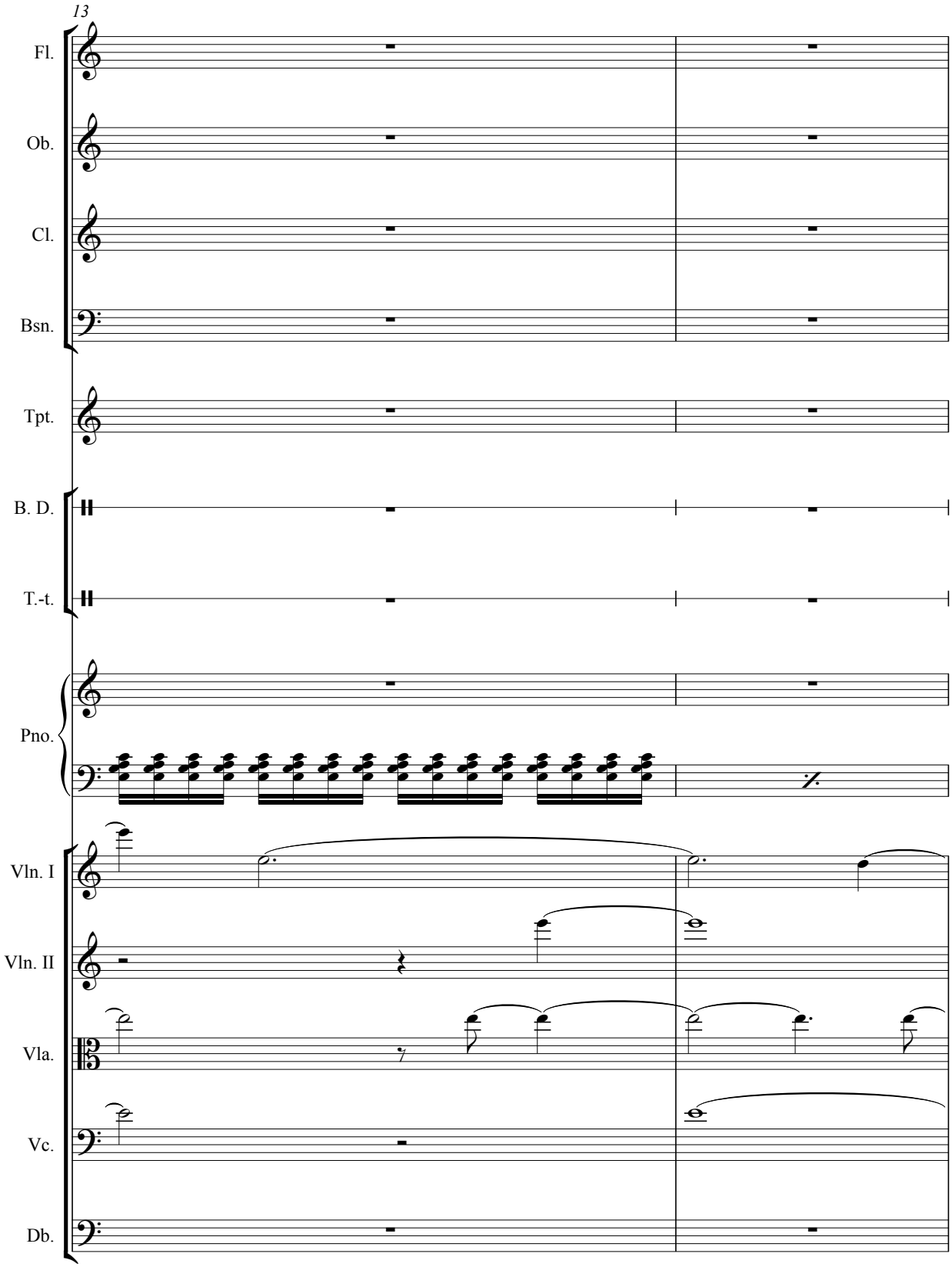
Irene Buckley

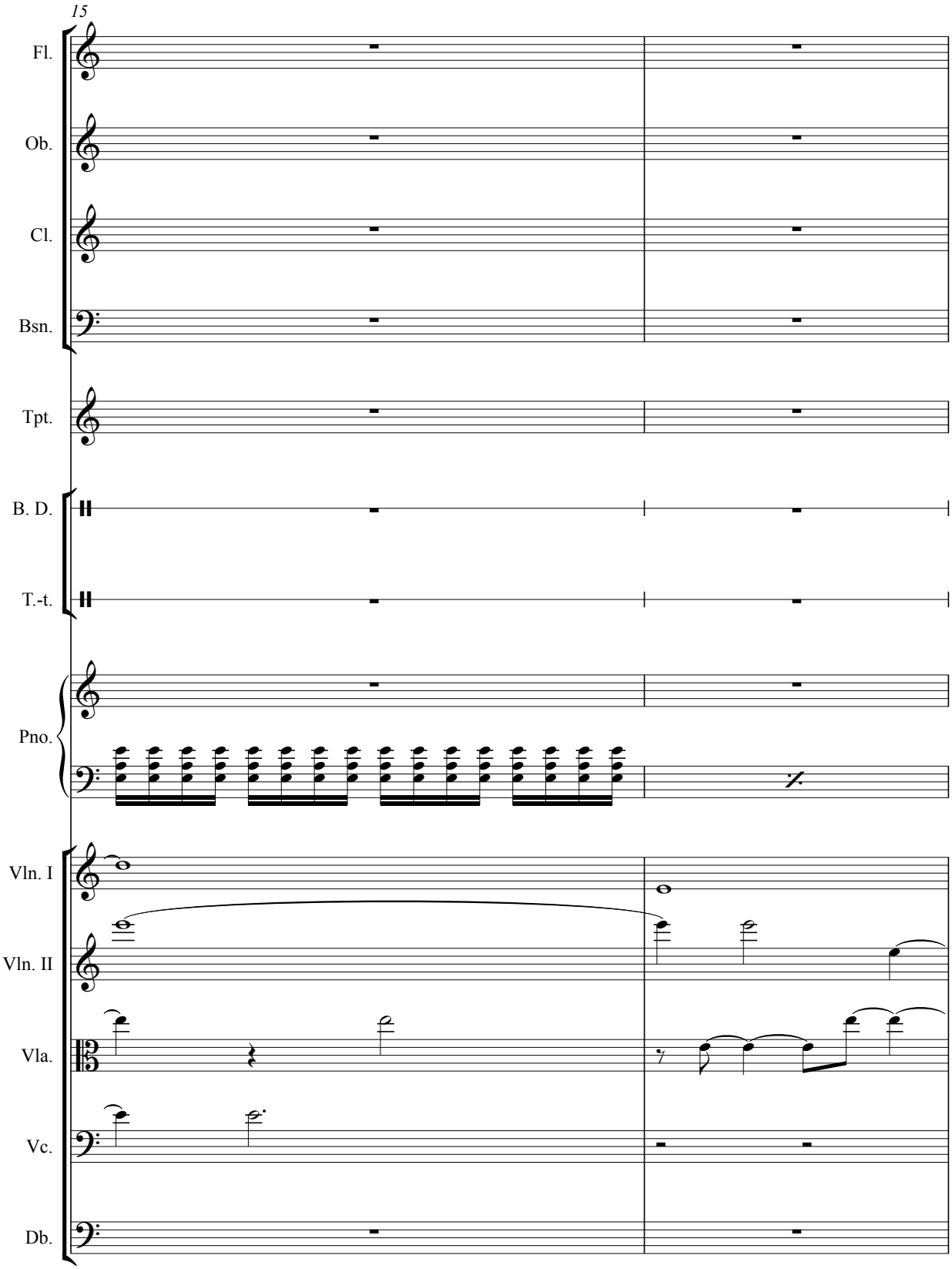


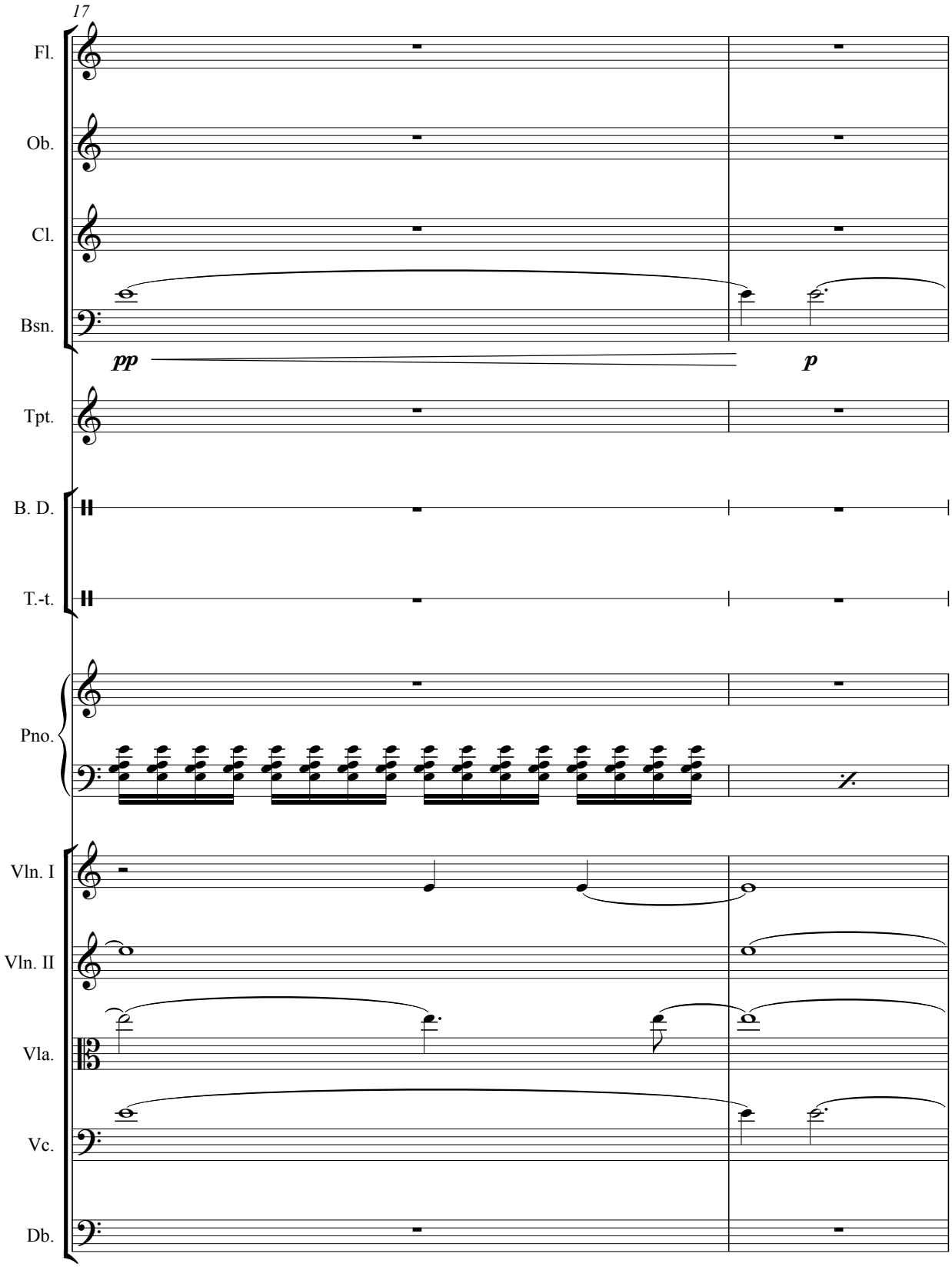

7
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Strum strings inside of piano *
mf
* Gently press down chords on keyboard with one hand without producing a sound. With the other hand, use a soft mallet stick (rubber) to strum back and forth the strings used in the chord. It is possible to use a second player do this.
Dynamics wise: Feel free to swell in places.
Vln. I
Vln. II
Vla.
Vc.
p
Db.

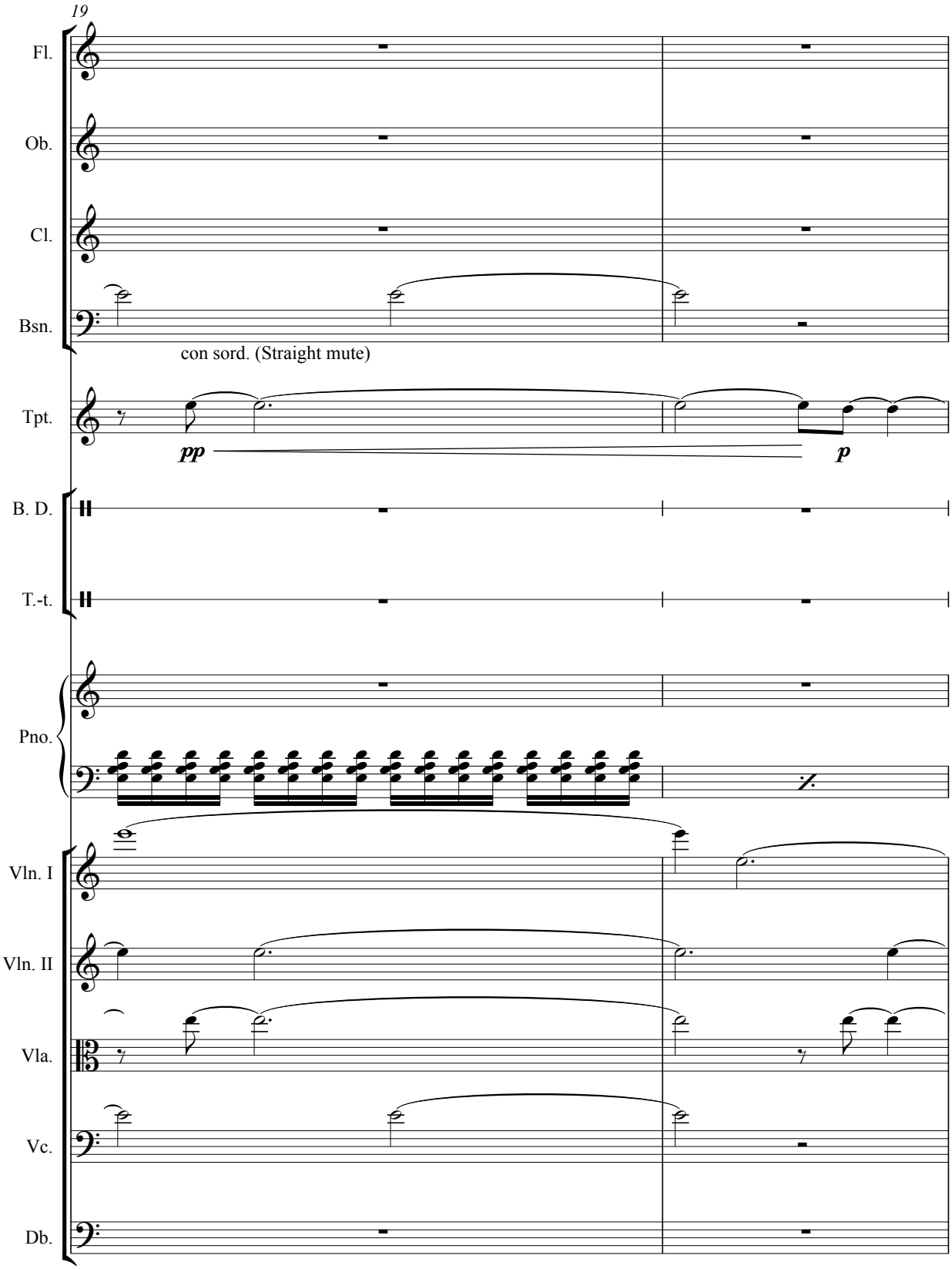

9
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

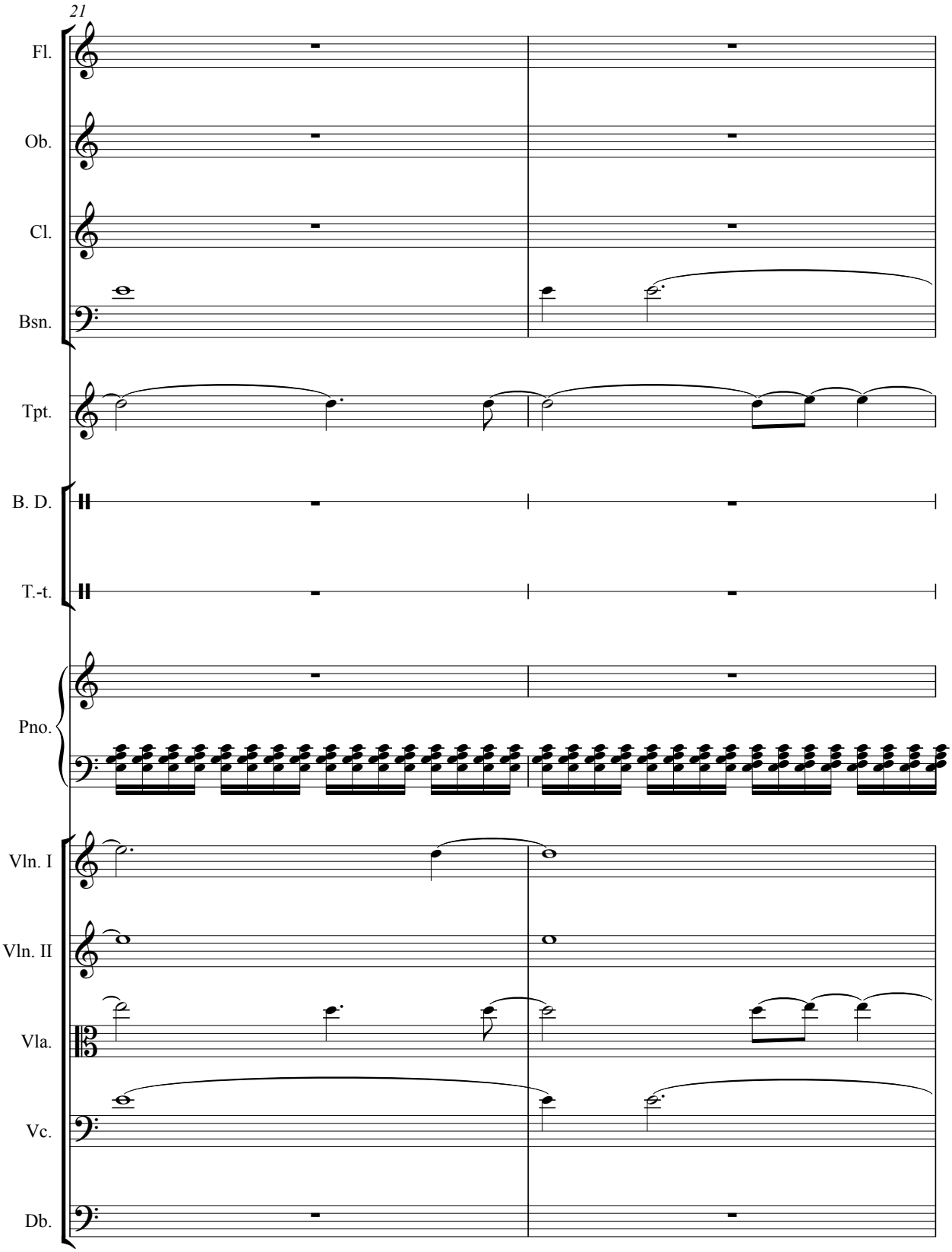

11
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

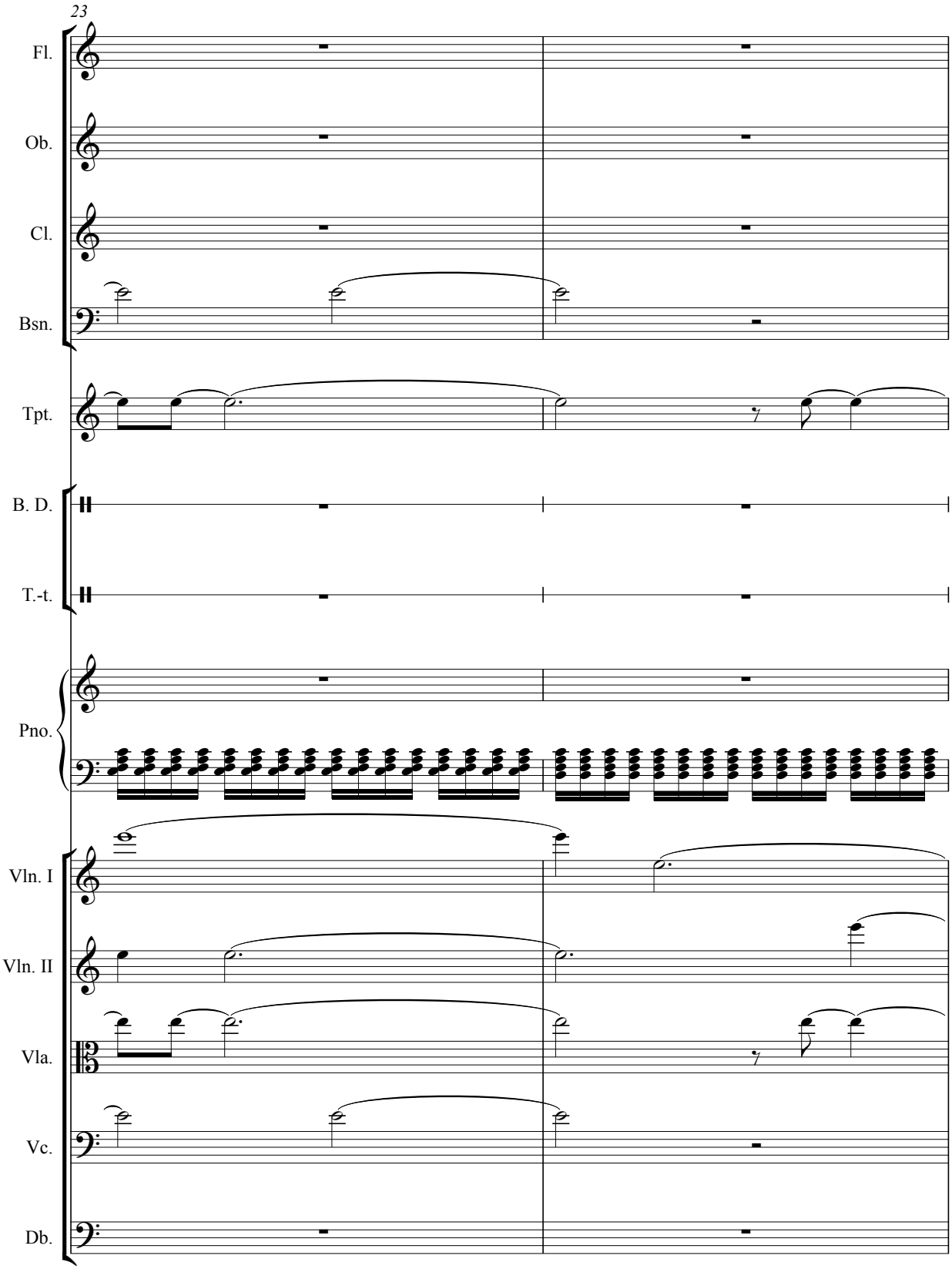

13
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

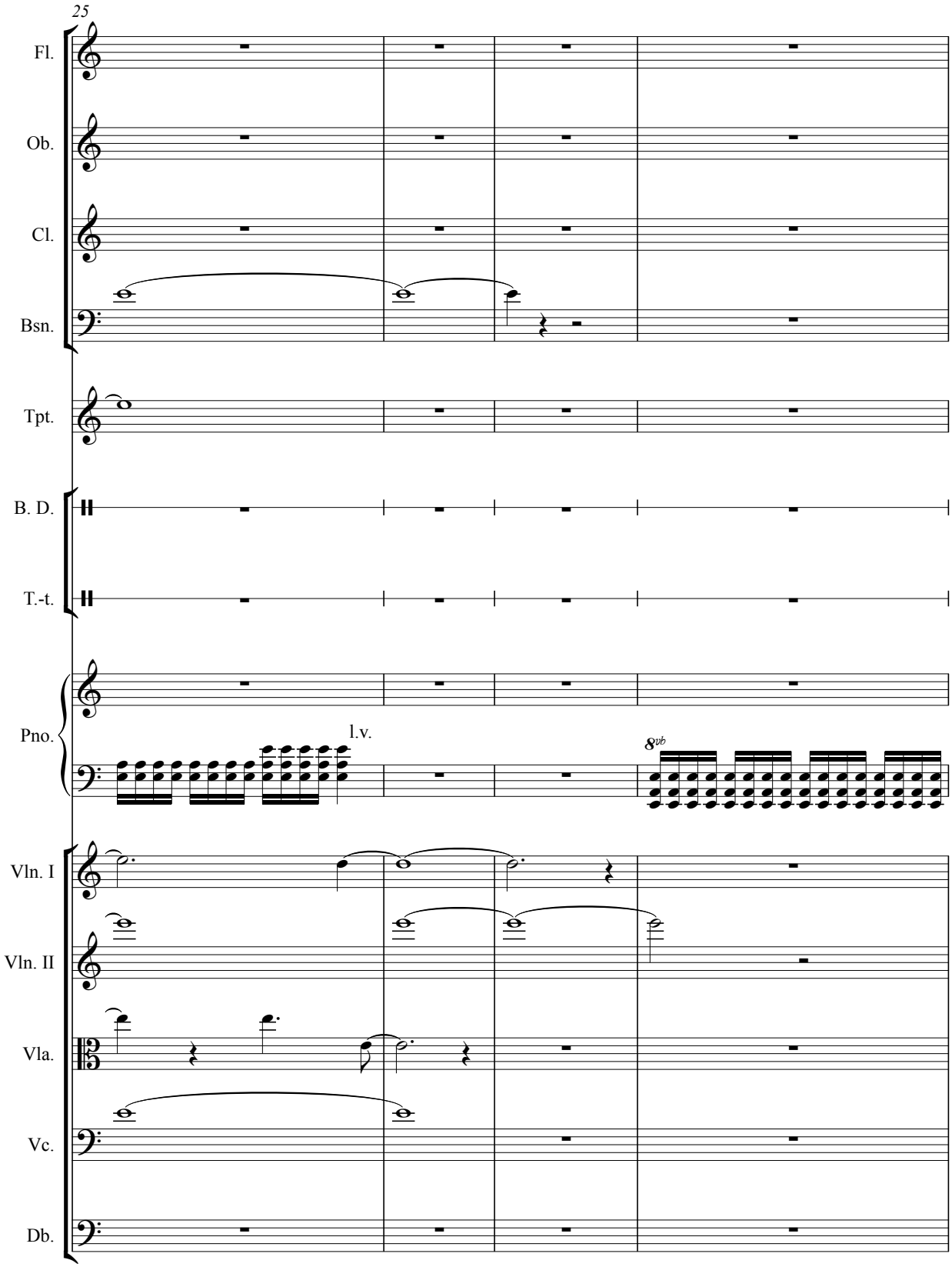

15
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

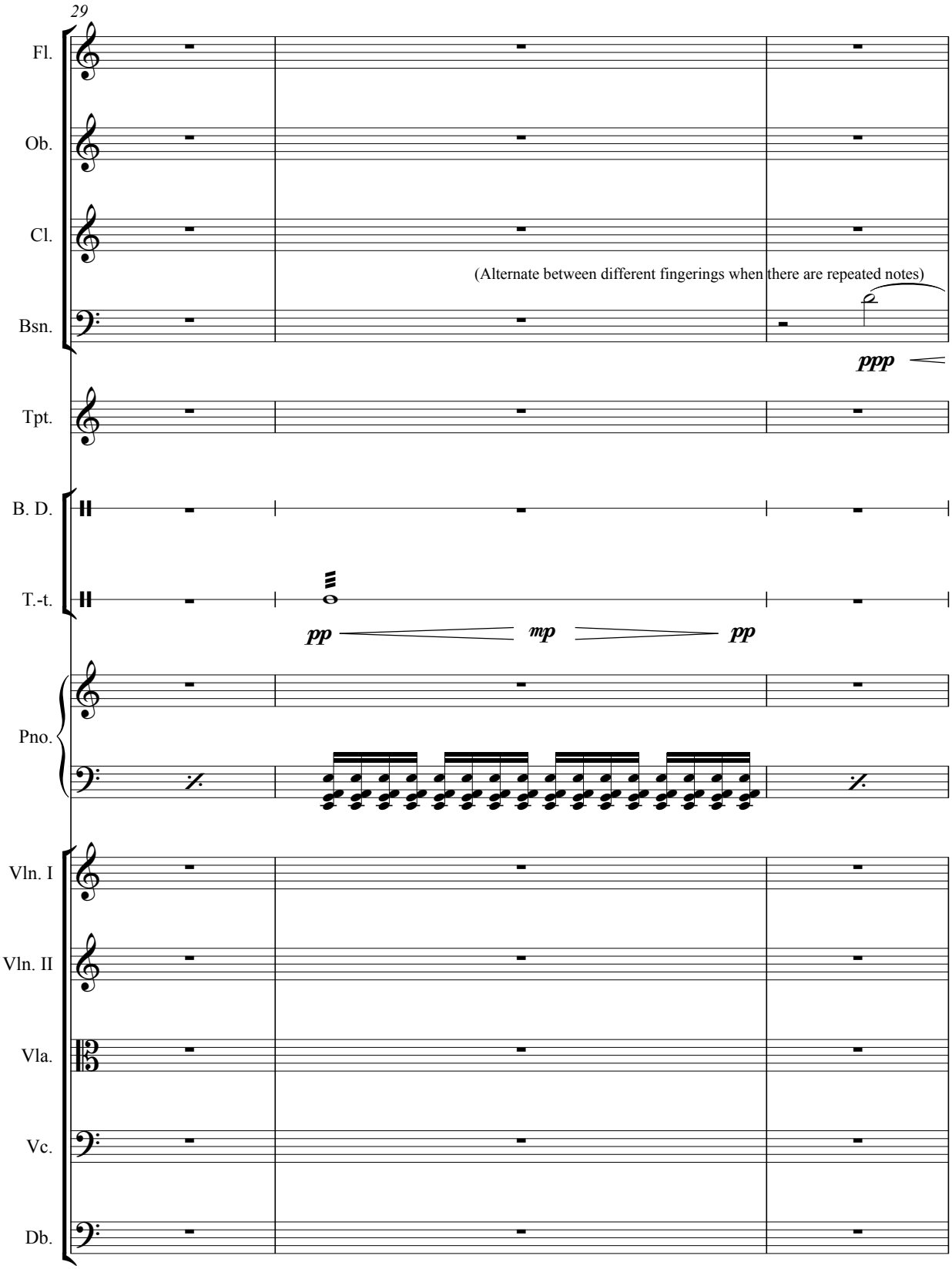

17
Fl.
Ob.
Cl.
Bsn.
pp
p
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

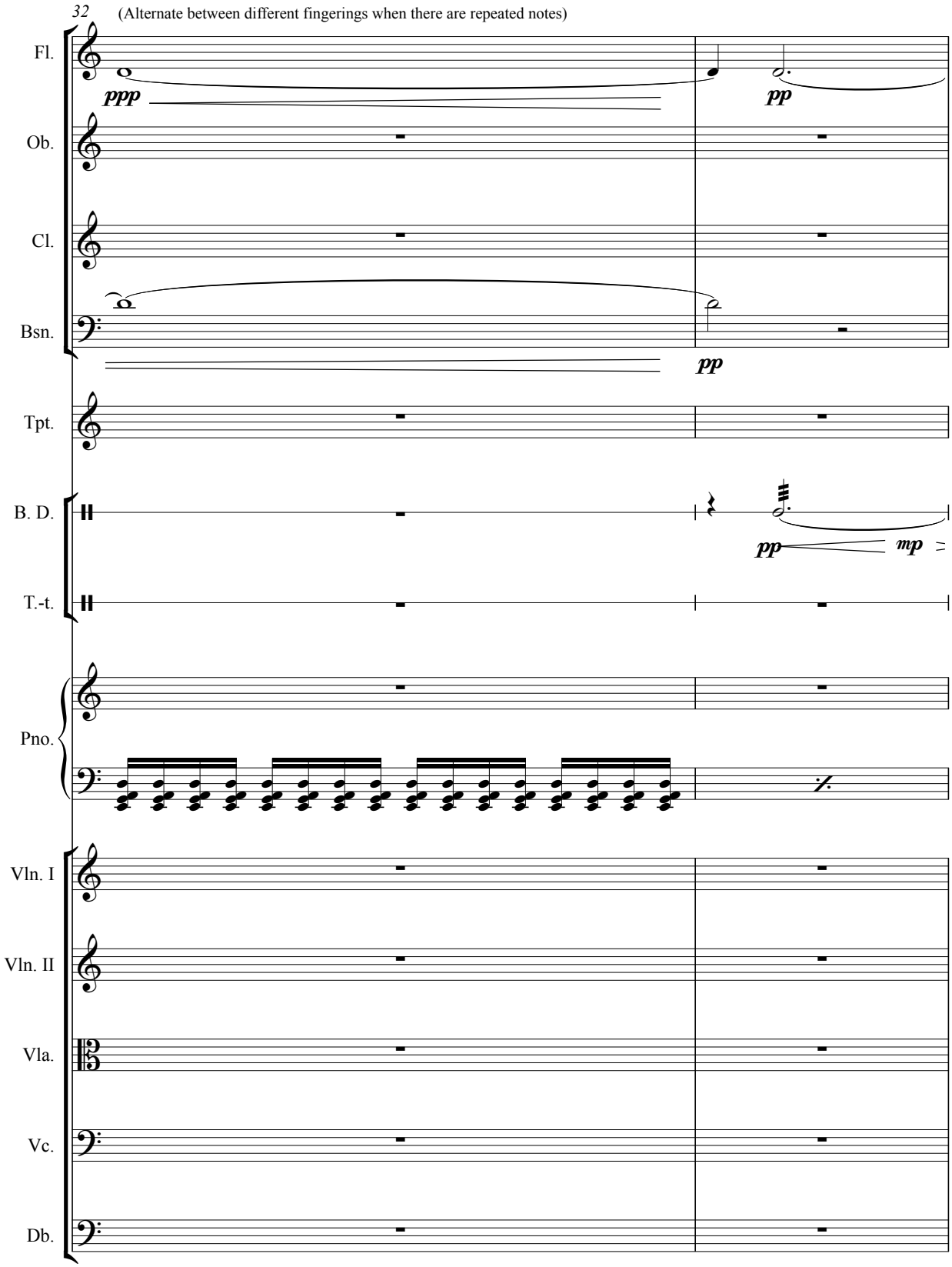

19
Fl.
Ob.
Cl.
Bsn.
con sord. (Straight mute)
Tpt.
pp
p
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

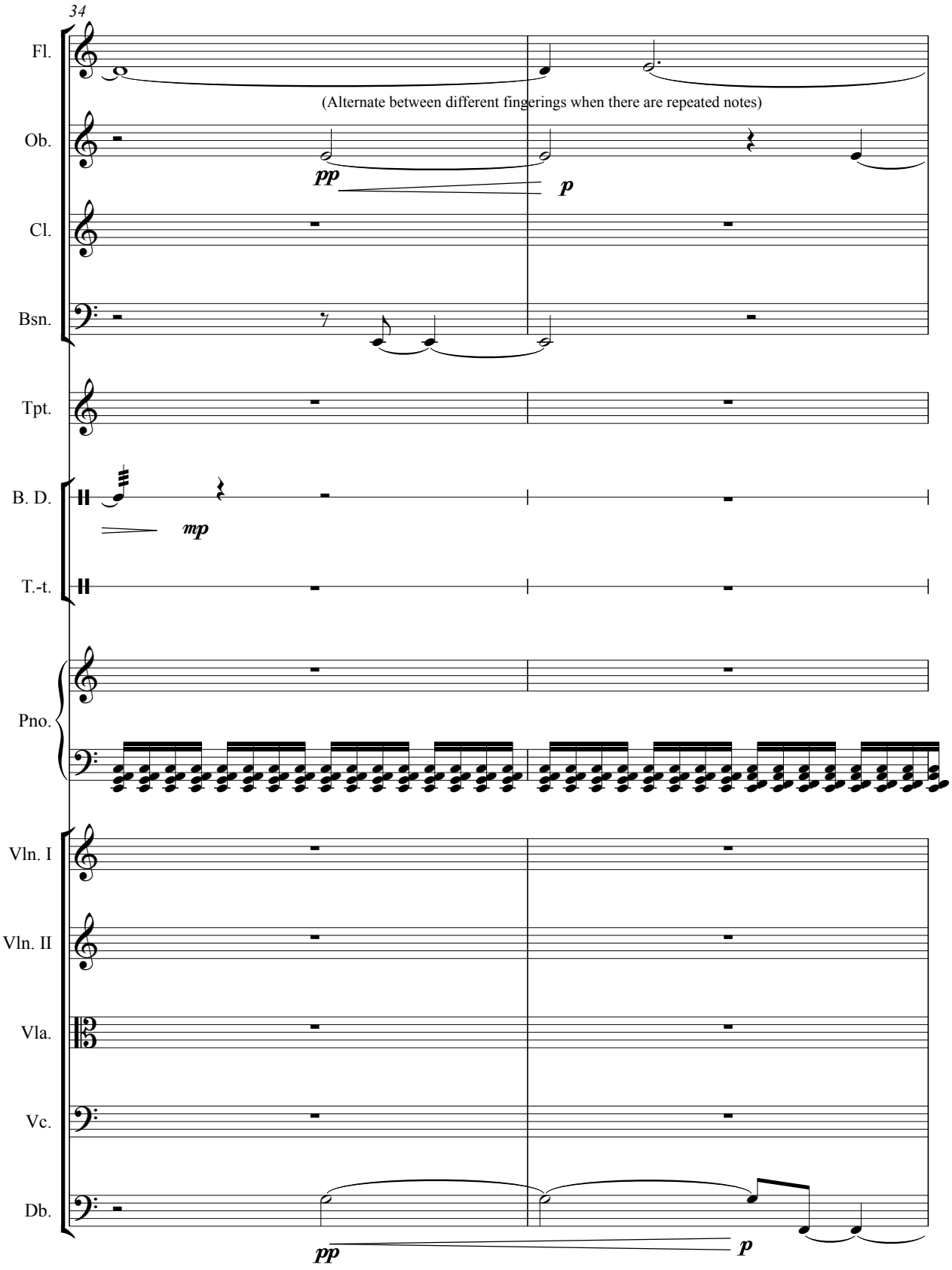

21
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

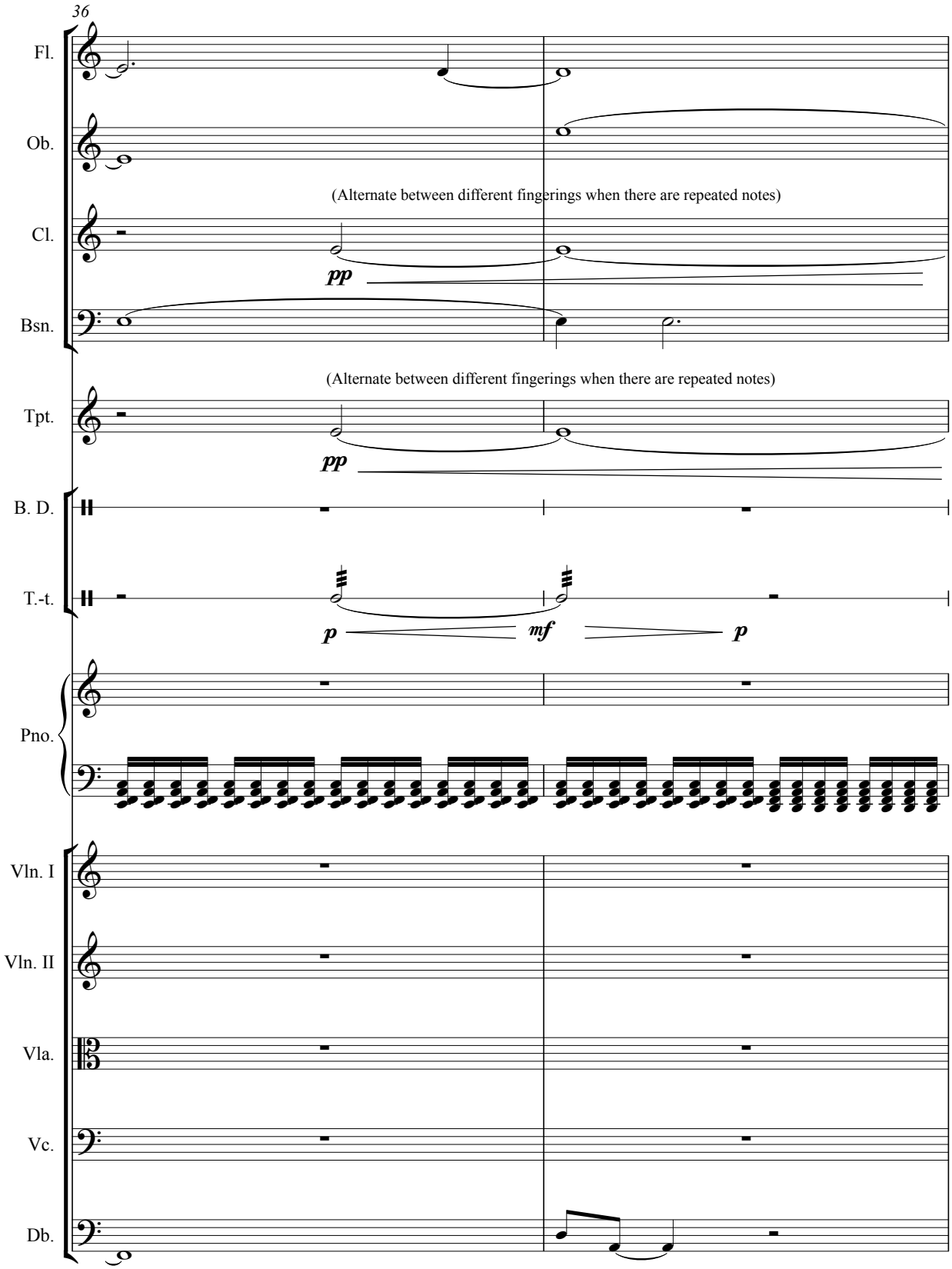

23
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

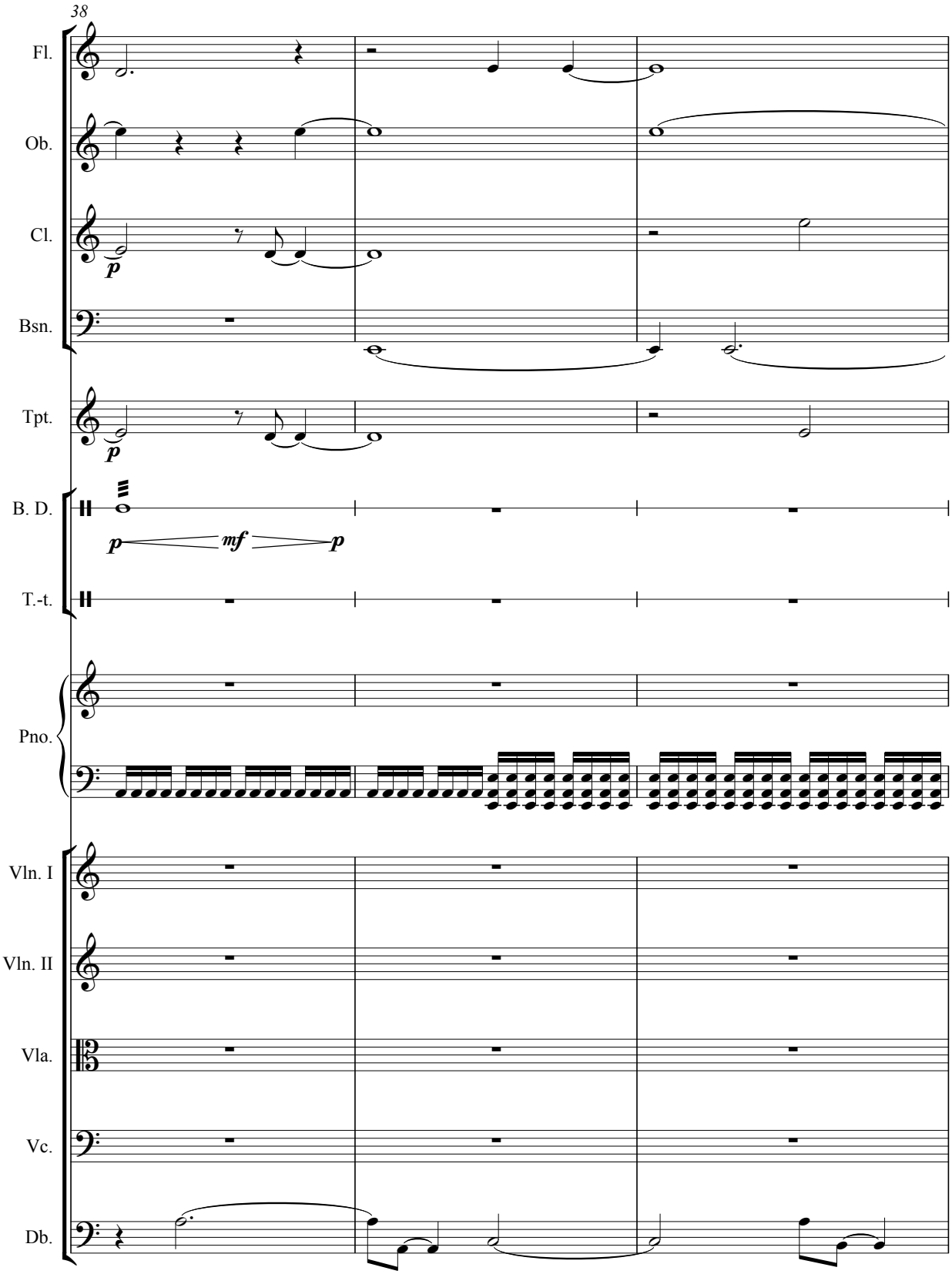

25
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
l.v.
8vb
Vln. I
Vln. II
Vla.
Vc.
Db.

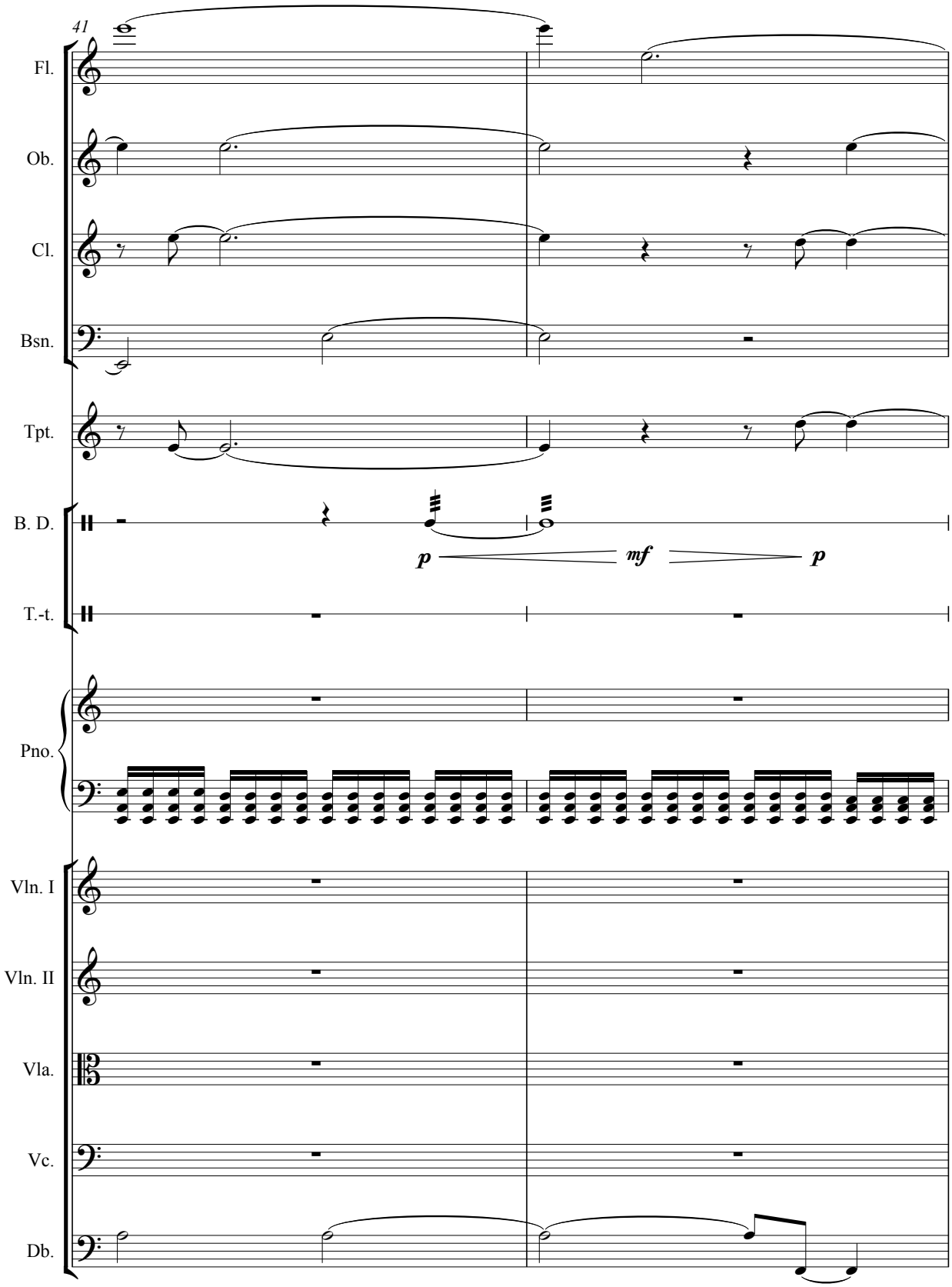

29
Fl.
Ob.
Cl.
(Alternate between different fingerings when there are repeated notes)
Bsn.
ppp
Tpt.
B. D.
T.-t.
pp
mp
pp
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

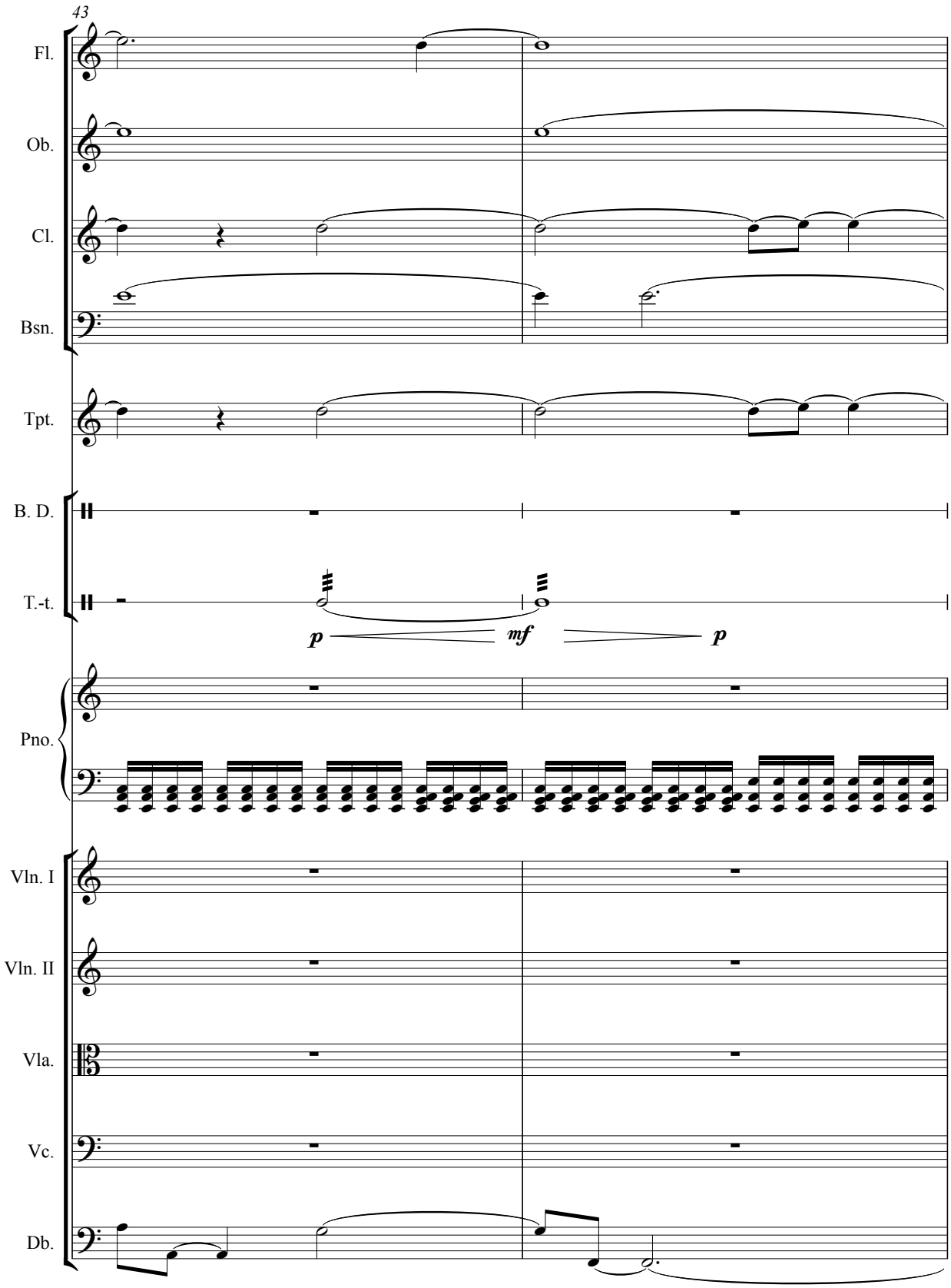

32
(Alternate between different fingerings when there are repeated notes)
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
ppp
pp
pp
pp
mp

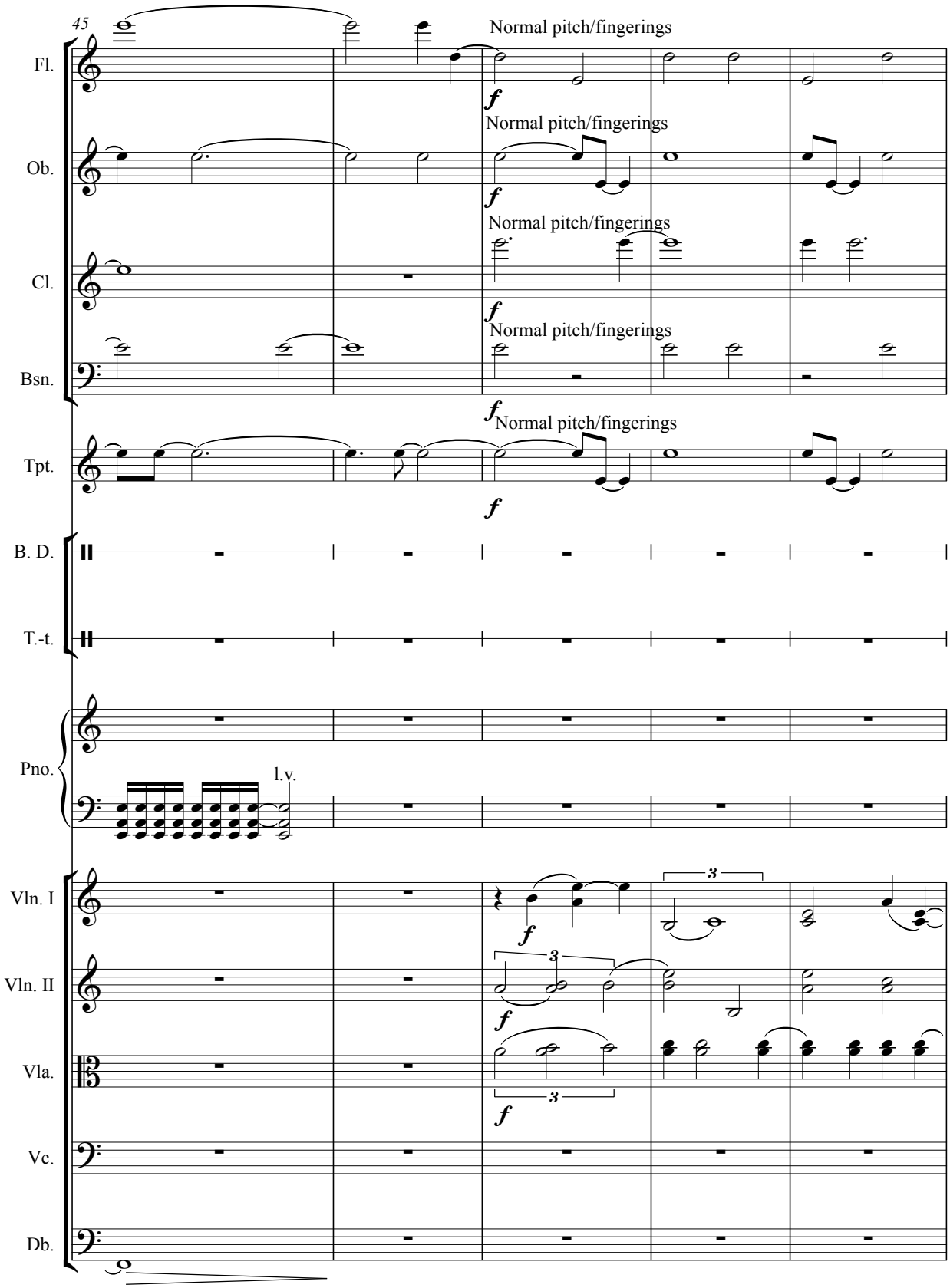

34
Fl.
(Alternate between different fingerings when there are repeated notes)
Ob.
pp
p
Cl.
Bsn.
Tpt.
B. D.
mp
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
pp
p

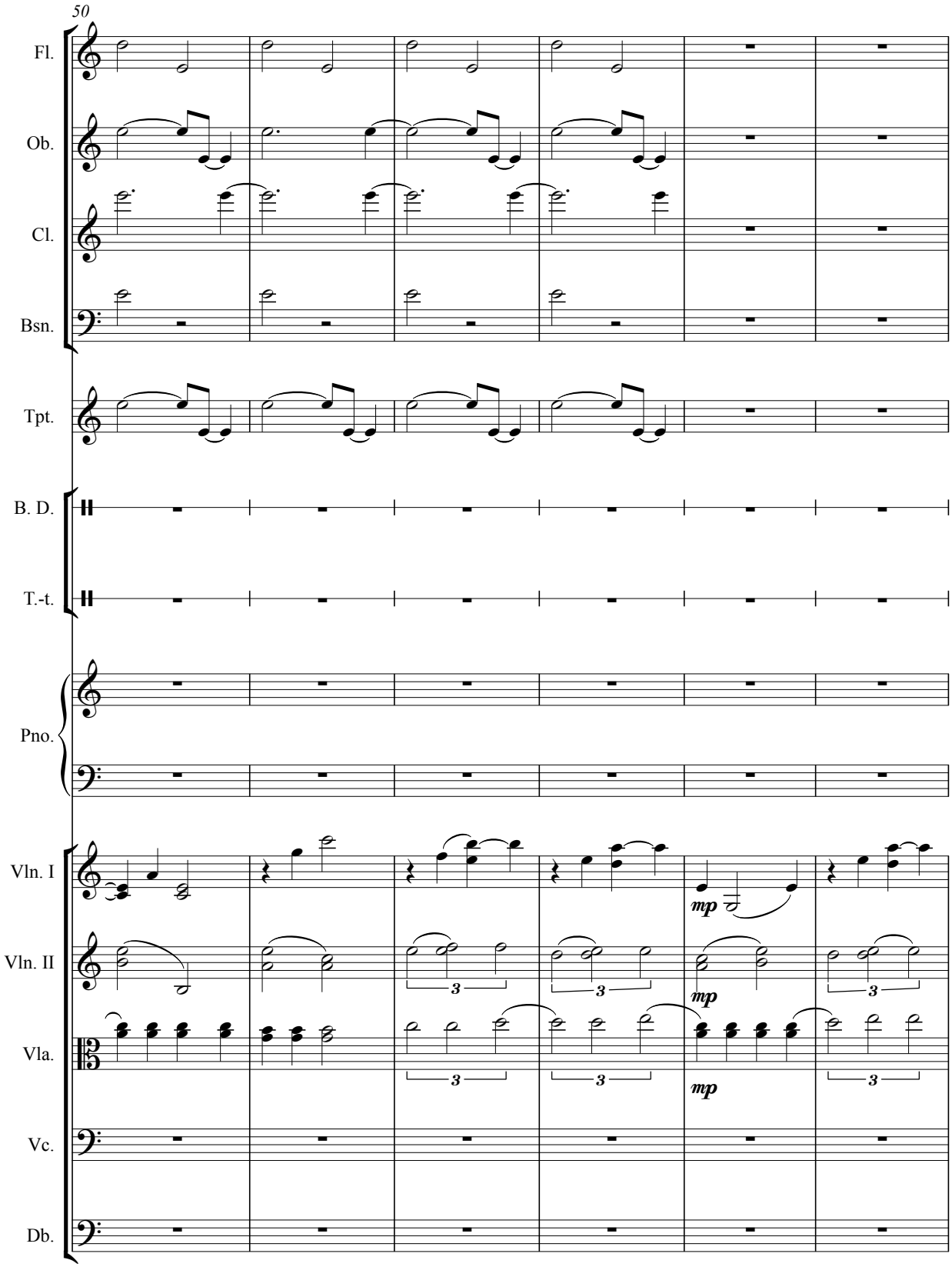

36
Fl.
Ob.
(Alternate between different fingerings when there are repeated notes)
Cl.
pp
Bsn.
(Alternate between different fingerings when there are repeated notes)
Tpt.
pp
B. D.
T.-t.
p
mf
p
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

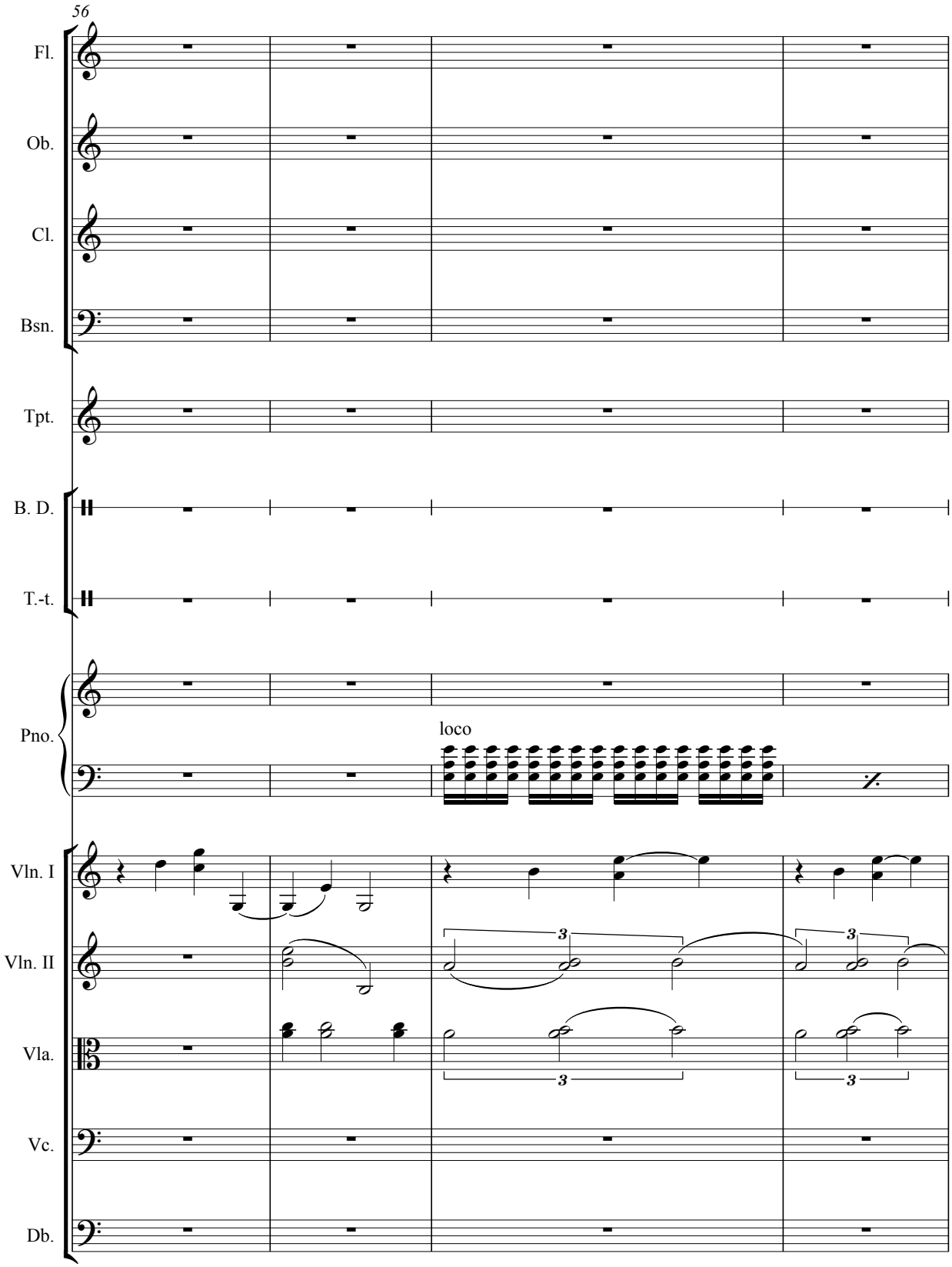

38
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
p
mf
p

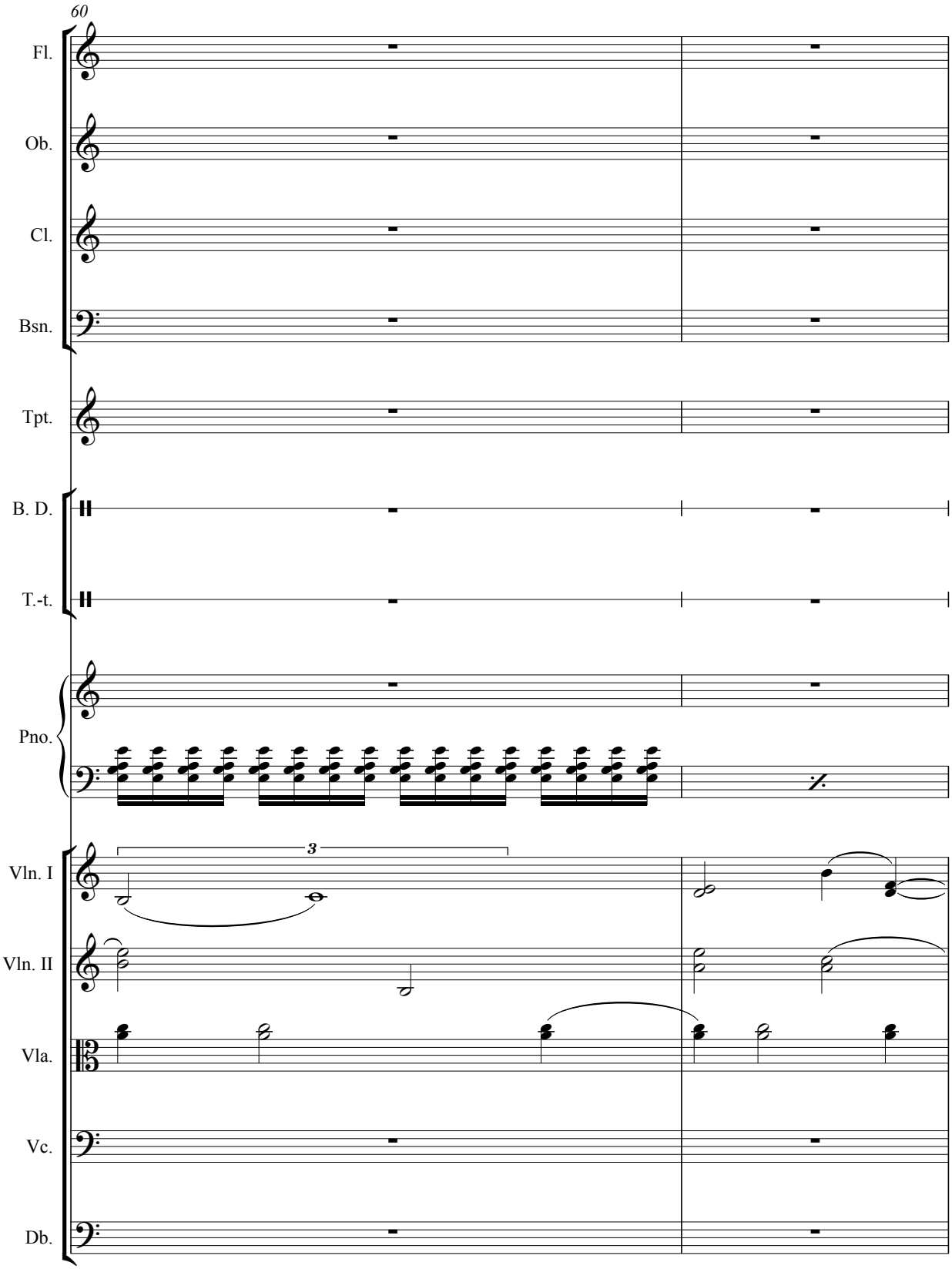

41
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
p
mf
p
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

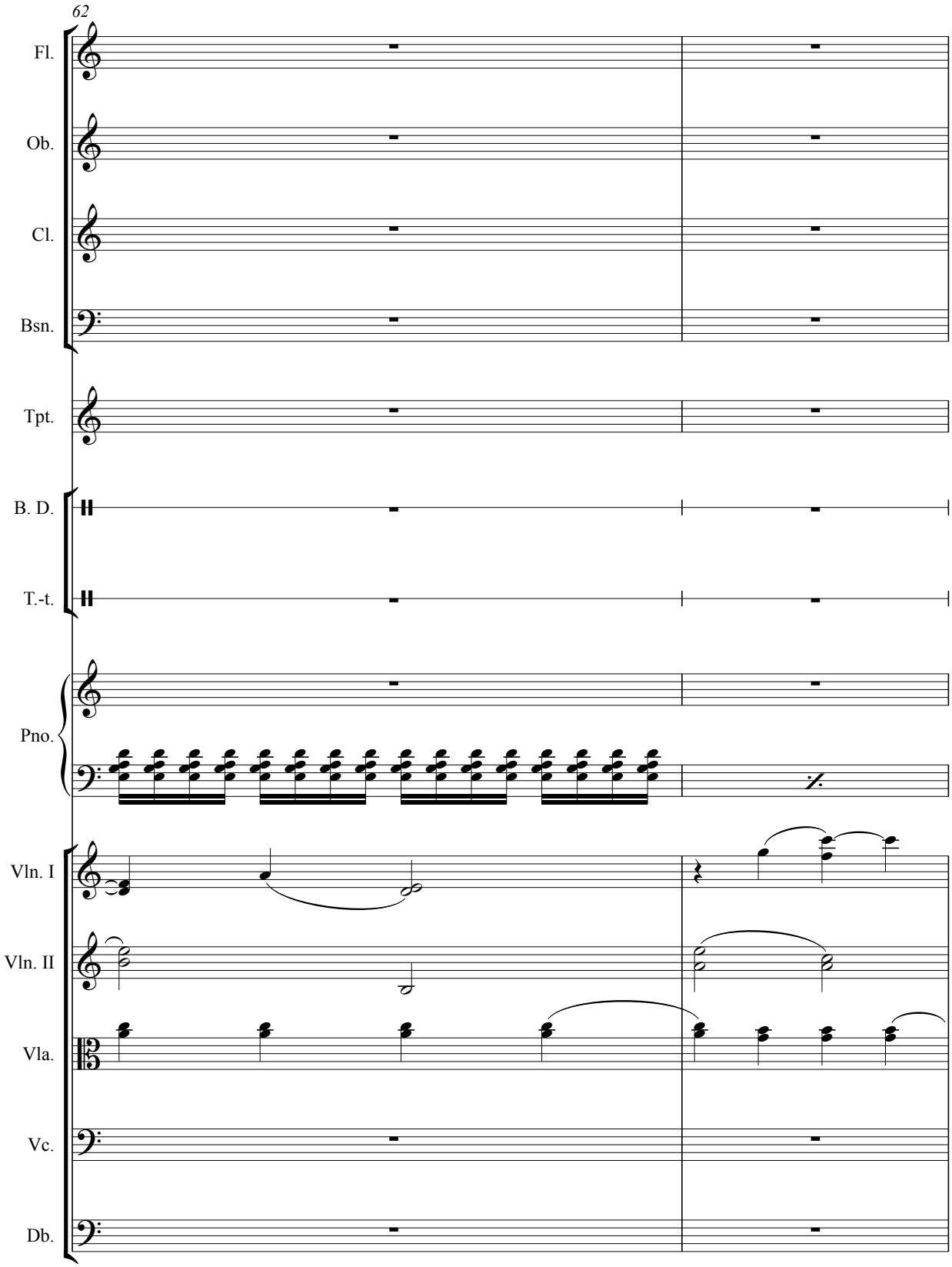

43
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
p
mf
p
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

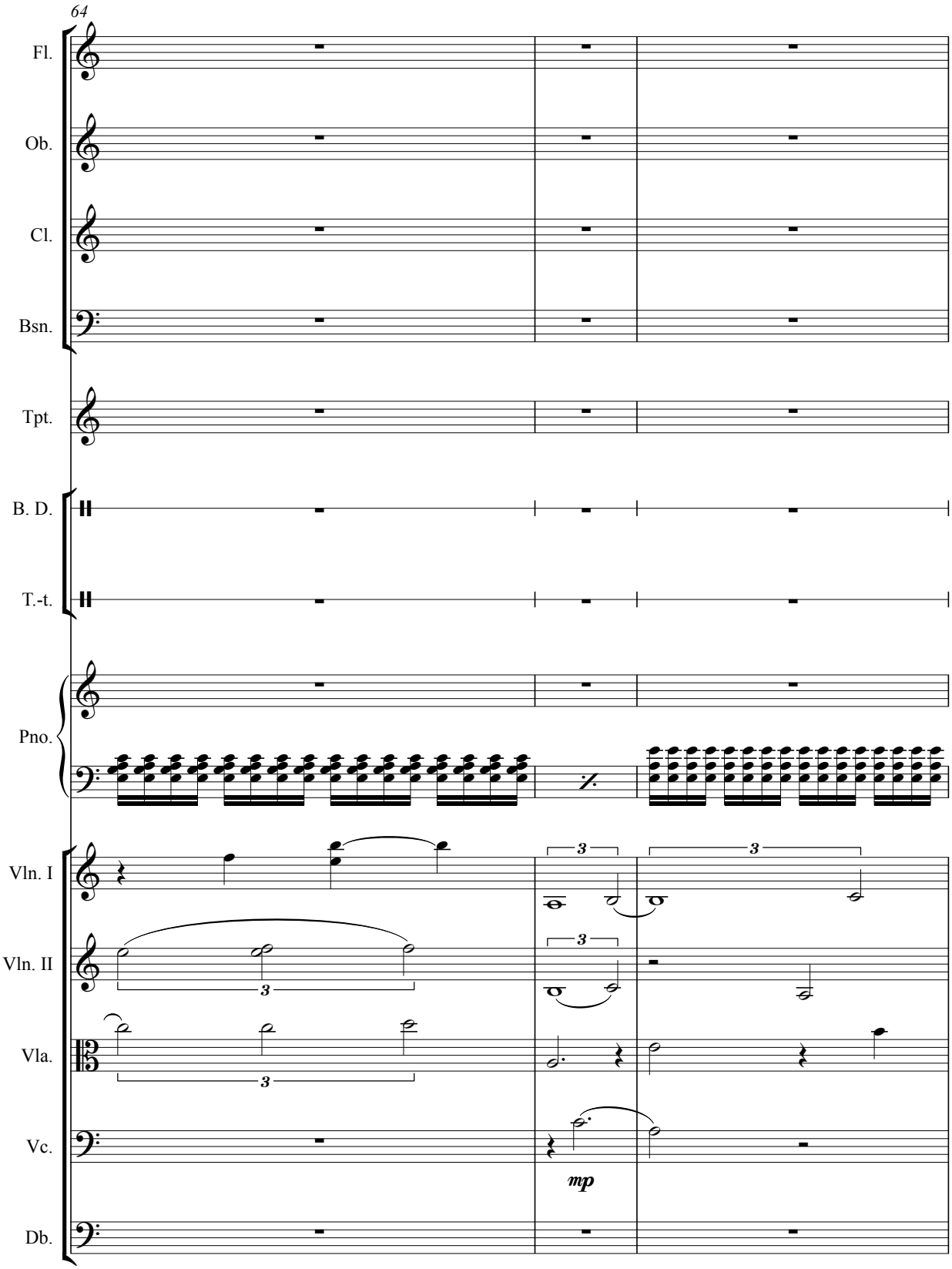

45
Fl.
Normal pitch/fingerings
f
Ob.
Normal pitch/fingerings
f
Cl.
Normal pitch/fingerings
f
Bsn.
Normal pitch/fingerings
f
Tpt.
Normal pitch/fingerings
f
B. D.
T.-t.
Pno.
l.v.
Vln. I
3
f
Vln. II
3
f
Vla.
3
f
Vc.
Db.

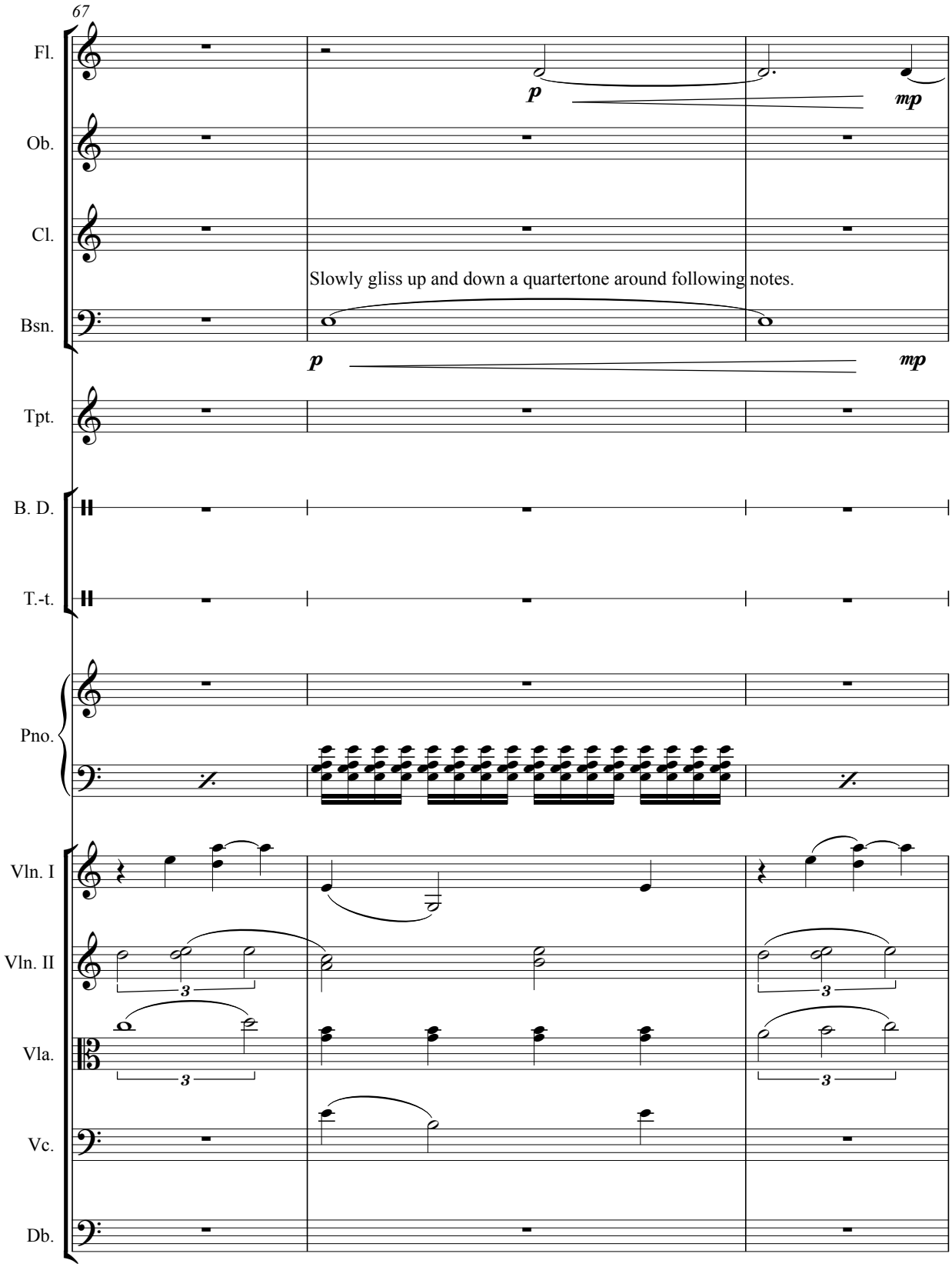

50
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
mp
mp
mp
3
3
3
3
3
3

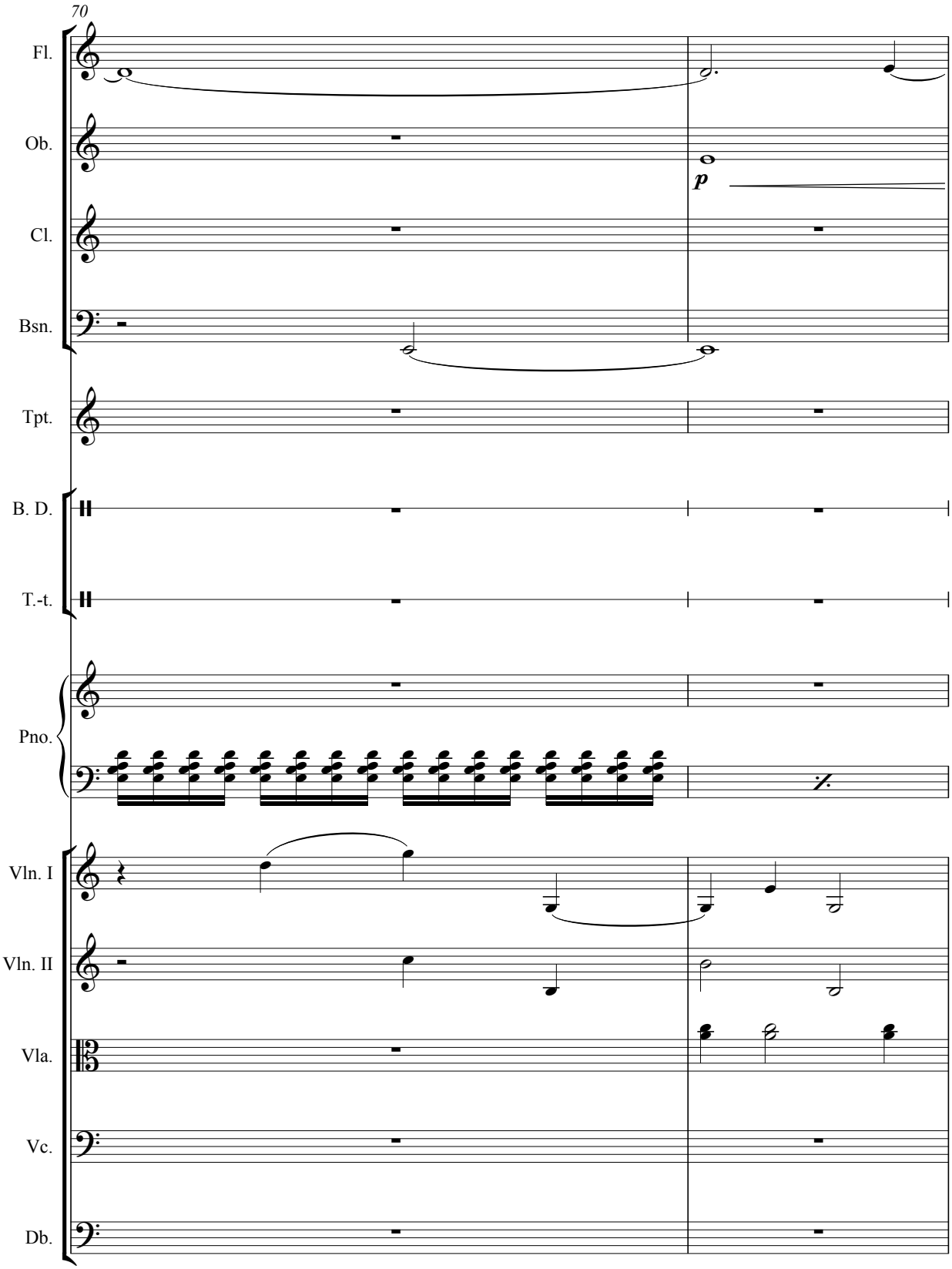

56
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
loco
Vln. I
Vln. II
Vla.
Vc.
Db.
3
3
3
3

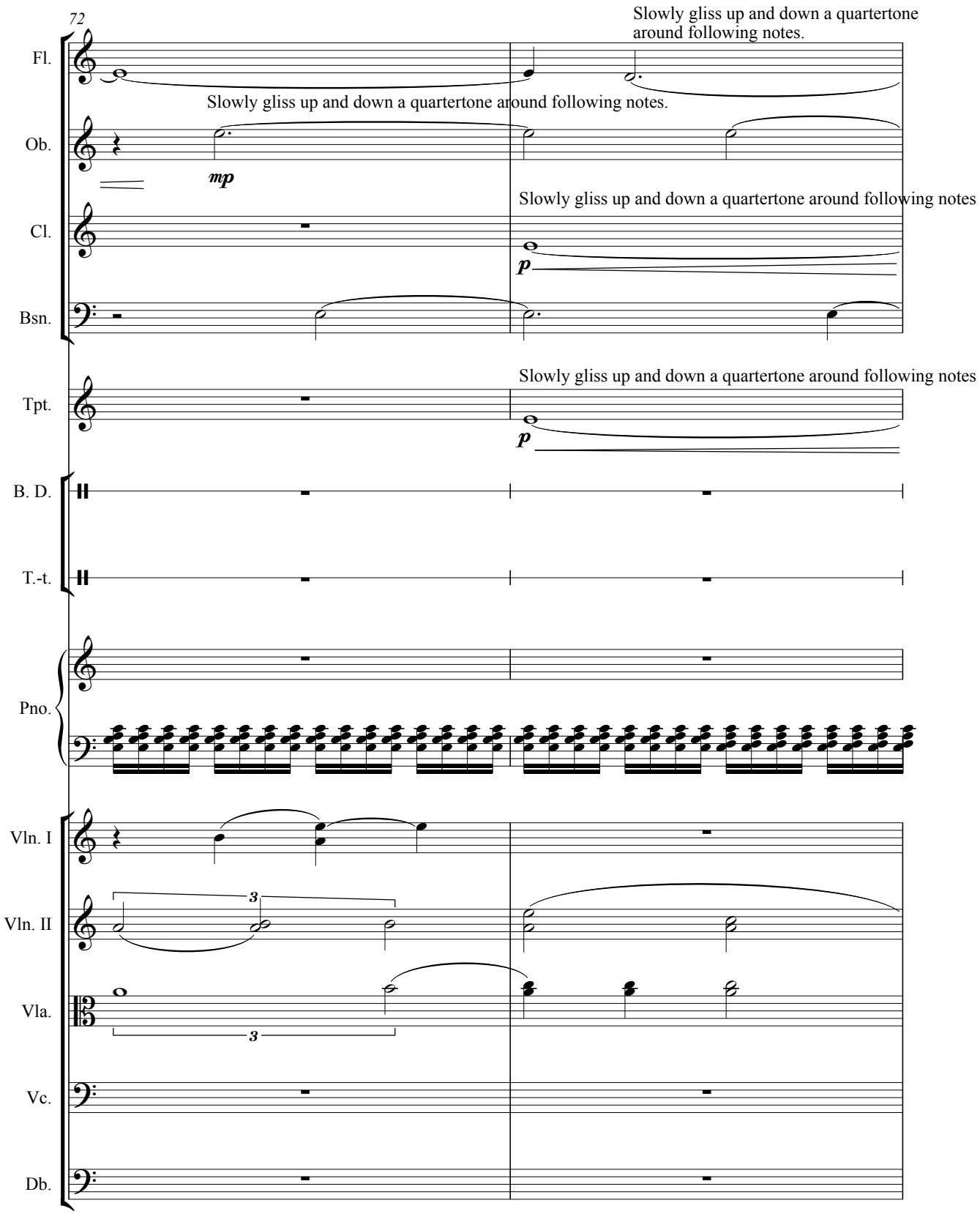

60
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
3
Vln. I
Vln. II
Vla.
Vc.
Db.

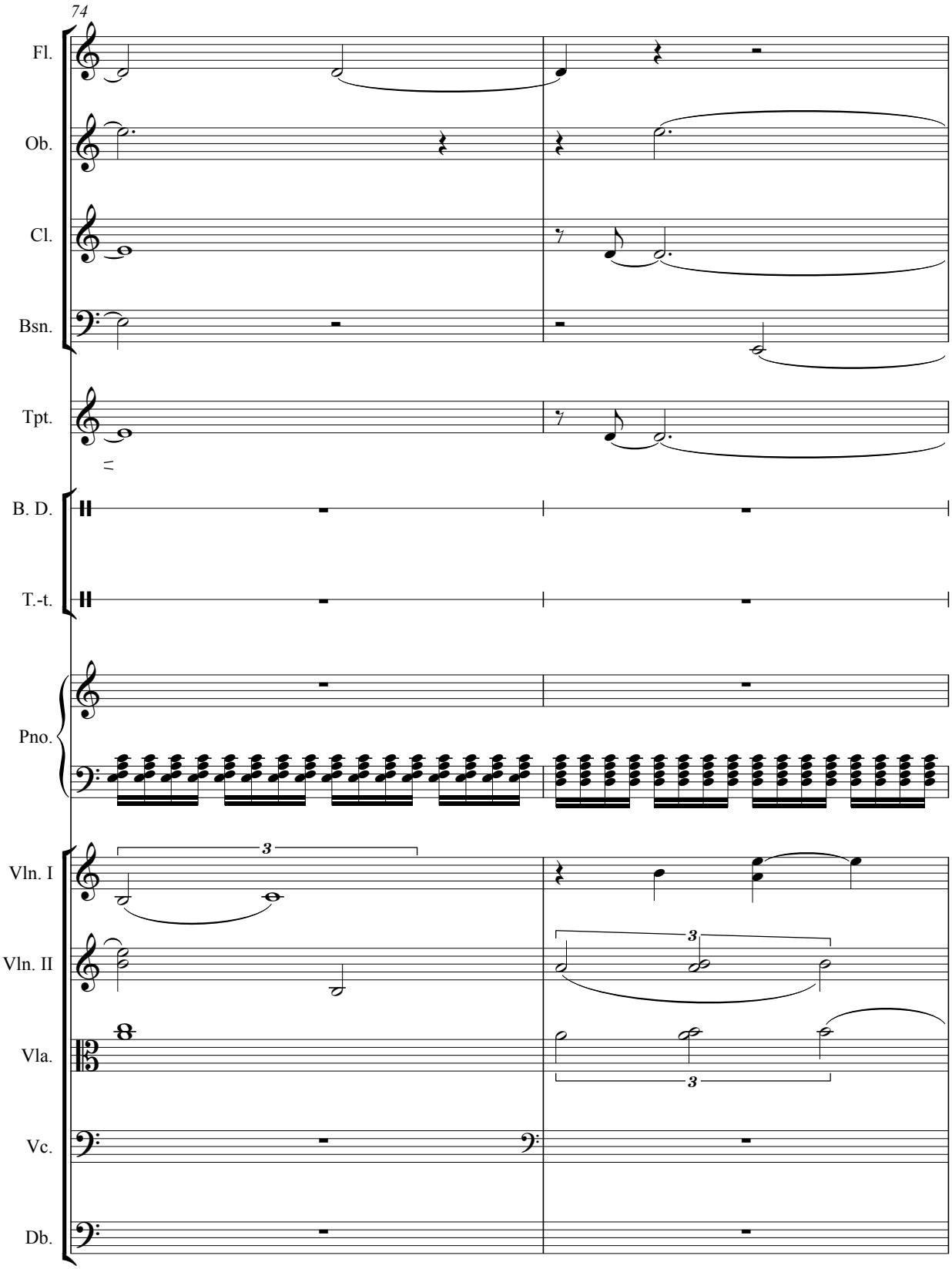

62
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.

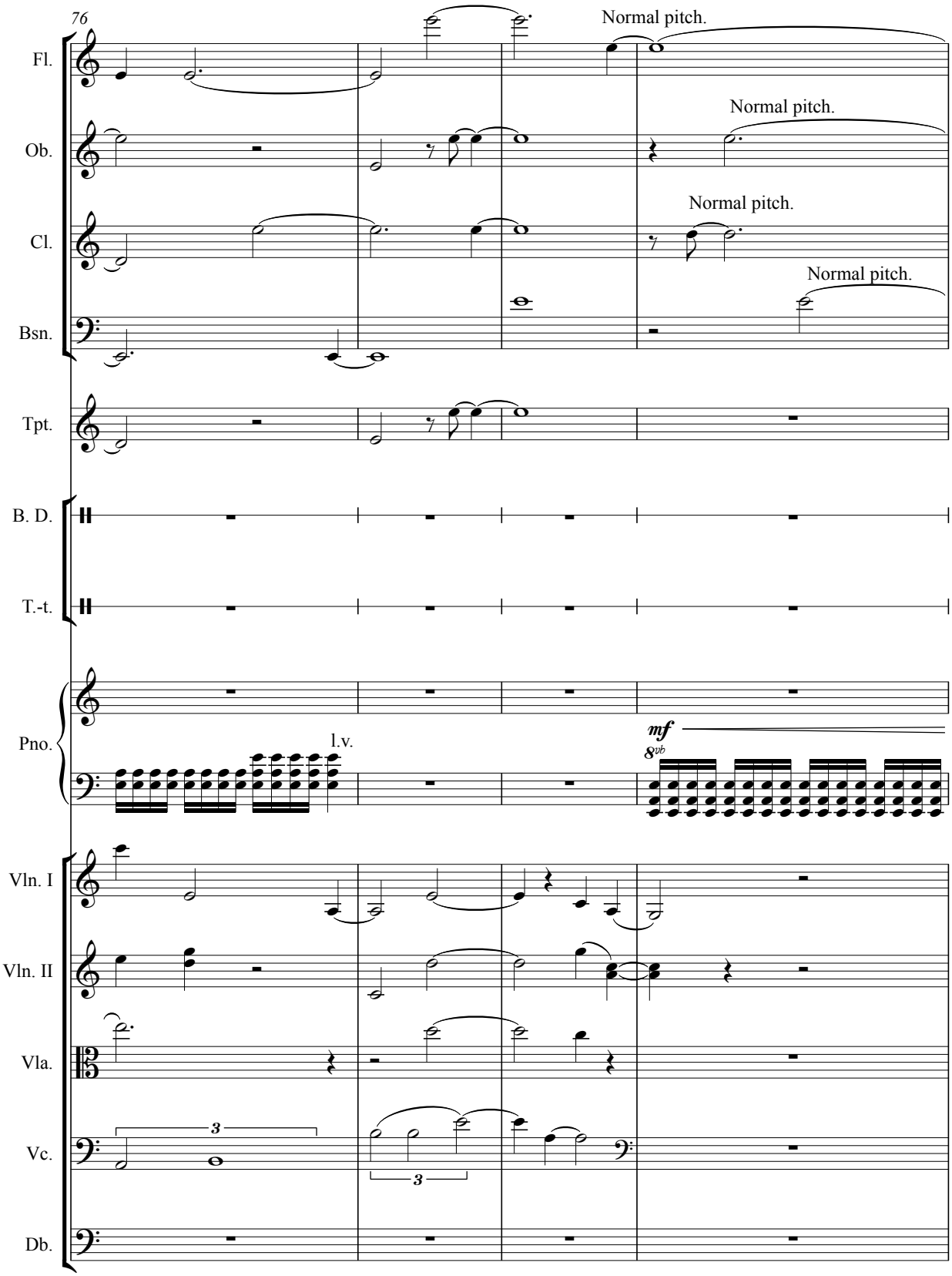

64
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
3
3
3
3
3
mp

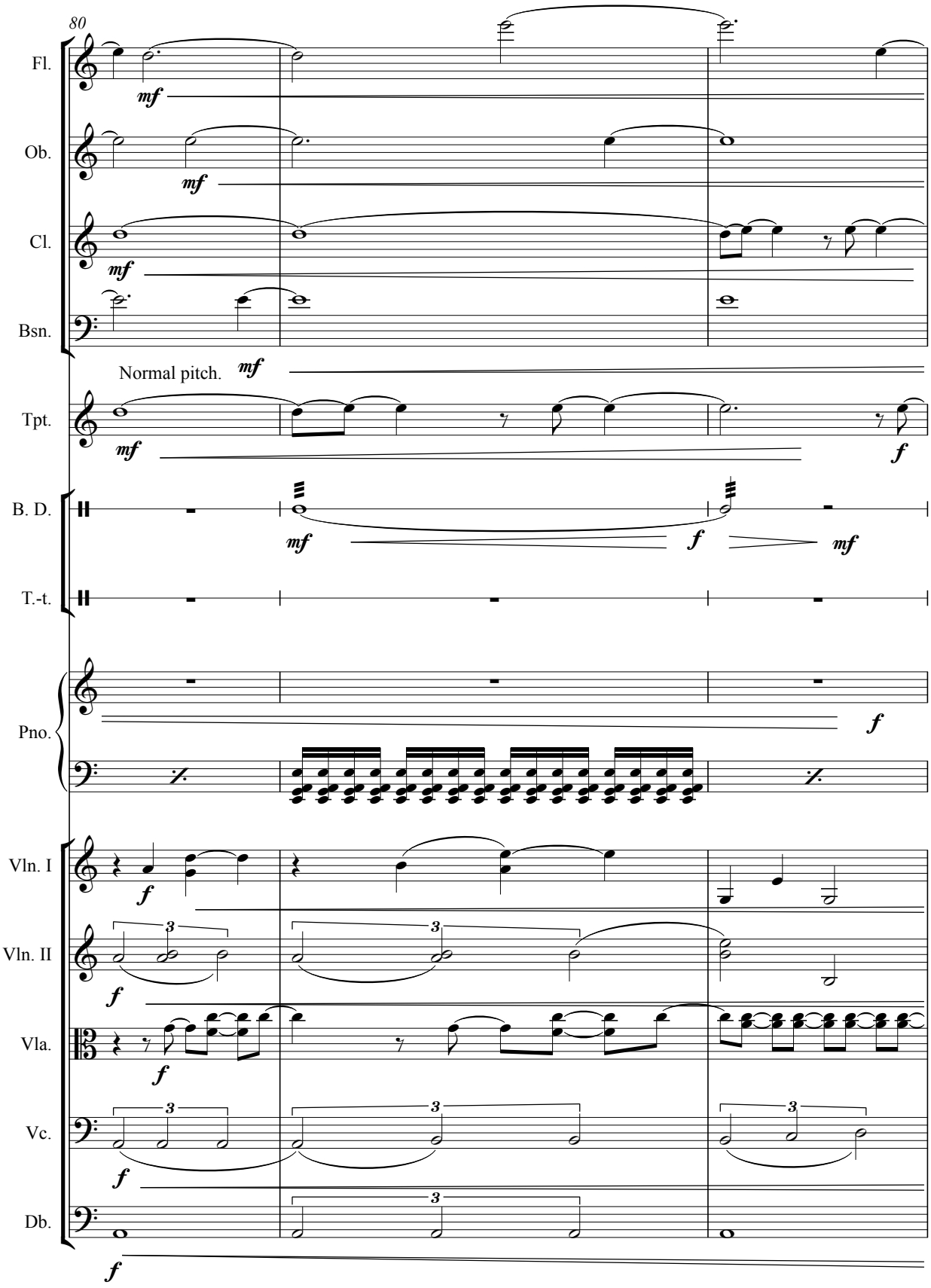

67
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
p
mp
Slowly gliss up and down a quartertone around following notes.
p
mp
3
3
3

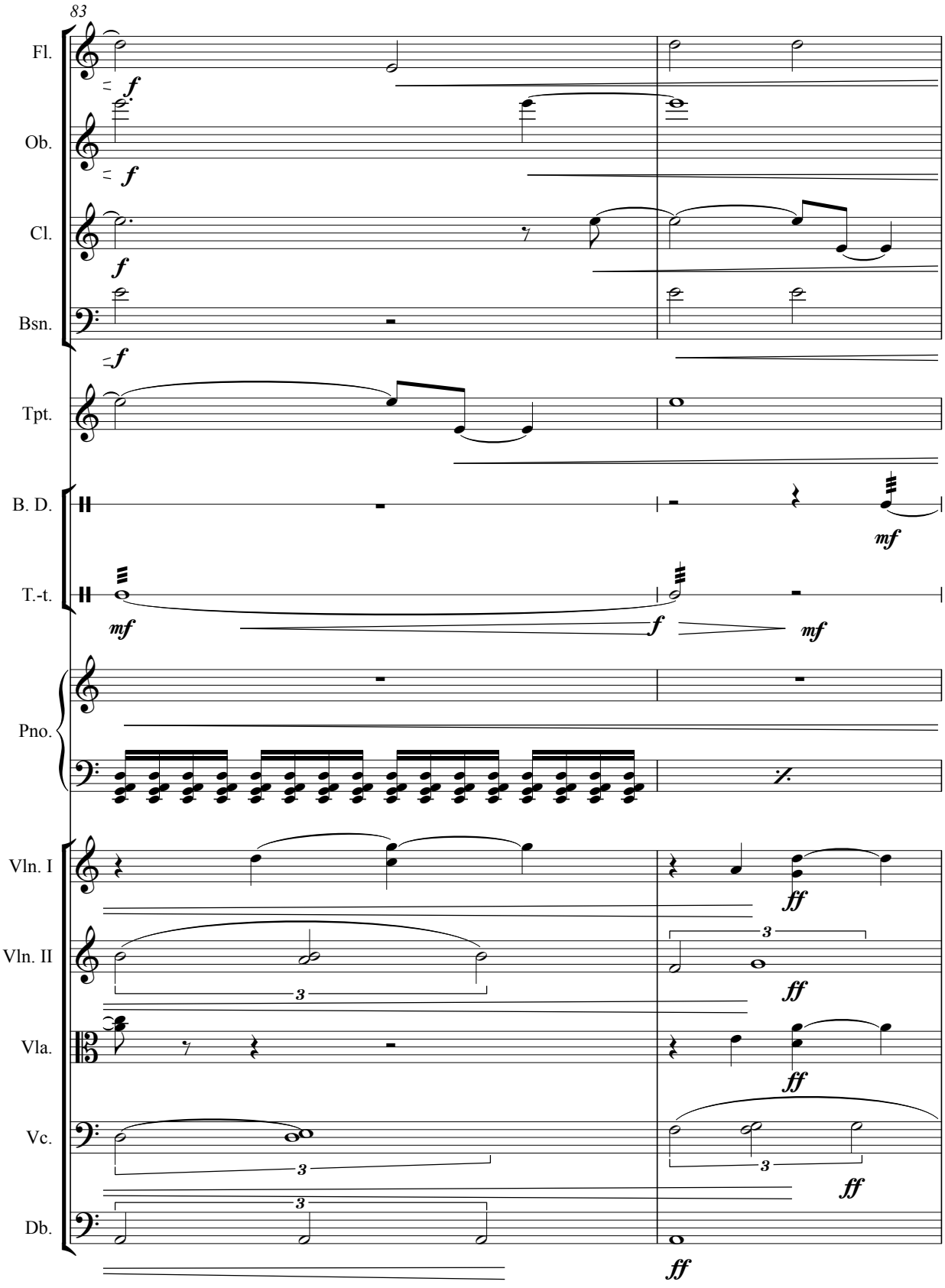

70
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
p

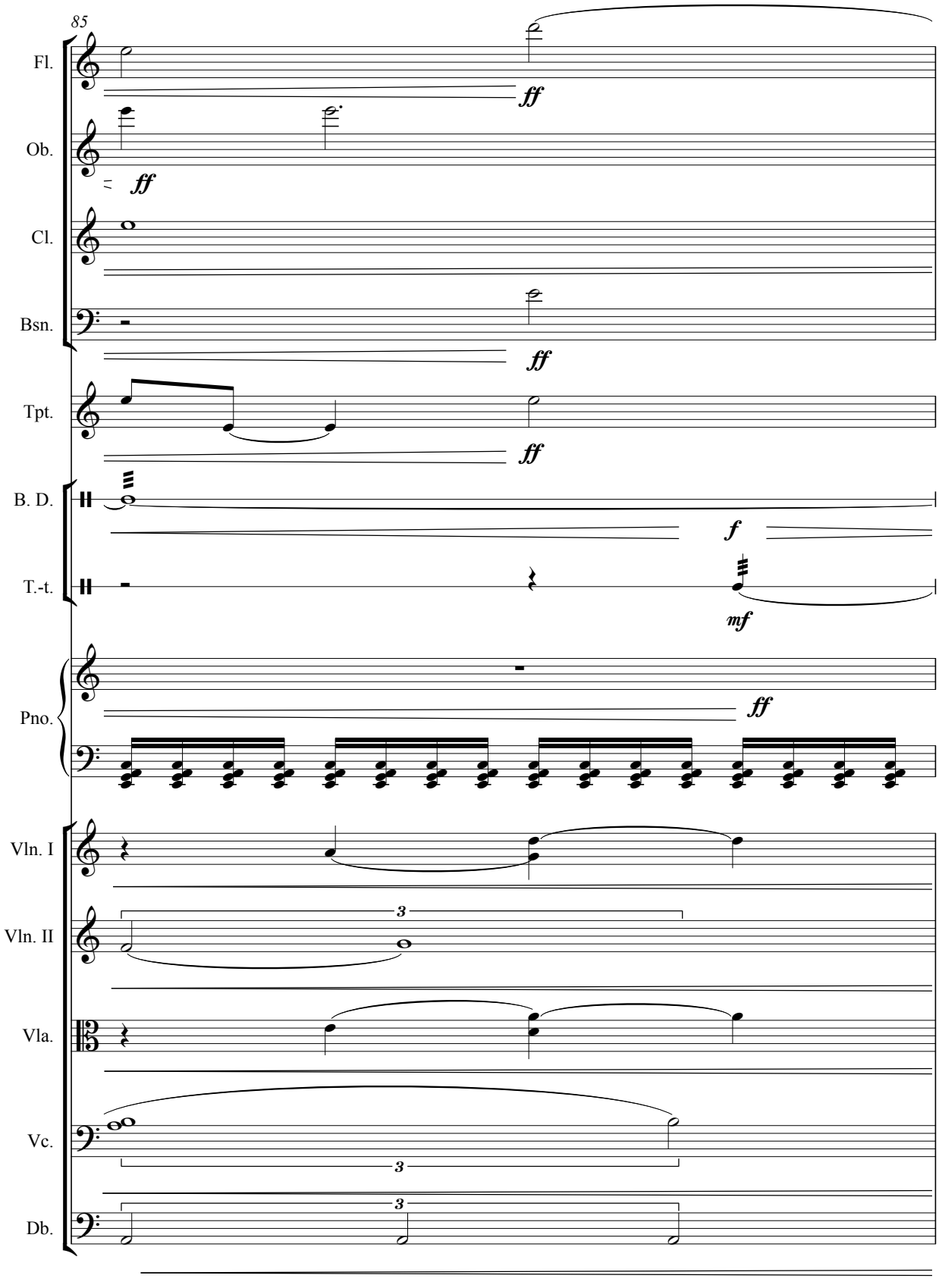

72
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
Slowly gliss up and down a quartertone around following notes.
Slowly gliss up and down a quartertone around following notes.
mp
Slowly gliss up and down a quartertone around following notes
p
Slowly gliss up and down a quartertone around following notes
p
3
3

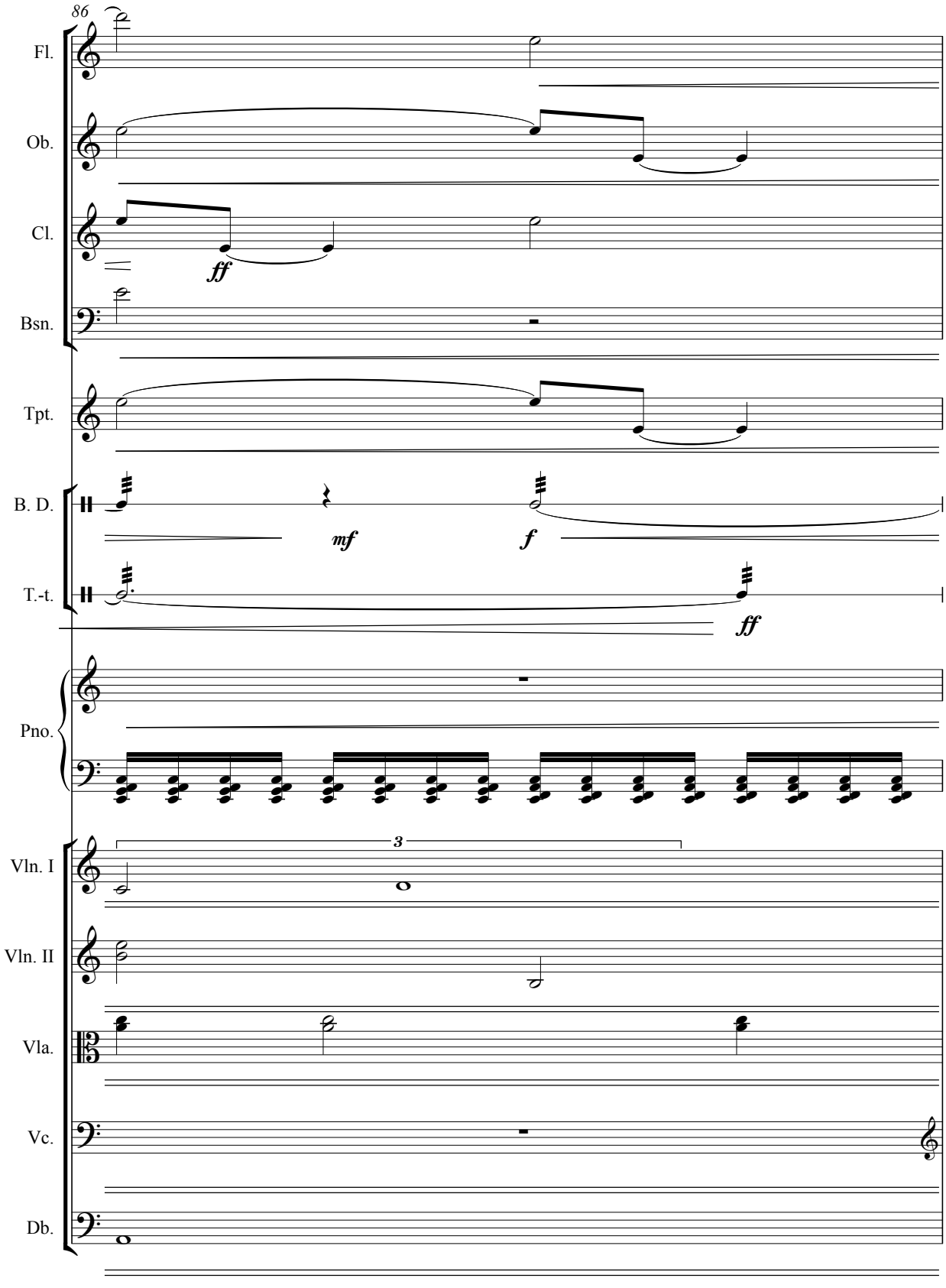

74
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
3
3
3

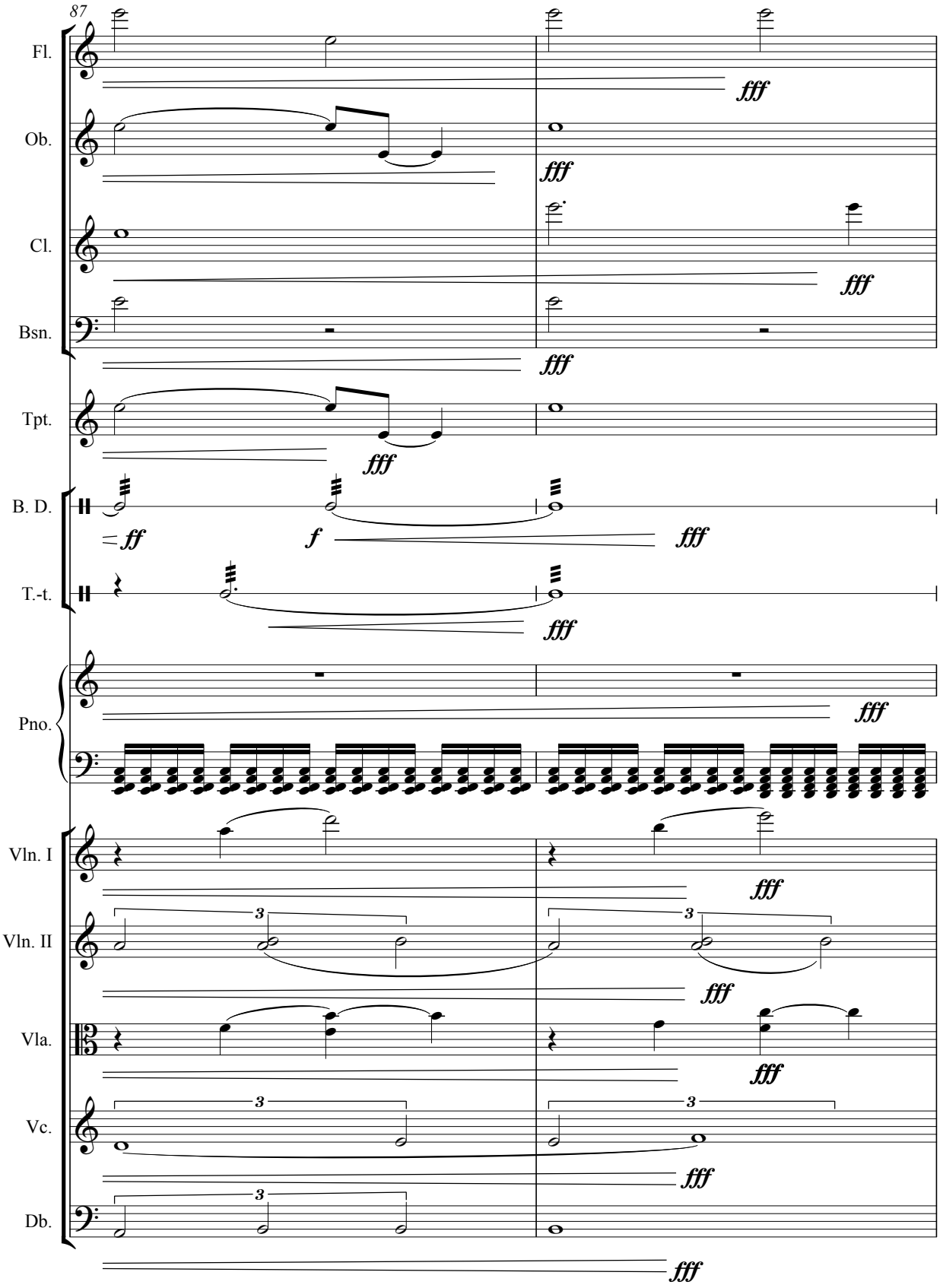

76
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
Normal pitch.
Normal pitch.
Normal pitch.
Normal pitch.
l.v.
mf
8vb
3
3

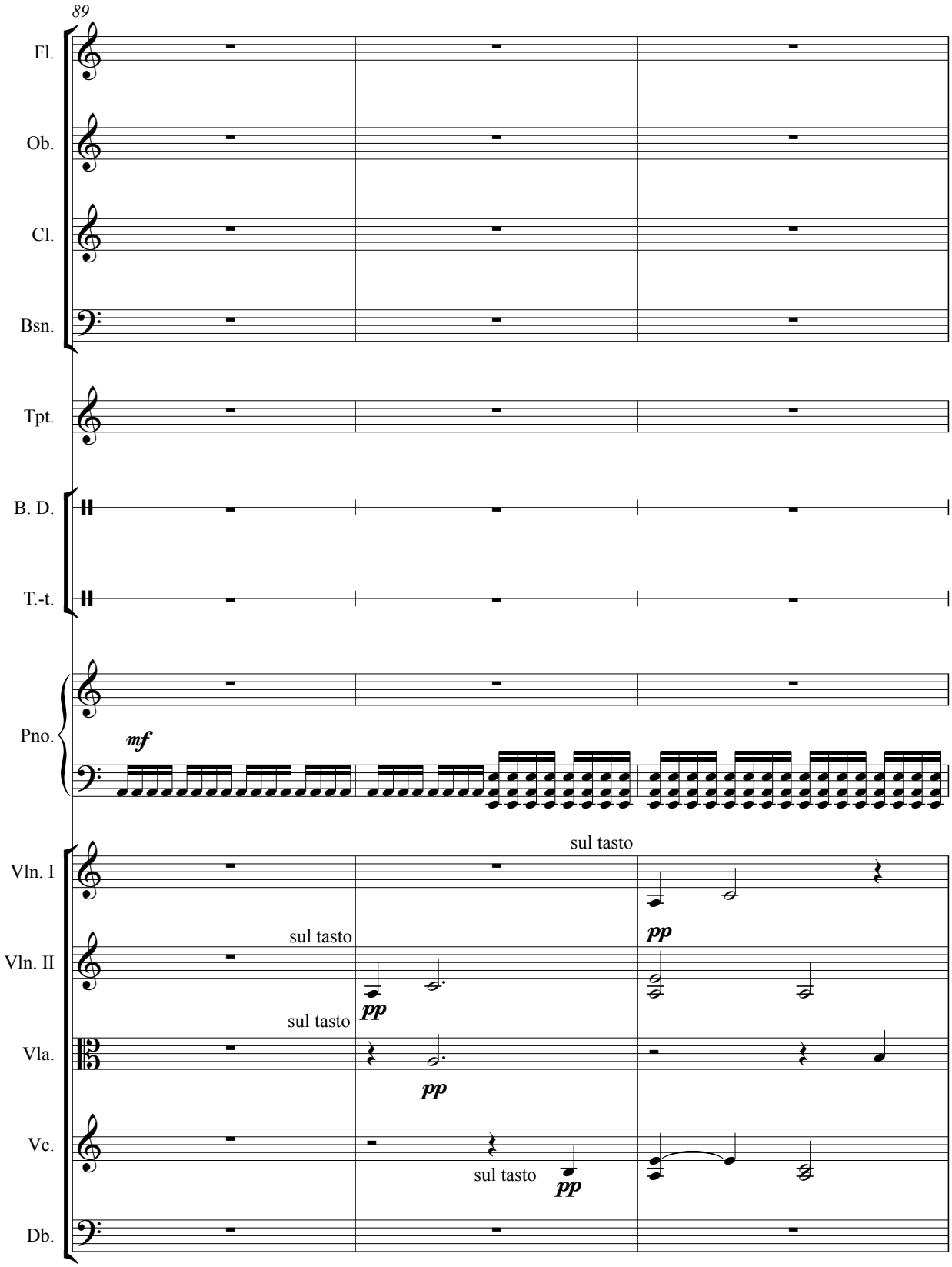

80
Fl.
mf
Ob.
mf
Cl.
mf
Bsn.
Normal pitch.
mf
Tpt.
mf
f
B. D.
mf
f
mf
T.-t.
Pno.
f
Vln. I
f
Vln. II
3
f
Vla.
f
Vc.
3
f
Db.
3
f

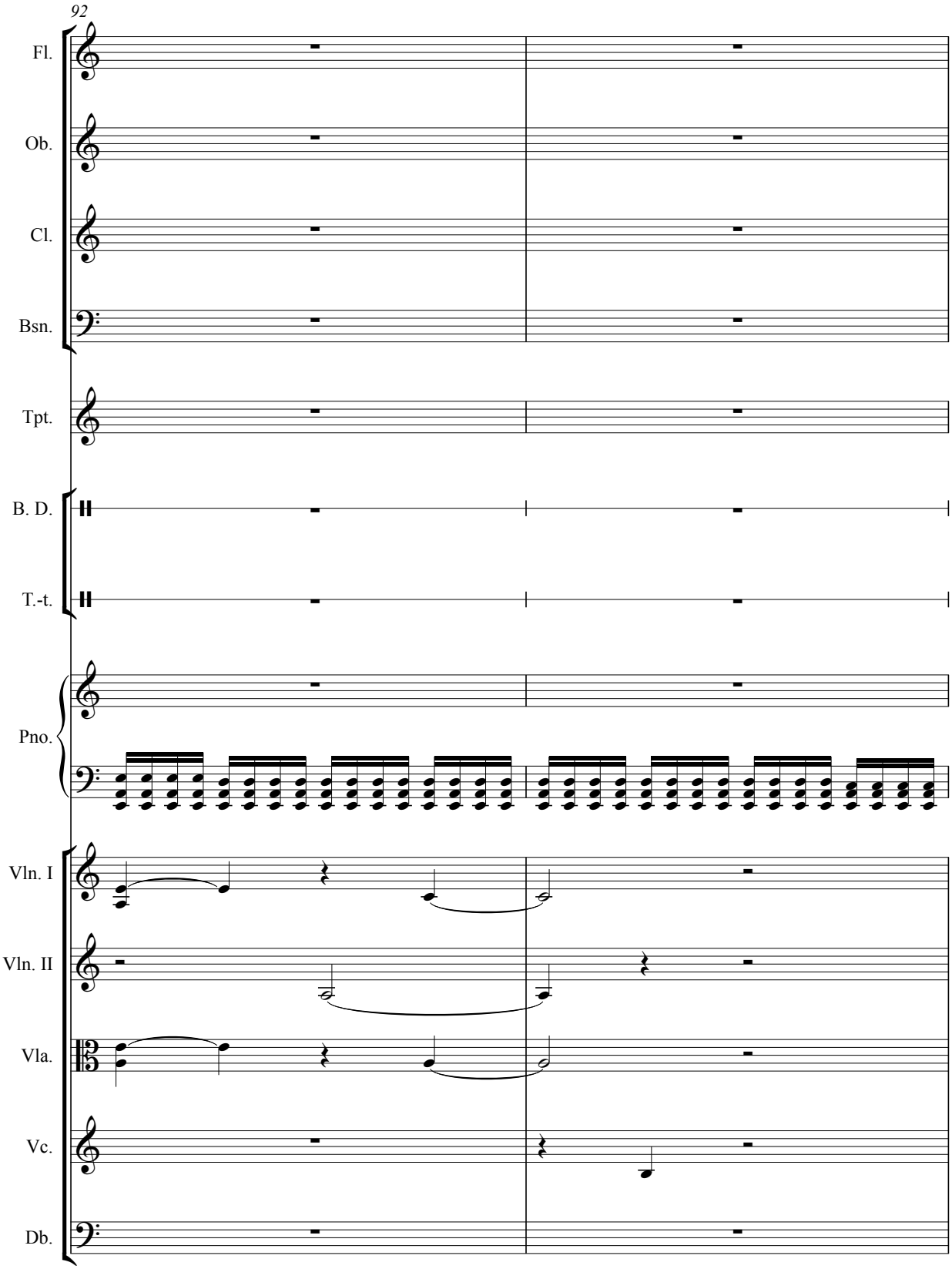

83
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
f
mf
ff
3

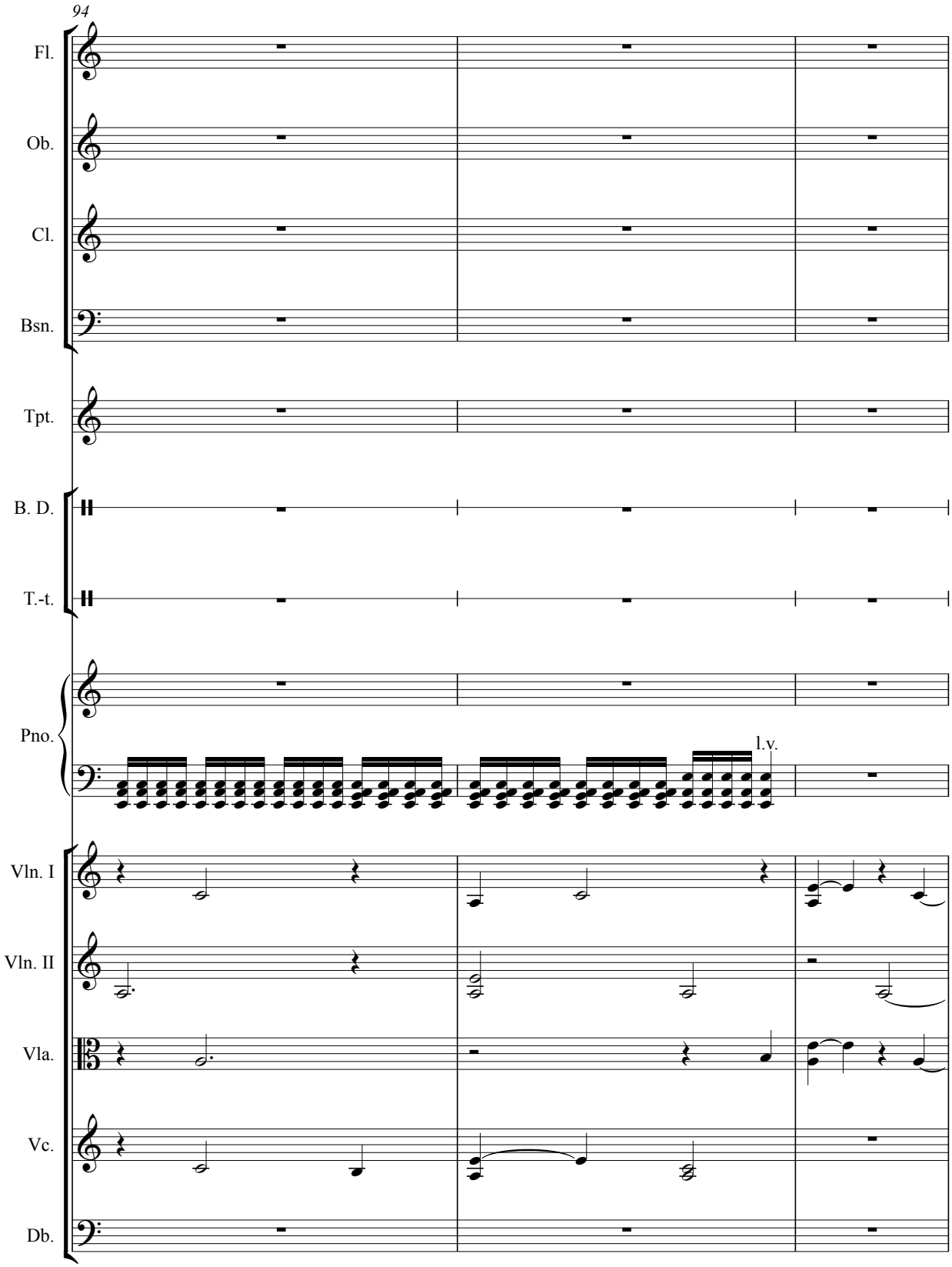

85
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
ff
f
mf
3

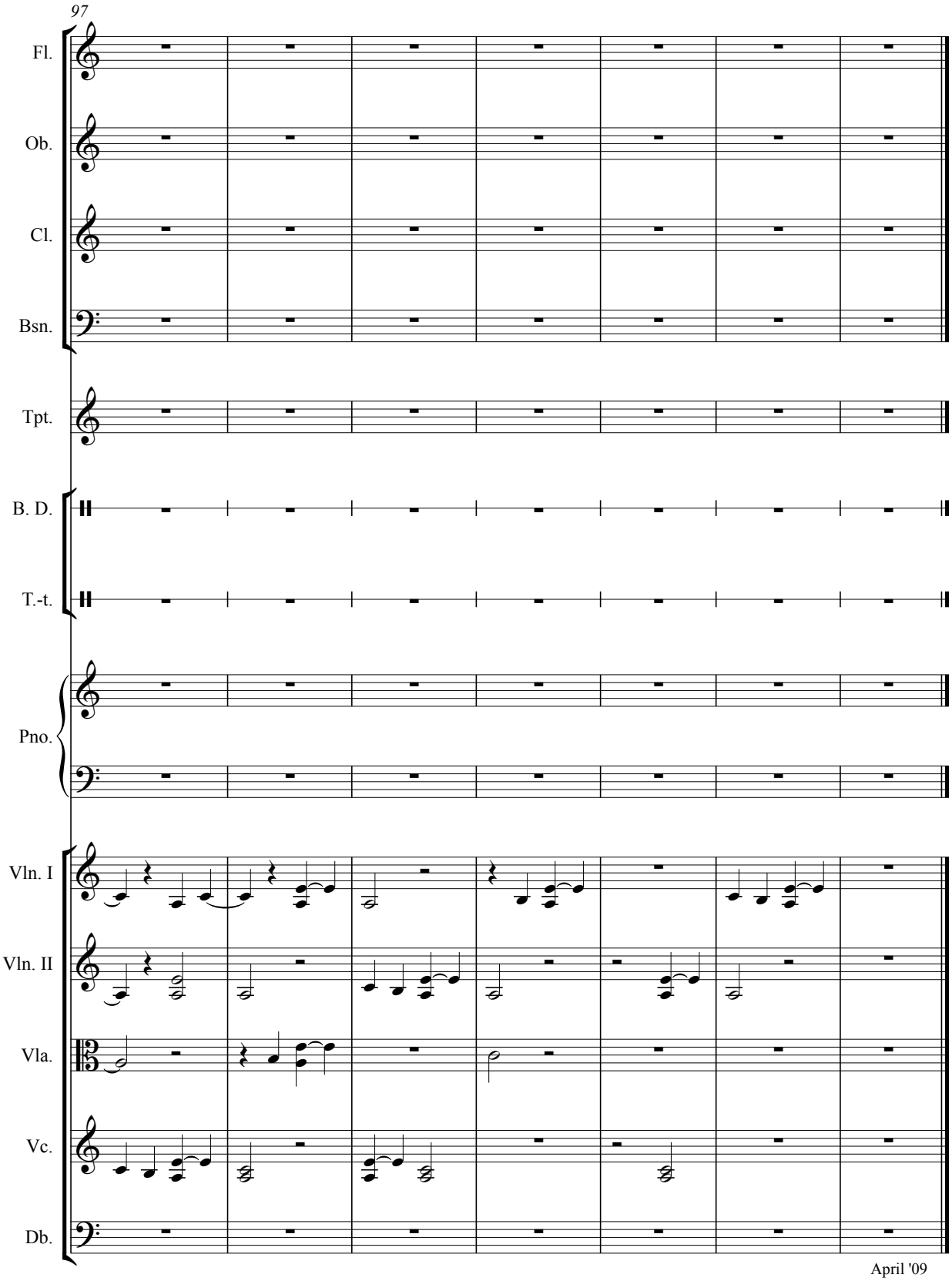

86
Fl.
Ob.
Cl.
ff
Bsn.
Tpt.
B. D.
mf
f
T.-t.
ff
Pno.
Vln. I
3
Vln. II
Vla.
Vc.
Db.


87
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.
fff
ff
f
3


89
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
mf
Vln. I
Vln. II
Vla.
Vc.
Db.
sul tasto
pp
sul tasto
pp
sul tasto
pp
sul tasto
pp


92
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Db.


94
Fl.
Ob.
Cl.
Bsn.
Tpt.
B. D.
T.-t.
Pno.
l.v.
Vln. I
Vln. II
Vla.
Vc.
Db.



April '09

Suaimhneas

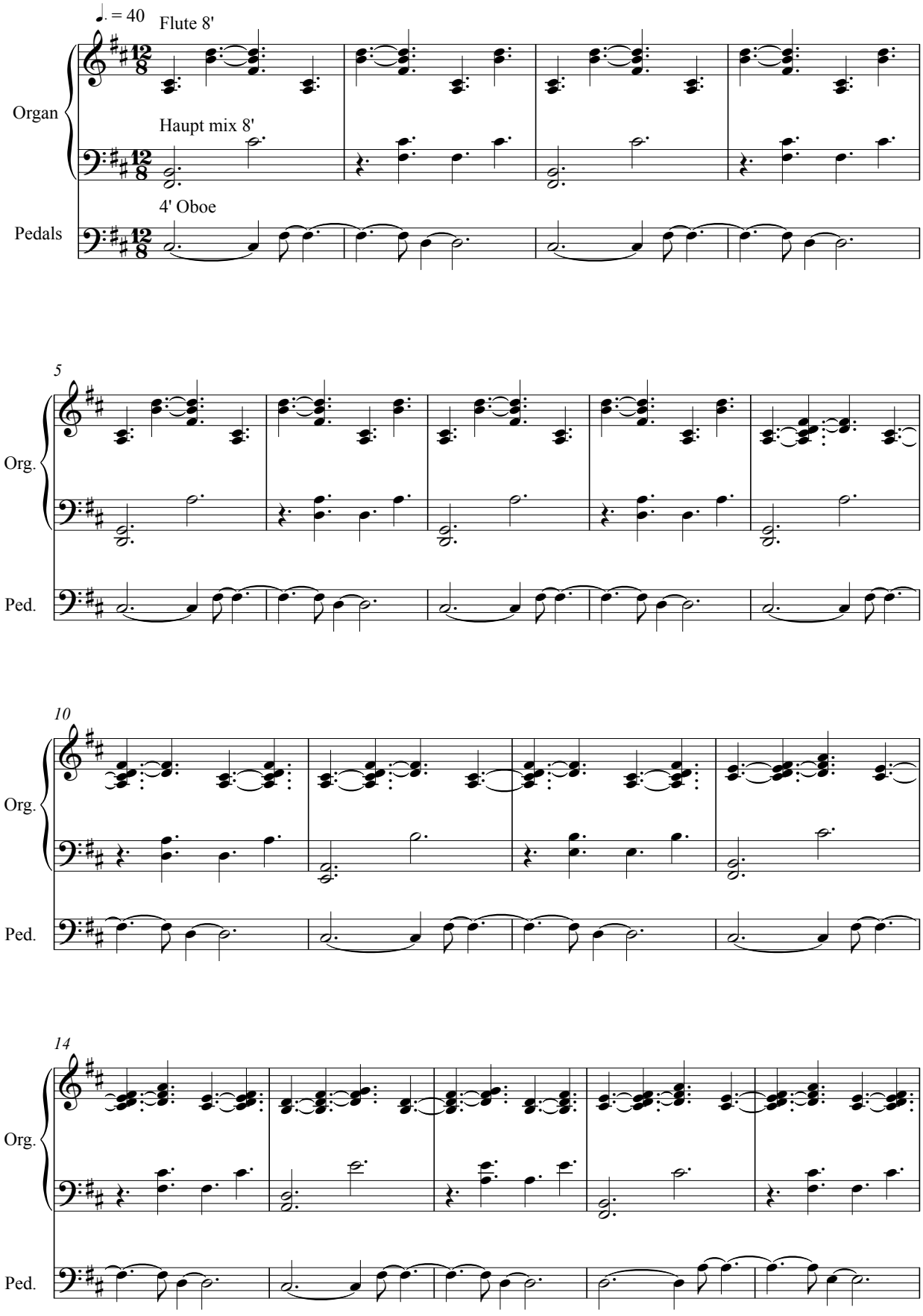
For Organ

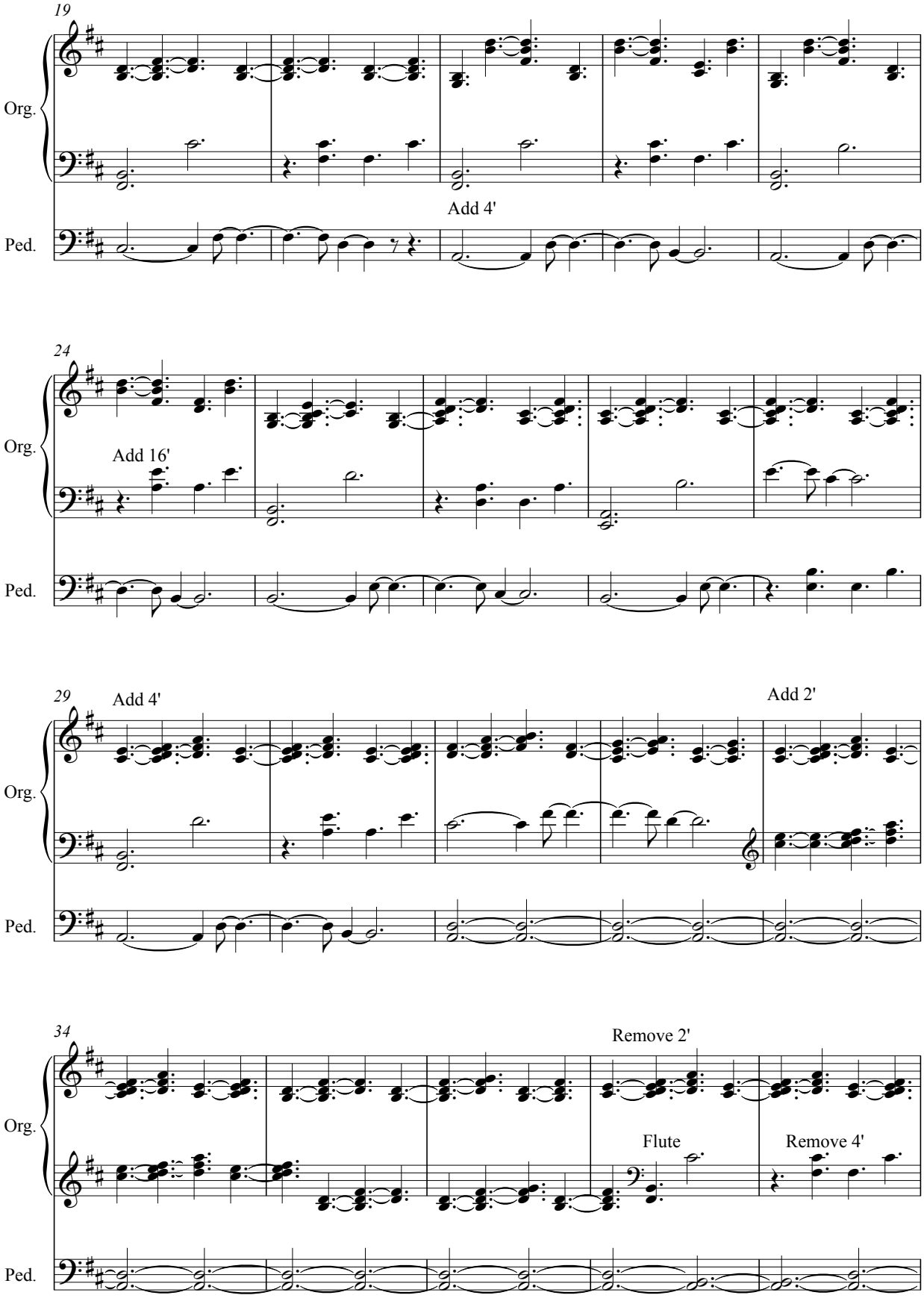
Irene Buckley

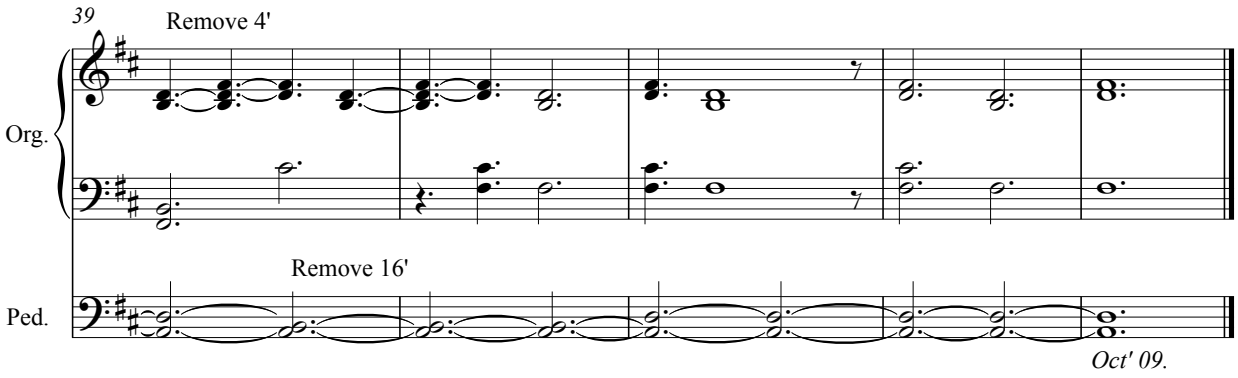
2009

Suaimhneas

Irene Buckley




19
Org.
Add 4'
Ped.
24
Org.
Add 16'
Ped.
29
Add 4'
Add 2'
Org.
Ped.
34
Remove 2'
Org.
Flute
Remove 4'
Ped.


39
Remove 4'
Org.
Remove 16'
Ped.
Oct' 09.

String Trio No. 1

for Violin, viola, cello and electronics

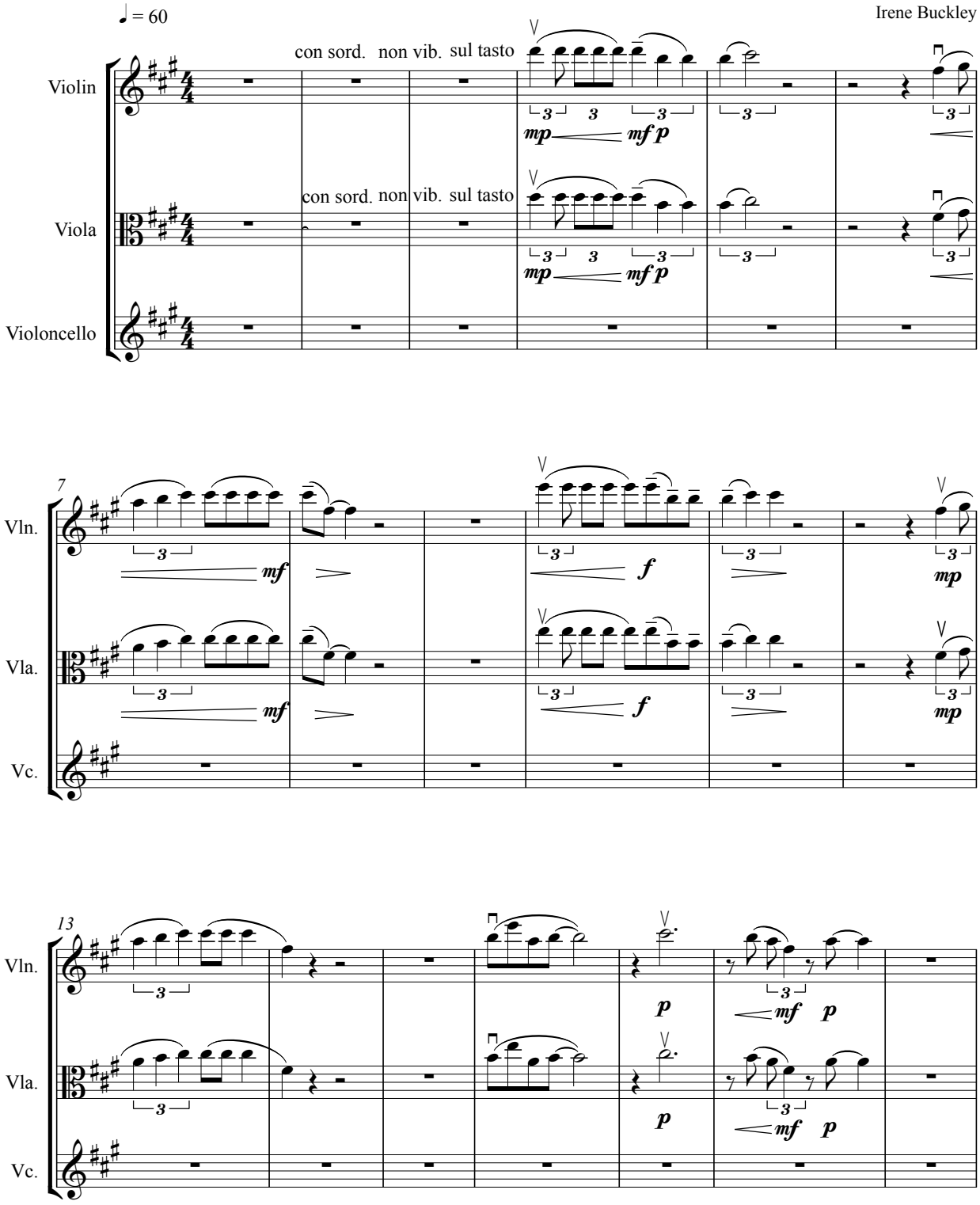
Irene Buckley

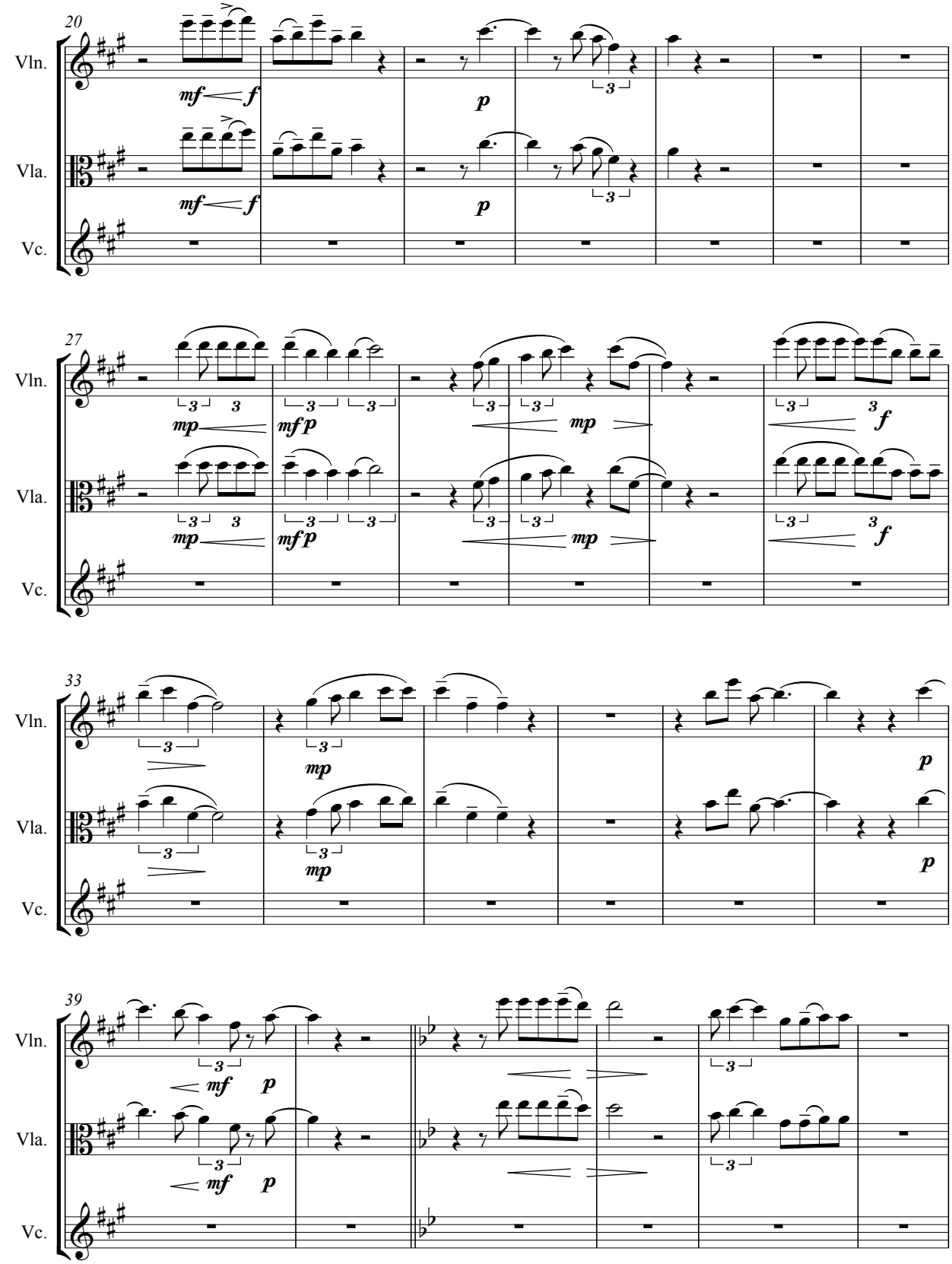
2011

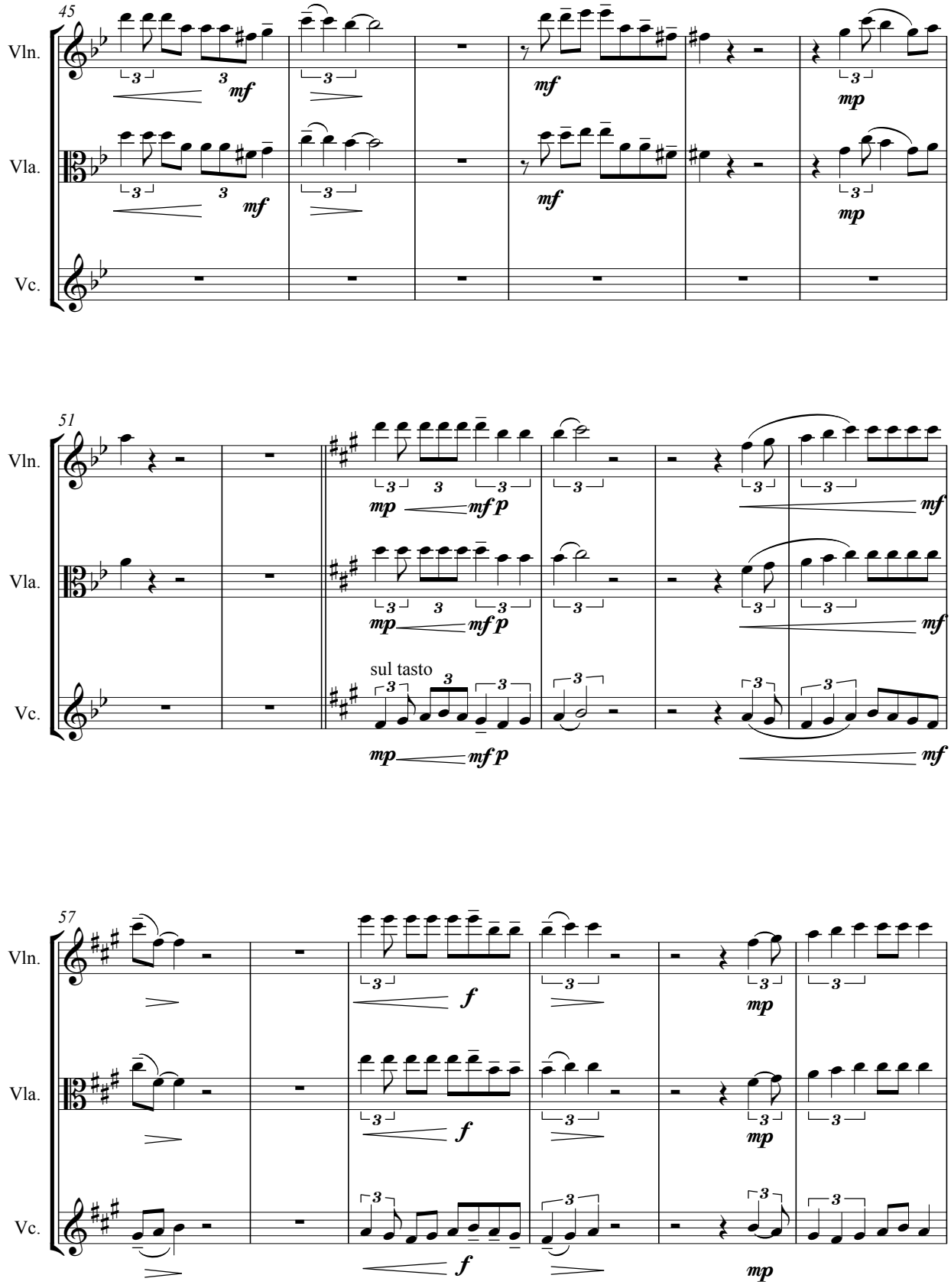
String Trio No.1

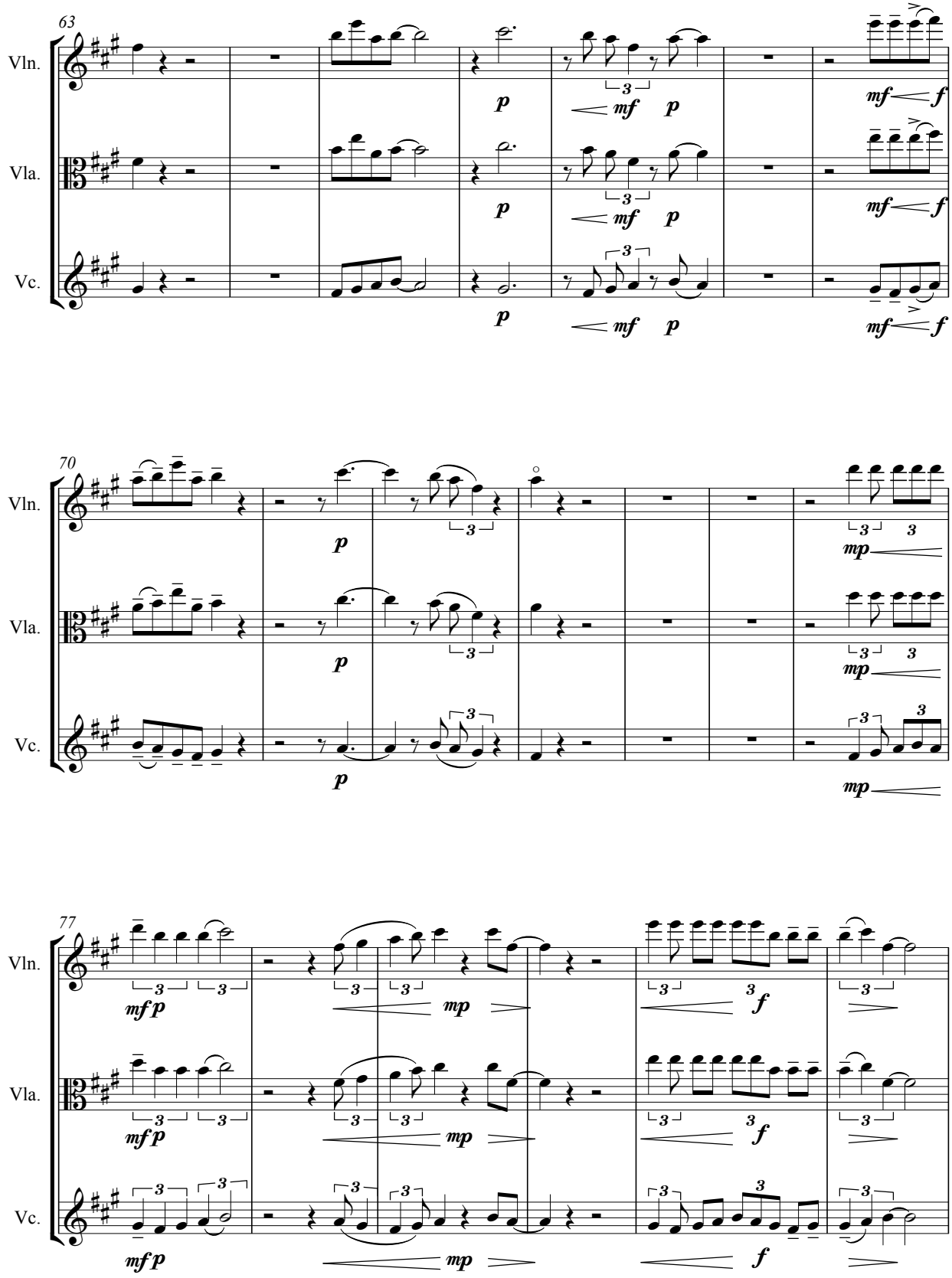
For Keith

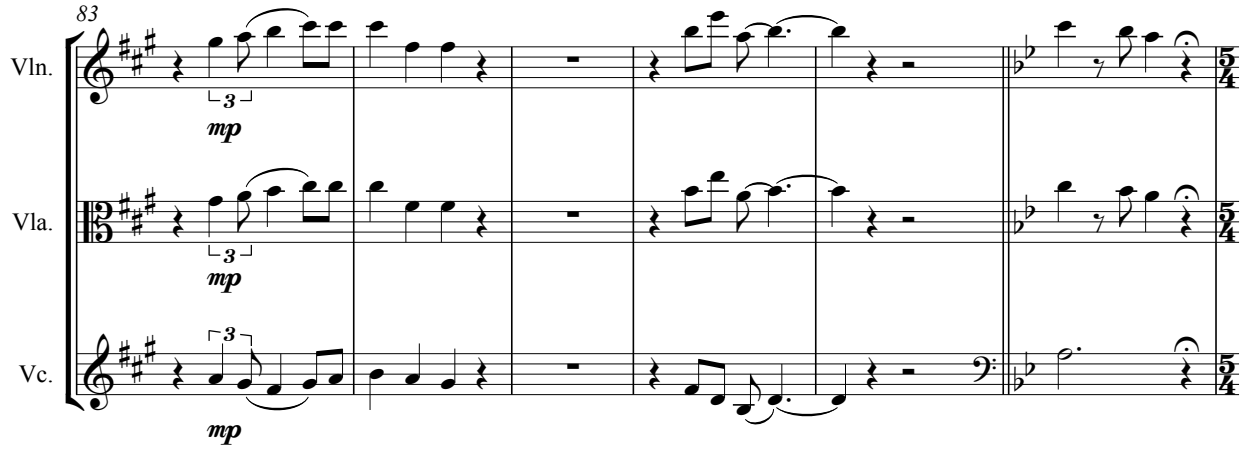
Irene Buckley

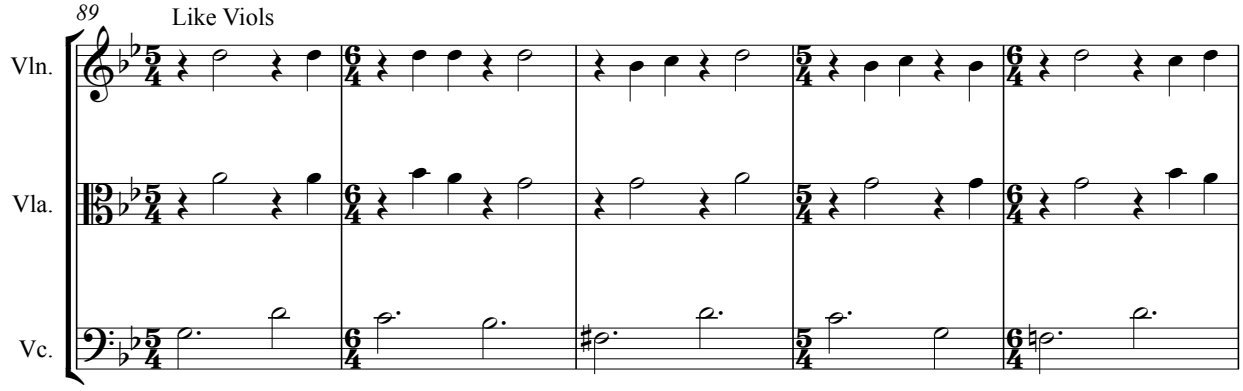


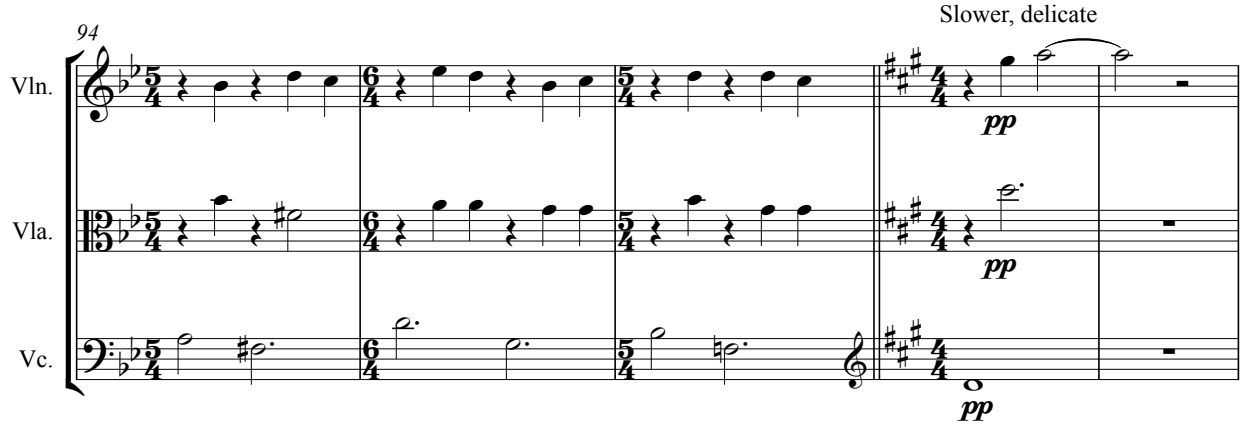

20
Vln.
Vla.
Vc.
mf
f
p
3
27
mp
mf p
3
f
33
mp
p
39
mf

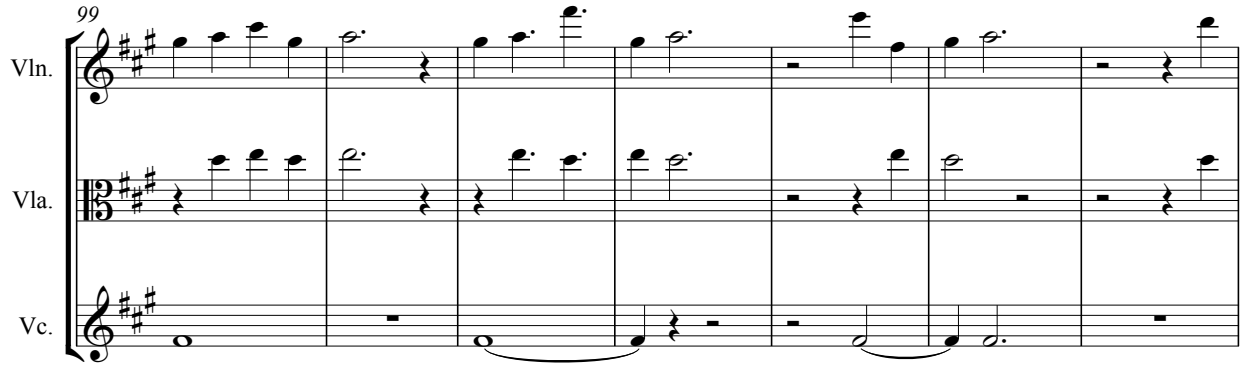

45
Vln.
Vla.
Vc.
mf
mp
51
mp
mf p
mf
sul tasto
57
f
mp

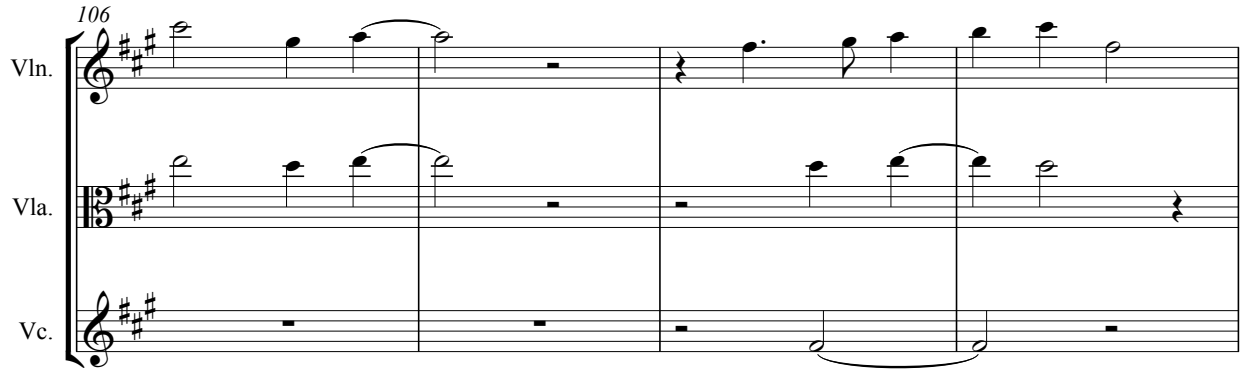

63
Vln.
Vla.
Vc.
70
77

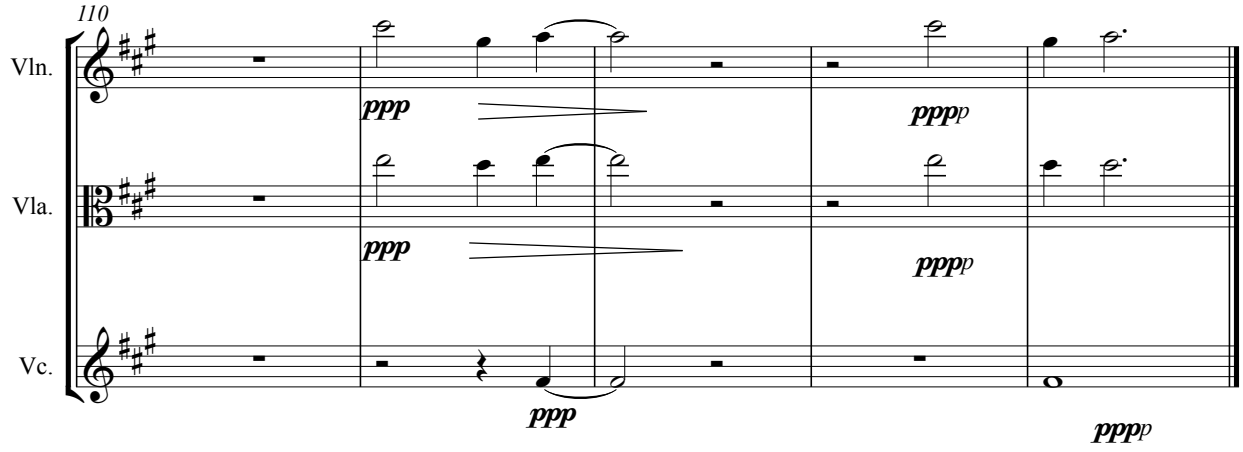

83
Vln.
Vla.
Vc.
3
mp
3
mp
3
mp
5
4


89
Like Viols
Vln.
Vla.
Vc.


94
Slower, delicate
Vln.
Vla.
Vc.
pp
pp
pp


99
Vln.
Vla.
Vc.


106
Vln.
Vla.
Vc.


110
Vln.
Vla.
Vc.
ppp
pppp
ppp
pppp
ppp
pppp

Oct' 2011

Irene Buckley

The Passion of Joan of Arc

for Soprano, Organ and Electronics

2012

Introit

Requiem æternam dona eis, Domine,	Grant them eternal rest, O Lord,
et lux perpetua luceat eis.	and let perpetual light shine upon them.

Kyrie

Kyrie eleison,	Lord have mercy;
Christe eleison;	Christ have mercy;
Kyrie eleison.	Lord have mercy.

Agnus Dei

Agnus Dei,	Lamb of God,
qui tollis peccata mundi,	who take away the sins of the world,
dona eis requiem.	grant them rest.

Sanctus

Sanctus, Sanctus, Sanctus,	Holy, Holy, Holy,
Dominus Deus Sabaoth;	Lord God of Hosts;
pleni sunt caeli et terra gloria tua.	Heaven and earth are full of your glory.
Hosanna in excelsis.	
Benedictus qui venit in nomine Domini.	Blessed is he who comes in the name of the Lord.
Hosanna in excelsis.	Hosanna in the highest.

Lux Aeterna

Lux æterna luceat eis, Domine,	May everlasting light shine upon them,
cum sanctis tuis in æternum,	O Lord, with your Saints forever,
quia pius es.	for you are kind.

In Paradisum

In paradisum deducant te Angeli:	May Angels lead you into paradise;
in tuo adventu suscipiant te Martyres,	may the Martyrs receive you at your coming
et perducant te in civitatem sanctam	and lead you to the holy city of
Ierusalem.	Jerusalem.
Chorus Angelorum te suscipiat,	May a choir of Angels receive you,
et cum Lazaro quondam paupere	and with Lazarus, who once was poor,
æternam habeas requiem.	may you have eternal rest.

Performance Timeline - Joan of Arc

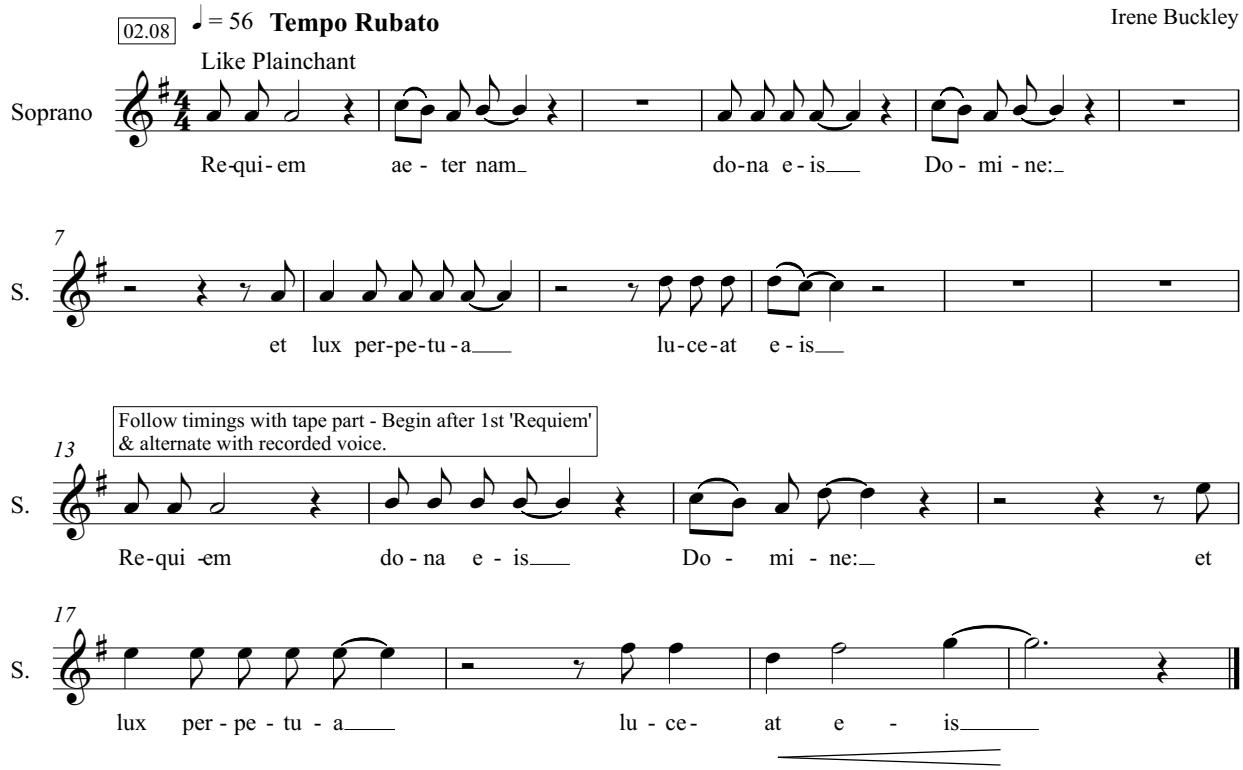
1. **2:08 –** *Requiem Aeternam*: SOPRANO.
2. **8:43 –** *Pulse drone 1*:* - Fade out at **9.30:** ORGAN.
3. **9:54** – *Agnus Dei 1:* ORGAN with *Kyrie 1:* SOPRANO. (Performed simultaneously)
4. **17:25** – *Agnus* Dei 2: ORGAN and SOPRANO - Organ continue pedal note until **19.35.**
5. **22:10** – *Pulse drone 2*:* ORGAN - Fade out at **25:00.**
6. **25:01** – *In Paradisum*: SOPRANO.
7. **27:25** – *Pulse drone (3):* (vary this by changing to other pedals) ORGAN – Swell in and out volume-wise – fade out at **30:10.**
8. **30**:**34** – *Libera Me:* ORGAN.
9. **36:43** – *Lux Aeterna 1:* ORGAN – (organ only)
10. **43:39** – *Angus Dei 3:* (with Tape) – SOPRANO.
11. **45:38** – *Sanctus:* ORGAN *and* SOPRANO.
12. **48:25** – *Libera mé (2):* ORGAN (More stops).
13. **52:57** – *Lux Aeterna 2:* ORGAN (establish pedal note for soprano) *and* SOPRANO. Continue pedal note and fade out at **57:03.**
14. **57:02** – *In Paradisum (2):* SOPRANO.
15. **1:01:43** – *Kyrie 2:* (with pedal) – ORGAN *and* SOPRANO (**1:02:03)** Fade out pedal at **1:03:43.**
16. **1:03:45** – *Lux Aeterna 3:* (with tape) – SOPRANO (**1:04:03)** *and* ORGAN.
17. **1:08:30** – *Sanctus:* ORGAN *and* SOPRANO.
18. **1**:**12:29** - *Kyrie 3:* (with Tape) – SOPRANO.
19. **1**:**18:08** - *Lux Aeterna 4 -Ending:* ORGAN (begin with pedal) *and* SOPRANO.

Performance notes:

- *Pulse drone 1*: Press the bottom two pedals (Min 2nd) on the pedalboard simultaneously.
- *Organ:* In general, organ should use 'flute' sounding stops. The tone should be warm and mellow, especially when accompanying soprano. For the *Libera Me* however, the tone can be brighter.
- *Pulse drone 2:* Alternate between Min and Maj 2nds.
- NOTE: The electronic part is pre-recorded and not performed live.

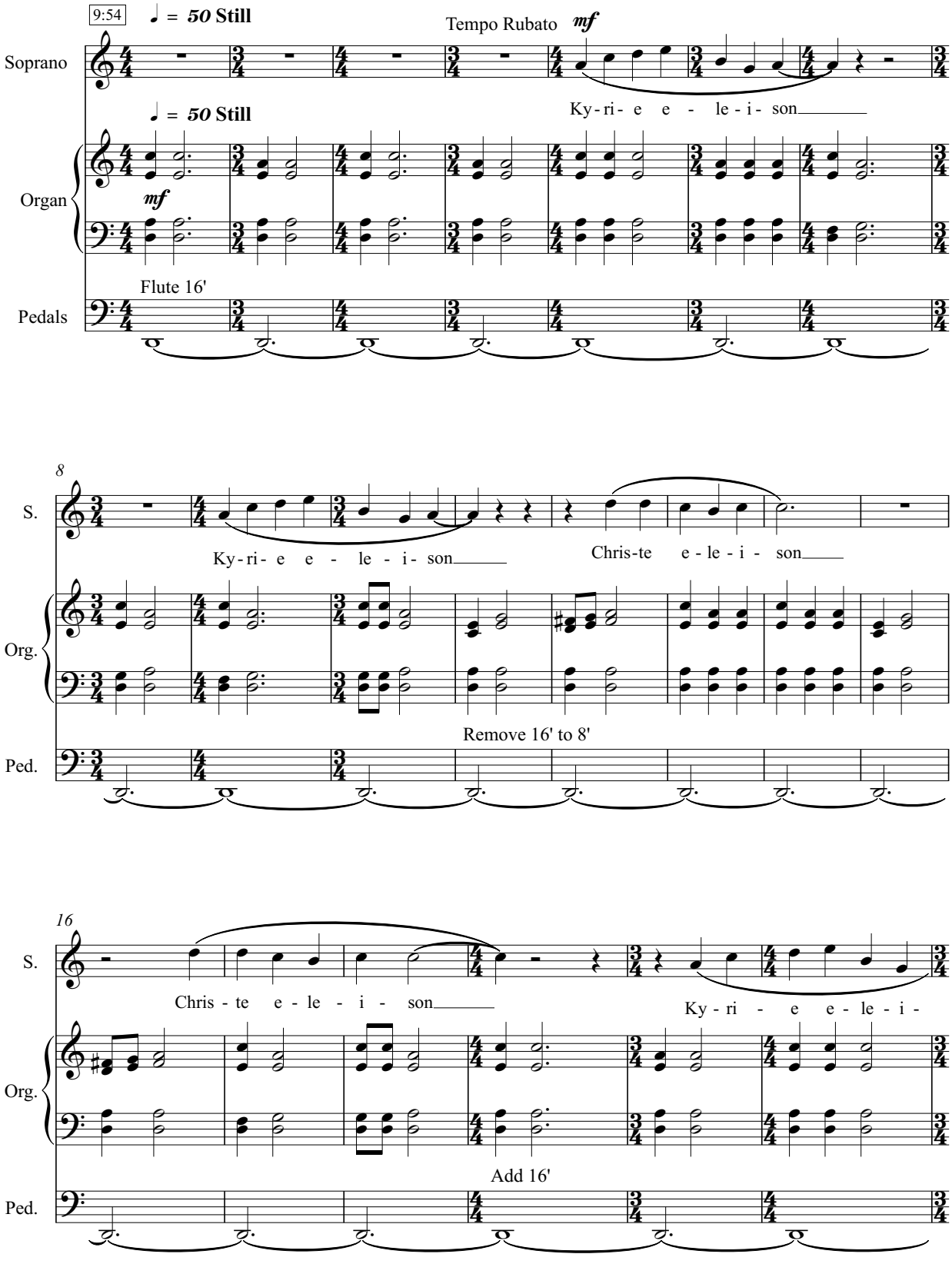
Commissioned by the Cork French Film Festival 2012

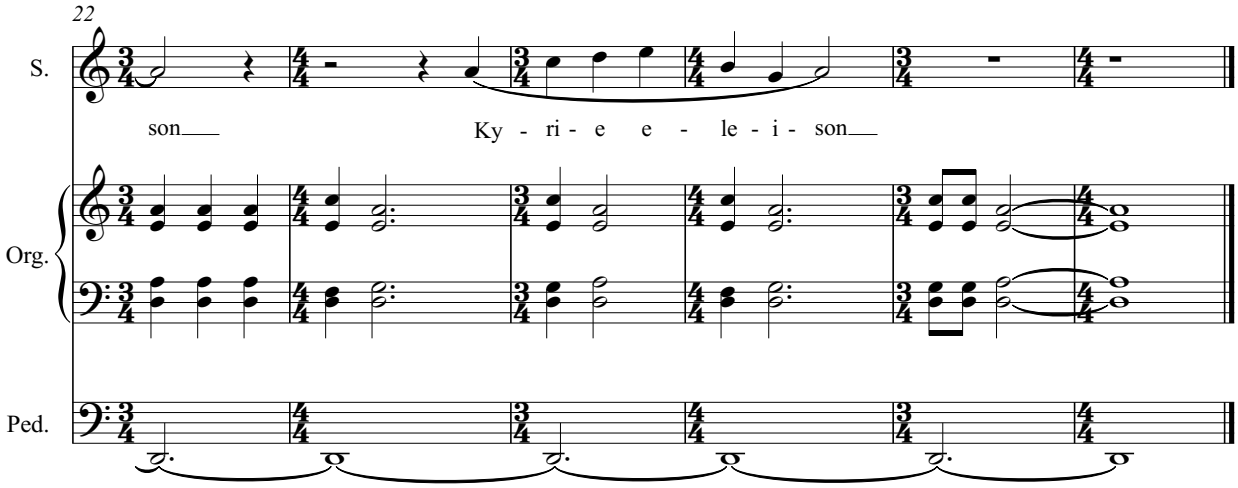
Requiem Aeternam



Agnus Dei (1) with
Kyrie (1)

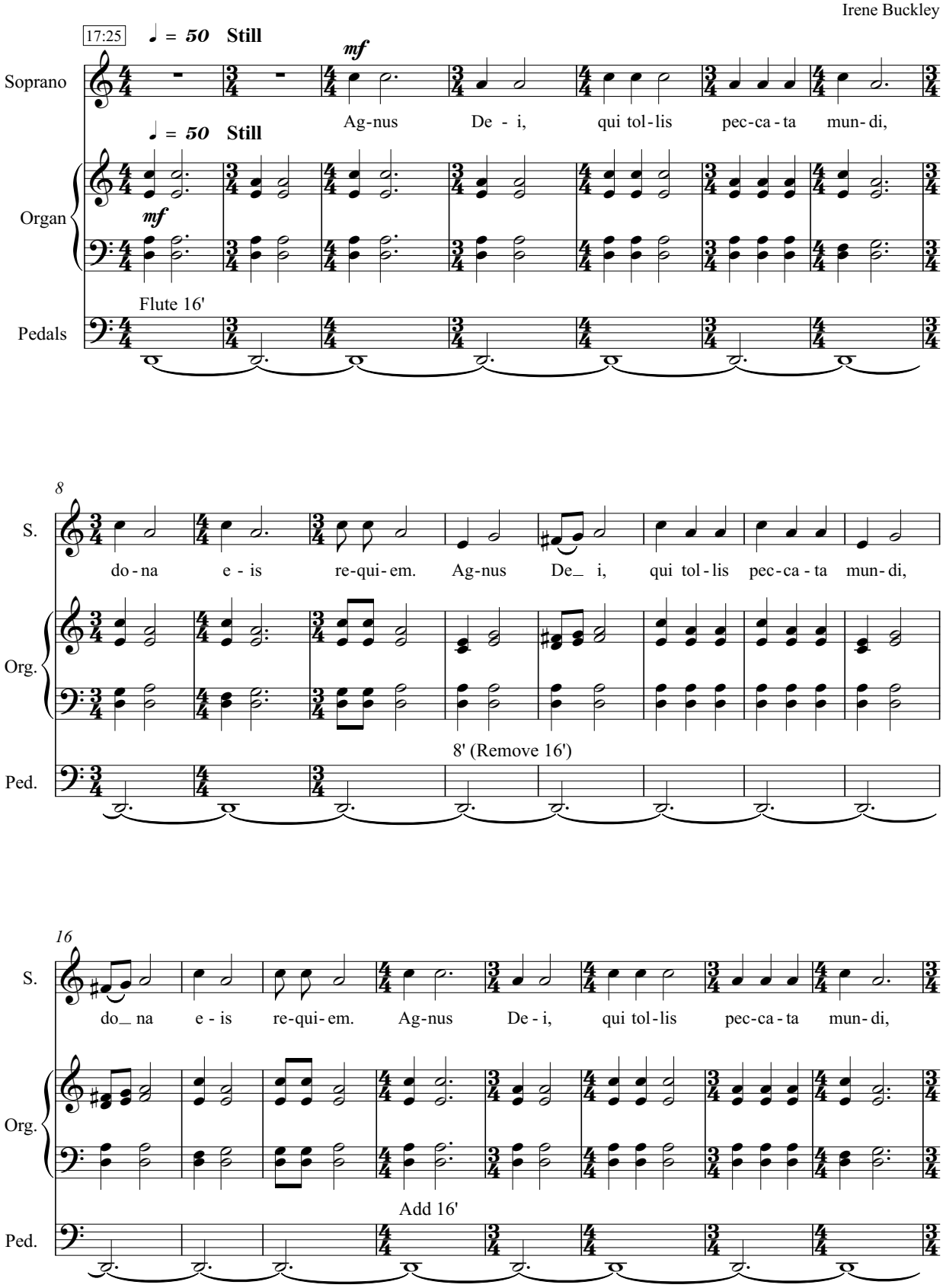
Irene Buckley

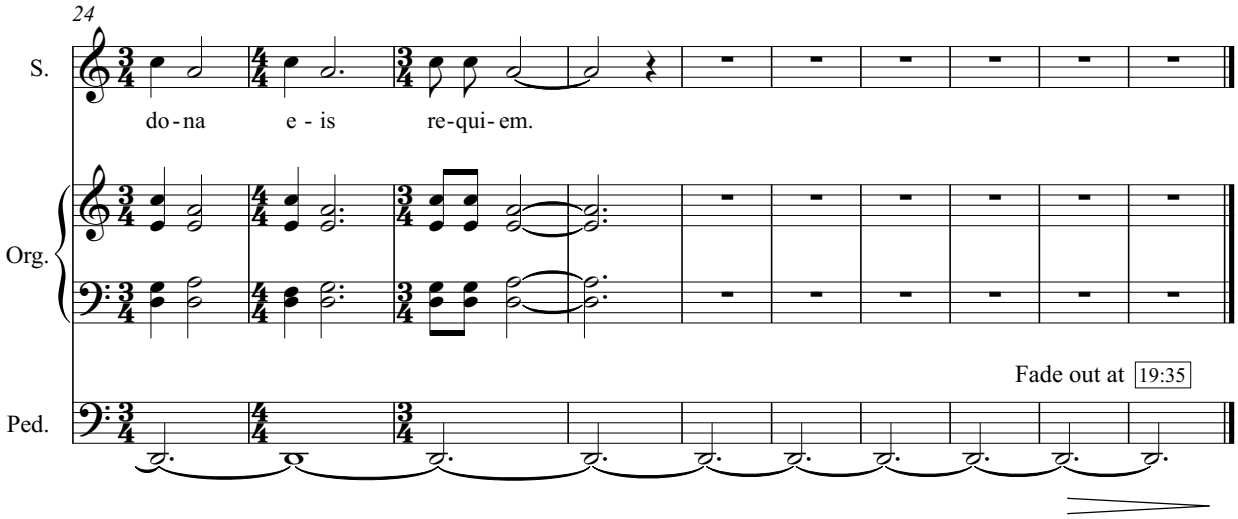



22
S.
son
Ky - ri - e e - le - i - son
Org.
Ped.

Agnus Dei (2)

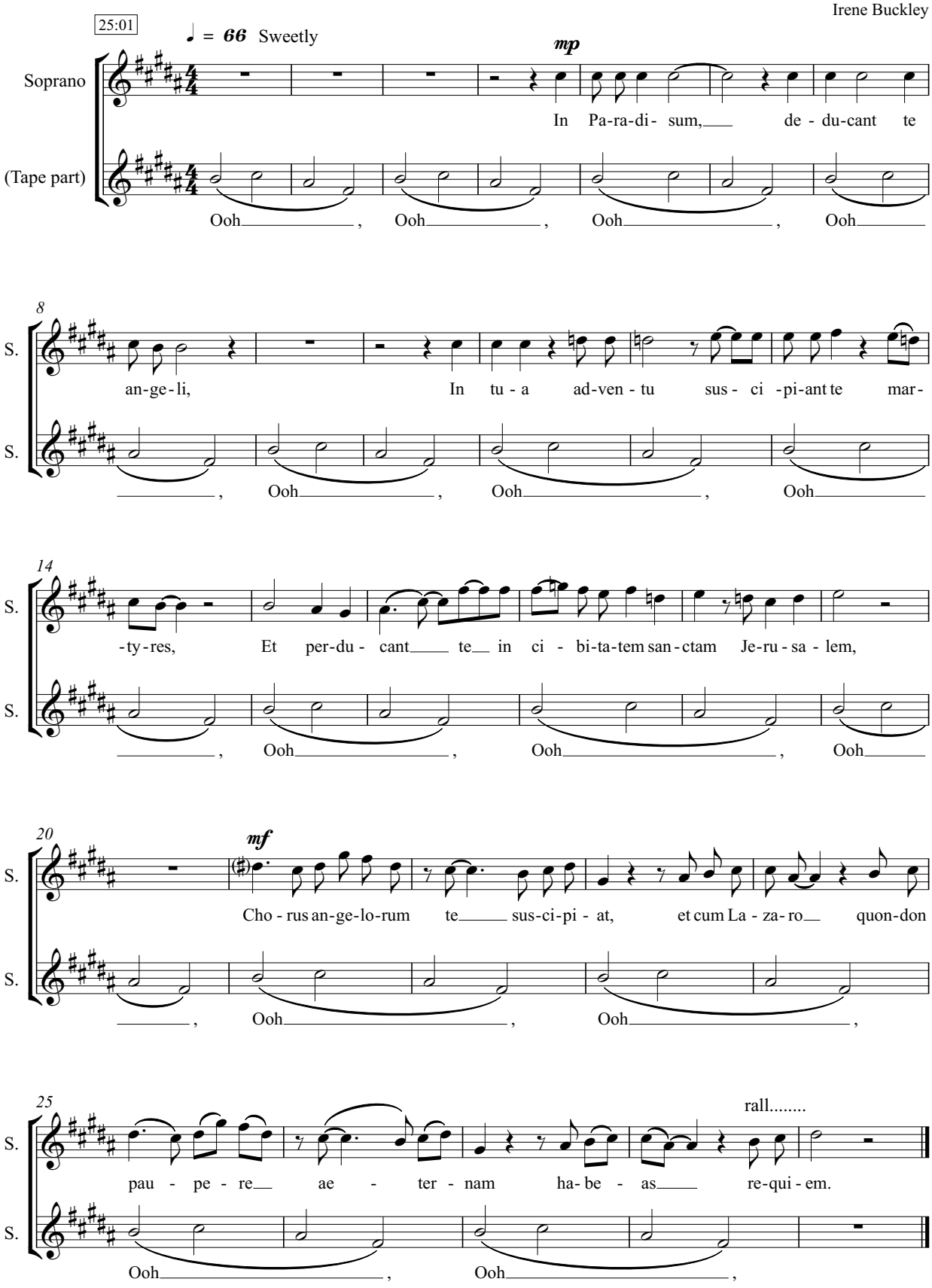
Irene Buckley




24
S.
do - na e - is re-qui- em.
Org.
Fade out at 19:35
Ped.

In Paradisum

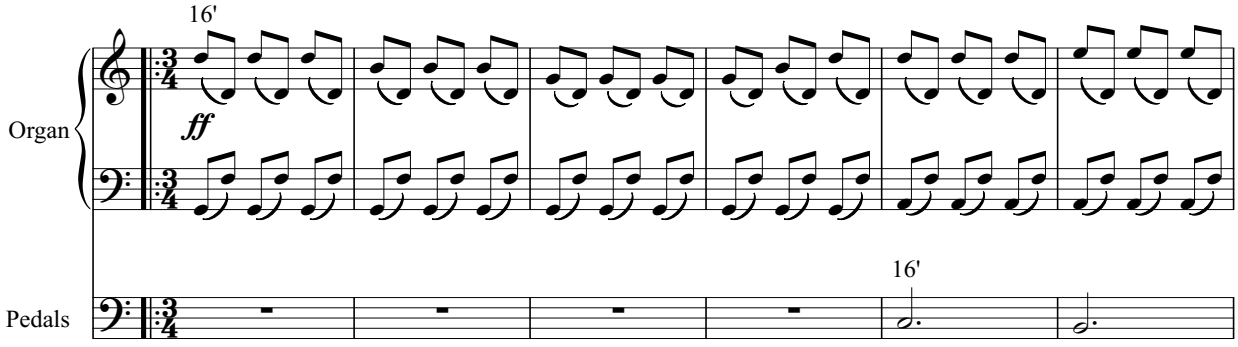
Irene Buckley

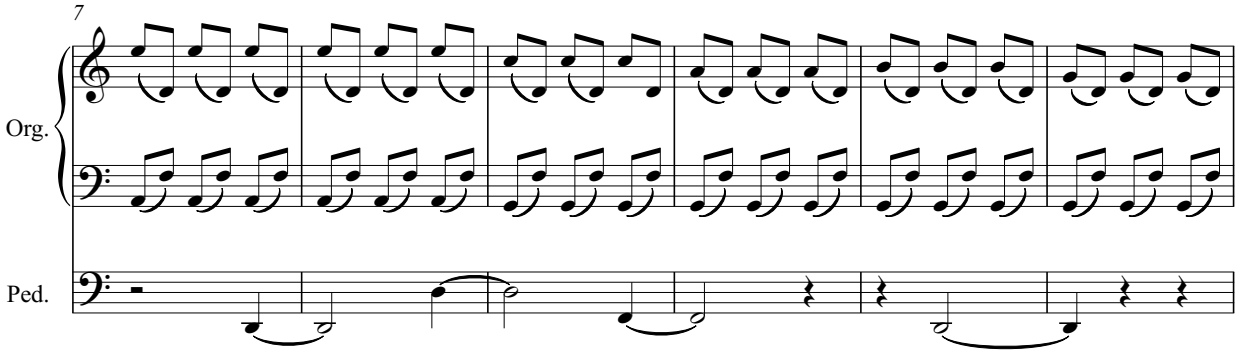


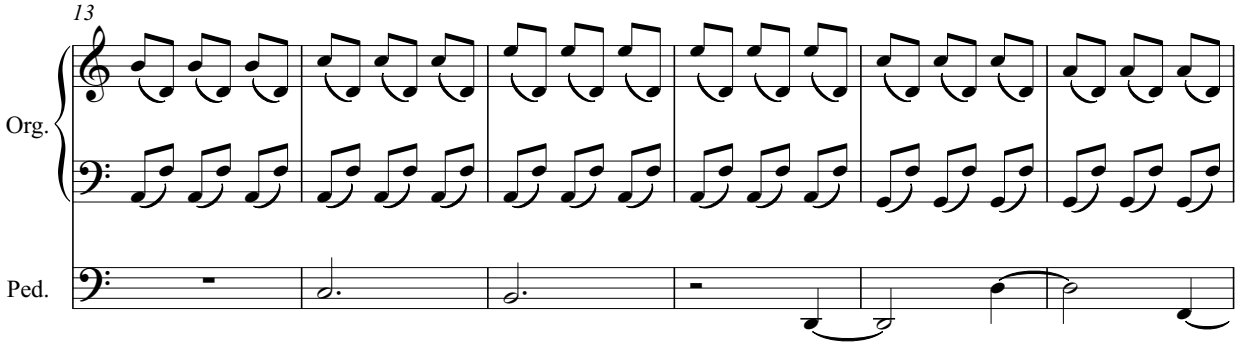
Libera me

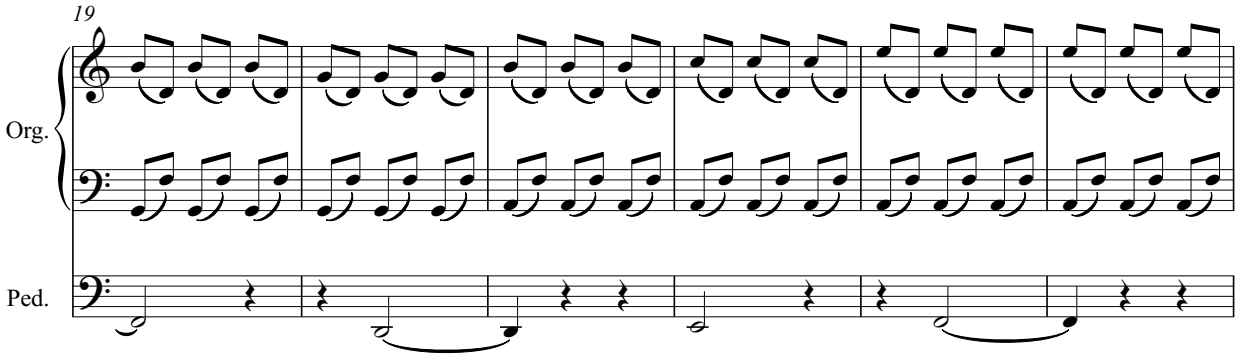
Irene Buckley

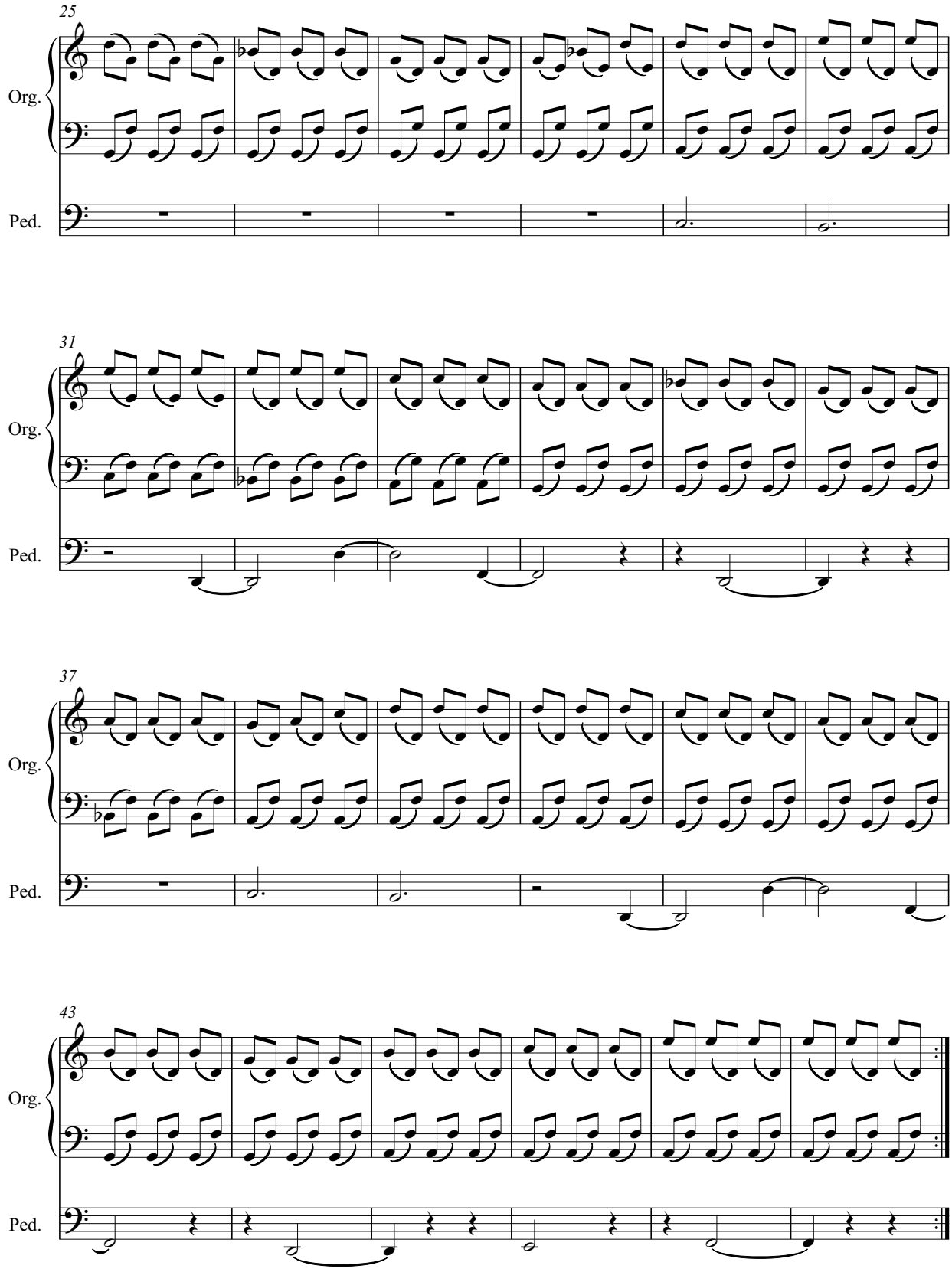
30:34 ♩ = 130 Agitato





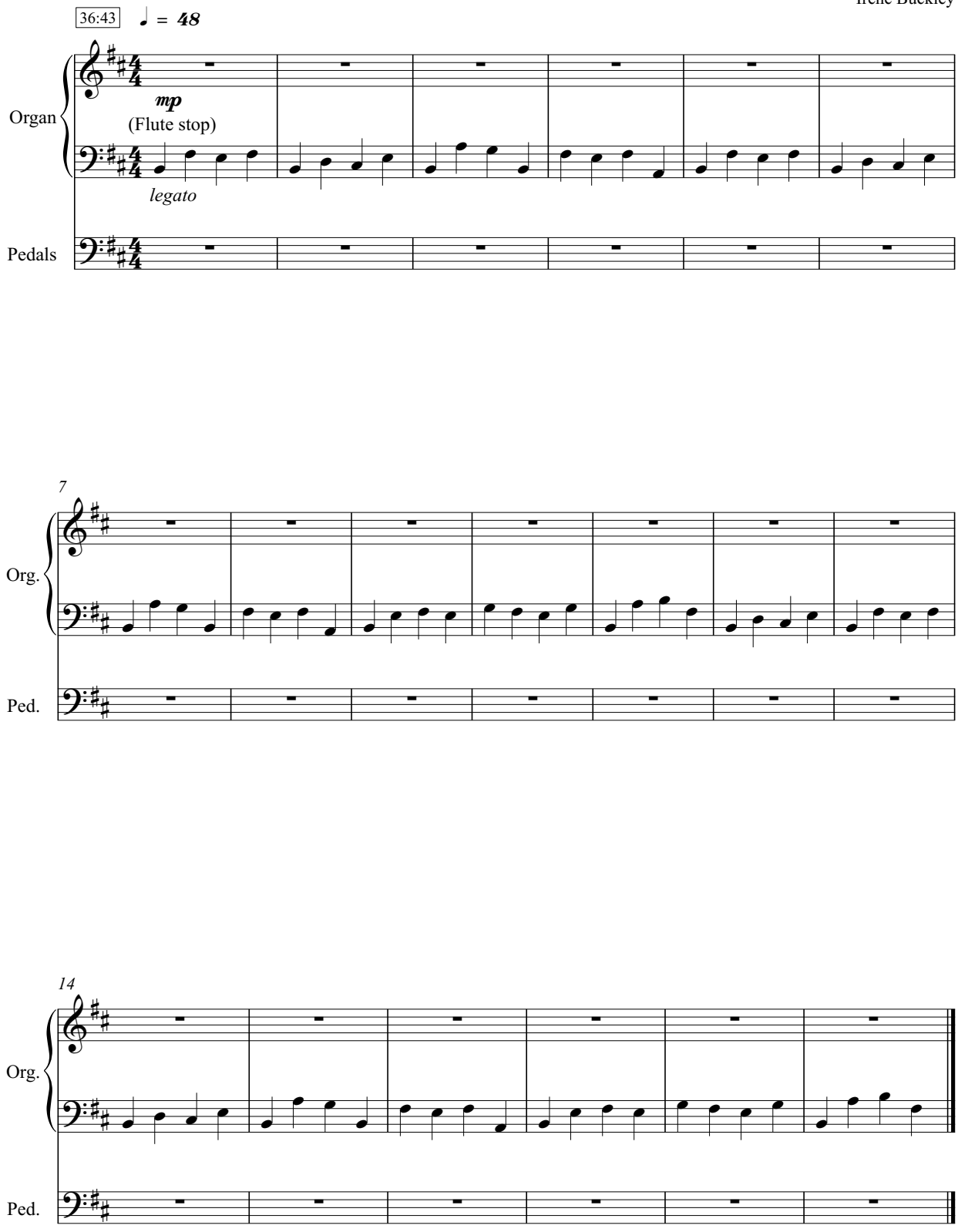





25
Org.
Ped.
31
Org.
Ped.
37
Org.
Ped.
43
Org.
Ped.

Lux Aeterna 1

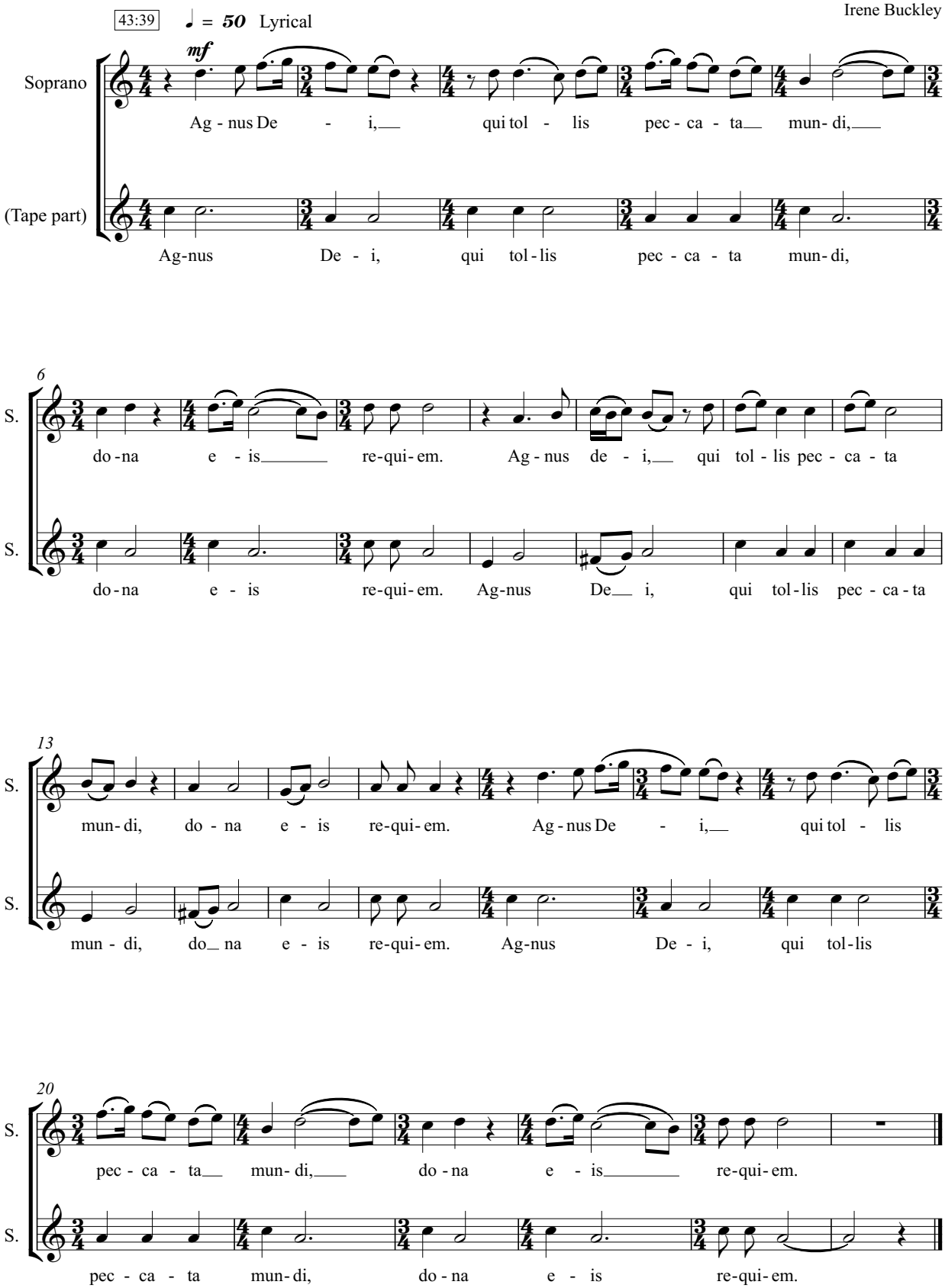
Irene Buckley



Agnus Dei (3)

(with tape part)

Irene Buckley



Sanctus

Irene Buckley

45:38 ♩ = 80 **Gentle**

Soprano

Organ

Flute 8'

mp *legato*

Pedals

5

mp

S. San - ctus, San - ctus, San - ctus Do - mi-nus

Org.

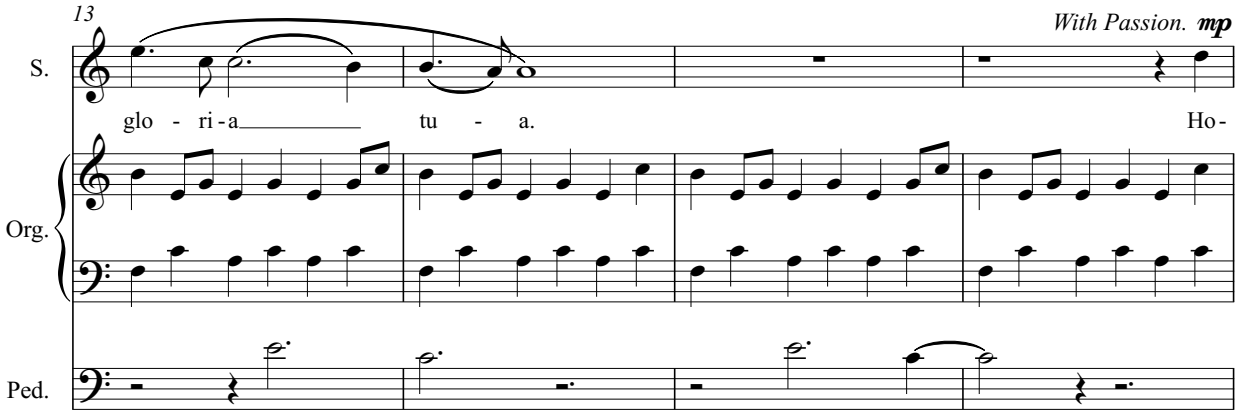
Ped.

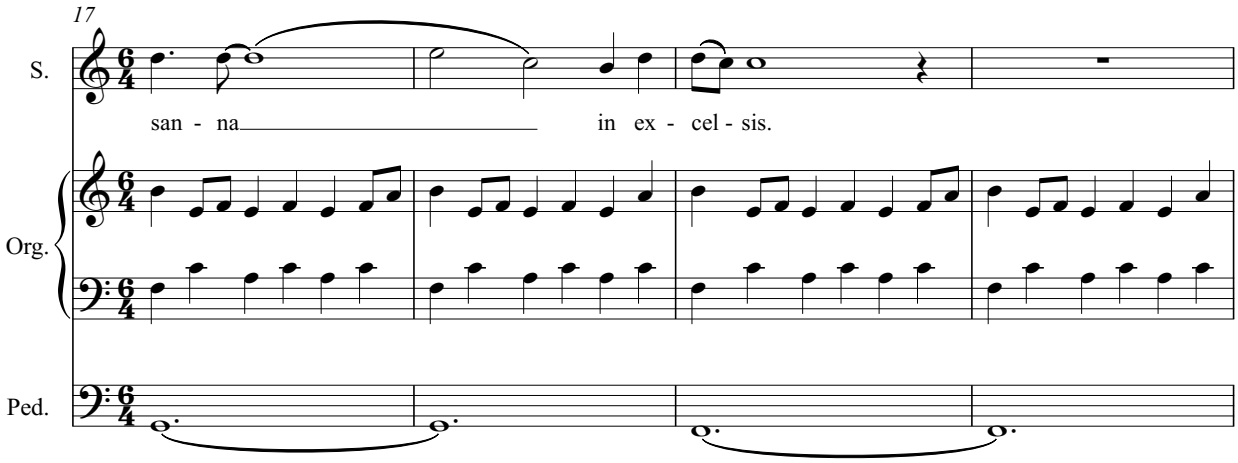
9

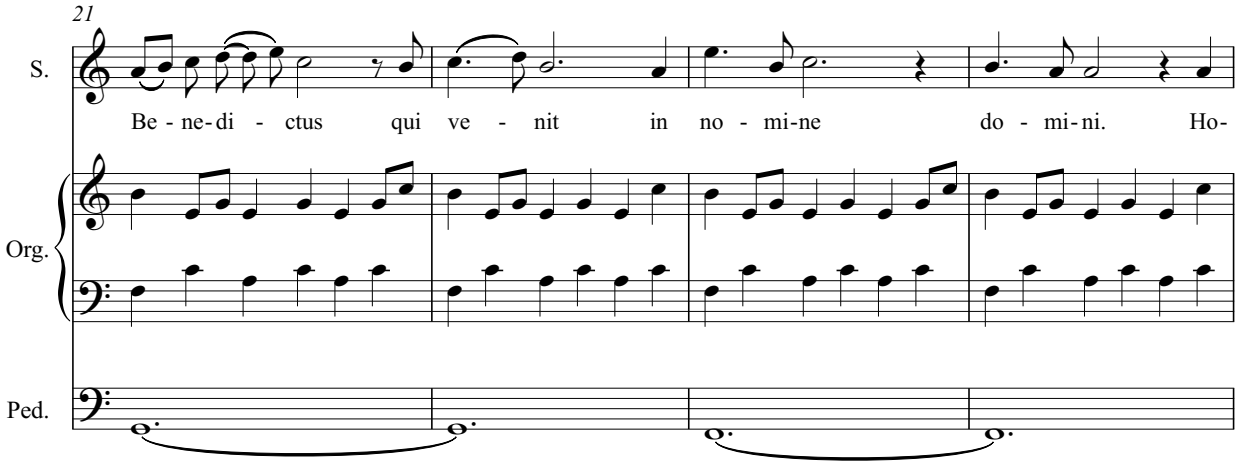
S. De - us Sa - ba-oth. Ple - ni sunt cae - li et ter - ra

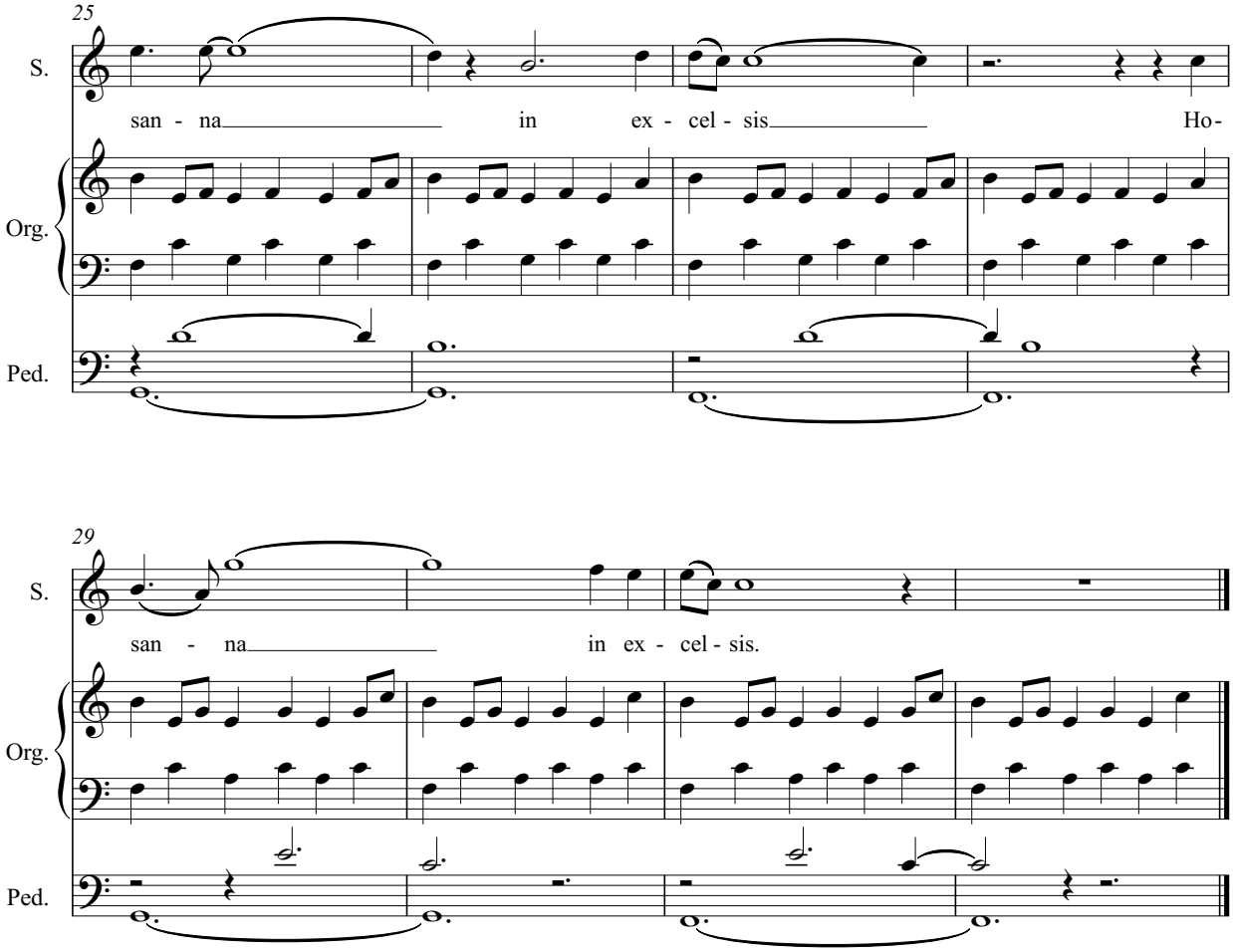
Org.

Ped.


13
With Passion. mp
S.
glo - ri - a tu - a. Ho -
Org.
Ped.


17
S.
san - na in ex - cel - sis.
Org.
Ped.

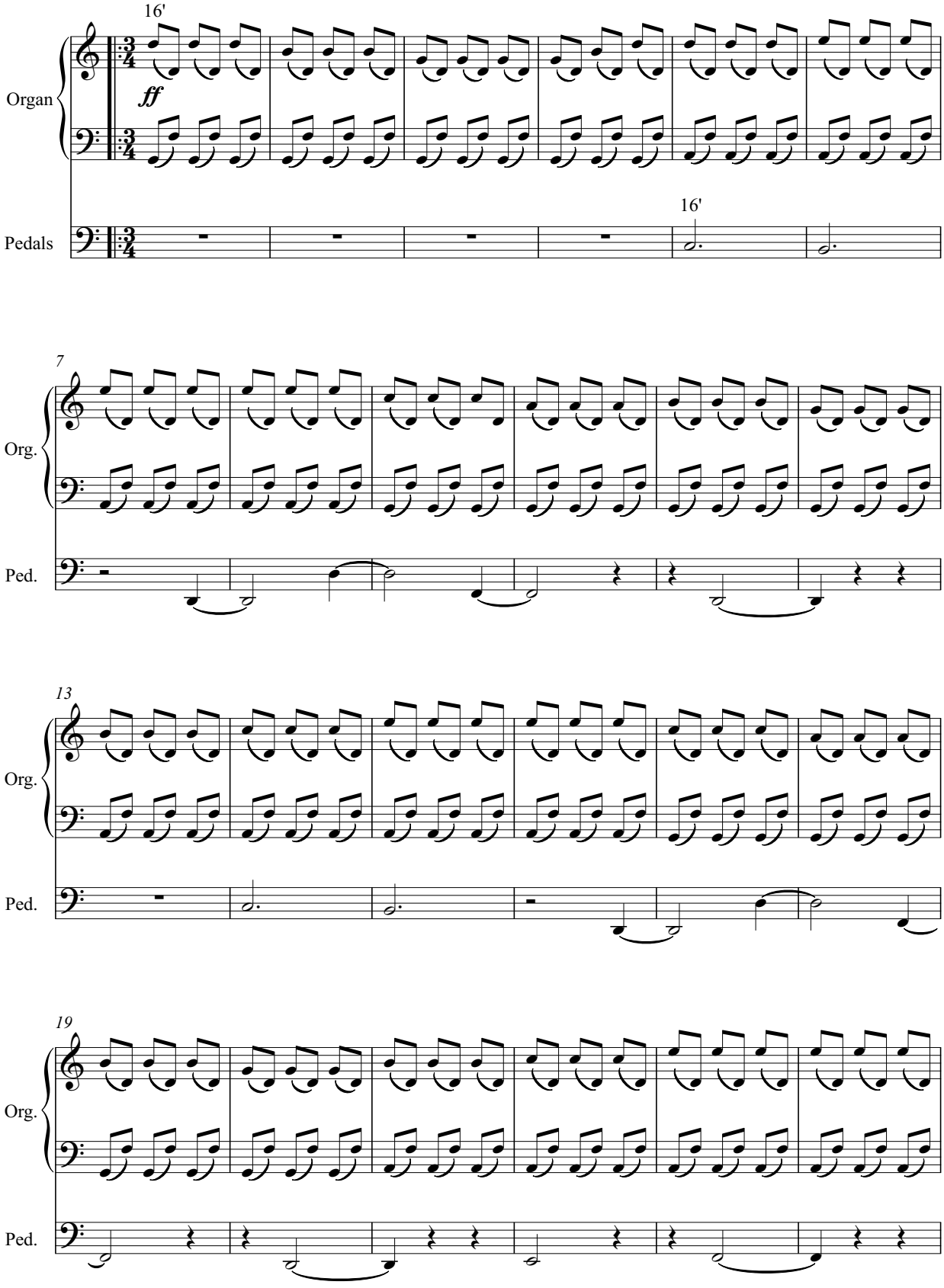

21
S.
Be - ne - di - ctus qui ve - nit in no - mi - ne do - mi - ni. Ho -
Org.
Ped.

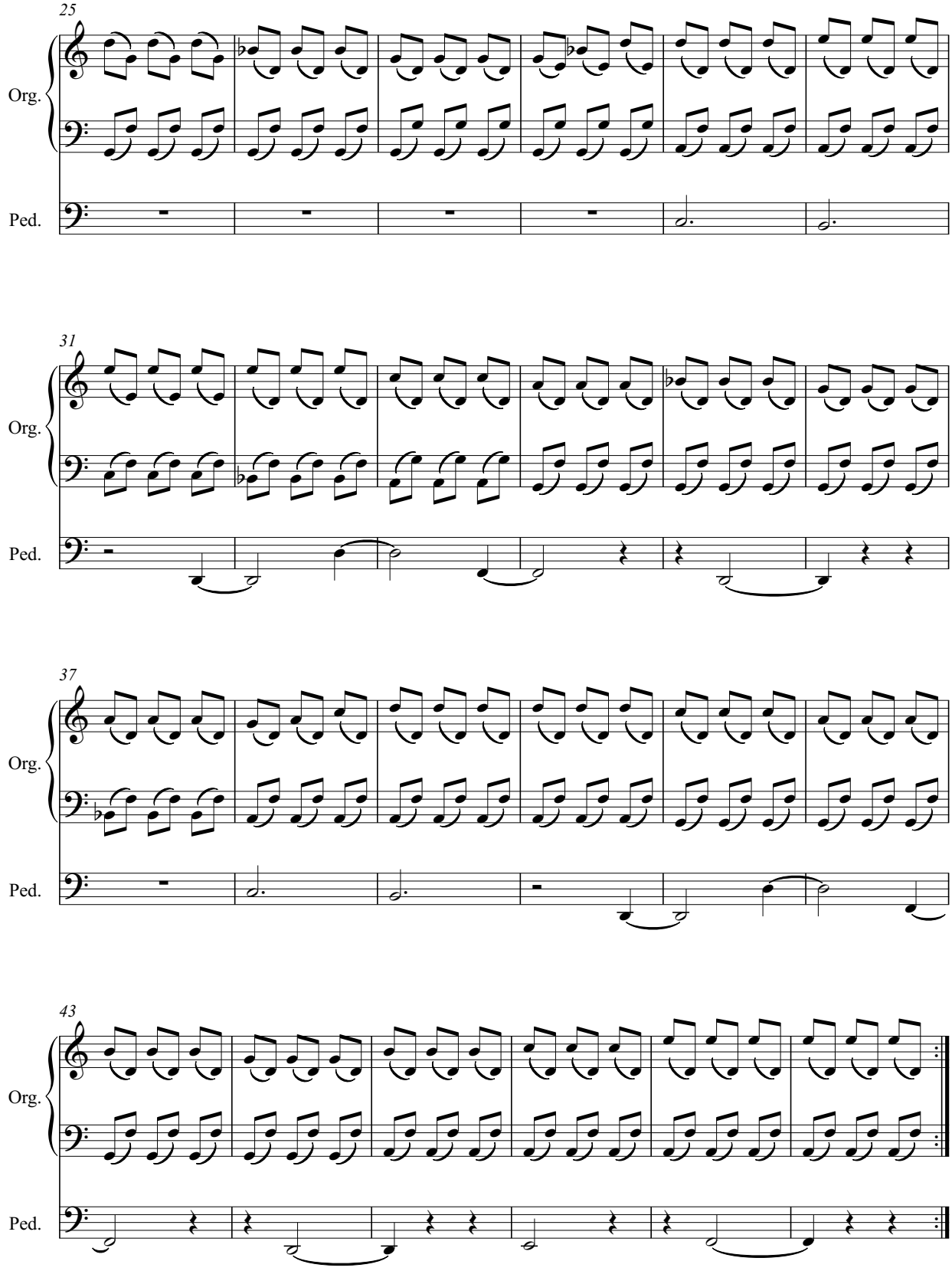

25
S.
san - na in ex - cel - sis Ho-
Org.
Ped.
29
S.
san - na in ex - cel - sis.
Org.
Ped.

Libera me (2)

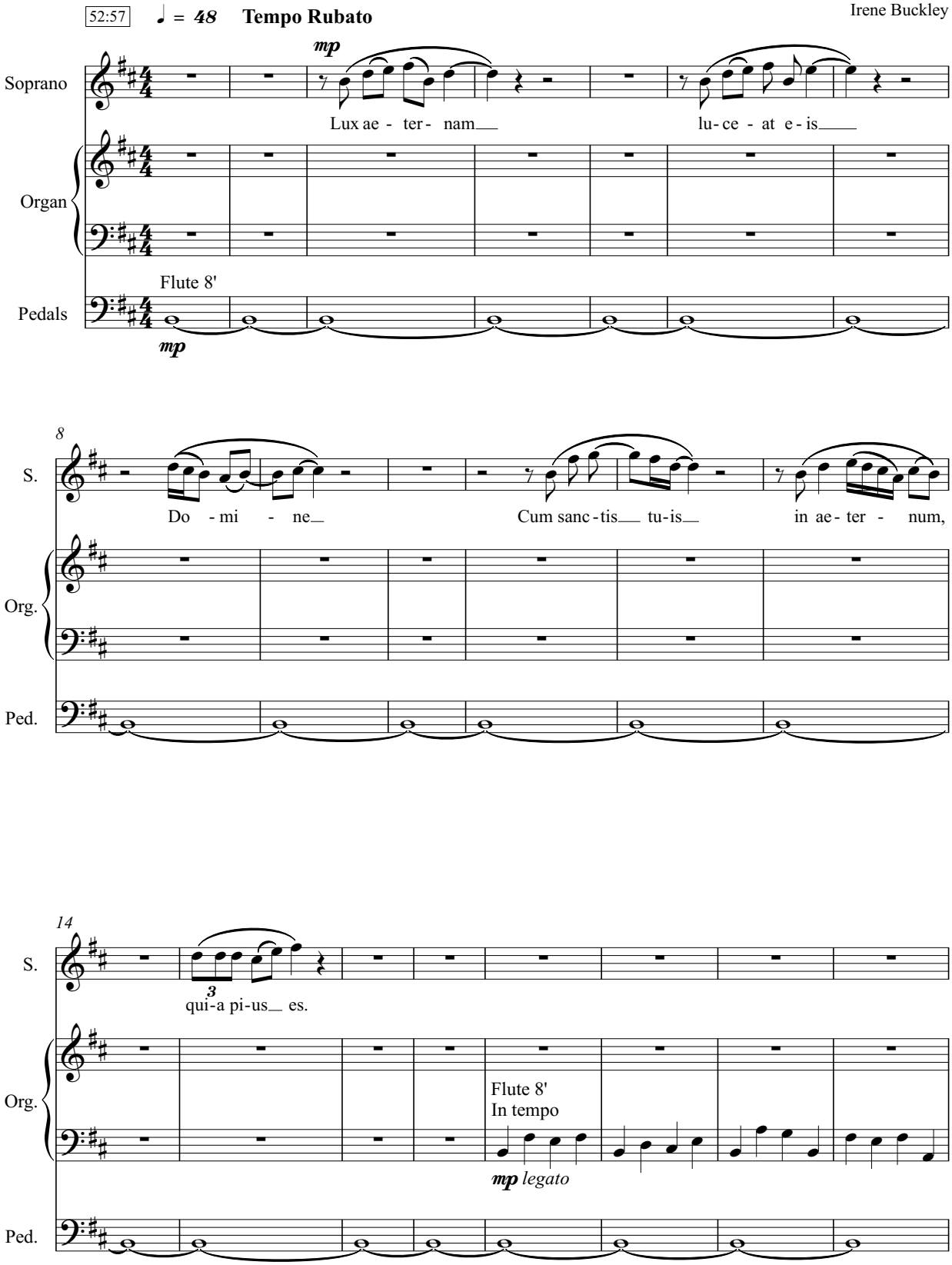
48:25 ♩ = 130 Agitato

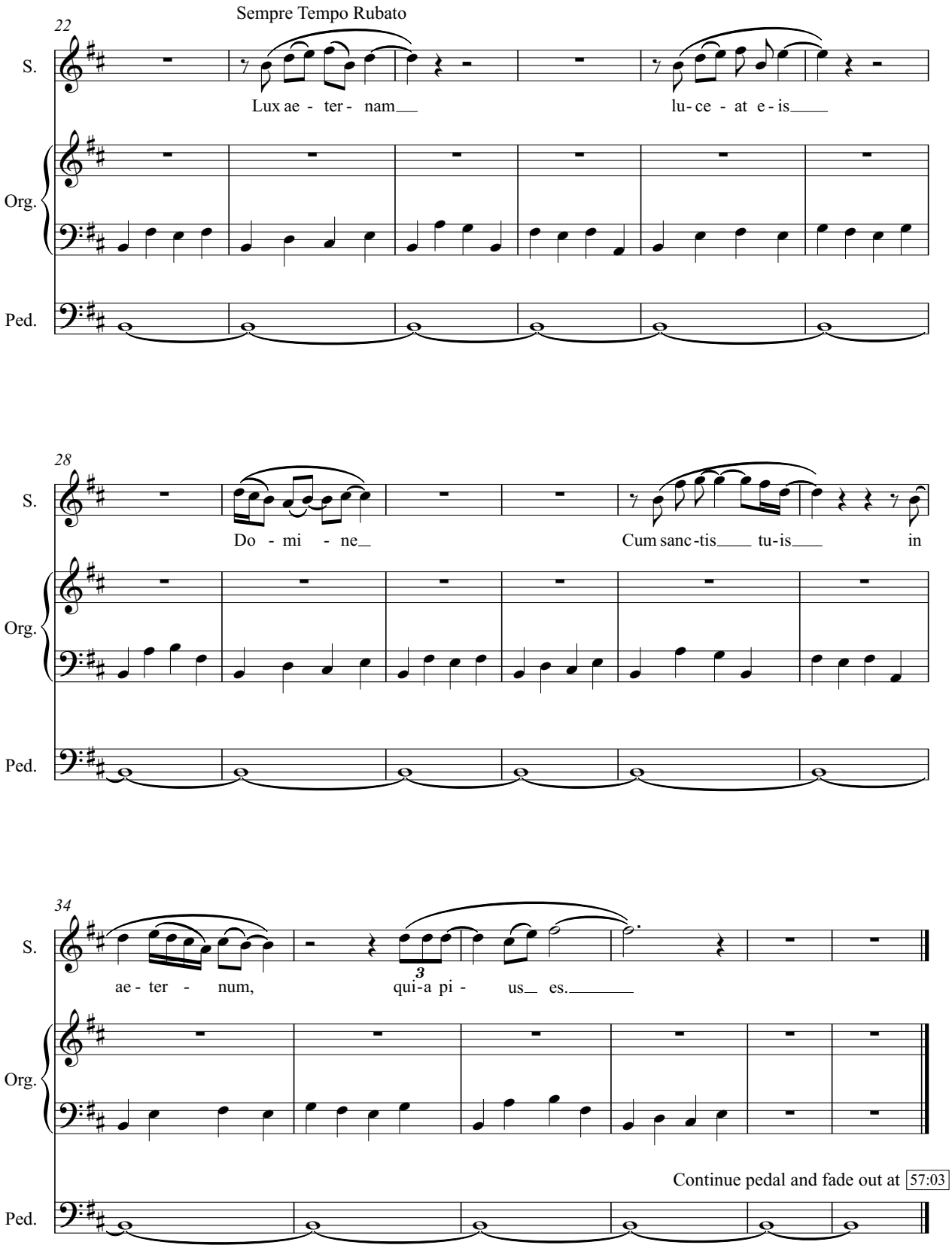
Irene Buckley




25
Org.
Ped.
31
Org.
Ped.
37
Org.
Ped.
43
Org.
Ped.

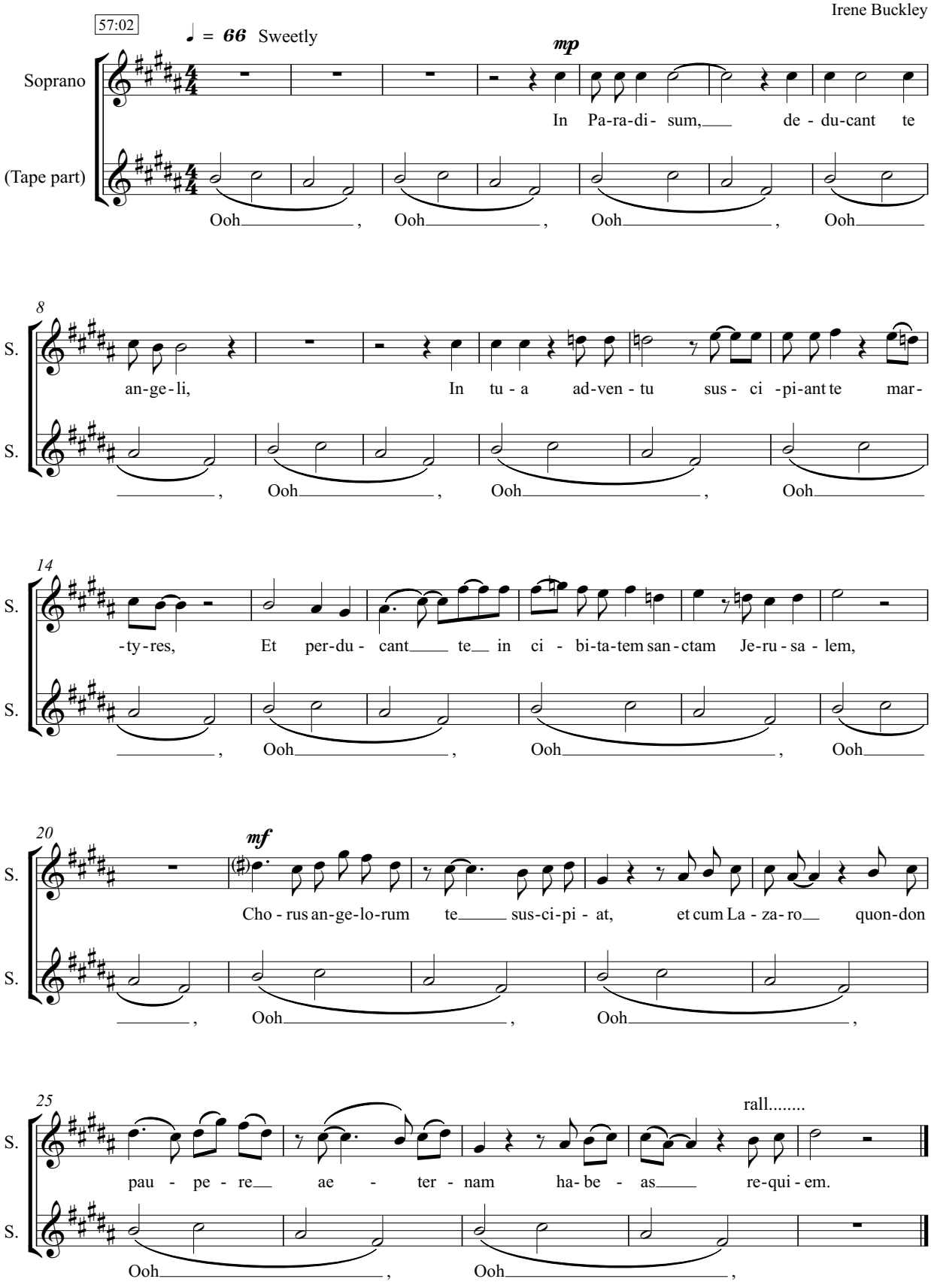
Lux Aeterna 2




Sempre Tempo Rubato
22
S.
Lux ae - ter - nam
lu - ce - at e - is
Org.
Ped.
28
S.
Do - mi - ne
Cum sanc - tis tu - is in
Org.
Ped.
34
S.
ae - ter - num,
3
qui - a pi - us es.
Org.
Continue pedal and fade out at 57:03
Ped.

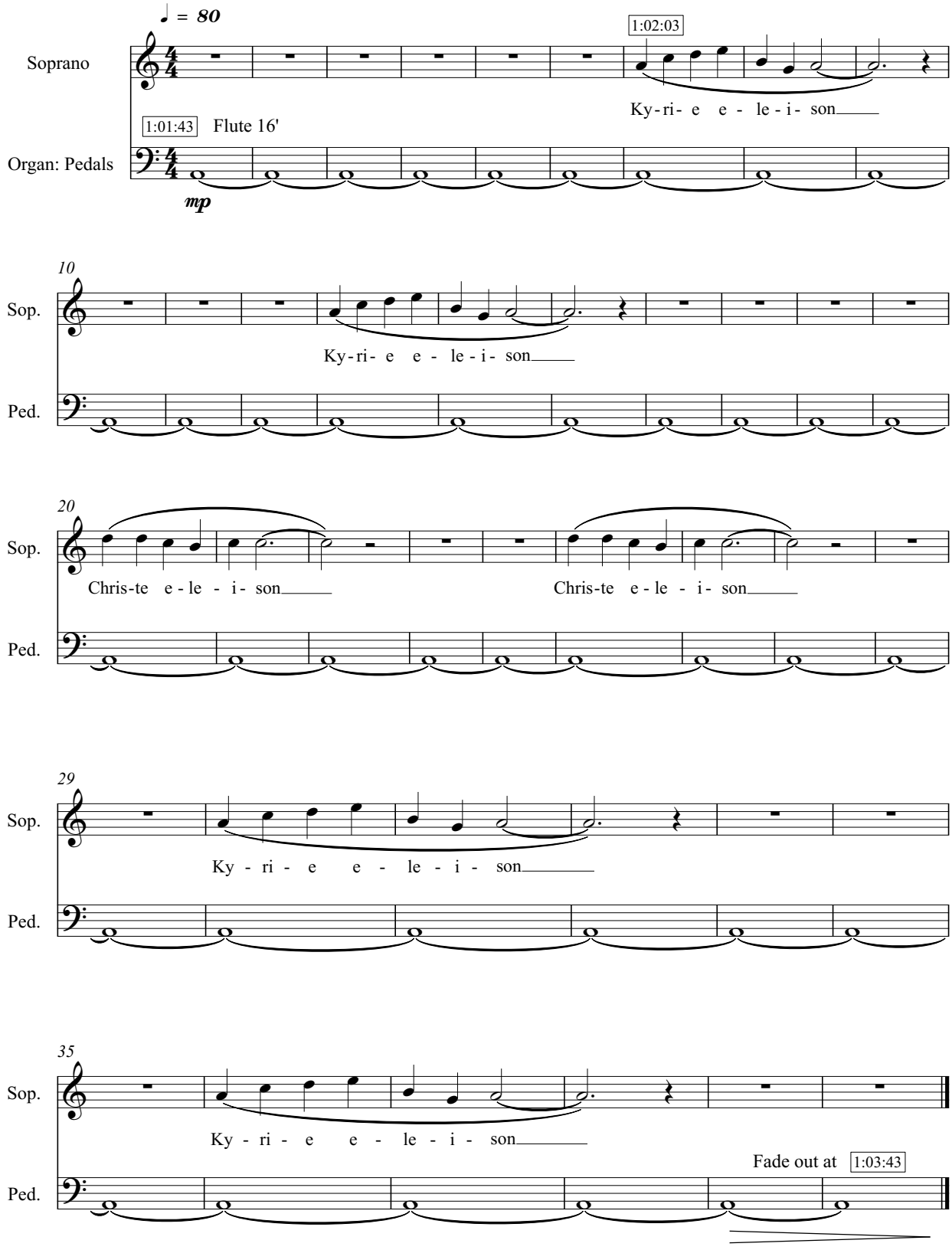
In Paradisum (2)

Irene Buckley

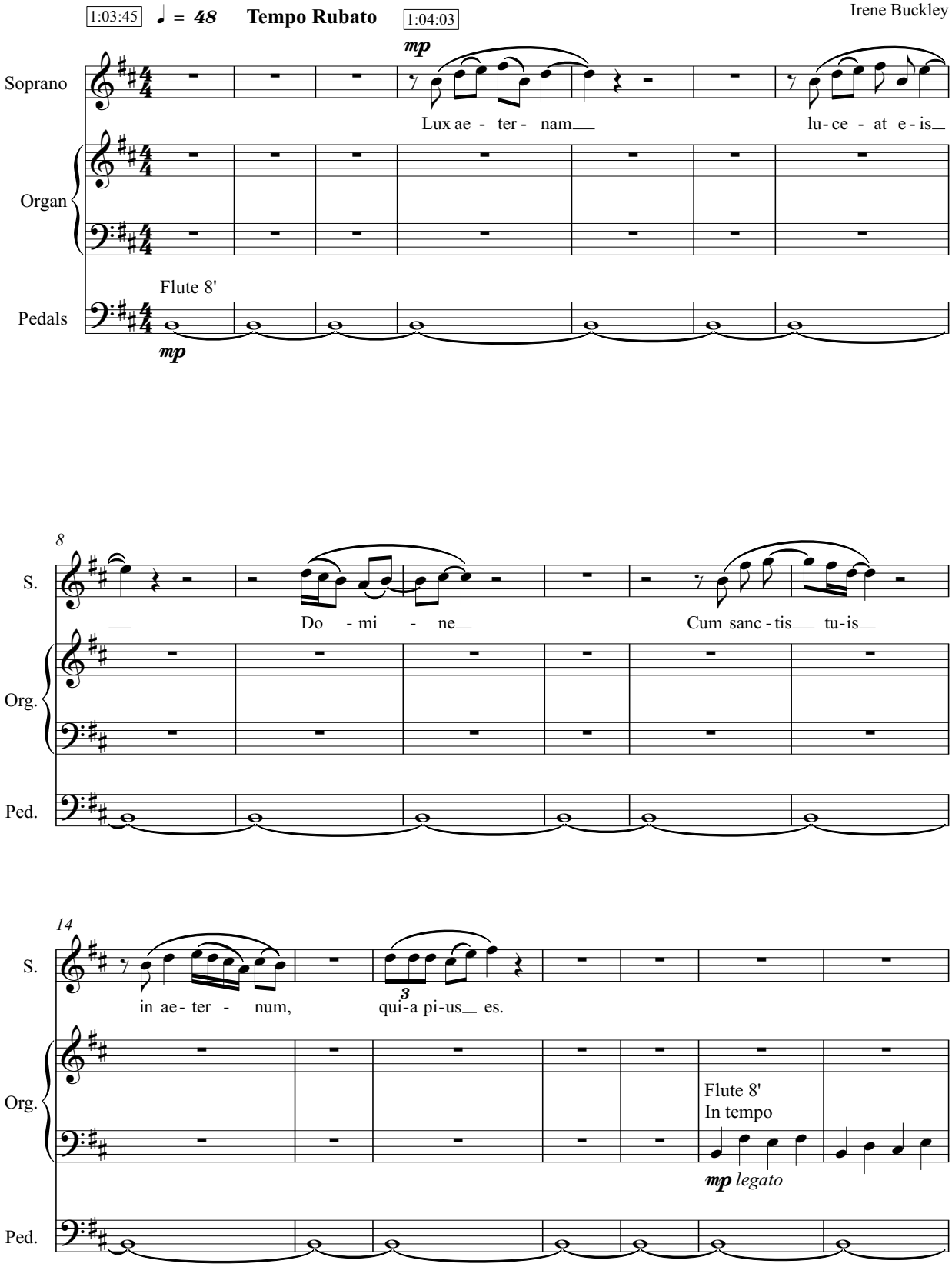


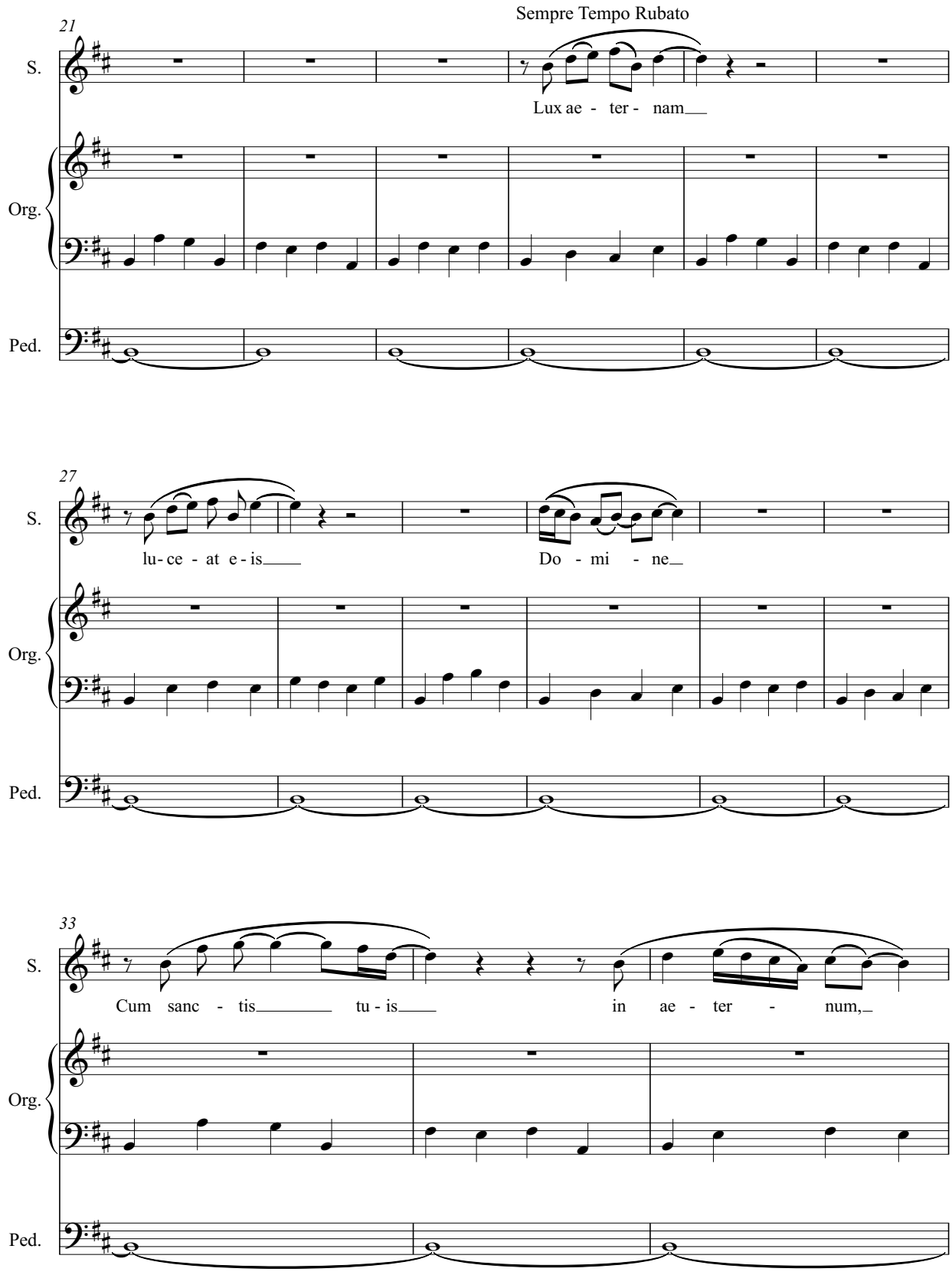
Kyrie (2)

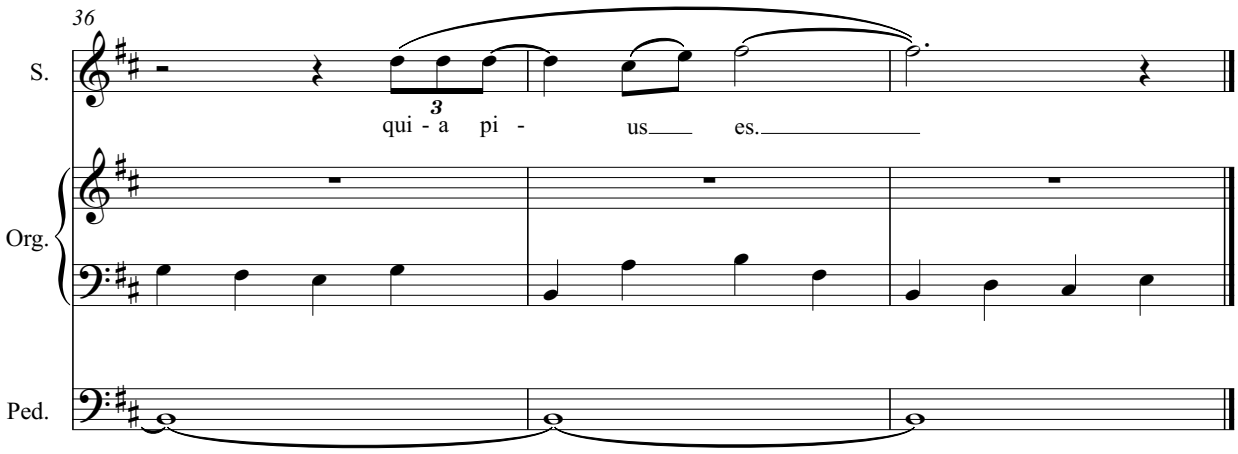
Irene Buckley



Lux Aeterna (3)



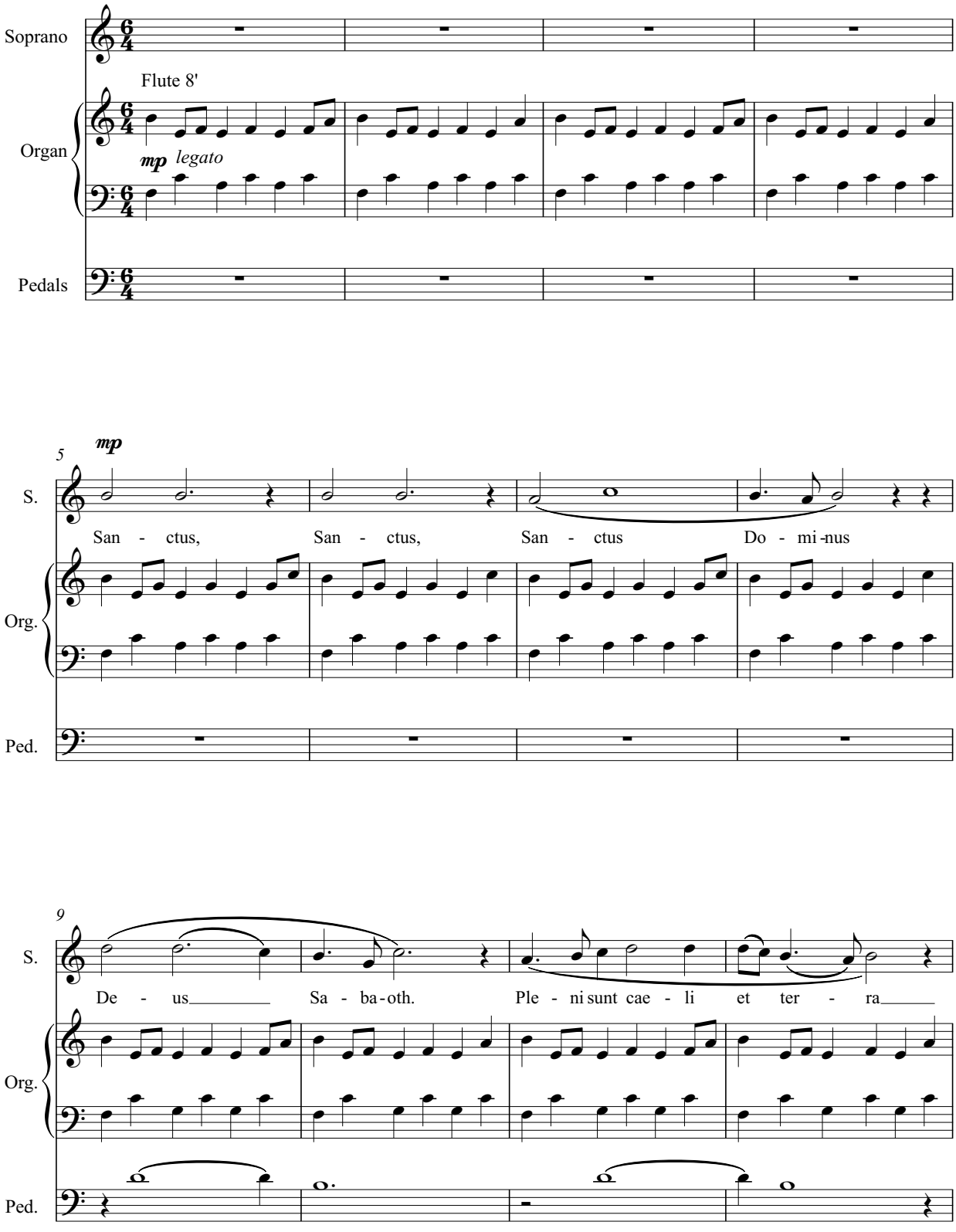

Sempre Tempo Rubato
21
S.
Lux ae - ter - nam
Org.
Ped.
27
S.
lu - ce - at e - is
Do - mi - ne
Org.
Ped.
33
S.
Cum sanc - tis tu - is in ae - ter - num,
Org.
Ped.

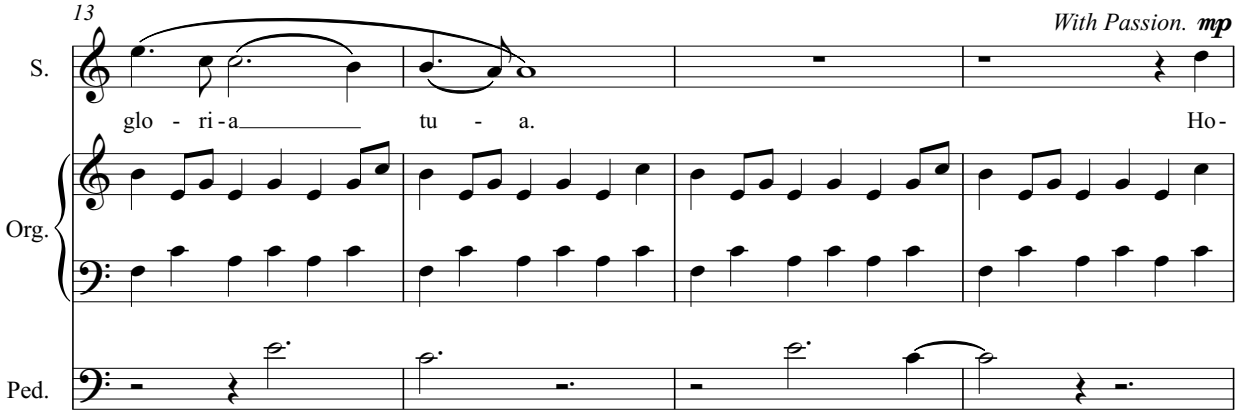

36
S.
3
qui - a pi - us es.
Org.
Ped.

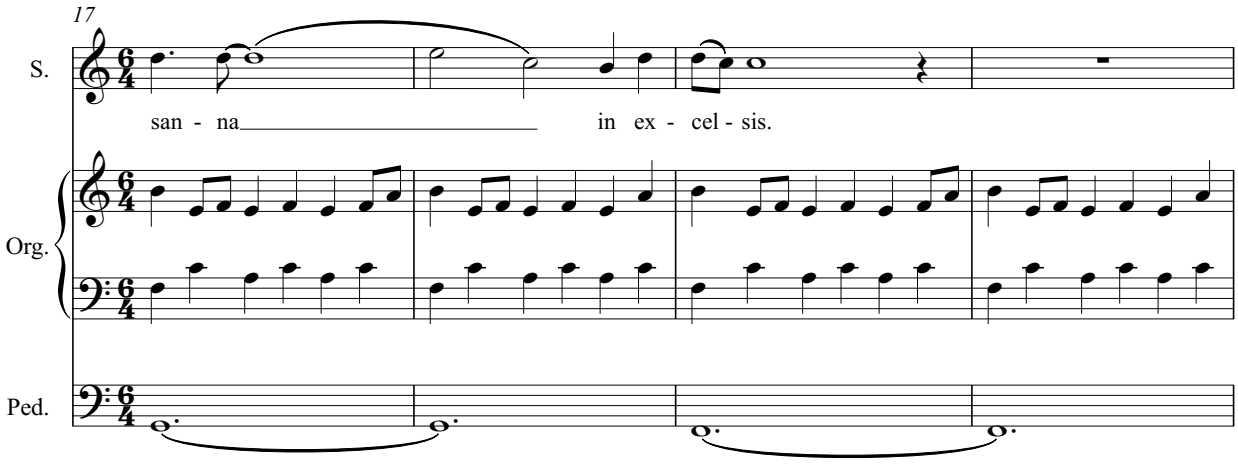
Sanctus

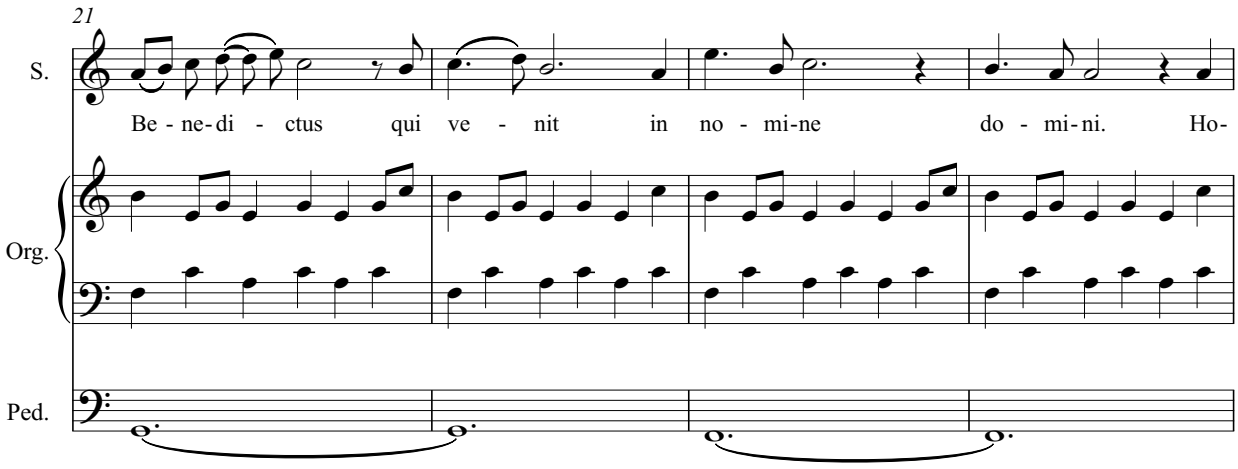
Irene Buckley

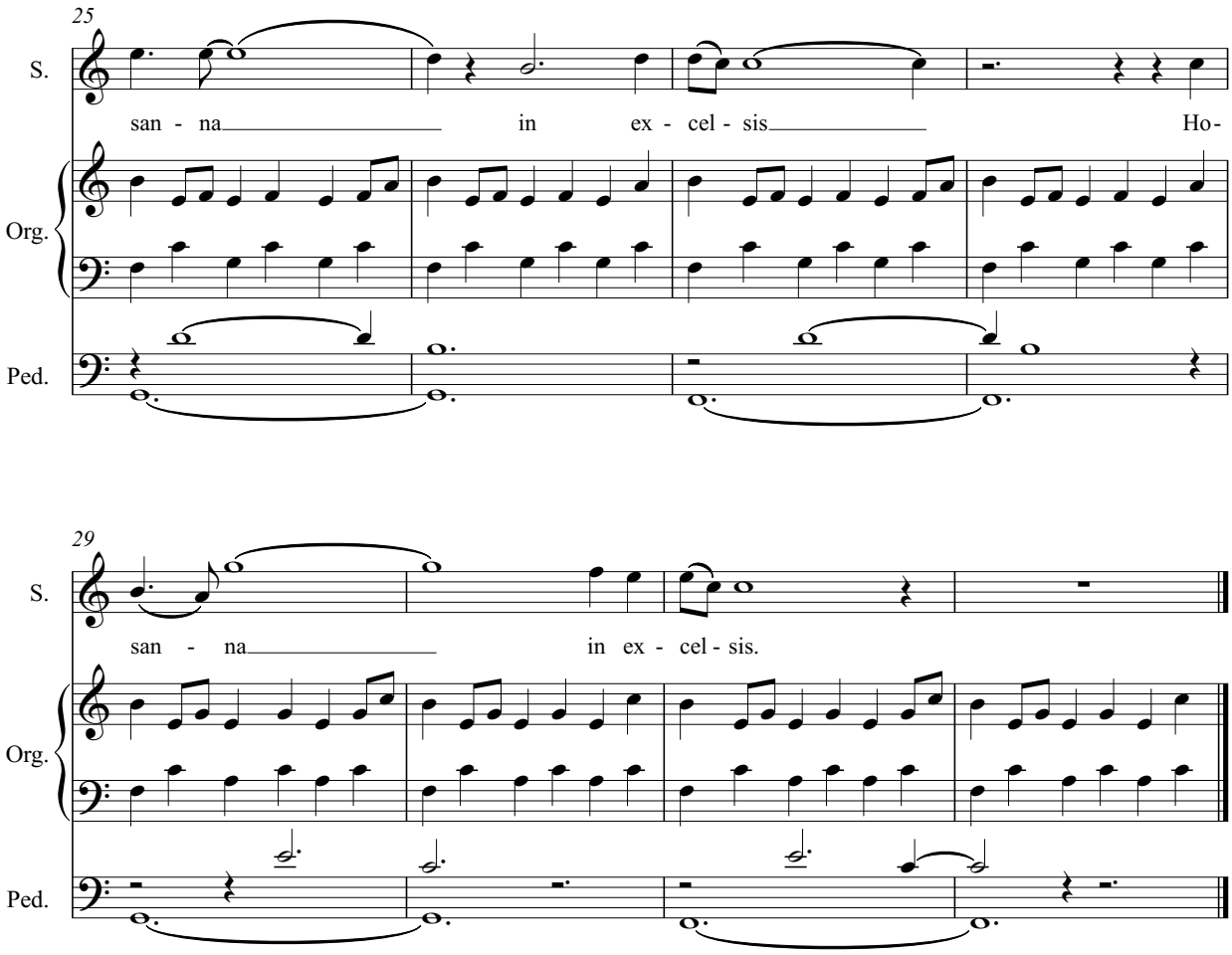
1:08:30 ♩ = 80 **Gentle**




13
With Passion. mp
S.
glo - ri - a tu - a. Ho -
Org.
Ped.


17
S.
san - na in ex - cel - sis.
Org.
Ped.

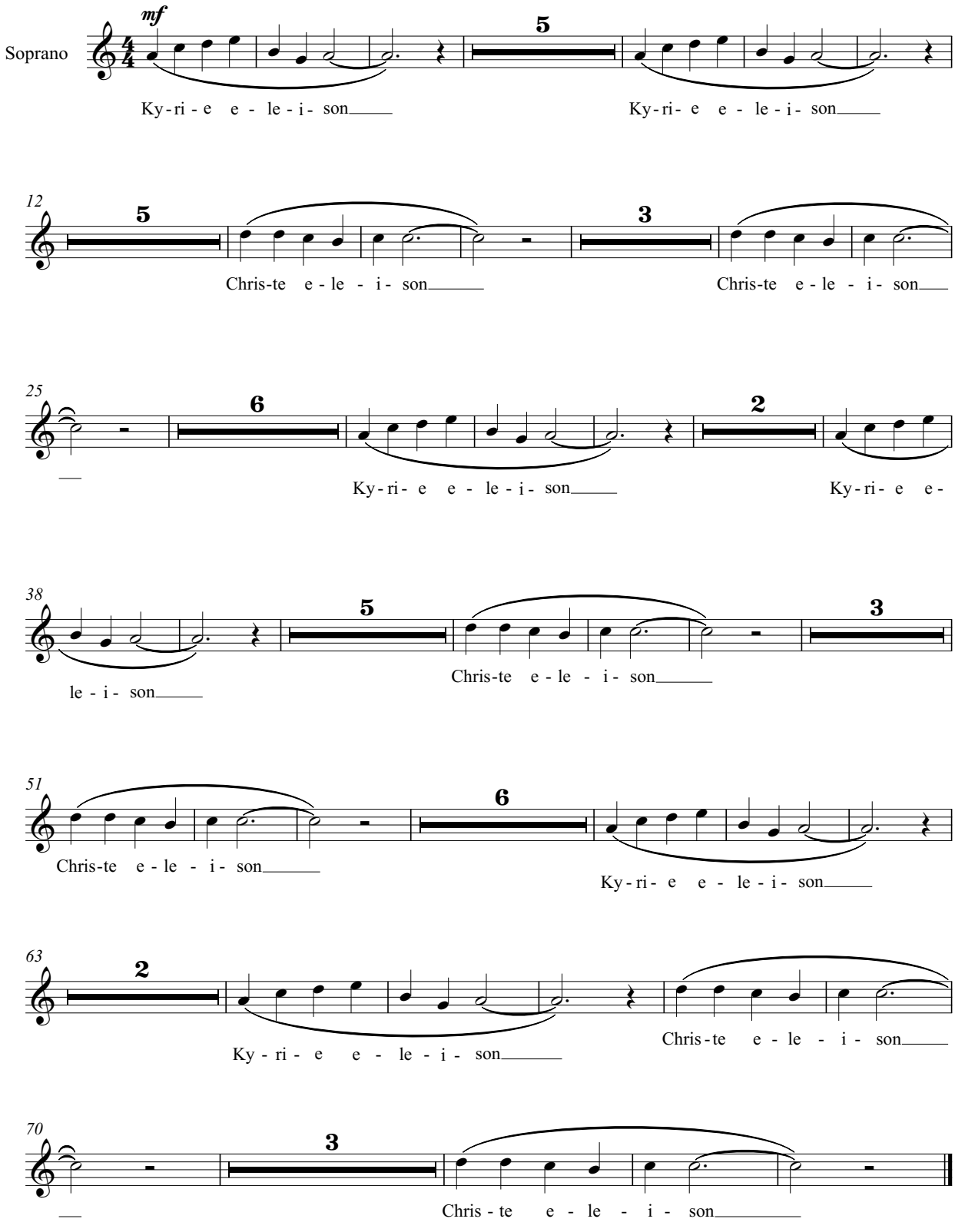

21
S.
Be - ne - di - ctus qui ve - nit in no - mi - ne do - mi - ni. Ho -
Org.
Ped.


25
S.
san - na in ex - cel - sis Ho-
Org.
Ped.
29
S.
san - na in ex - cel - sis.
Org.
Ped.

Kyrie (3)

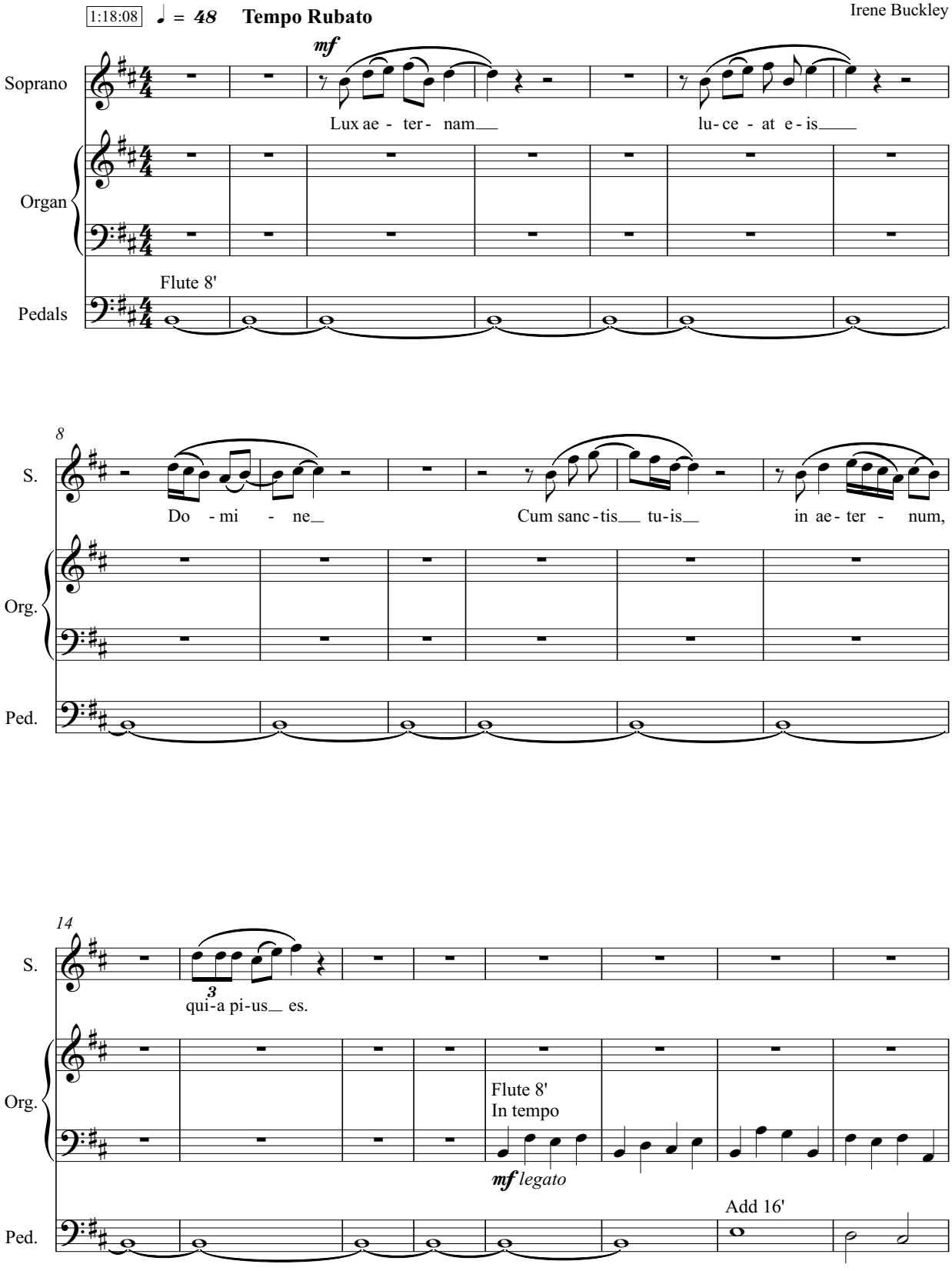
1:12:29 ♩ = 80 Tempo Rubato

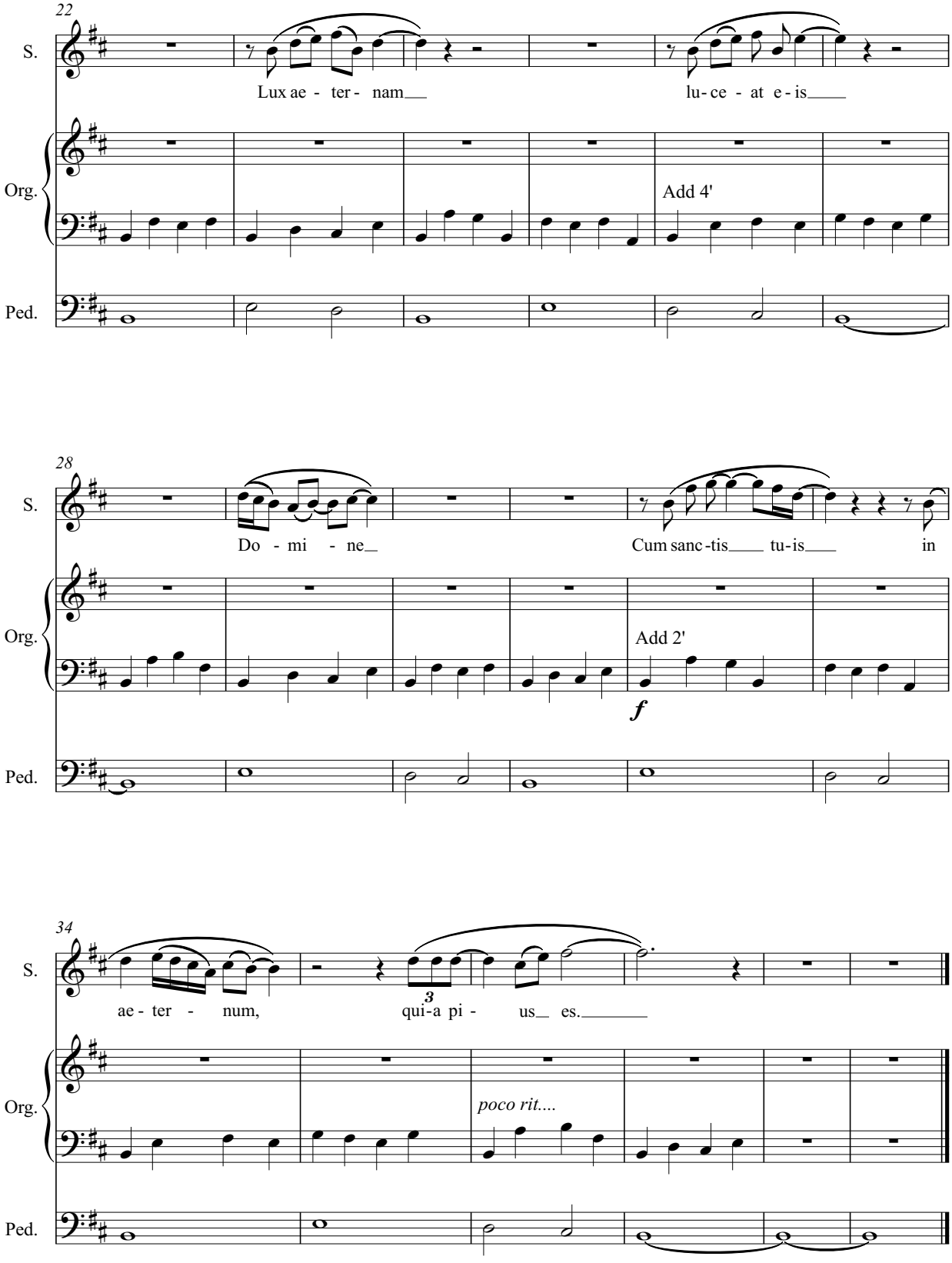
Irene Buckley



Lux Aeterna 4 (Ending)

Irene Buckley




22
S.
Lux ae - ter - nam
lu - ce - at e - is
Org.
Add 4'
Ped.
28
S.
Do - mi - ne
Cum sanc - tis tu - is in
Org.
Add 2'
f
Ped.
34
S.
ae - ter - num,
3
qui - a pi - us es.
Org.
poco rit....
Ped.