BETWEEN SPEECH AND MUSIC

Composing for Guitar with Dialectal Patterns

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Abstract

Music and speech share many of the same fundamental properties, with music often being referred to as a "universal language". The 20th century saw many composers using speech as a musical element, at times combining it with acoustic instruments and exploiting the sonic similarities.

Given the wide variety of timbres and techniques available on both the classical and electric guitar, it has proven to be an effective vehicle to imitate and blend with the human voice in speech-inspired compositions. This project examines the methods with which composers applied these concepts to contemporary guitar music, as well as the potential they yield to invoke a sense of place, nostalgia, and meaning in the audience.

The core applications of this research involved a collaborative research-creation project with composer, Jason Noble, in which we created three new speech-based works involving guitar and electronics. In 2015, we decided to tour our home province of Newfoundland to record interviews with residents, and then to use those recordings as source material for musical creation. The dialects of Newfoundland and Labrador are diverse yet diminishing; and so we sought to celebrate them in an artistic context through this project.

This paper discusses the creative and technological processes behind Noble's works *One Foot in the Past* (2016), *Take Me Back* (2017), and *We Never Told Nobody* (2019), which collectively celebrate the dialects of Newfoundland and Labrador while simultaneously contributing to the fields of guitar technique, notation, and composition.

Research Ethics Board II: Certificate of Ethical Acceptability of Research Involving Humans

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Abrégé

La musique et la parole partagent plusieurs caractéristiques fondamentales, il n'est donc pas surprenant que la musique soit souvent décrite comme une langue universelle. Le vingtième siècle a vu plusieurs compositeurs intégrer la parole comme un élément musical en la combinant parfois avec des instruments acoustiques pour exploiter les similarités sonores.

Tant la guitare classique que la guitare électrique, considérant la grande variété de timbres et techniques disponibles, ont prouvé être un véhicule efficace pour imiter et s'harmoniser avec la voix humaine dans des compositions inspirées de la parole. Ce projet étudie les manières utilisées par les compositeurs pour appliquer ces concepts à la guitare contemporaine, ainsi que sa capacité à inspirer un sens du lieu, de la nostalgie et de signification pour l'audience.

Les principales applications de cette recherche ont impliqué un projet collaboratif de recherche-creation avec le compositeur Jason Noble, dans lequel nous avons créé trois nouvelles pièces basées sur la parole pour la guitare et l'électronique. En 2015, nous avons pris la décision de faire la tournée de notre province d'origine, Terre-Neuve, pour enregistrer des entrevues avec des résidents, pour ensuite utiliser ces enregistrements comme matériel de base pour la création musicale. Les dialectes de Terre-Neuve et Labrador sont multiples, mais en déclin, et nous avons donc cherché à les célébrer à travers une démarche artistique dans le cadre de ce projet.

Ce papier illustre le processus créatif et technologique derrière les créations de Noble *One Foot in the Past* (2016), *Take Me Back* (2017), et *We Never Told Nobody* (2019), qui célèbrent collectivement les dialectes de Terre-Neuve et Labrador tout en contribuant simultanément au domaine de la technique de guitare, de la notation et de la composition.

Acknowledgements

I would first like to extend gratitude to my dear friend and collaborator, Jason Noble, for the commitment to work alongside me throughout this entire project and for helping it to surpass all expectations. I am grateful to my doctoral committee for their guidance, patience and support over the years: Jérôme Ducharme, Jean Lesage, Jacqueline Leclair, and Lena Weman. To my family: Janice, Craig, and Megan Cowan, for always believing in my artistic work. Thanks to the many friends and collaborators who have helped or presented opportunities to me during my studies: Juan Sebastian Delgado, Adam Cicchillitti, Hannah Darroch, and Michael Pecak. To the inspiring faculty I have worked with during my time at McGill: Fabrice Marandola, Martha de Francisco, Joel Wapnick, Isabelle Cossette, and Lisa Lorenzino. Finally, a special thanks to Caroline Traube, for her informative research and the enthusiasm to collaborate with Jason Noble and me on future developments of this project.

This project would not have been possible without the enthusiasm and support of the late Eleanor Stubley, who was a selfless mentor and constant source of inspiration for both Jason and me.

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INTRODUCTION

Speech as a Compositional Element

Paul Dutton describes the relationship between speech and music as "two extremes of a sonic continuum".[1] Within this idea, vocal music could be understood as a midpoint between the two: a product equal parts linguistic and musical. In recent years, contemporary composers have been exploring the more gray areas of this continuum, and different ways in which speech and music can be combined to produce compelling results. Whether it involves isolating rhythmic, structural, melodic, or timbral elements of speech, there seems to be a consensus that speech is in itself "musical"; and our approaches to music-making can benefit from analyzing these elements and incorporating them into new works.

Speech has been applied to contemporary composition using various technical and expressive means. Incorporating speech can greatly aid in the communication of themes or meanings, for instance. The third movement of *Sinfonia* by Luciano Berio is a great example of this: described as a "collage", quoting excerpts from Mahler *Symphony No. 2 "Resurrection"* and other famous pieces, the work also includes eight speakers who recite texts from a wide variety of sources. Michael Hicks describes the use of musical and literal quotations as "creating an aura of a specific culture; and by them the past is made to belong, through a changed context, in the immediacy of a new present".[2]

Steve Reich saw great potential in both rhythmic and melodic aspects of speech, and sought to directly mimic them in his piece *Different Trains*. The piece employs samples of train

[1] Paul Dutton, "The Speech–Music Continuum." Listening Up, Writing Down, and Looking Beyond: Interfaces of the Oral, Written, and Visual (2012): 125.

[2] Michael Hicks, "Text, music, and Meaning in the Third Movement of Luciano Berio's Sinfonia." Perspectives of New Music, Vol. 20 (1981): 210.

conductors speaking. These samples are combined with a string quartet playing repetitive textures based on the musical shapes of the spoken phrases.[3]

Thomas Hummel was interested in timbral similarities between instruments and voices. In his work *Nicanor*, the spectral envelope of this word is compared with the average spectral envelopes of different instruments, informing his orchestration decisions in order to simulate the spoken word with a purely acoustic approach. When listening to the piece, "a considerable similarity of the respective orchestral sequence to the sound of the whispered word is perceived".[4]

Newfoundland Dialects

The Dialect Atlas of Newfoundland and Labrador states, "The English spoken in the Canadian province of Newfoundland and Labrador (NL) exhibits perhaps the greatest regional diversity to be found anywhere in North America...However, such factors as socioeconomic change, population loss and out-migration...mean that many traditional features of local speech are currently undergoing decline".[5] Linguists are currently attempting to trace and understand this change, but further contributions are needed in order to give these dialects a continuing presence. Canadian music scholar, Will Straw, states, "If musical styles crystallize particular complexes of regional and ethno-cultural tradition, their cultural value is more easily grasped".[6] Musicians working at this critical juncture in Newfoundland's cultural evolution have a timely opportunity to celebrate and preserve these dialects through new works.

My research-creation project involves using recordings of Newfoundland dialects as

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[3] Steve Reich, *Kronos Quartet / Pat Metheny – Different Trains / Electric Counterpoint* (1989). Elektra Nonesuch, 1998, compact disc.

[4] Thomas Hummel, "Simulation of Human Voice Timbre by Orchestration of Acoustic Music Instruments." International Computer Music Conference Proceedings, 2005: 1.

[5] Sandra Clarke and Philip Hiscock, "The Dialect Atlas of Newfoundland and Labrador". www.dialectatlas.mun.ca. Memorial University of Newfoundland (2011).

[6] Will Straw, "In and Around Canadian Music." Journal of Canadian Studies 35.3 (2000): 173. Trent University, Peterborough, ON, Canada.

compositional elements within new electroacoustic works for guitar. Jason Noble, a composer and fellow Newfoundland-raised musician, collaborated with me for the entire creative process. Research and experimentation helped devise new applications of sound-processing technologies in order to replicate speech patterns with a guitar, drawing from melodic, rhythmic, timbral, and semantic aspects of the speech samples. The pieces involve pre-recorded voice clips of Newfoundlanders telling personal stories, as well as familiar elements from the Newfoundland folk song canon. The proposed combination of new technologies with folk tradition will celebrate one of the regional cultures, contributing to the diverse musical and linguistic heritage of Canada.

Speech and the Guitar

The guitar is an ideal instrument for a project based on folk song and speech. While the fiddle and accordion have a long history with Newfoundland folk song, the guitar became the principal accompanying instrument after the 1950s, largely due to the presence of country and western music on the radio in Newfoundland.[7] Furthermore, as we intend to imitate speech in various ways, the extensive range, timbral diversity, and microtonal capabilities give us various approaches to experiment with. From a scientific perspective, the guitar and human voice also share similar properties: vocal sounds and guitar sounds can both be "understood in terms of a "source-filter" model, where the resonant body of the instrument or of the vocal tract shape "filters" the input (the source)".[8] In voiced human speech, the periodic vibration of the vocal folds provides the source. On the guitar, the vibration of the strings provides the source.[9] It is

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[7] Evelyn Osborne, "Fiddling with Technology: The Effect of Media on Newfoundland Traditional Musicians." Newfoundland and Labrador Studies 22, no. 1 (2007): 204.

[8] Michael Kateley Klingbeil, "Spectra analysis, Editing, and Resynthesis: Methods and application." DMus diss., Columbia University (2009): 30.

[9] Michael Kateley Klingbeil, "Spectra analysis", 31.

possible to analyze the resonances of different words, or plucked notes, to determine similarities and make artistic decisions depending on the desired result.

As our project was originally conceived in order to celebrate disappearing cultural elements in Newfoundland, research has strongly supported the notion that guitar and speech are an effective combination for our goals. The rhythmic and melodic elements of speech have often been combined with guitar in remarkably effective ways, many of which will be referenced in the following chapters. We plan to build upon these while also further exploring the potential of shared *harmonic* and *timbral* properties between speech and guitar.

Methodology

As we wanted to capture the dialects in their current state, Jason and I needed to record interviews with various participants from around the island. Research thus began in Newfoundland in order to refine our understanding of the dialects and their geographic locales. We consulted the Dialect Atlas of Newfoundland and Labrador as well as the departments of Linguistics and Folklore at Memorial University of Newfoundland. On the basis of this research, we planned a 10-day tour around the island, focusing on areas with different settlement histories and therefore possessing contrasting dialectal trends:

Figure 1. A map of the Newfoundland tour with locations chosen based on settlement history.

With the aid of local newspapers, a CBC radio interview, and personal connections that Jason and I had around the island, we were able to get our call to participants out to the necessary locations. The result was over 18 hours of recorded material from 16 different participants across eight communities. As we wanted to capture these dialects in their most natural state, our interviews were primarily informal conversations about various aspects of life in their communities. We had a script of questions to ask, but we often diverged from it. In many cases, the discussion of music led to live performances of folk songs for us. Finally, in order to have a controlled variable with which we could analyze contrasting dialectal trends, we had certain participants recite lyrics from traditional Newfoundland songs.

Tips regarding the placement of the microphone as well as interview tactics to induce a more natural and fluent conversation were drawn from *Encounters in the Republic of Heaven* by Trevor Wishart: a speech-based composition with an accompanying book explaining his methodology. Wishart further explains his approach to cataloging and cleaning the material, a process we also recognized as essential and undertook throughout the majority of 2016. This process involved cutting up the interviews into smaller segments and organizing them by either phonetic or semantic content, highlighting our favourite moments, and "cleaning" the files by removing distracting background noise.[10]

At the outset of this project, our interest was purely phonetic: It was the sound of the speech that interested us, and which we sought to integrate into a musical context. However, the Newfoundlanders we interviewed shared many touching stories and personal insights; we began to realize that there was a great emotional and narrative resource here as well. We thus reconceived the goal to include both narrative *and* isolated sonic elements of speech, in a multi-

[10] Trevor Wishart, Encounters in the Republic of Heaven. York: Orpheus the Pantomime, 2011. Print.

phase project that will include several compositions.

In order to establish a precedent and working method, the technological portion of the research began with analysis of existing compositions that incorporate speech. These works included Steve Reich's *Different Trains*, Jonathan Harvey's *Speakings*, Peter Ablinger's *Deus Cantando*, René Lussier's *Le trésor de la langue*, and others that will be referenced in the following chapters. Extensive experimentation with softwares such as SPEAR, AudioSculpt, and MaxMSP helped us realize our technological and musical goals.

The following chapters will consists of an in-depth analysis of three new compositions by Jason Noble from a formal and performative perspective with the goal to:

1) Explain the various artistic applications of Newfoundland dialects within the works

2) Explain the technological processes in clear and methodical ways so as to be useful for future guitarists or composers

3) Explore the interpretive and performative roles from my perspective as a co-creator and as someone who is familiar with Jason Noble's unique conceptual and notational approaches.

Above all, we sought to create music that is both innovative in its application of new technological means and compositional methods, while remaining accessible and meaningful for both the Newfoundlanders who inspired our project and for our academic and musical peers.

Chapter 1: *One Foot in the Past* (2015) for guitar, piano and electronics

1.1 *Beaumont Hamel*: an introductory note on the 1916 battle that this piece commemorates

One Foot in the Past was premiered on July 11th 2016 at the Sound Symposium XVIII Festival in St. John's, Newfoundland. The piece was written as a commemoration of the attack at Beaumont Hamel, which was "the Newfoundland Regiment's costliest engagement during World War I".[11] On July 1st, 1916, during the first day of the Battle of the Somme, 800 Newfoundlanders advanced on the German front lines after hastily preparing an assault in response to enemy attacks.[12] The assault was ill conceived, as most of the 800 were in a clear line of German fire and were dead before reaching their own front line.[13] July 1st 2016 marked 100 years since this battle occurred; and so *One Foot in the Past* was one of many commemorations, artistic and otherwise, throughout the province of Newfoundland and Labrador during 2016.

While the content of our interviews varied from subject to subject, we had plans to write a Beaumont Hamel themed piece and so were sure to include it in our list of questions each time. Some of the questions we asked are listed below, which prompted thoughtful responses that provided the source material to begin composing.

"Do people in your community know about this battle?"

"Are young people today still learning about it?"

"How has the battle affected you, your family, or your community?"

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[11] Robert J. Harding, "Glorious Tragedy: Newfoundland's Cultural Memory of the Attack at Beaumont Hamel, 1916-1925." *Newfoundland and Labrador Studies* 21, no. 1 (2001): 1.

[12] Robert J. Harding, "Glorious Tragedy", 7.

[13] Robert J. Harding, "Glorious Tragedy", 9.

1.2 *Speech as narrative:* telling a story with a "collage" from our field interviews

In exploring different ways that speech has been used to create a sense of place, environment, or narrative, we looked to other compositions for inspiration. István Anhalt wrote *Cento*, a piece for 12-voice choir and electronics, for the 100th anniversary of Canada in 1967. His use of "collage" techniques and speaking voices creates an "imaginary urban impression" that reflected the mood of young Canadian people of the time.[14] As a European immigrant who moved to Montréal after World War II, he perceived an edgy and uncertain attitude prevalent amongst many Canadians. This tension, as well as a more abstract theme of "the place of the individual in society", is enhanced and depicted through his use of speech as a musical event. Recognizing the musical qualities inherent in everyday speech, he developed a graphic notation to guide the performers with respect to inflection, duration, range, and emphasis.[15]

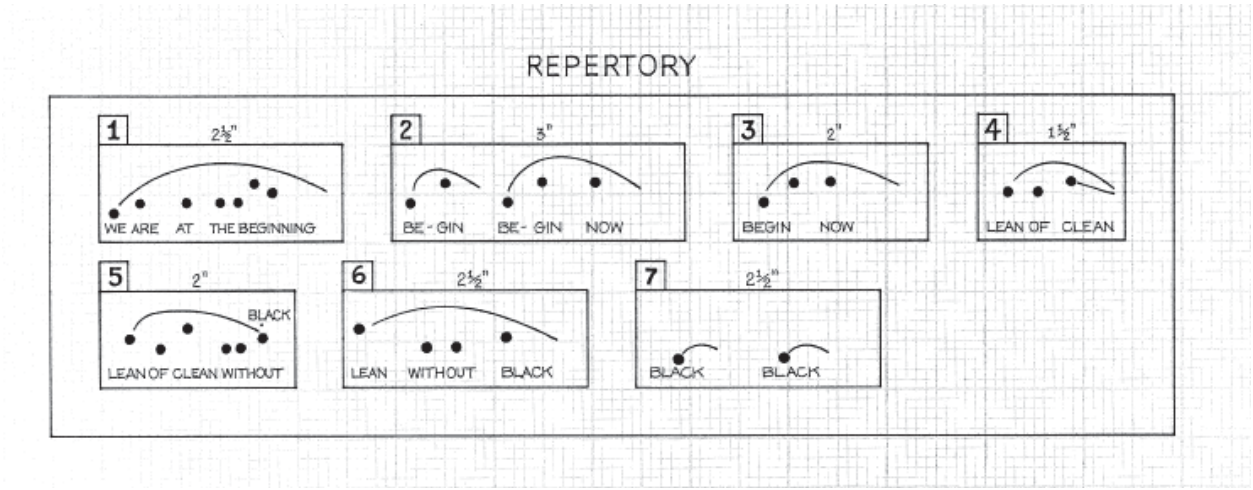

Figure 2. Notation for speech gestures in Cento, by István Anhalt.

A more direct use of narrative can be found *Kit's Beach Soundwalk* (1989) by Hildegard Westerkamp. This piece falls under the genre, "Soundscape Composition", which Westerkamp

14 Gordon E. Smith, ""Deep themes, not so hidden" in the Music of István Anhalt." Queen's Quarterly 98, no. 1 (1991): 107.

15 Gordon E. Smith, "Deep themes", 108.

describes as "tape pieces that are created with recorded environmental sounds".[16] While the genre does not necessarily use speech samples, this particular example uses the voice as a narration, talking one through the soundscape and helping to create an environment in the listener's imagination.

In cases like this, the composer must make a decision about where they want to fall on the continuum between composition and documentary. *Kit's Beach Soundwalk* is more documentary, while our initial goals were more abstract and compositional. As we progressed in the project we found ourselves gravitating towards a balance between the two, with the voices telling a story that contextualizes the music. Westerkamp justifies this approach by stating, "…compositions may be created with a combination of unprocessed and processed sounds. But whatever the continuity is or the proportions are between the real (unprocessed) and the abstract (processed) sounds, the essence of soundscape composition lies in the relationship between the two and how this relationship inside the composition informs both composer and listener about place, time and situation".[17]

One Foot in the Past commemorates the Battle of Beaumont Hamel not by attempting to retell the story of the battle but rather by providing a snapshot of what it still means to people today. Fragmented responses from the aforementioned questions are placed throughout, collectively giving a sense of how the battle resonates within the small Newfoundland communities we visited. This narrative is supported by musical sections based on Newfoundland folk songs, to be discussed at length in the next section, as well as elements of "soundscape" composition. Sounds of fire crackling, rivers flowing, birds chirping, and industrial noise help

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[16] Hildegard Westerkamp, "Soundscape Composition: Linking Inner and Outer Worlds." *Soundscape Newsletter, Amsterdam, Holland* (1999): 3.

[17] Hildegard Westeramp, "Soundscape Composition", 2.

juxtapose the environments of "home" versus "at war" in a musical context. Below, are transcriptions of the speech samples we used in the order that they appear in the composition:

"Young people would be more aware of ISIS, Iraq, Afghanistan… than they would, Beaumont Hamel"

Subject sings "July Drive", a folk song written about Beaumount Hamel. (lyrics in Appendix)

"You can always learn from the past"

"People are recognizing that there is value in your roots"

"It's a strong connection ... and it's in here"

"Change… things change in a community, you know"

"That's just that… people keep leaving"

"They know about Beaumount Hamel, yes"

"July 1st ... July 1st ... July 1st ... July 1st"

"A lot of people died… A lot of Newfoundlanders died"

"25 people from here died in the war"

"My father was in the first world war"

"My first cousin was killed at Beaumont Hamel"

"My cousin… brother… father"

"It was supposed to be the war to end all wars… that didn't work very well"

"We're smart enough to come up with a phrase like "the war to end all wars", but not smart enough to make that a reality"

"Really something… unreal… yes my son, it was unreal"

"You know, you've got to learn from the past, and for us here in Tilting we always say, we have one foot in the past and the other in the present; you don't know where you're going until you know where you come from"

"Trying to keep it alive, and it remember it you know, so it never goes away, right?"

"Things change in a community"

"Unbelievable changes"

"We didn't have electricity"

"I remember the first bit of electricity, the first car, the first TV, the first everything; and this was in my generation, my lifetime"

"It's hard to stick around, it's hard to stay"

Subject sings folk song, *"Somebody's Waiting For Me"*

1.3 *Folk Song:* on the use of Newfoundland Folk Music in *One Foot in the Past* and other contemporary classical works

Folk Song, Speech and Nationalism

Nationalism in music has been present to varying degrees throughout history. One of the most common ways to celebrate one's culture has been to use folk song as the basis of a new arrangement or composition. Béla Bartók is perhaps the most well-known example of this, as a composer who collected extensive field recordings of Hungarian folk songs and treated them in a variety of different ways throughout his career.[18] In some 50 works spread over 40 years, Bartók used folk songs in order to "help Hungarian music be known abroad",[19] and to display the simple but peculiar rhythmic and melodic aspects of the art form in a new way.[20] Benjamin Britten is

[18] Vera Lampert, "Nationalism, Exoticism, or Concessions to the Audience? Motivations behind Bartók's Folksong Settings." Studia Musicologica Academiae Scientiarum Hungaricae 47, no. 3-4 (2006): 337.

[19] Vera Lampert, "Nationalism, Exoticism, or Concessions to the Audience?", 339.

another notable example, composing his first folk song settings while he was in America and feeling homesick.[21] The tunes have a direct association to particular places; and so their communicative potential is invaluable to composers wishing to express nationalistic sentiments.

German philosopher, Johann Gottfried Herder, claimed, "…the native tongue and songs and tales of the common folk are the embodiment of the nation's character".[22] This proposes the idea that speech, language, and dialect can have comparable nationalistic potential to that of folk song. An interesting subject to consider here is Frederic Chopin, whose nationalistic elements are generally recognized as the Polish rhythms found in his mazurkas and polonaises. In his D.Mus dissertation, Michel Pecak points out that one of Chopin's mentors, Józef Elsner, published a method on the "rhythm and meter of the Polish language",[23] which undoubtedly had an influence on Chopin's writing. Pecak proceeds to argue that "an understanding of Polish prosody can uniquely inform our decisions in phrasing, pacing and inflecting Chopin's melodies".[24] This idea makes a strong connection between language, music, and nationalism.

Folk Song, Speech and Guitar

Composers drawing from both folk song as well as speech for inspiration have sometimes used the guitar in their compositions. As an instrument with roots in many genres, the guitar is often associated with folk music. Britten recognized this and used it as accompaniment in his sixth volume of English folk song arrangements.[25] Spanish guitarist Miguel Llobet took popular Catalan folk melodies and treated them to the chromatic and sometimes impressionistic harmony

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[20] Vera Lampert, "Nationalism, Exoticism, or Concessions to the Audience?", 343.

[21] Vera Lampert, "Nationalism, Exoticism, or Concessions to the Audience?", 339.

[22] Vera Lampert, "Nationalism, Exoticism, or Concessions to the Audience?", 338.

[23] Michael Pecak, ""Dire un morceau de musique": The Language Behind Chopin's Music.", DMus diss., McGill University (2016): 13

[24] Michael Pecak, ""Dire un morceau de musique"", 7.

[25] Benjamin Britten, Complete folk song arrangements. Boosey & Hawkes Inc, 2006.

he was developing, creating solo guitar works that are still widely performed today.[26]

In *Le trésor de la langue*, Québécois composer René Lussier uses the electric guitar's extreme melodic and gestural range to imitate the dialects and inflections spoken in more remote areas of Québec.[27] In *Nocturne*, British composer Arthur Keegan-Bole combines the intimacy of the classical guitar with electronic samples of radio shows and accents that portray a sense of "British-ness" to the listener.[28] The aforementioned examples demonstrate various ways that musicians have used folk song and speech in the context of guitar music. The remainder of this section will discuss the use of Newfoundland speech and song in contemporary music, as well as my specific methods and rationales for combining both with the guitar.

Newfoundland Folk Song and Speech in Contemporary Music

In 2015, Jason Noble and I travelled around Newfoundland collecting speech and folk song samples from locations chosen based on their different settlement histories. Maud Karpeles, an English folk song collector, and MacEdward Leach, American folklorist and ballad scholar, undertook similar expeditions in the 1920s and 1950s, respectively.[29] The trips by Karpeles and Leach led to the greater exposure of Newfoundland folk songs, as well as a better understanding of the regional dialects. Ralph Vaughan Williams and Benjamin Britten are two of the composers who made arrangements of Newfoundland folk songs that surfaced from these trips. Both

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[26] Robert Michael Phillips, "The influence of Miguel Llobet on the pedagogy, repertoire, and stature of the guitar in the twentieth century." (2002): 66.

[27] Dominique Olivier, "Montréal (1991-1992): vigueur accrue ou derniers soubresauts d'une civilisation?" Circuit: Musiques contemporaines 3, no. 2 (1992): 85.

[28] Arthur Keegan-Bole, "Imagining Soundworlds: a Commentary on Portfolio of Compositions 2012-16." PhD diss., University of Bristol (2016): 38.

[29] Glenn Colton, "Ralph Vaughan Williams Newfoundland Folksong Arrangements: A Reappraisal." The Phenomenon of Singing 7, (2009): 31.

composers used a personalized approach, keeping in line with Bartók's justification for adding accompaniments; that is, that the melodies "need clothing if we are to take them from the meadows to the town".[30] Vaughan Williams' treatment of the songs is "characterized by counter-melodies and beautiful textures, which enforce the beauty of the poetry and do not cloud the clarity of the original melodies".[31] More recent works based on Newfoundland folk songs include *5 Songs of the Newfoundland Outports* (1969) by Canadian composers Harry Somers (1925-1999), as well as *Slept Unwell* (2017) and *Swallow/Breathe* (2016) by Bekah Simms (b.1990). Somers' realizations are an effective blend of tradition and innovation, adding use of experimental vocal techniques to create a sense of Newfoundland landscape and culture in addition to the folk melodies.[32] In *Swallow/Breathe*, Simms takes the famous tune of *She's Like the Swallow* and "breaks down small pieces of the melody into micro-gestures, obsessing with single intervals. The piece gradually clarifies over time, revealing the melody in its entirety at the very end".[33]

Jason Noble and I utilized Newfoundland folk songs extensively in *One Foot in the Past* for guitar, piano, and electronics. Like Vaughan Williams, we did not want to "cloud the clarity of the original melodies", and so presented them authentically, albeit quite fragmented. These fragments are present in contrasting keys and notated in a way that asks for improvisation from the performers. The effect is comparable to Charles Ives' use of American folk songs in *General Putnam's Camp*, which depicts the frantic and patriotic celebrations of July 4th.[34] In our context,

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30 Vera Lampert, "Nationalism, Exoticism, or Concessions to the Audience?", 339.

31 Glenn Colton, "Ralph Vaughan Williams Newfoundland Folksong Arrangements: A Reappraisal", 37.

32 Glenn Colton. "She's Like the Swallow: Creative Responses to Newfoundland Folksong in the Choral Music of Harry Somers." The Phenomenon of Singing 3 (2001): 73.

33 Personal e-mail correspondence with Bekah Simms, September 22nd, 2017.

34 Charles Ives, "Three Places in New England: Orchestral Set. No. 1". Mercury Music Corp., 2008.

the fragmentations are intended to represent the troubled mind of a homesick Newfoundlander at war.

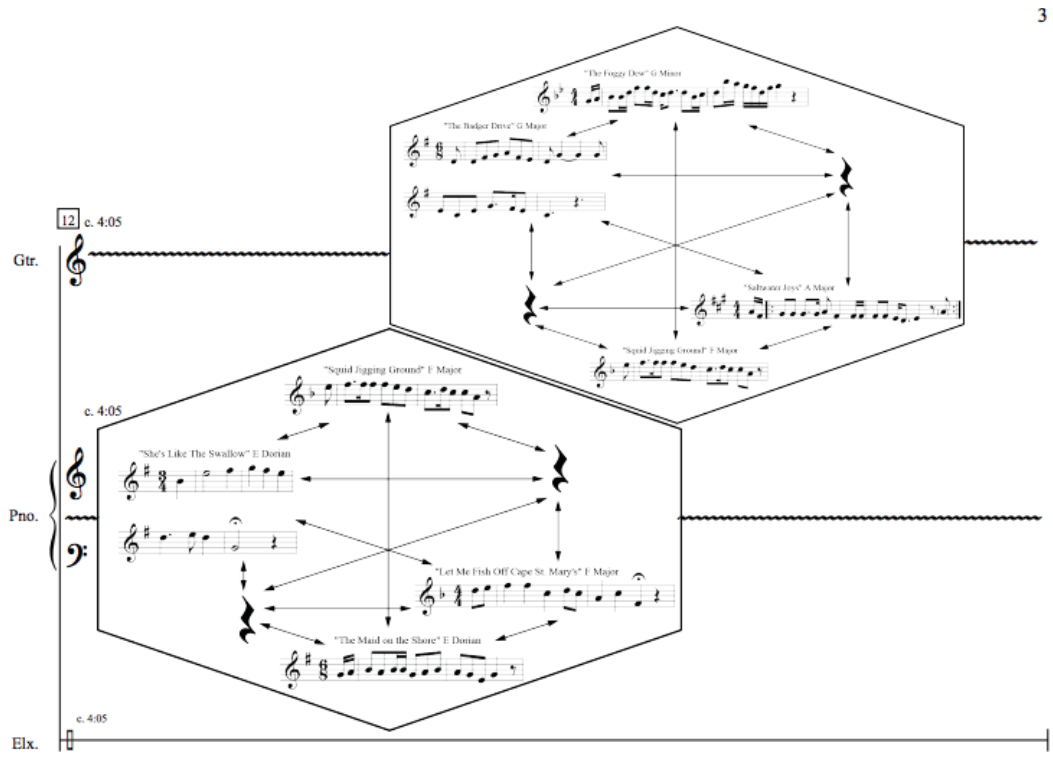

Figure 3. Improvisatory folk song collage from *One Foot in the Past* by Jason Noble.

Remaining use of folk songs in *One Foot in the Past* include electronic samples of subjects singing the folk songs *July Drive* and *Somebody's Waiting for Me*. Inspired by the heartfelt delivery of these songs in the homes of the respective singers, we felt it necessary to keep the performances unaltered in our piece. In their article "Repertoire Categorization and Performer-Audience Relationships: Some Newfoundland Folksong Examples", Rosenberg et al discuss the social functions of Newfoundland folk songs, as well as the importance of the people and places with which they are associated with.[35] This understanding supports our use of direct sampling, as both subjects sang community songs associated with their families, and thus their

[35] George J. Casey, Neil V. Rosenberg, and Wilfred W. Wareham, "Repertoire Categorization and Performer-Audience Relationships: Some Newfoundland Folksong Examples." Ethnomusicology 16, no. 3 (1972): 402.

personal delivery was more important to preserve than just the tune by itself.

In the realm of speech, most artistic applications of Newfoundland dialects have been in a comedic or parodic context. Artists such as Buddy Wasisname and the Other Fellers and Gazeebow Unit have both used a Newfoundland vernacular to stylize local identities with humorous results.[36] While certainly known for their sense of humour, Newfoundlanders are often passionate storytellers who inflect their words in unique and sonically interesting ways. Some examples include "the interdental fricatives as stops (e.g., "dis" rather than this, "wit" instead of with), the unrounding of the /ɔɪ/ diphthong (as in toy pronounced like "tie"), and several other vowel pronunciations that have a vaguely Irish cast".[37] Part of our goal was to find good examples of these unique dialects within our field recordings, and to prioritize unique sounds and meaningful phrases over comedic elements.

As two Newfoundlanders exploring possible projects that could pay homage to our home, the realms of speech music and folk song provided ample inspiration for Jason and me. These elements are rich within Newfoundland culture, and have been applied to various musical contexts within the past century. Bartók, Britten, and Vaughan Williams exemplify the nationalistic and expressive potential of folk melodies. Chopin, Lussier, and Keegan-Bole show us that speech can be equally nationalistic and applied to a variety of musical contexts, many of which involve guitar. Somers and Simms push these ideas further, keeping with contemporary approaches yet never losing sight of the important traditional elements. It was important for us to consider similar balances throughout the creative process, as innovation and authenticity were equally important to our goals.

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[36] Sandra Clarke and Philip Hiscock, "Hip-hop in a Post-Insular Community: Hybridity, Local Language, and Authenticity in an Online Newfoundland Rap Group." Journal of English Linguistics 37, no. 3 (2009): 243.

[37] Sandra Clarke and Philip Hiscock, "Hip-hop", 243.

1.4 *Technological and performative considerations*: digital processing techniques, guitar/piano techniques, notational practices

Digital Processing Techniques

Compared to the other works in this project (*Take Me Back* and *We Never Told Nobody*) the technological applications in *One Foot in the Past* are rather elementary. We chose to keep the processing element simple as it was our first time composing with speech as a musical element. The majority of creating the tape track involved cleaning, normalizing, and editing the files together in such a way that followed our pre-composition formal plan. Outside of this, processing such as a time stretching, reverberation and filters were applied to the tape track at key musical moments, which are as follows:

1) A subject singing *July Drive,* a folk song about Beaumont Hamel, is processed through a filter making it sound slightly distorted; the effect is akin to listening to an old radio;

2) A subject states "you can always learn from the past", while the "s" in "past" is time-stretched and processed to seamlessly transition into a soundscape of fire crackling, and eventually, water running and birds chirping;

3) Throughout the folk song sections (mm. 8-16, mm. 51-end), in addition to the performers freely improvising within the notated cells, the tape track plays modulated, reverberated and fragmented bits of the songs that were pre-recorded. The contrast of the live performers with the processed folk song fragments gives this section its distinct character, with one element in the "real world", and the other seemingly a more distant memory.

Extended techniques and notational practices

Guitar

Beginning in measure two, after the electronic introduction, the guitar plays the previously sung *July Drive* melody with a "clarinet tone". This is achieved when plucking the

string at a node twelve frets directed above a fretted note, producing an especially warm and round *sul tasto* effect. John Schneider notes that this name is associated with the technique because "…theoretically a mid-string pluck produces only odd harmonics, like the tone of a clarinet."[38]

In measures 16-18, both instruments are interacting rather aggressively with the tape track, which consists largely of industrial noise that we recorded during our tour of Newfoundland. Noble requests string overlapping, tremolo textures, and bending techniques.

Piano

Extended piano techniques rely primarily on external objects in this piece; most notably, chains placed inside the piano and a metal bowl. These objects are used to add to the industrial noise texture in measures 16-18; the notation can be seen below. Near the end of the piece, soft mallets are used to play the folk songs on the inside of the piano. This creates a very distant and warm affect, not unlike that of the "clarinet tone" on the guitar. Both guitar and piano techniques in this section are notated with one of Jason's "improvisation networks" where the performer can freely move between the different gestures.

[38] John Schneider, *The Contemporary Guitar* (University of California Press: Berkeley, 1985), 112.

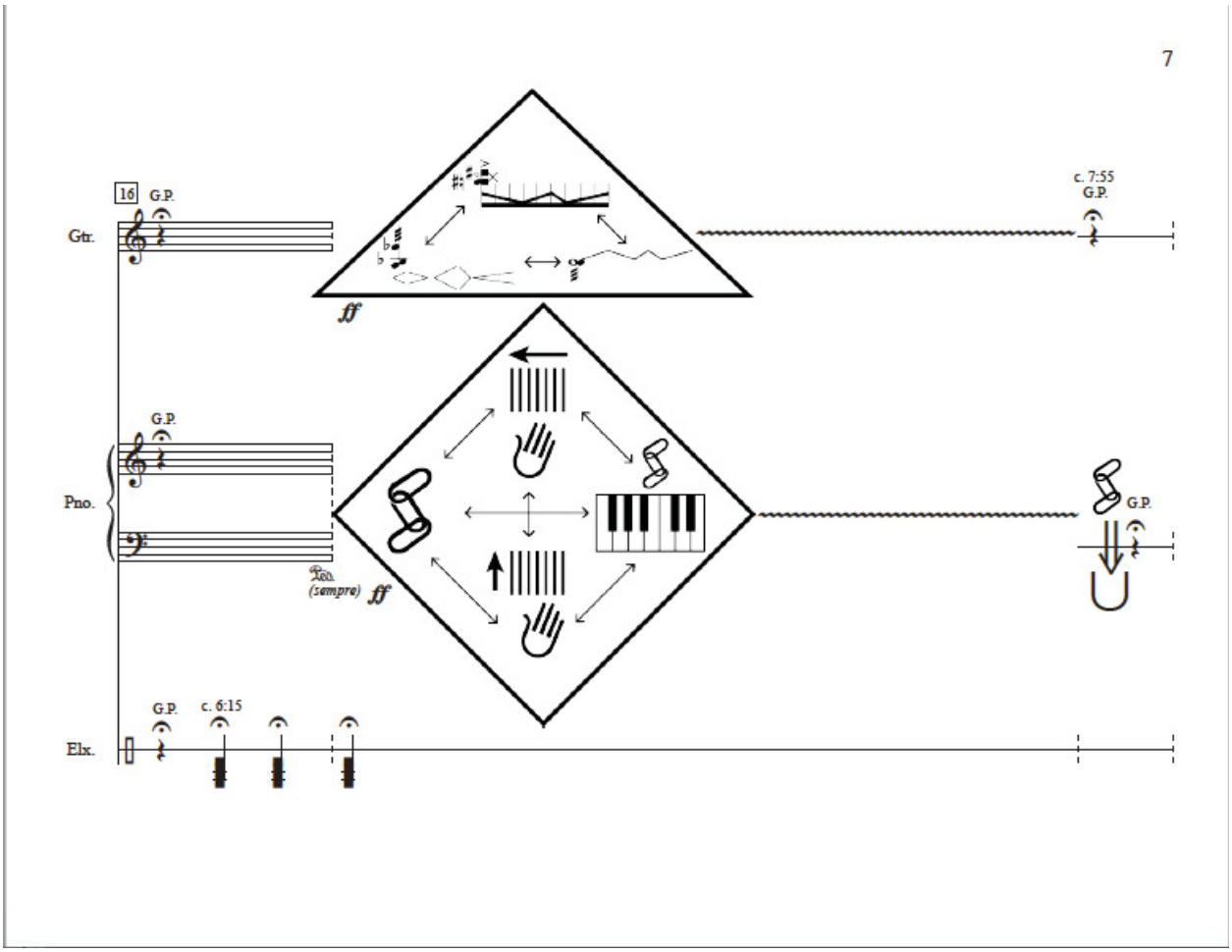

Figure 4. Notational practices for extended guitar and piano techniques in *One Foot in the Past*.

Performance practice

When it comes to a piece like *One Foot in the Past*, one must consider the work's place in a repertoire intended for performers of different backgrounds. As this piece was written about Newfoundland, for Newfoundland performers, to be premiered in Newfoundland, much of the necessary contextualization of the work's meaning is taken care of. James Hurley, the pianist for the premiere, is a childhood friend of mine with whom I have performed improvisation-based concerts with in the past. We both grew up with all of the folk songs in the work; thus, finding appropriate tempi, phrasing, and articulation for these melodies were easy tasks.

From a performer's perspective, it is helpful to think of elements that may need to be adjusted for different scenarios. Regardless of venue, this piece will always need either a verbal introduction or a detailed program note; the narrative as it relates to the battle of Beaumont Hamel is abstract, and the details around the premiere of the piece should also be explained. It is also important to consider an audience who is not familiar with Newfoundland dialect, folk song, or landscape, and whether the "soundscape" will be clear. My theory is that it will be clear, albeit in a less-detailed way.

Arthur Keegan-Bole proposes a similar question on a podcast with David Fay, wondering how a non-British audience would respond to his piece *Nocturne*, which uses speech elements of popular British radio programs to create his musical environment. An expert on semiotics, Fay explains that:

> "Meanings are generated in listeners' minds as they perceive and interpret signs whilst experiencing music…the resulting mental web of "meaning relations" – signs, thoughts, and feelings that are brought into contact with one another whilst listening - draws on the listeners' relevant previous experiences. These are integrated with signs in a musical situation, and a mental concept of the piece's meaning is built in the listener's minds. Meanings stem from a combination of signs from music, words, sights, or smells".[39]

Given the musical content of *One Foot in the* Past, a non-Newfoundland audience would still easily grasp the story of an isolated place with strong cultural ties to language, landscape and folk song, having suffered a terrible loss at war.

[39] Arthur Keegan-Bole, "Imagining Soundworlds: a Commentary on Portfolio of Compositions 2012-16." PhD diss., University of Bristol (2016): 38.

Figure 5. The Beaumont-Hamel Newfoundland Memorial in France commemorates the Dominion of Newfoundland forces members who were killed during World War I.

Chapter 2: *Take Me Back* (2017) for electric guitar and electronics

2.1 *Going electric:* an introductory note on the use of electric guitar in speech-based music

The notion of speech-like qualities found within the guitar world is not a new concept. Artists such as Jimi Hendrix and Peter Frampton popularized electric guitar effects such as the wah-wah pedal and talk box in the 1960s and 1970s. René Lussier, an experimental Québécois guitarist-composer, took the speech-guitar relationship to new heights with his monumental work *Le trésor de la langue*. Incorporating politically-driven speeches and field recordings that highlight the dialectal diversity of Québec, he composed a nearly 3-hour album for speech and instruments, with electric guitar almost exclusively at the forefront. Dominique Olivier describes the effect as follows: "Bien sûr, il s'agit plus de texte que de musique, mais le travail de moine réalisé par Lussier et son équipe permettant de suivre la courbe musicale de chaque fragment linguistique utilisé, donne une efficacité grandement accrue aux extraits choisis et conditionne notre écoute".[40]

Our goals for *Take Me Back* included taking the "soundscape" element further, as well as finding more new ways for the guitar to interact with speech. We settled on exploring three elements within the speech that define how our western ears understand music: rhythm, melody, and harmony. For all of the above, we decided that the electric guitar would produce convincing results.

A large part of the "soundscape" within this piece is bird sounds we recorded in Cape St. Mary's, Newfoundland. We discovered that muted strings on an electric guitar could convincingly imitate flocks of birds, which in turn can blend with crowds of people speaking.

[40] Dominique Olivier, "Montréal (1991-1992): vigueur accrue ou derniers soubresauts d'une civilisation?" Circuit: Musiques contemporaines 3, no. 2 (1992): 85.

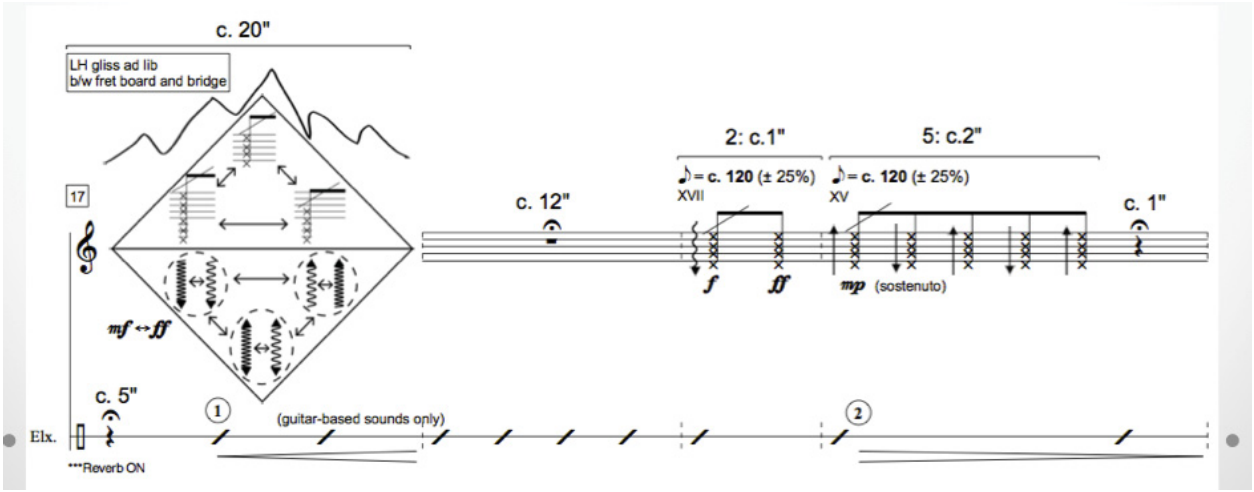

Figure 6. Improvisatory "soundscape" cell with muted strings interacting with bird sounds

Within the realm of melody, the guitar being a fretted instrument poses limitations, as speech melody is seldom landing on precise pitches. Use of string bends and a glass slide to achieve *continuous* pitch is effective on the electric guitar. Furthermore, as a polyphonic instrument, it allows the performer to perform multiple voices and thus explore harmonic aspects of speech. Finally, since the wah-wah pedals and talk boxes of the 70s, many more effects pedals have been developed. These effects provide a wider range of processed timbres than previously available; and the modern electric guitar can now function like a synthesizer with an extraordinary amount of possibilities.

In order to extract melodic and harmonic elements of speech, computer software was needed. The internal structure of the sound, whether it is rhythm, harmonic partials, or melodic contour, could then be used as a model for instrumental sound production. The following sections describe different ways we use this data, which for *Take Me Back* was obtained primarily using a program called SPEAR (Sinusoidal Partial Editing Analysis and Resynthesis[41]).

[41] Michael Kateley Klingbeil, "Spectra analysis, Editing, and Resynthesis: Methods and application." DMus diss., Columbia University, 2009.

2.2 *The rhythm of dialect:* transcribing speech rhythm for instruments

Speech, rhythm, and music have long had musical associations, particularly in the Baroque era as music was heavily influenced by rhetoric, or "the art of speaking or writing persuasively or effectively". Blake Wilson explains that music has "been influenced to some degree by rhetorical doctrines governing the setting of texts to music, and even after the growth of independent instrumental music, rhetorical principles continued for some time to be used not only for vocal music but for instrumental works too".[42] Theo Van Leeuwen claims that, from a rhythmic perspective, musical phrasing and time signatures evolved to have what we consider natural "strong beats" that aid in their understanding, much like words have emphasis on certain syllables for purposes of structure and natural flow.[43]

Steve Reich *Different Trains* shows effective use of speech rhythm,[44] while an example from the guitar repertoire is *Body of Your Dreams* by Jacob TV.[45] In this work, the guitars are playing along with edited speech from fitness infomercials. The original samples are clearly enunciated and steady in tempo; and they were edited to have a distinctive sense of pulse throughout.

Jason and I were interested in more complex rhythms that emerge within speech; patterns that seemingly switch meter or tempo when analyzed. One of the most interesting dialects we encountered was in the sparsely populated Francophone region on the west coast of the island, where both the isolated French and English dialects influenced one another to produce a speaker with a unique rhythmic flair. In *Take Me Back*, a sample of this speaker is transcribed in the

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42 Blake Wilson, George J. Buelow, and Peter A. Hoyt, "Rhetoric and music." *The New Grove Dictionary of Music and Musicians* 21 (2001): 260.

43 Theo Van Leeuwen, "Speech, Music, Sound". New York: St Martin's Press, 1999: 39.

44 Refer to the Introduction of this paper for a description of *Different Trains.*

45 Jacob Ter Velduis, "Body of Your Dreams" for guitar duo and electronics. Unpublished musical score, Netherlands, 2002.

guitar part and the two are played together. The guitar produces the rhythm with muted strings and uses harmonics to emphasize accented syllables. The delivery is not pitch-specific, but the approximate contour is followed.

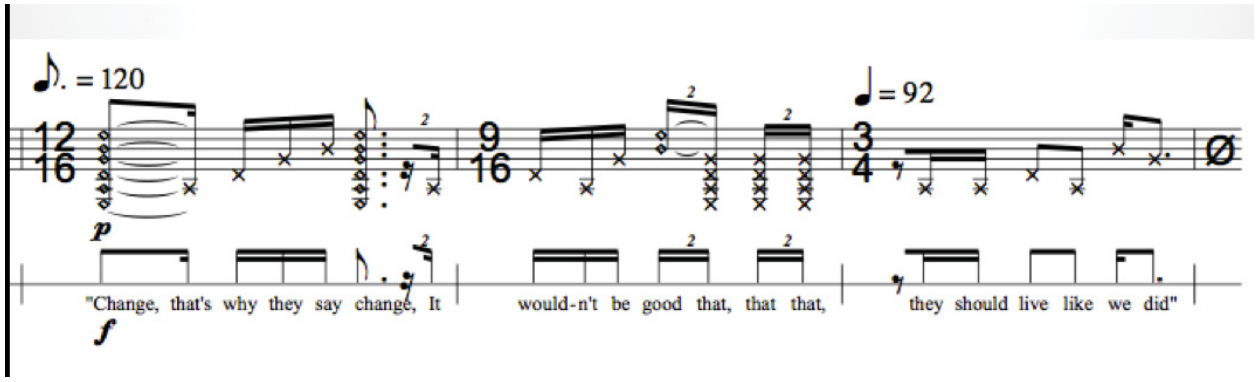


Figure 7. Speech rhythm imitated on muted electric guitar strings.

2.3 *The melody of dialect*: extracting partials with SPEAR and imitating melodic contour with slide guitar

Le trésor de la langue by René Lussier is the quintessential example using electric guitar to imitate speech.[46] While Lussier's work is a remarkable achievement, at the same time, the guitar techniques it employs are generally conventional; though the piece does require great virtuosity to imiate the rhythmic and pitch elements of the spoken excerpts. Jason and I sought to utilize the electric guitar in different ways in *Take Me Back*. With the aid of SPEAR, we were able to analyze spoken excerpts as a collection of individual partials, sometimes retaining harmonic qualities that resembled conventional chords. After lengthy experimentation, we found that certain equalizations on the guitar amplifier, combined with techniques involving volume swells and slide guitar, closely resembled the timbres of the individual partials. Through a technique that could be considered "additive synthesis", but with the addition of a live performer, we combined the guitar sounds and speech partials in order to replicate intelligible speech.

[46] René Lussier, Alain Trudel, Claude Simard et al, "Le trésor de la langue". La Tribu (2007), 2 compact discs.

Notation

The technique of slide guitar in tandem with subtle volume pedal changes was not something that could be expressed using standard notation. Jason and I therefore looked to recent developments in "tablature" notation, and how it has been used to indicate extended techniques. Tablature is a notation for plucked stringed instruments that dates back to the Renaissance, and involves horizontal lines representing the strings, with letters and numbers representing finger positions.[47] As tablature shows direct relation to the instrument and where to put your fingers, it has great potential for demonstrating precise extended techniques.

In his paper *A Survey of Extended Techniques on the Classical Six-String Guitar with Appended Studies in New Morphological Notation*, Martin Vishnick explores how tablature principles can be combined with "morphological diagrams" that "draw attention to the temporal evolution of spectra and pitch-to-noise content produced by playing particular techniques".[48] An advantage of this approach is the graphic notation's ability to show the continuity of dynamic shaping more immediately than is possible with conventional notational indications like the Italian dynamic abbreviations.[49] An example can be seen below:

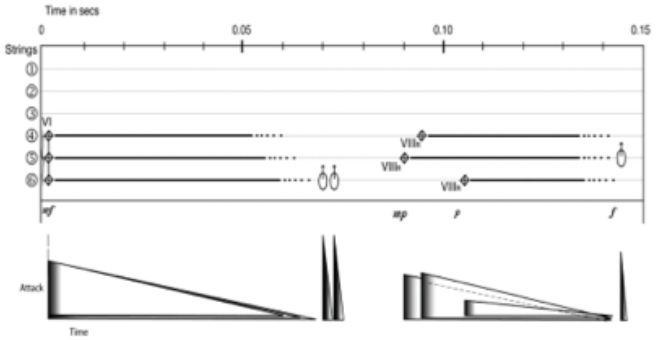


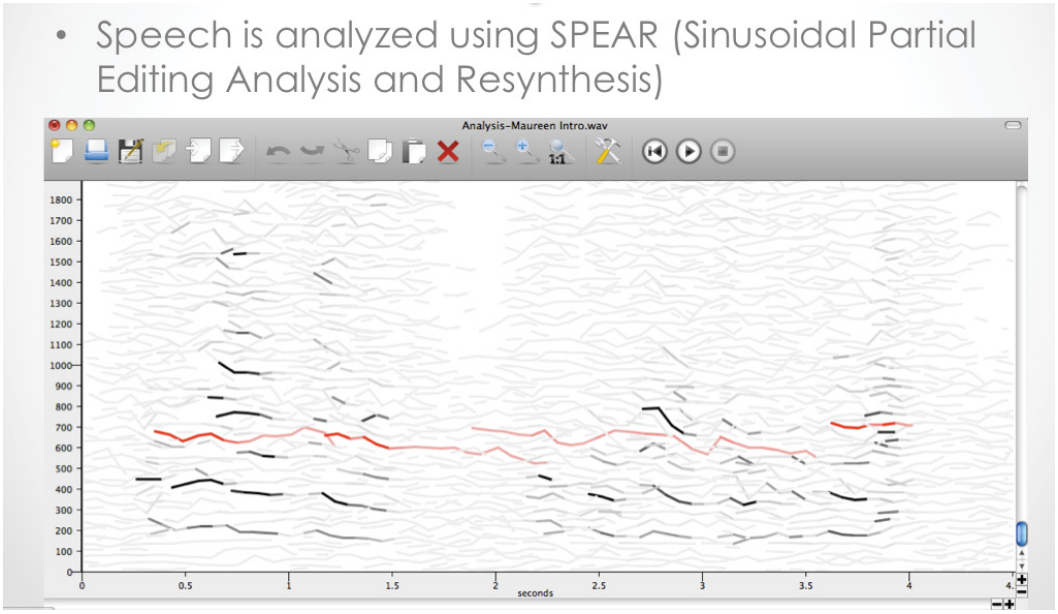
Figure 8. Graphic notation "morphology" developed by Vishnick to display a multiphonic technique combined with Bartok pizz. The key element of interest to us is the visual representation of the sound's decay over time.

47 Marlon Titre, "Thinking Through the Guitar: the Sound-Cell-Texture Chain." PhD diss., Leiden University, 2013: 53.

48 Martin Lawrence Vishnick, "A Survey of Extended Techniques on the Classical Six-String Guitar with Appended Studies in New Morphological Notation." PhD diss., City University London, 2014: 201.

49 Martin Lawrence Vishnick, "A Survey of Extended Techniques on the Classical Six-String Guitar", 201.

The sample we chose to imitate melodically in *Take Me Back* was short, but particularly expressive and with a wide melodic range. The subject states, "…so, we were always steeped in the past a little bit more". As previously mentioned, the partials we are imitating on guitar have a very specific dynamic contour, and we needed a way to express resonance durations in relation to a time continuum, much like the above "morphology" does. Our approach is not quite tablature, as there are only four lines representing pitches and the microtonal range of the speech sample. Inspired by the visual appearance of the partial waves themselves, we then drew the gesture to be executed onto the lines. The placement of the partial gesture therefore determines the approximate microtonal placement and motion of the glass side. The thickness of the line determines the dynamic, and thus the approximate placement of the volume pedal, when executing the gesture.



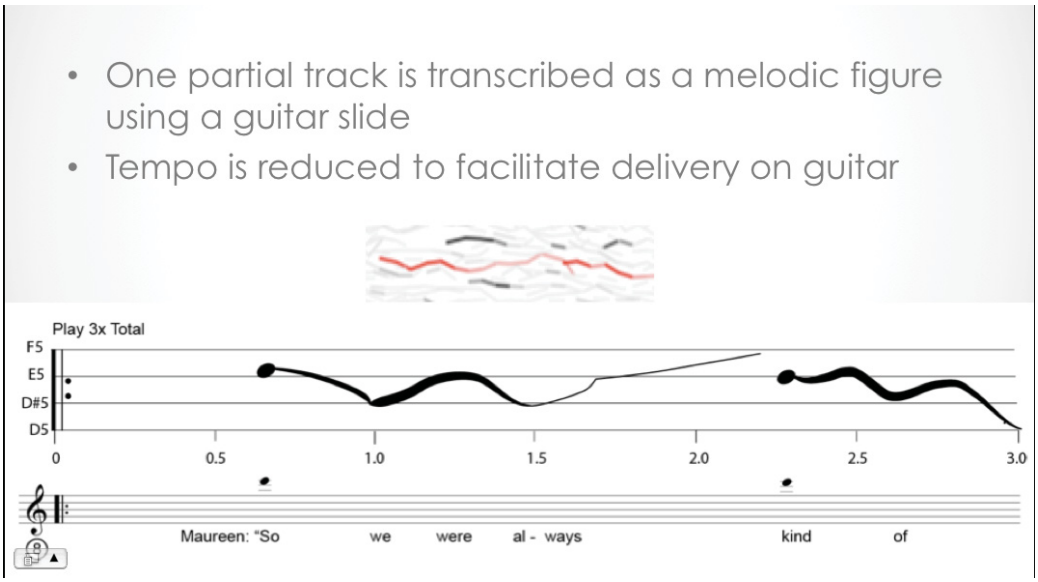


Figure 9. Guitar gestures to be synchronized with recorded speech samples from *Take Me Back* by Jason Noble. The thickness of the line determines dynamic, and the zoomed-in notation guides the microtonal pitch contour to be executed with a glass slide.

2.4 *The harmony of dialect*: extracting partials from SPEAR and imitating harmonic content of speech with guitar chords

Despite speech being made up of many different partials, the human ear generally hears a single dominant pitch at any given moment. After listening to our field recordings, a sample with harmonic potential revealed itself in an older man whose voice had somewhat of a "growl", at times sounding almost multiphonic. Digital analysis with SPEAR yielded strong partials that collectively formed a familiar sounding dominant seventh chord, which is easily playable on guitar.

We used this information as a compositional starting point for something more organic and free, as opposed to the ultra-precise transcription we developed for the melodic section. We began by identifying some other harmonies made up from the different partials in the subject's voice. Using delay pedals, volume swells and string bends, the performer must work from within one of Noble's "improvisation cells", where the extracted harmonies are played on the guitar while interacting with both processed and un-processed vocal sounds on the tape track. The

guitar strings are bent slightly to imitate the micro-fluctuations in pitch that occur in speech and song.

The chosen quote is particularly relevant with regard to this piece: “Today’s…technology and everything, you know, you have to, don’t you? You still don’t have to forget, though…the past”.

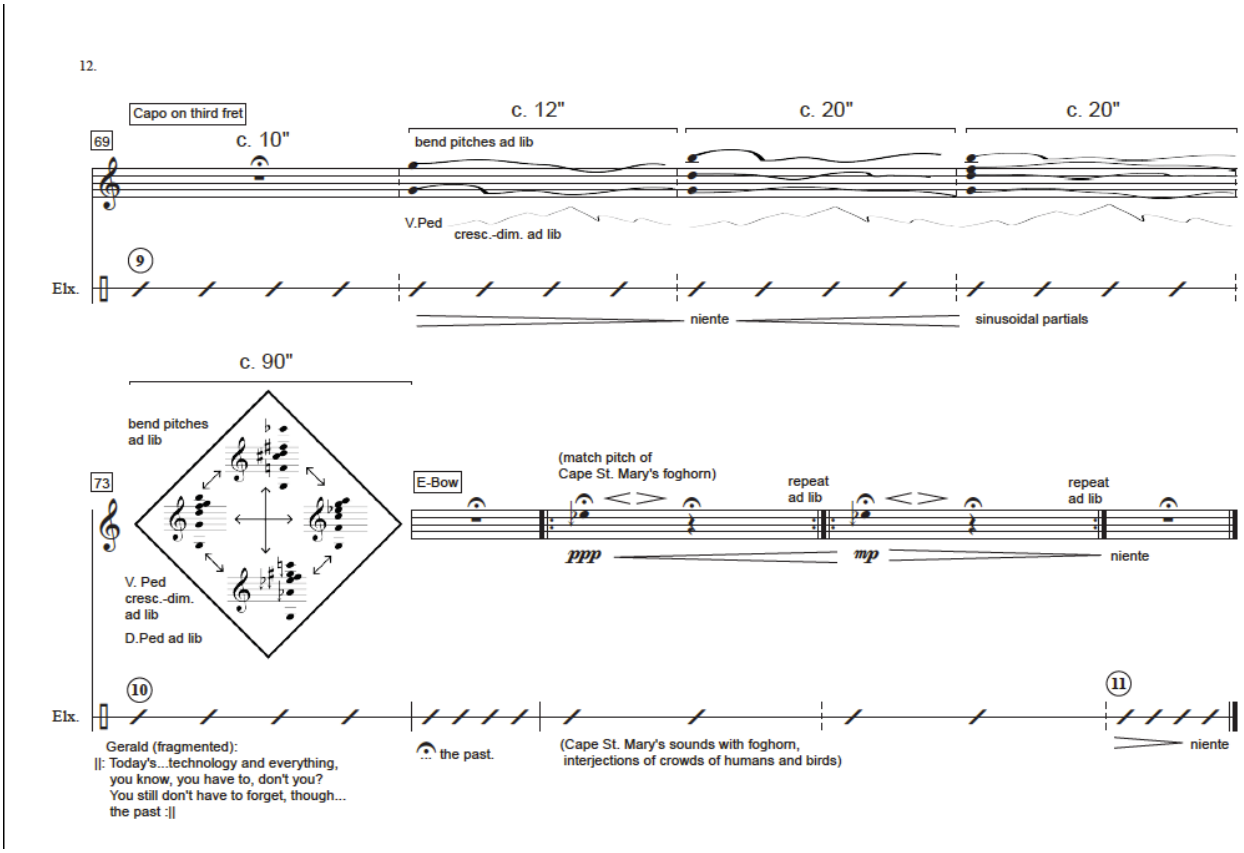


Figure 10. Improvisatory cell with guitar chords extracted from the speech sample.

Chapter 3: *We Never Told Nobody* (2019), for guitar and electronics

3.1 *Contrasting vowel sounds in NL English*

The distinct and diverse dialects of Newfoundland have attracted considerable interest and research, and have been documented in a dictionary of Newfoundland English,[50] published in 1982, a comprehensive study of Newfoundland and Labrador dialects published in 2010 by linguist Sandra Clarke,[51] and an interactive online dialect atlas published in 2015.[52]

Phonetics is the study of actual speech sounds, each of which are represented by a unique symbol, known as IPA symbols, within square brackets.[53] In Chapter 2 of *Newfoundland and Labrador English* by Sandra Clarke, titled "Phonetics and Phonology",[54] Clarke outlines the main distinctive features in both vowels and consonants amongst the different dialects of NL English. When it comes to vowel sounds, Clarke states, "Although the phonological inventories of vowels in Newfoundland English (NLE) and Canadian English (CE) are identical, actual phonetic realizations may differ considerably".[55] In other words, the same sounds exist in both variations of English, but where they are found and how certain words are pronounced varies a great deal.

Vowel sounds are most easily understood with reference to certain keywords, which are found under "lexical set" in the table below. Explaining the phonetic symbols here is beyond the

[50] George Morley Story, William James Kirwin, and John David Allison Widdowson, eds. *Dictionary of Newfoundland English*. University of Toronto Press, 1990.

[51] Sandra Clarke, "Newfoundland and Labrador English". Edinburgh University Press, 2010.

[52] Sandra Clarke and Philip Hiscock, "The Dialect Atlas of Newfoundland and Labrador." (2013).

[53] Peter Roach, *Phonetics*. Oxford University Press, 2001: 5.

[54] Sandra Clarke, "Newfoundland and Labrador English", 19.

[55] Sandra Clarke, "Newfoundland and Labrador English", 26.

scope of this paper, though it is important to observe that there are many variations amongst the categories of Newfoundland English for the different lexical sets.

Table 2.3 Phonetic realisations of the NLE lax vowels

Lexical set (〈 Wells 1982)	CE (Canadia English)	SNLE (Standard NLE)	NIE (conservative Irish-origin NLE): additional pronunciations	NBE (conservative English-origin NLE): additional pronunciations
KIT /ɪ/	ɪ	ɪ, ɪ̝	iː	iː, ɛ̝
DRESS /ɛ/	ɛ	ɛ, ɛ̝	ʔ	ɪ, ɛ̝ɪ, æ̝
TRAP/BATH /æ/	æ (ː)	æ(ː), æ̝(ː)	ɛ̝	ɛ̝, ɛ̝ɪ, <aː, ɑ̝ː>
LOT/CLOTH/THOUGHT /ɑ/	ɑ(ː), ɒ(ː)	ɐ(ː), a(ː);ɑ(ː)	ɐ̝(ː), ɑ̝(ː)	ɐ̝(ː), ɑ̝(ː)
PALM /ɑ/	ɑ(ː), ɒ(ː)	ɑː, ɑ̟, aː	æ(ː)	æ(ː)
FOOT /ʊ/	ʊ	ʊ	ʊ̟, ʌ, u(ː), ʌ, ʊ(ː)	ʌ, ʊ(ː)
STRUT /ʌ/	ʌ	ʌ, ʌ̟	ɔ̟, ʌ̟, ɐ	ʌ̟, ɐ

Figure 11. Varying realisations of vowel sounds across different NL dialects.[56]

For *We Never Told Nobody*, Jason and I decided to select samples from our recordings that had interesting realizations of vowel sounds. The semantic content was equally important, and for this piece we focused on recorded conversations about ghost stories and fairies, whose myths and legends hold an important part in the traditions and folklore of the communities we visited.

Clarke gives plenty of examples that guided our listening, although as born-and-raised Newfoundlanders, most of these vowel sounds were already familiar to Jason and me. To name a couple with their phonetic explanations:

1) Retraction of the TRAP/BATH vowel. In the case of a St. John's resident whose first name, *John*, was repeatedly interpreted as *Jan* when he travelled to Toronto.[57] The two following images show rhythmic transcriptions of some samples used in *We Never Told*

[56] Sandra Clarke, "Newfoundland and Labrador English", 27.
[57] Sandra Clarke, "Newfoundland and Labrador English", 31.

Nobody, where both cases possess retraction of the TRAP/BATH vowel, in the words "long" and "frosty", respectively.

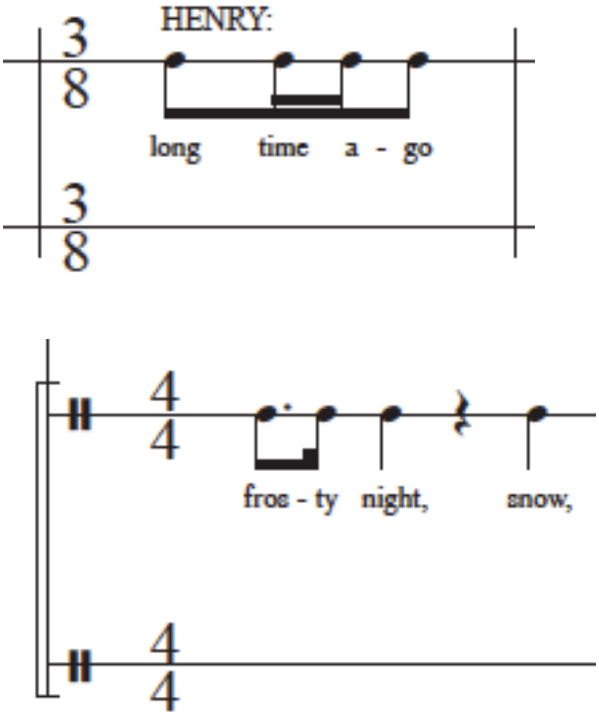


Figure 12. Rhythmic transcriptions of speakers who possess a retracted TRAP/BATH vowel

2) The nucleus of the PRICE/PRIZE diphthong frequently undergoes some degree of backing, which may also be accompanied by rounding, the result generally being a wedge ([ʌ]) or rounded [ʌ]-like vowel. This feature may lead to words like *high, pie* and *wine* to be heard as 'hoi', 'poi' and 'woine' by speakers from elsewhere.[58] The following image shows a sample from *We Never Told Nobody* in which the word "die" sounds more like "doi".

[58] Sandra Clarke, "Newfoundland and Labrador English", 38.

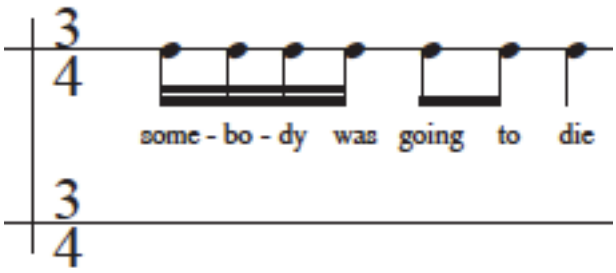


Figure 13. Rhythmic transcription of a speaker who rounds the dipthong of the word "die".

3.2 *Vowel sounds on the guitar*: applying Caroline Traube's research on guitar timbre to composition, notation and performance

Two examples of classical guitar works that use electronic samples of speech are the previously mentioned *Body of Your Dreams* (2002) by Dutch composer Jacob TV,[59] and *Nocturne* (2015) by Arthur Keegan-Bole.[60] *Body of Your Dreams* is similar to Reich's approach in *Different Trains*, in that the guitar directly imitates the rhythmic and melodic contour of the speech samples. In *Nocturne*, Keegan-Bole sees more blending potential between the two elements, and adjusts the pitch and equalization of the speech samples to more closely resemble the guitar timbre.[61] This is an interesting concept, and is directly in line with our goals to blend speech and guitar with more timbre-centric methods. However, rather than processing speech to more closely resemble guitar, we sought to apply techniques that would make guitar more closely resemble speech. This brought us to Caroline Traube's research on guitar timbre, and specifically her experiments on "listening to guitar sounds as vocal sounds".[62]

Timbral diversity on the classical guitar has long been one of its greatest assets. In his

[59] Jacob Ter Velduis, "Body of Your Dreams" for guitar duo and electronics. Unpublished musical score, Netherlands, 2002.

[60] Arthur Keegan-Bole. *Nocturne* for guitar and electronics. Unpublished musical score, Rochester, 2015.

[61] Arthur Keegan-Bole. "Imagining Soundworlds: a Commentary on Portfolio of Compositions 2012-16." PhD diss., University of Bristol, 2016: 29.

[62] Caroline Traube. "An Interdisciplinary Study of the Timbre of the Classical Guitar." PhD diss., McGill University, 2004: 132.

guitar method, Dionisio Aguado described the instrument as an "orchestra in miniature", and devotes a chapter highlighting techniques that can aid in imitation of instruments such as drum, trumpet, harp, violin, and cello.[63] Caroline Traube's PhD thesis, *An Interdisciplinary Study of the Timbre of the Classical Guitar,* contains a section that is dedicated to supporting her claim that "the guitarist speaks and sings through the instrument; indeed the guitar is an extension of the guitarist's voice".[64] After conducting acoustical analyses, Traube then explores how common verbal descriptors of timbre relate to acoustical properties of the guitar. The result is the following image, which provides classical guitarists with scientifically supported vowel sounds that emerge from different plucking points on the guitar:

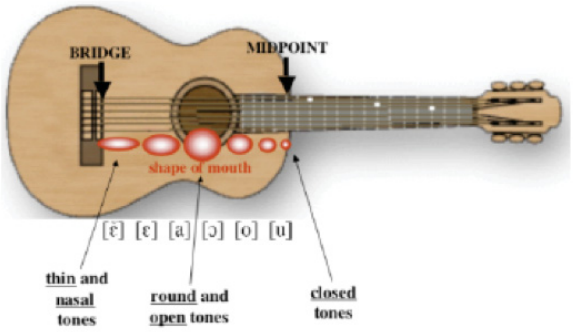


Figure 14. IPA symbols associated with timbres of different plucking positions on the guitar.[65]

Compositional and notational applications

At this point in the creative process, we had chosen our speech samples with interesting vowel sounds, while simultaneously focusing on the subject matter of ghost and fairies. After structuring the form and narrative of the piece with the raw speech files, we further developed electronic processing of the tape track using *concatentative synthesis* and *formant filtering*, to be

63 Garrick, Jamie. "The Intimate Virtuoso: The Guitar, the Rhetoric of Transformation, and Issues of Spectacle in Music by Fernando Sor, Johann K. Mertz, and Giulio Regondi." Master's thesis, New Zealand School of Music, 2014: 22.
64 Caroline Traube, "An Interdisciplinary Study", 7.
65 Caroline Traube, "An Interdisciplinary Study", 139.

discussed in the following sections.

We had specific approaches in mind when considering the role of the guitar, many of which were based on precise transcription of speech rhythm and melody. These transcriptions are mostly played in unison with the speech, and it was at this point that we added timbral contrasts in the guitar part, based on vowel sounds in the electronics. Using the following summary from Traube's research, we simplified the plucking points to 4 vowel timbres that were available to us on the guitar:[66]

- 5 cm from bridge = [ɛ̃]
- 8 cm from bridge = [a]
- 13 cm from bridge = [o]
- 20 cm from bridge = [u]

Traube also states that a vowel timbre can be maintained on any given string, regardless of pitch, as long as plucking position is maintained. A notable exception would be the "clarinet tone", which would apply only to the note of which the position is at the node point.[67] With all of this information, Jason then began inserting IPA symbols into the notation. A guide is provided in the performance notes to help the performer learn which pluck positions correspond to which vowels.

[66] Caroline Traube, "An Interdisciplinary Study", 142.
[67] Caroline Traube, "An Interdisciplinary Study", 133.

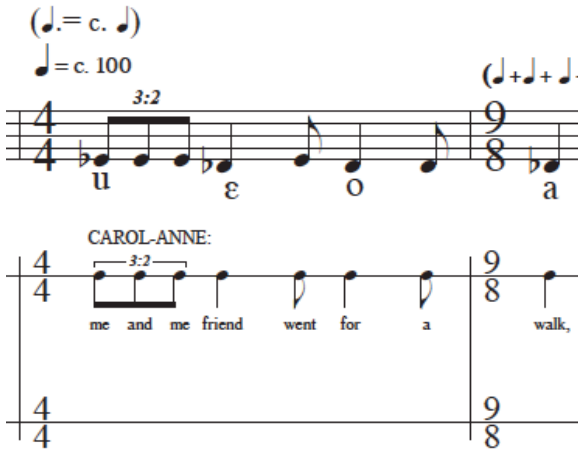


Figure 15. Speech transcription for guitar with IPA symbols that correspond to specific plucking points.

Certain considerations have to be made here, as not all vowel sounds are available on the guitar, and many speech samples contain changes that are far too rapid. For example, the above example contains a **[u]** plucking point for the word "me". This is because the **[i]** vowel that is found in the word "me" is not available on the guitar, and since **[u]** is also a "closed" vowel, Jason decided it was the best alternative.

It was interesting to analyze the phonetics of our tape track and corresponding guitar transcriptions after consulting Chapter 2 of *Newfoundland and Labrador English* by Sandra Clarke. Our understanding that vowels are more retracted in certain excerpts, such as the previously mentioned "long time ago" and "frosty", informed me as a performer to pluck on the brighter side of the **[a]** vowel region (closer to the bridge), as the speakers in our tape track use a slightly more retracted and nasal **[a]**.

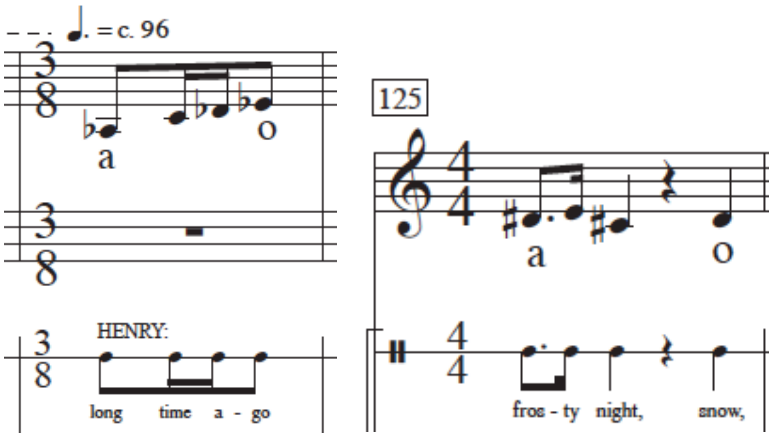


Figure 16. In these passages, the unique Newfoundland realization of the [a] vowels informed my choice of a more nasal tone production.

Performative considerations

From the guitarist's point of view, changing plucking points as rapidly as vowels change in natural speech is beyond the realm of possibility. In synchronizing the two, slowing the speech samples down was an option that would make it more feasible for the performer. However, the speed with which Newfoundlanders speak is a defining part of the dialect, so I therefore did my best to retain most of the timbral changes, omitting as necessary when the distance was too far or too fast. Furthermore, I discovered that using an abundance of left hand slurs in playing speech gestures makes it easier to keep up with the pace, while also freeing up the right hand to move between the vowel plucking points more easily.

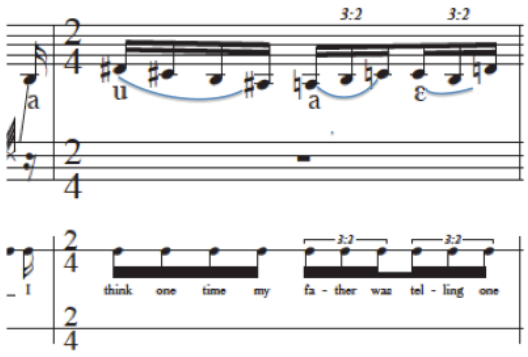


Figure 17. Slurs added by the performer to aid in execution of plucking points.

Outside of plucking points, Traube discusses the role of *articulation* in timbre perception, and how this can relate to unvoiced versus voiced consonants.[68] The same experiment that determined our four vowel plucking points had subjects associate consonant sounds to the attack of each pluck. For example, the **[e]** plucking point (5 cm from bridge) has a metallic quality that seemed to evoke the consonant **[k]**. The **[a]** plucking point (8 cm from bridge) was most often associated with a **[t]** consonant for the attack.[69] Furthermore, Traube states "unvoiced consonants would have a perceivable interruption, and so should be played more staccato, while voiced consonants are smooth and should be played legato".[70] For a few key gestures in *We Never Told Nobody*, we applied a sharp accent and staccato to the speech samples transcribed below, which include the **[k]** from the word "black", and a **[t]** attack for a percussive hit when a subject dropped an object loudly.

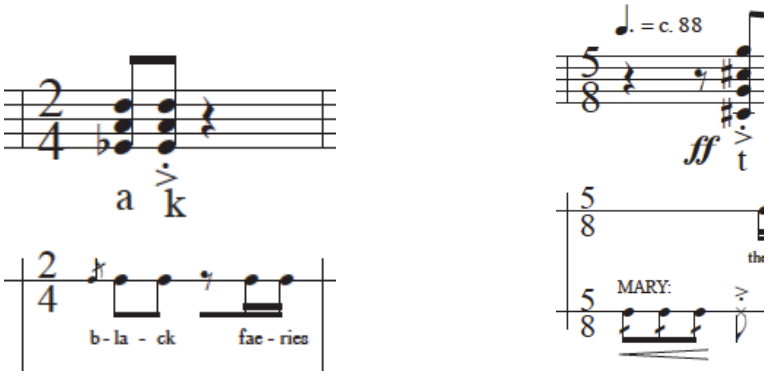


Figure 18. Speech transcriptions for guitar with the added elements of consonants and articulation.

While certain adjustments, omissions, and substitutions are necessary, these vowel timbres give guitarists another dimension of speech to imitate outside of rhythm and pitch. It is possible that live processing of the guitar or slowing speech samples down could provide more

68 Caroline Traube, "An Interdisciplinary Study", 144.
69 Caroline Traube, "An Interdisciplinary Study", 141.
70 Caroline Traube, "An Interdisciplinary Study", 144.

convincing results, but applying the four plucking points with some technical considerations certainly creates a more speech-like effect.

3.3 *Concatenative synthesis*: corpus-based concatenation of guitar and speech

Peter Ablinger's *Deus Cantando* for computer-controlled piano is an example of a piece that extracts data from a speech sample and applies it to an instrumental context. Beginning with time and frequency analysis of a speech sample, this data is then slowed down in order to be possible on a player-piano. The result is musical gestures executed at superhuman speeds; and with the addition of written text to guide our listening, the piano indeed sounds as if it is "speaking". The comparison between instrumental sounds and speech, and this "border-zone between abstract musical structure and the sudden shift into recognition", is precisely Ablinger's goal.[71] This procedure is known as "concatenative synthesis", or "audio mosaicing".

Figure 19. A still shot of a video-performance of *Deus Cantando* by Peter Ablinger. The player-piano replicates the sound of the written text using concatenative synthesis.[72]

[71] Peter Ablinger, "Peter Ablinger – Quadraturen". Peter Ablinger. August 26, 2006. http://ablinger.mur.at/docu11.html

[72] Ear, "Peter Ablinger", July 9, 2018, https://www.youtube.com/watch?v=Wpt3lmSFW3k.

Using a patch for Max MSP known as "CataRT",[73] we were able to execute a similar process using our recorded speech samples as well as guitar sounds. CataRT requires both a "source" and a "target", which in our case involved a corpus of guitar sounds as our "source", and a short recording of speech acting as the "target". In building our guitar corpus, we recorded the entire range of the guitar, one pitch at a time. We then used software to transpose this corpus to include microtones as well as pitches below and above the range of the guitar; this is because the frequencies emitted in speech do not follow equal temperament, and are also far beyond the normal range of guitar. Following the "target" of recorded speech, CataRT then chooses and arranges small "grains" from the guitar corpus so that they resemble the internal structure of the speech. The result is comparable to Ablinger's piano, though with guitar sounds, and many of these concatenations are heard throughout the electronics in *We Never Told Nobody,* adding to the speech-guitar hybrid sound world we were aiming for. It was not intended to be as intelligible as Ablinger's and functions more as an abstract element to our aesthetic.

[73] Diemo Schwarz, Grégory Beller, Bruno Verbrugghe, and Sam Britton. "Real-time corpus-based concatenative synthesis with cataRT." In *9th International Conference on Digital Audio Effects (DAFx)*, pp. 279-282. 2006.

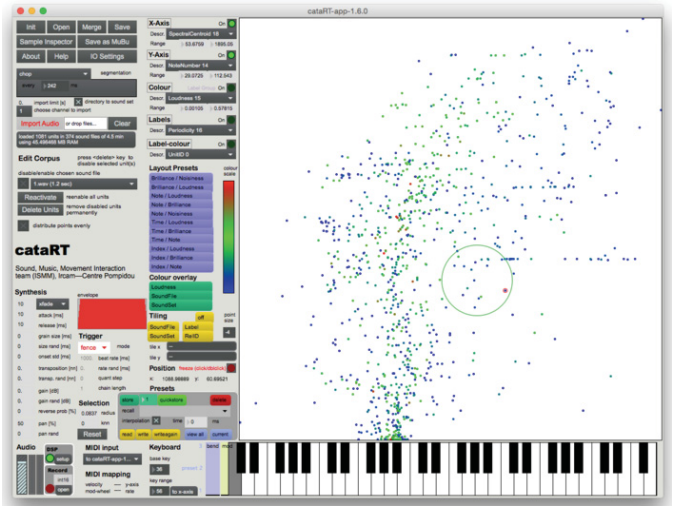


Figure 20. A screenshot example of the CataRT interface.[74] The individual coloured dots usually represented "grains", which in our case were very short guitar sounds. These hundreds of sounds are chosen and aligned based on the timing and frequencies of our speech "targets", creating what sounds like a talking guitar.

3.4 *Formant filtering*

The final technological process we applied to this piece is known as "formant filtering", which is a feature in the audio processing software, AudioSculpt.[75] A vowel formant can be understood as a zone of the sonic spectrum containing partials where more energy is detected.[76] Certain frequencies are emphasized when vowels are perceived, and so "filtering" with certain formants in mind can give any sound a vowel-like quality.

74 Diemo Schwarz et al. "CataRT Real-Time Corpus-Based Concatenative Synthesis." Accessed March 29, 2019. http://catart.concatenative.net/.

75 C. Picasso, "'Audiosculpt software." (2015).

76 Ingo R. Titze and Daniel W. Martin. "Principles of voice production." (1998).

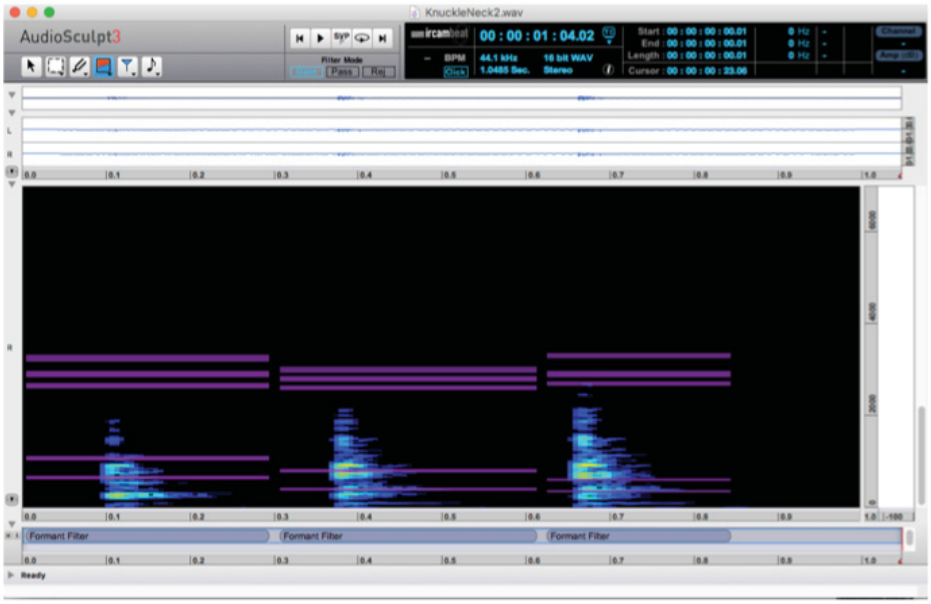


Figure 21. This is an image of AudioSculpt when three percussive knocks on the guitar were filtered through the vowels [a], [o] and [u]. The purple lines represent the "filtering", or omission of certain frequencies, so that the timbres more closely resemble the desired vowels.

The opening section of the piece is largely based around an electronic sound world of nail scrapes on the bass strings and various percussive hits on the guitar. Many of these sounds are filtered through different formants, with the nail scrapes slowly transforming from one vowel to another. In the guitar part, this transformation is imitated and combined with our IPA notations based on plucking points.

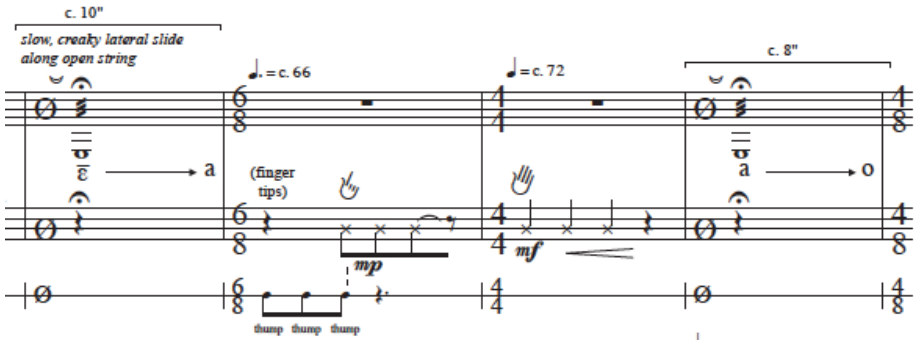


Figure 22. Nail scrapes notated for specific areas of the bass string, determined by vowel plucking points. This gesture accompanies electronic processing of the same sound, filtered through various vowel formants.

Vowel plucking points, concatenative synthesis, and formant filtering are combined with even more extended techniques on the guitar to form the most ambitious piece in this project thus far. In other works for guitar by Jason Noble, notably *Shadow Prism* for solo guitar (2015), and *River and Cave* for two guitars (2017), we experimented extensively with natural harmonics as well as mid-piece *scordatura*; both of these techniques are also applied in *We Never Told Nobody*, as well as a demanding percussive element that mimics speech rhythm throughout, notated on the "body" staff. Two solo guitar cadenzas are interspersed with the different musical episodes with electronics. These cadenzas use speech rhythms and vowel timbres as a compositional starting point for a virtuosic display of the guitarist's abilities.

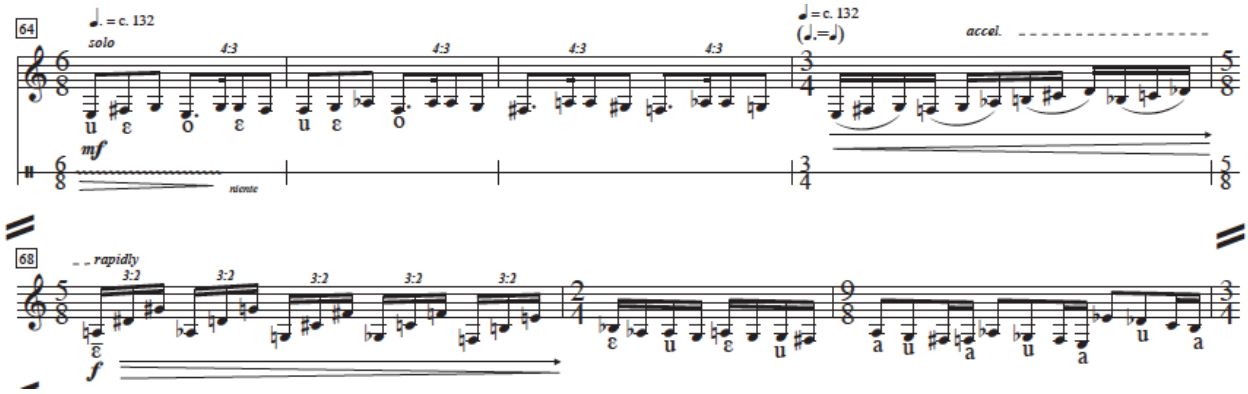


Figure 23. An excerpt from the first solo guitar cadenza in *We Never Told Nobody*. The motive in measure 64 is based on a guitar transcription of one of our speech samples, in which the subject says the name of the piece: "we never told nobody". This gesture is developed into a virtuosic cadenza based on rapid timbral shifts, creating a speech-like passage for solo guitar.

CONCLUSION

Between Speech and Music has been a unique undertaking for both Jason Noble and me, as an entirely collaborative project with much further potential. In a discipline that is built upon a Western European tradition and "standard repertoire", it feels timely to contribute something so personal and decidedly Canadian. In a time where musicians generally remain within the confines of their own specialties, this project gave me a window into the compositional process of a true craftsman, while Jason refined his understanding of the guitar through watching me work. We collectively worked through a technological learning curve, gaining new understanding of tools available to the 21st century musician that can be applied in a variety of artistic contexts.

One Foot in the Past is perhaps the most direct homage to Newfoundland and Labrador, due to the thematic content of Beaumont Hamel and extensive use of folk songs. It was through this piece that we considered previous works from the repertoire and their applications of speech and folk song as musical elements, leading us to determine our own approaches. The electronics, consisting of a Newfoundland "soundscape" as well as a narrative constructed from our field interviews, are undeniably the focal point of this work. The guitar and piano play supportive roles as the piece functions like a mini-documentary on the significance that Beaumont Hamel held in 2015.

Take Me Back sees the electric guitar emerge with a more significant role, this time interacting with the sound of speech more than its meaning. The rhythm, melody, and harmony (i.e. spectral content) of speech samples are transcribed for the electric guitar, which interweaves with the electronics at times to create a kind of virtual hyper-voice. Sounds from Newfoundland's natural landscape, such as the calls of gannets and gulls and the drone of a

distant foghorn, also colour the soundscape. In using contemporary techniques, notation, and technological means to create a texture of nostalgia-inducing sounds of nature and fading dialects, the piece embodies the crossroads of identity felt by many Newfoundlanders in the 21st century.

In *We Never Told Nobody,* the guitar rises to the forefront of a demanding and virtuosic showpiece. The natural soundscape is abandoned here, as concatenative synthesis and formant filtering allow for electronics that focus entirely on blurring the lines between speech sounds and guitar sounds. Caroline Traube presents, with her detailed research, the potential for "talking guitars" to be used compositionally.[77] In *We Never Told Nobody,* she can see this potential realized for the first time with regard to both technical and notational implementation. While demanding melodic and rhythmic transcriptions are present throughout, it is this addition of timbre-based composition that makes a unique contribution to the realm of speech-based music, particularly as to how it can be executed on the classical guitar.

The techniques developed throughout this project may be useful to future guitarists and composers, regardless of whether they choose to apply them to speech-based contexts or not. An understanding of SPEAR can help break any sound down into its complex spectral content; the software is user-friendly, and can easily be understood and applied by both composers and performers alike. Concatenative synthesis need not focus solely on guitar and speech, as any two sounds can replace the roles of "source" and "target" in the process outlined in Chapter 3. The notation developed for imitating speech partials with slide guitar and a volume pedal in Chapter 2 could be applied by anyone looking for a similar gesture that requires microtonal and dynamic precision.

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77 Caroline Traube, "An Interdisciplinary Study", 187.

Traube's research presents a new and precise way of communicating timbre, an element that is recognized as a strength of the guitar yet remains loosely communicated through terms such as *ponticello* and *sul tasto*. Understanding precise plucking points as they relate to vowels gives guitarists not only a more refined concept of how to execute these timbres, but also a clear sense of how the desired results should sound. Furthermore, this idea gives "singing" on the guitar a new meaning, particularly when it comes to slower passages: a guitarist may choose to conceive of melodic lines with a greater number of colour variations, particularly if those lines are based on text. On the contrary, if timbral homogeneity is the goal, Traube also provides precise measurements on how to retain a particular timbre when moving to adjacent strings; a concept that has tremendous pedagogical value.[78]

Further work

Much like the trips led by Karpeles and Leach in the 20s and 50s,[79] our field recordings represent the state of Newfoundland dialects as of the year 2015. We plan to share our recordings with the Linguistics Department at Memorial University of Newfoundland, as they helped inform the trajectory of our tour and will certainly be interested to hear what we have documented.

Next steps involve professional audio and video recordings of the three pieces, ideally followed by a tour in support of the project. We would love to bring the final product back to the rural communities we visited when collecting the source material. Although small towns are generally less exposed to contemporary classical music, we believe that a proper presentation and contextualization of this project can prove meaningful to those who helped provide the original speech samples.

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78 Caroline Traube, "An Interdisciplinary Study", 136.

79 Glenn Colton, "Ralph Vaughan Williams Newfoundland Folksong Arrangements: A Reappraisal", 31.

I am currently working with Jason Noble and Caroline Traube towards a collaborative presentation at the inaugural *21st Century Guitar: Interdisciplinary Perspectives on Performance and Pedagogy* conference. The presentation will involve a lecture and performance surrounding the techniques applied in *We Never Told Nobody.* We are presently refining aspects of the score and electronics while considering Traube's expertise as an acoustician, with the goal of further refining the analogies between speech and musical sound produced on the guitar.

To summarize, the benefits of *Between Speech and Music* are at once personal, pedagogical, performative, and culturally significant. We are hoping that the speech element helps reach a wider audience than the niche circles of contemporary music, and that this exposure highlights Newfoundland dialects as a source of cultural pride. From a more practical standpoint, the documentation of our process with regards to computer software and execution on the guitar can provide future composers and guitarists useful tools. With over 17 hours of source material we have yet to explore, we are considering new techniques and musical themes that further explore the relationship between speech and the guitar.

Appendix A: Lecture-Recital Program, March 11th, 2019, McGill University

McGill
Schulich School of Music
École de musique Schulich

Salle Tanna Schulich Hall
527, rue Sherbrooke ouest, Montréal, QC
Billetterie / Box Office: 514-398-4547
Renseignements / Information: 514-398-5145
www.mcgill.ca.music

Le lundi 11 mars 2019
à 20h

Monday, March 11, 2019
8:00 p.m.

Conférence-récital de doctorat

Doctoral Lecture Recital

Steven Cowan

guitare / guitar

classe de / class of
Jérôme Ducharme

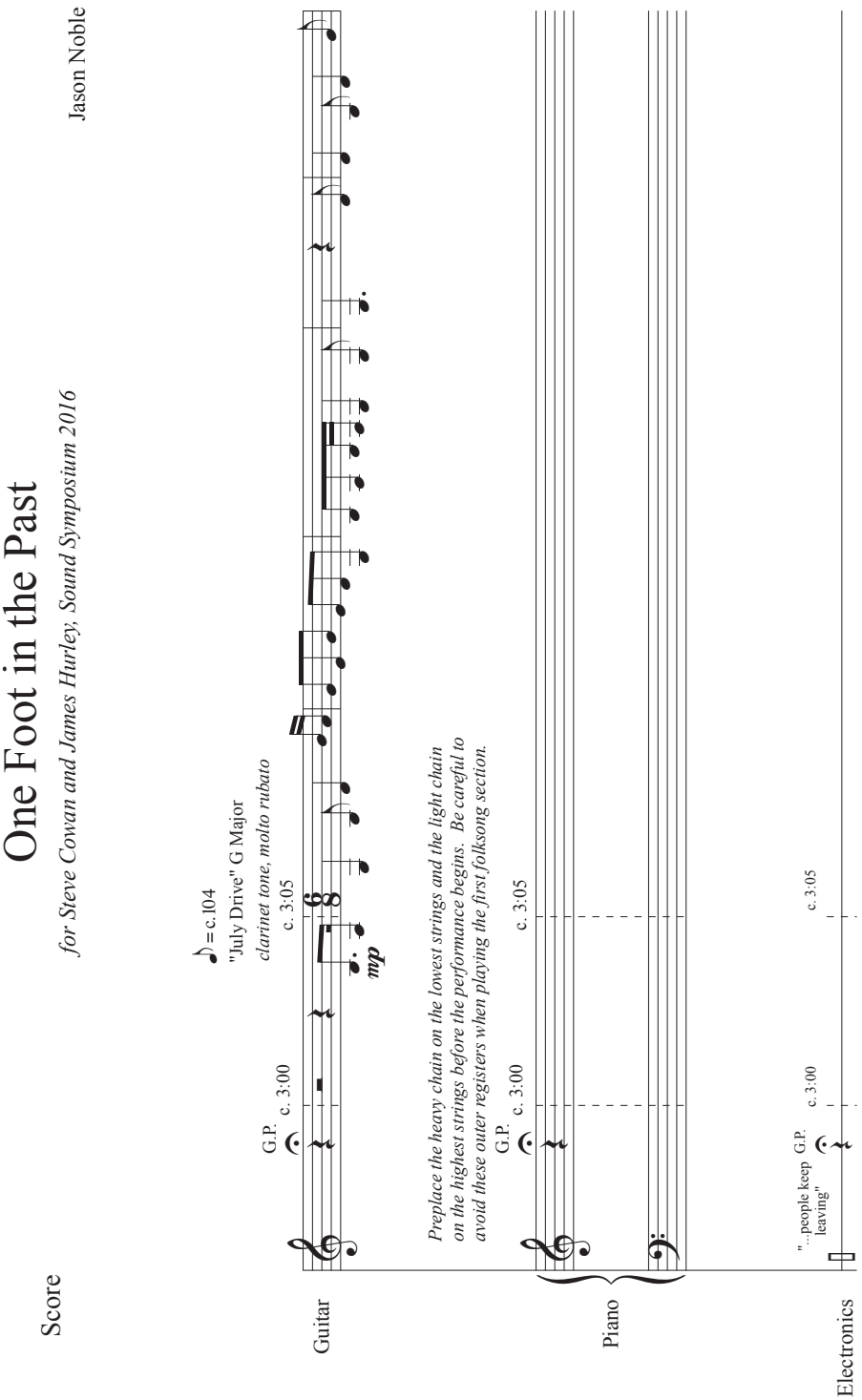
One Foot in the Past (2016)	Jason Noble (né en / b. 1980)
Take Me Back (2017)	J. Noble

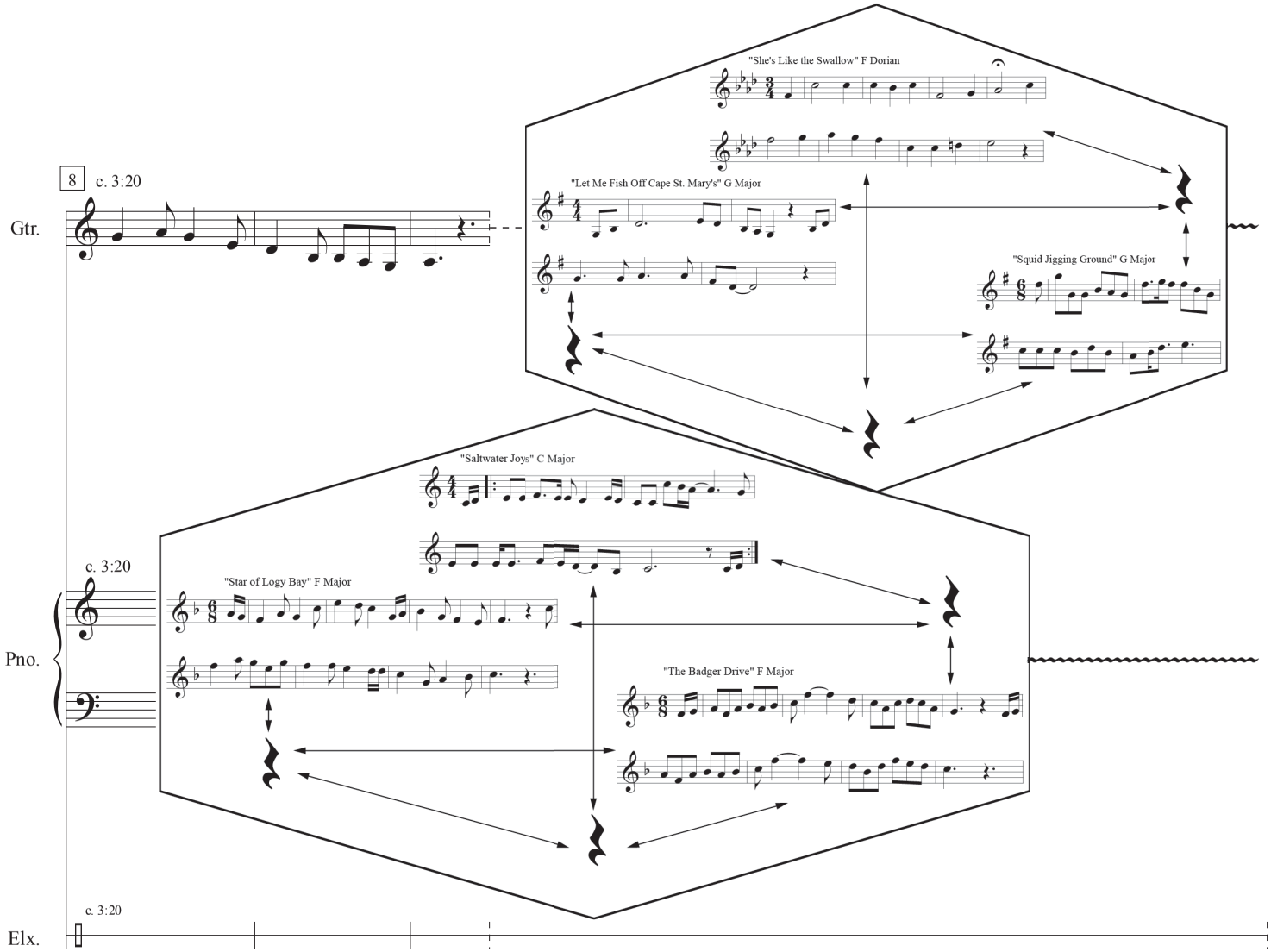
entracte

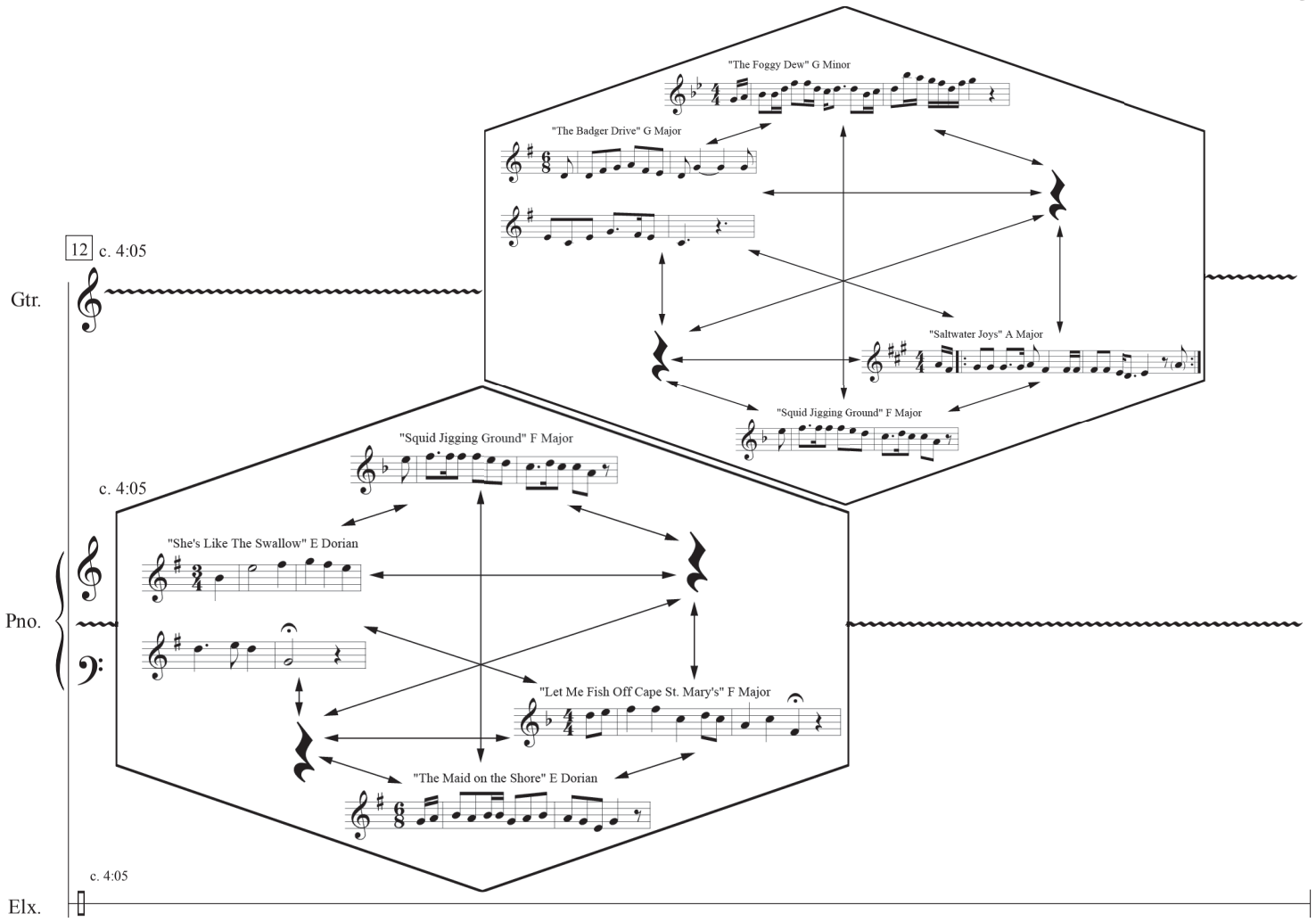
we never told nobody (2019)	J. Noble

Ce concert fait partie des épreuves imposées à Steven Cowan pour l'obtention d'un doctorat en musique.
This recital is presented by Steven Cowan in partial fulfilment of the requirements for a Doctoral degree in Music.

Appendix B: Musical Scores




8
c. 3:20
Gtr.
"She's Like the Swallow" F Dorian
"Let Me Fish Off Cape St. Mary's" G Major
"Squid Jigging Ground" G Major
"Saltwater Joys" C Major
c. 3:20
Pno.
"Star of Logy Bay" F Major
"The Badger Drive" F Major
c. 3:20
Elx.


"The Foggy Dew" G Minor
"The Badger Drive" G Major
"Saltwater Joys" A Major
"Squid Jigging Ground" F Major
12 c. 4:05
Gtr.
"Squid Jigging Ground" F Major
c. 4:05
"She's Like The Swallow" E Dorian
Pno.
"Let Me Fish Off Cape St. Mary's" F Major
"The Maid on the Shore" E Dorian
c. 4:05
Elx.

4

13 c. 4:45

Gtr.

"Petty Harbour Bait Skiff" D Major

"Sweet Forget-Me-Not" C Major

"Let Me Fish Off Cape St. Mary's" D Major

"Star of Logy Bay" B Major

"The Squid Jigging Ground" F Major

"The Maid on the Shore" F Dorian

c. 4:45

Pno.

"Saltwater Joys" F Major

"Sweet Forget-Me-Not" C Major

"The Maid on the Shore" G Dorian

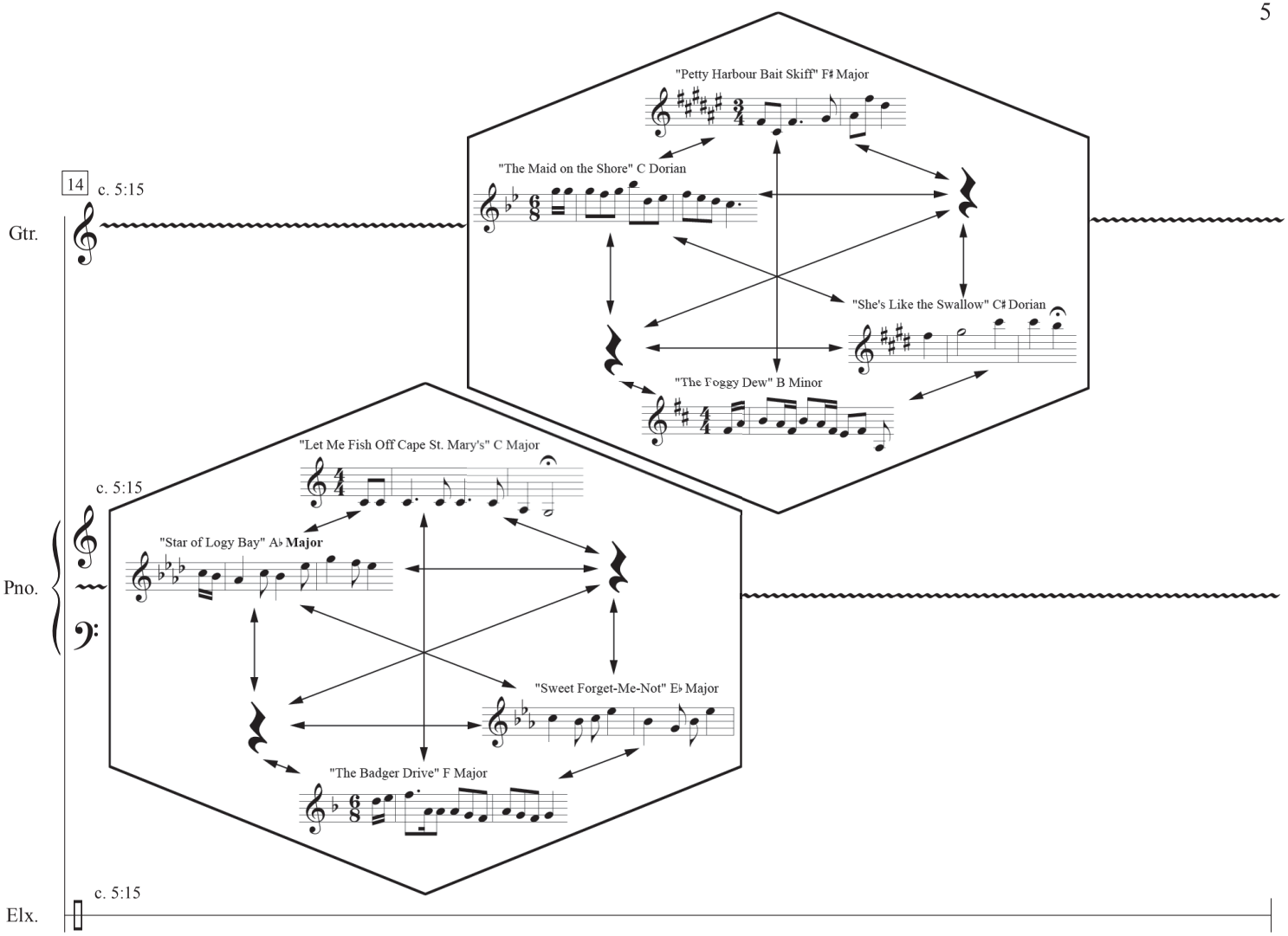
"Squid Jigging Ground" G Major

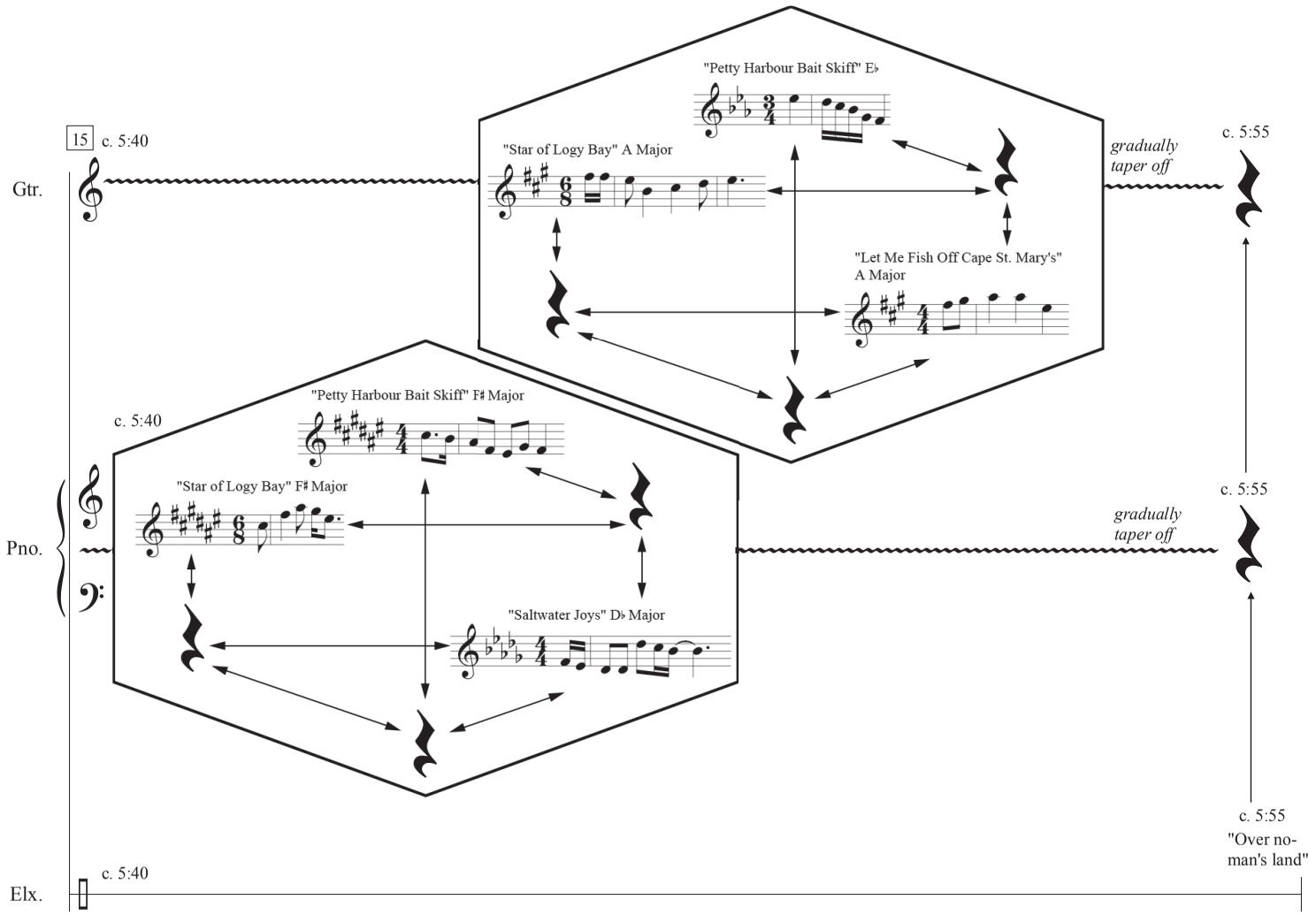
"The Foggy Dew" B Minor

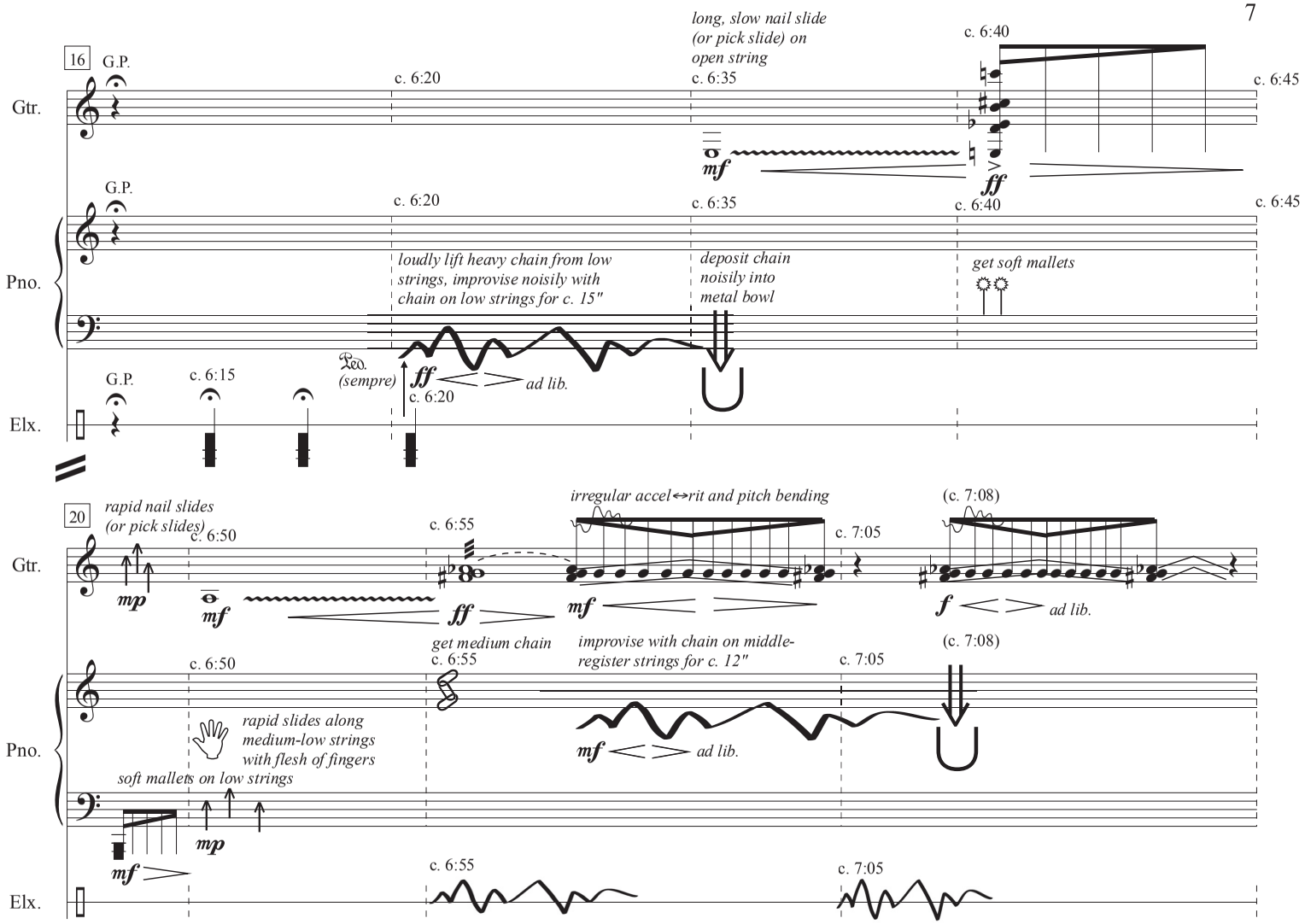
"Petty Harbour Bait Skiff" C Major

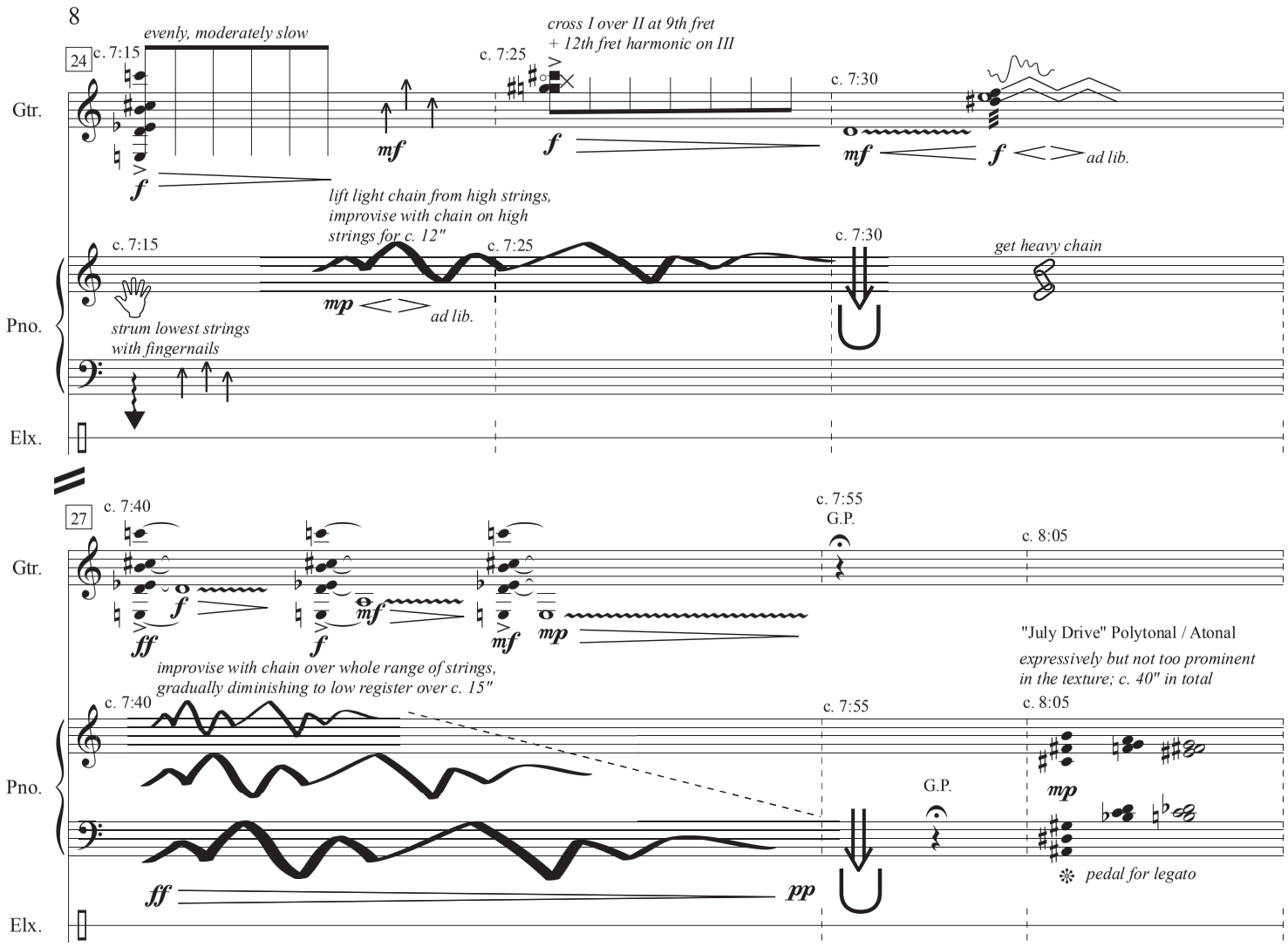
c. 4:45

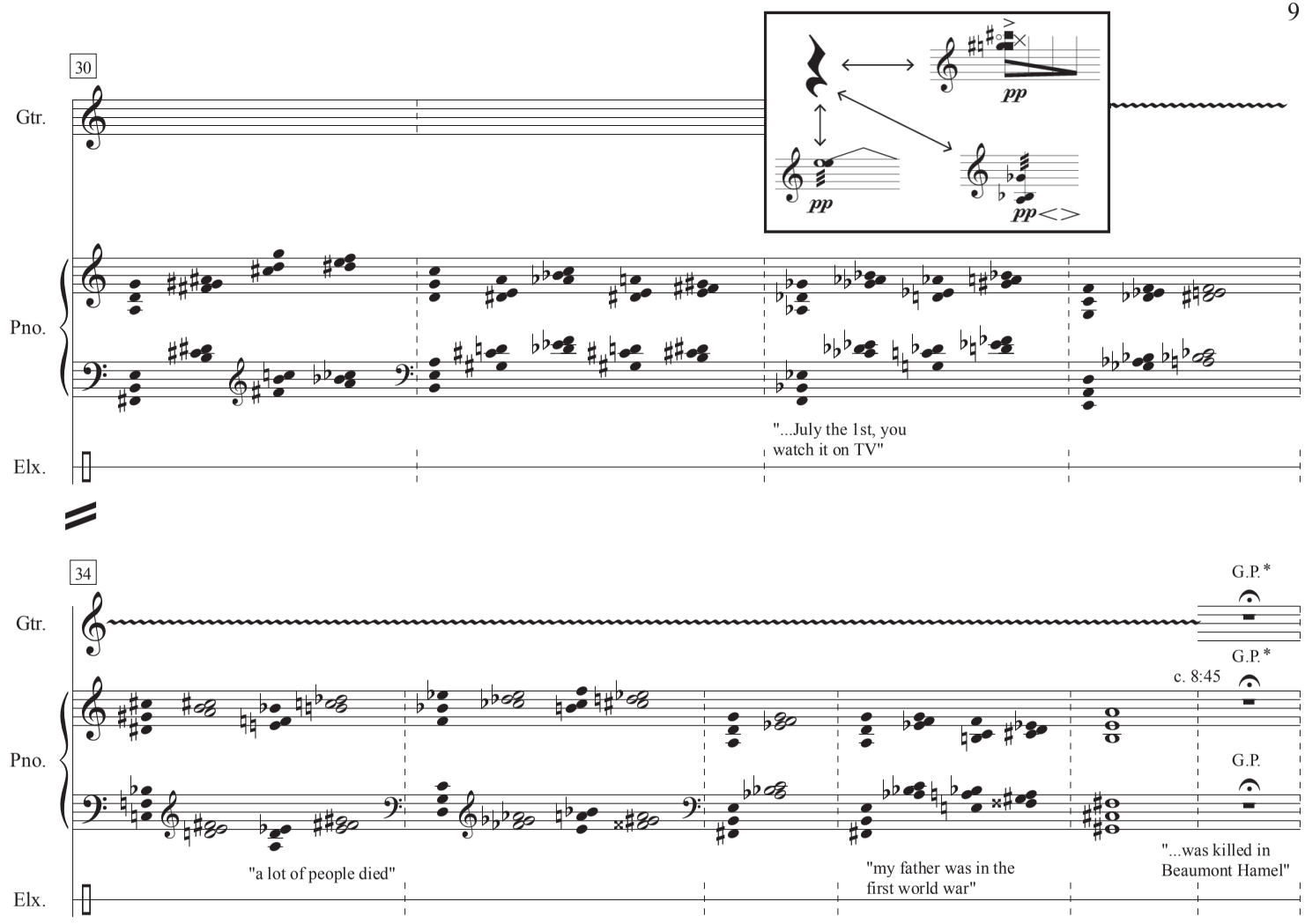
Elx.


14
c. 5:15
Gtr.
"Petty Harbour Bait Skiff" F♯ Major
"The Maid on the Shore" C Dorian
"She's Like the Swallow" C♯ Dorian
"The Foggy Dew" B Minor
c. 5:15
Pno.
"Let Me Fish Off Cape St. Mary's" C Major
"Star of Logy Bay" A♭ Major
"Sweet Forget-Me-Not" E♭ Major
"The Badger Drive" F Major
c. 5:15
Elx.

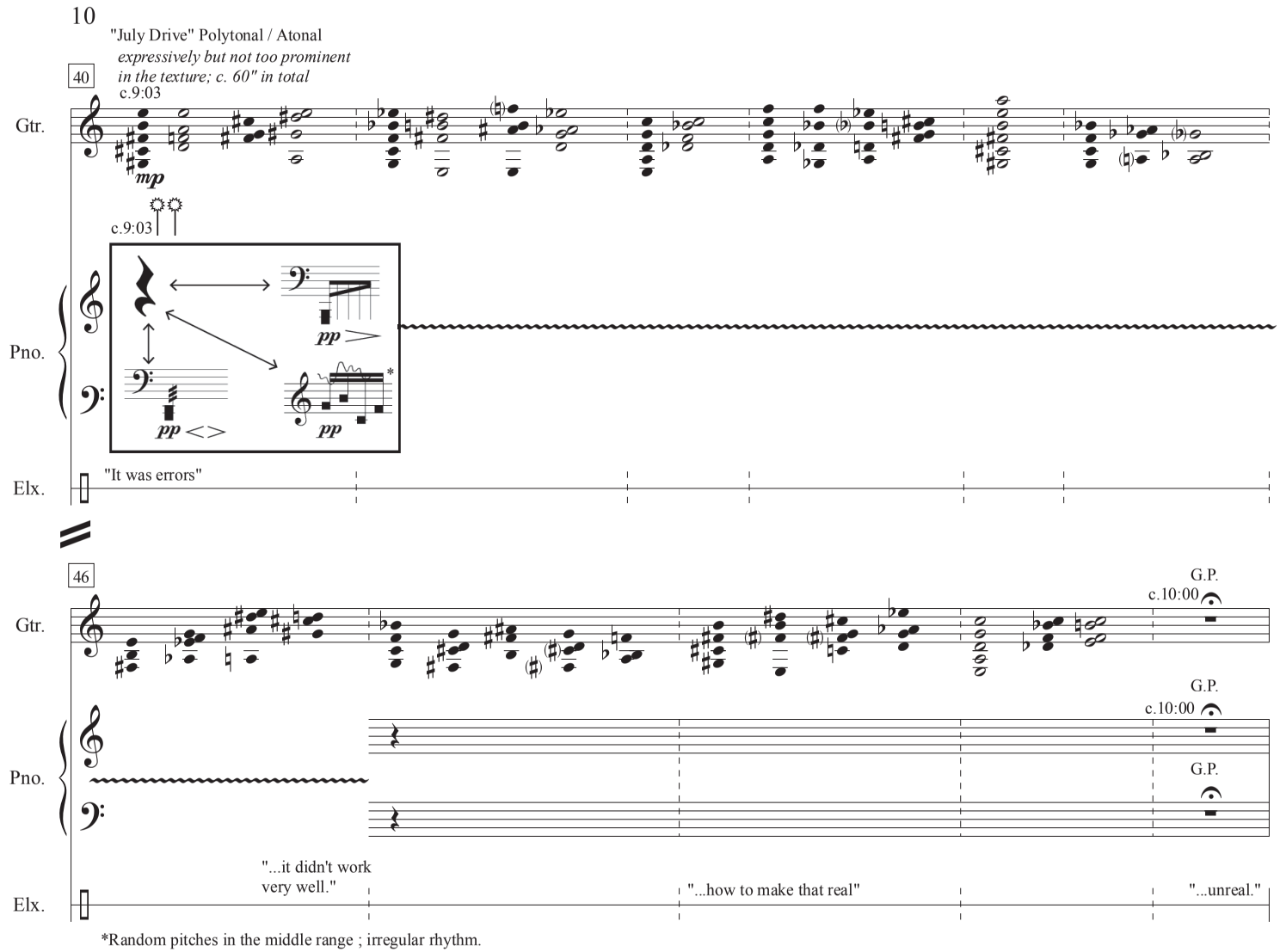

6
15
c. 5:40
Gtr.
"Petty Harbour Bait Skiff" E♭
"Star of Logy Bay" A Major
"Let Me Fish Off Cape St. Mary's"
A Major
gradually
taper off
c. 5:55
c. 5:40
"Petty Harbour Bait Skiff" F♯ Major
"Star of Logy Bay" F♯ Major
Pno.
"Saltwater Joys" D♭ Major
gradually
taper off
c. 5:55
c. 5:55
"Over no-
man's land"
c. 5:40
Elx.


16
G.P.
Gtr.
Pno.
Elx.
c. 6:20
c. 6:35
c. 6:40
c. 6:45
long, slow nail slide (or pick slide) on open string
mf
ff
loudly lift heavy chain from low strings, improvise noisily with chain on low strings for c. 15"
deposit chain noisily into metal bowl
get soft mallets
Ped. (sempre)
ff
ad lib.
c. 6:15
20
rapid nail slides (or pick slides)
c. 6:50
c. 6:55
c. 7:05
(c. 7:08)
irregular accel↔rit and pitch bending
mp
mf
f
get medium chain
improvise with chain on middle-register strings for c. 12"
rapid slides along medium-low strings with flesh of fingers
soft mallets on low strings

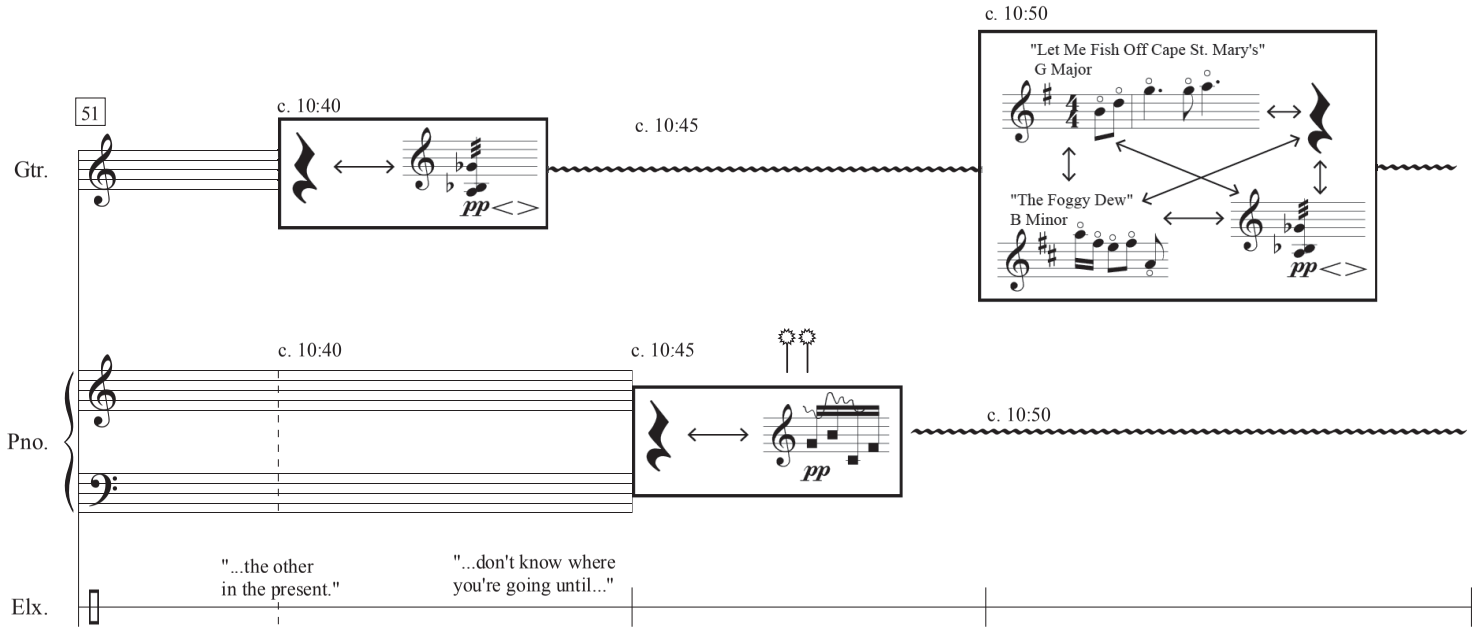

8
24
evenly, moderately slow
c. 7:15
c. 7:25
cross I over II at 9th fret
+ 12th fret harmonic on III
c. 7:30
Gtr.
mf
f
mf
f
ad lib.
lift light chain from high strings,
improvise with chain on high
strings for c. 12"
c. 7:15
c. 7:25
c. 7:30
get heavy chain
Pno.
strum lowest strings
with fingernails
mp
ad lib.
Elx.
27
c. 7:40
c. 7:55
G.P.
c. 8:05
Gtr.
ff
f
mf
f
mf
mp
"July Drive" Polytonal / Atonal
expressively but not too prominent
in the texture; c. 40" in total
improvise with chain over whole range of strings,
gradually diminishing to low register over c. 15"
c. 7:40
c. 7:55
c. 8:05
Pno.
G.P.
mp
ff
pp
pedal for legato
Elx.

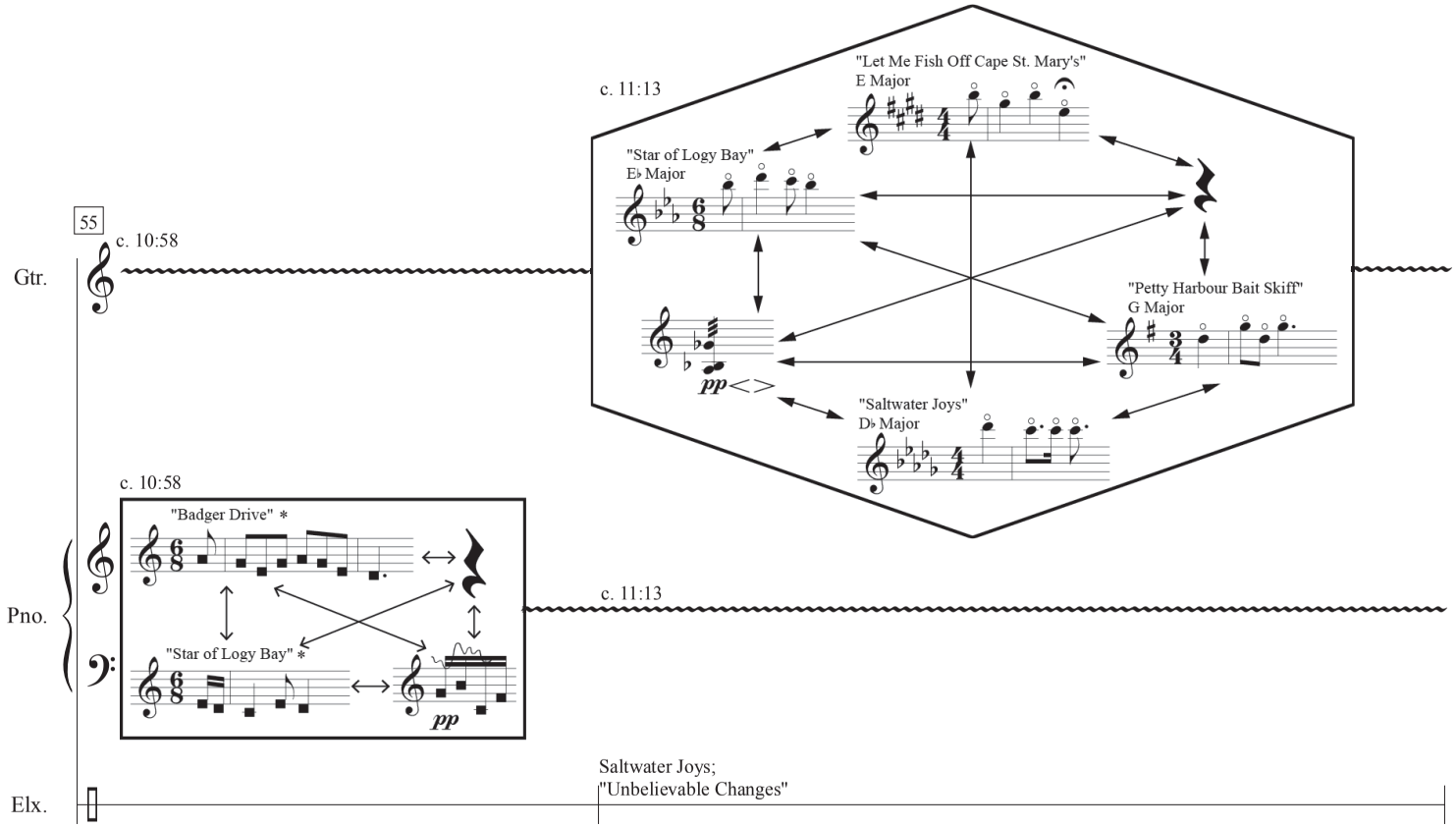


*The performers should imagine this G.P. as a memorial "moment of silence."

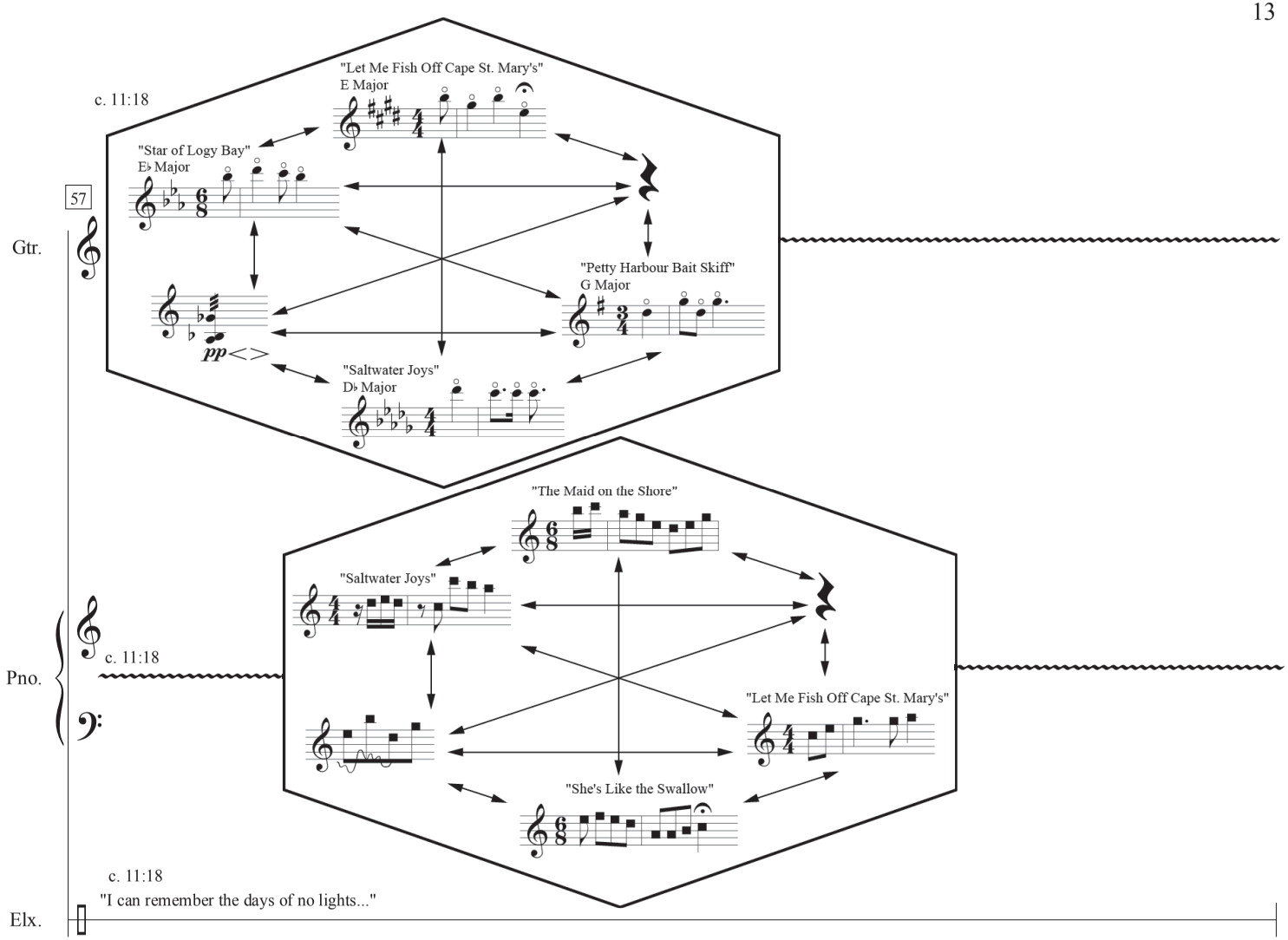


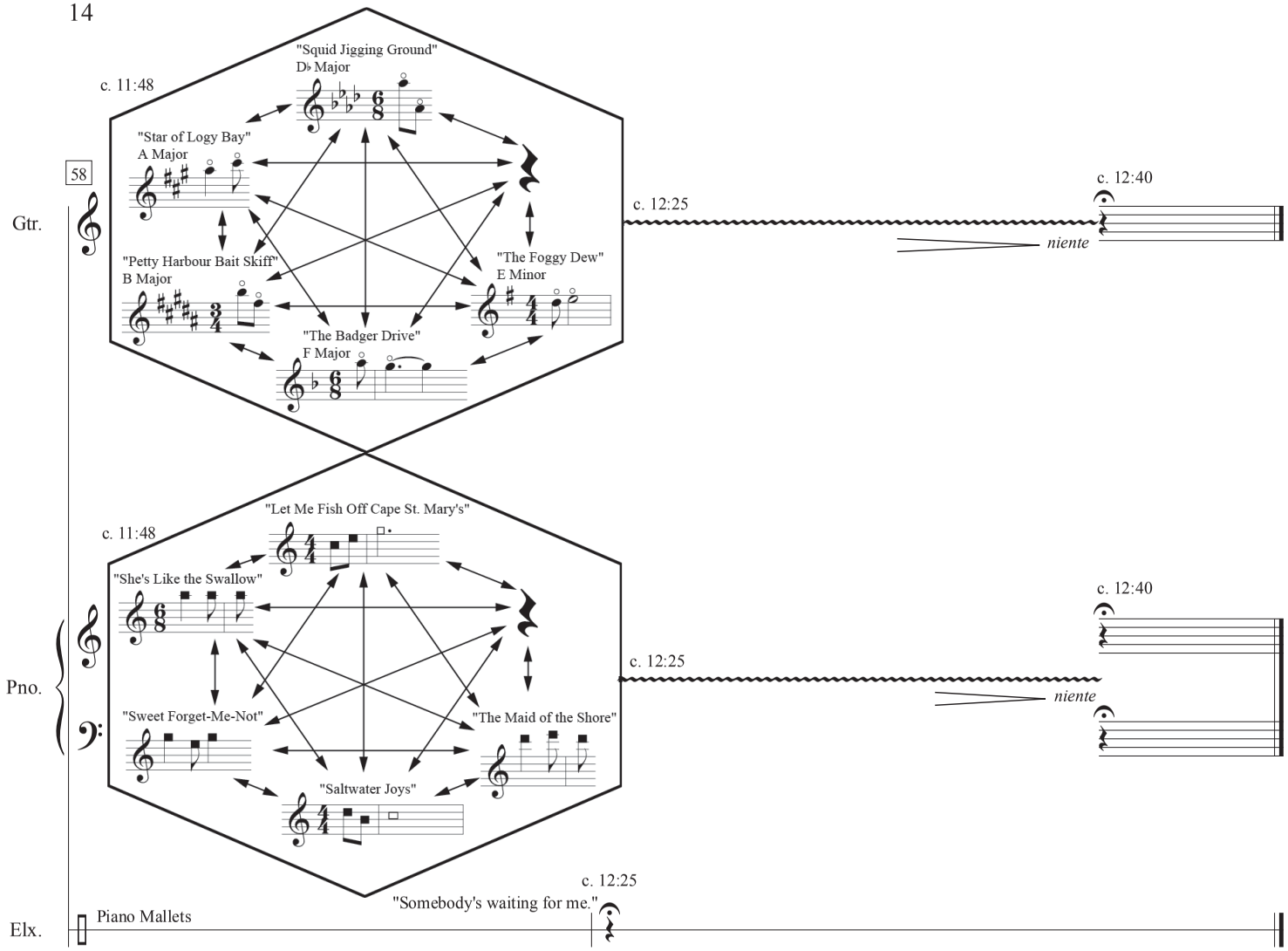
*Random pitches in the middle range ; irregular rhythm.


51
c. 10:40
c. 10:45
c. 10:50
"Let Me Fish Off Cape St. Mary's"
G Major
"The Foggy Dew"
B Minor
pp
Gtr.
Pno.
Elx.
"...the other
in the present."
"...don't know where
you're going until..."



*Approximate tunes with mallets on the strings of the piano. They are notated in "white note" keys but keys and precise intervals are indeterminate. Please approximate the contours of the melodies and observe the notated rhythms.


c. 11:18
"Let Me Fish Off Cape St. Mary's"
E Major
"Star of Logy Bay"
E♭ Major
57
Gtr.
"Petty Harbour Bait Skiff"
G Major
pp
"Saltwater Joys"
D♭ Major
"The Maid on the Shore"
"Saltwater Joys"
Pno.
c. 11:18
"Let Me Fish Off Cape St. Mary's"
"She's Like the Swallow"
c. 11:18
"I can remember the days of no lights..."
Elx.


14
"Squid Jigging Ground"
D♭ Major
c. 11:48
"Star of Logy Bay"
A Major
58
Gtr.
"Petty Harbour Bait Skiff"
B Major
"The Foggy Dew"
E Minor
"The Badger Drive"
F Major
c. 12:25
c. 12:40
niente
"Let Me Fish Off Cape St. Mary's"
c. 11:48
"She's Like the Swallow"
Pno.
"Sweet Forget-Me-Not"
"The Maid of the Shore"
"Saltwater Joys"
c. 12:25
c. 12:40
niente
c. 12:25
"Somebody's waiting for me."
Elx.
Piano Mallets

take me back

for electric guitar and electronics

Jason Noble

2017

Program Note

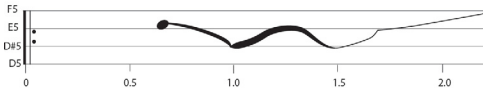
take me back explores the musicality of dialects of Newfoundland. Recorded speech samples from residents of the province provide much of the source material, sometimes unmodified and other times digitally transformed. The rhythm, melody, and harmony (i.e. spectral content) of those same speech samples are transcribed for the electric guitar, which interweaves with the electronics at times to create a kind of virtual hyper-voice. Sounds from Newfoundland's natural landscape, such as the calls of gannets and gulls and the drone of a distant foghorn, also colour the soundscape. The piece's title is from the first line of the famous Newfoundland folk song *Let Me Fish Off Cape St. Mary's*, which in turn is named after a community of the cape shore of St. Mary's Bay where much of the source material was collected. In using contemporary techniques, notation, and technological means to create a texture of nostalgia-inducing sounds of nature and (fading) dialects, the piece embodies the crossroads of identity felt by many Newfoundlanders in the 21st century. As one interviewee described it, we have "one foot in the past, the other in the present."

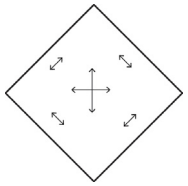
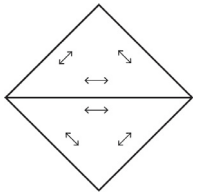
Equipment and Setup

The guitarist requires an electric guitar and amplifier, a slide, a delay pedal, a volume pedal, and an e-bow.

The electronics, which use only pre-recorded sound sources, may (A) be processed live (giving the performer greater freedom of pacing): if so, the guitarist requires a MIDI trigger to control a MaxMSP patch run on a MacBook computer and played through loudspeakers. Alternately, the electronics may (B) be entirely pre-recorded as a "tape track," in which case an assistant may trigger the soundfile directly from the computer (or other audio playback device).

Symbols

Ø	Ametrical time indicated in seconds above the staff. If no timing is indicated, tempo ad lib.
	Arpeggiate rapidly, moderately, and slowly (respectively) in the direction indicated by the arrowhead.
	Slightly irregular rhythm (± 25% of notated value).
	Dead stroke: mute the indicated open strings in the position indicated with roman numerals (or other instructions) above the staff.
	Indeterminate glissando ad lib. Indicates LH position on dead strokes when above the staff, or volume pedal changes when below the staff (indicated with V.Ped).
	(*On normal staff*) Slide gliss ad lib. To be executed ad lib, freely varying pitch with a slide and dynamics with the volume pedal.
	(*On oversided notation, pages 5-10*) Slide gliss, notated precisely. Each line indicates a semitone. Notehead indicates point of attack, contour of line indicates pitch variation, thickness of line indicates dynamic variation (controlled with volume pedal). The corresponding starting position on the staff is notated on the normal staff below.

	Pitch bend ad lib. Finger notes as indicated at attack point, then pend pitches freely. Do not synchronize bends between concurrent notes, but so far as possible improvise a separate bend contour for each note.
	Geometrical network: choose freely between the notated musical elements. Consider networks of this kind to graphically represent the instruction “play in any order.”
	Geometrical double-network: simultaneously choose freely between the notated musical elements in the top half and the bottom half (e.g. dead-stroke strings; arpeggiation instructions).

Performance Notes

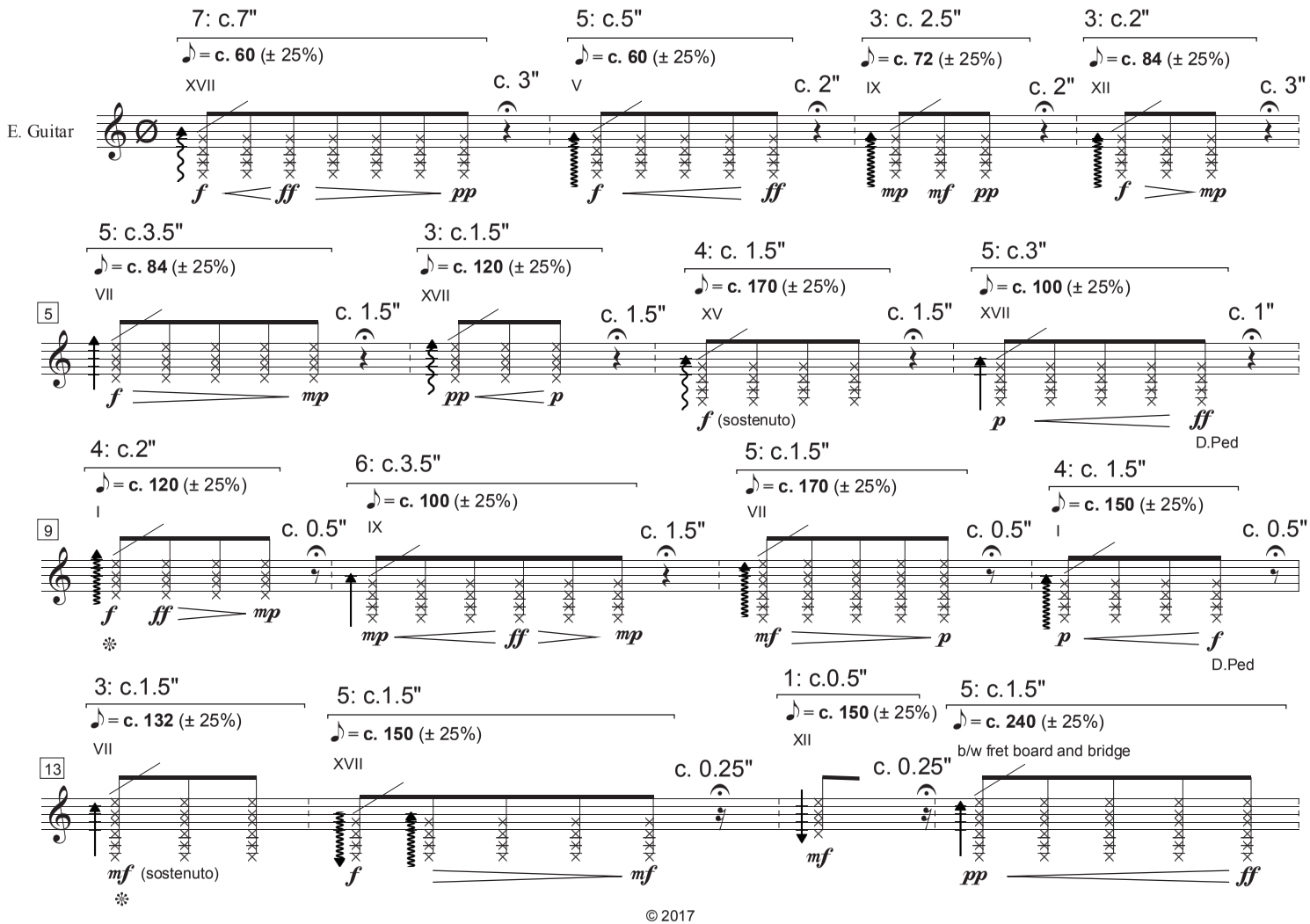
This score is notated in concert pitch, INCLUDING the section on p. 12 with a capo on the third fret.

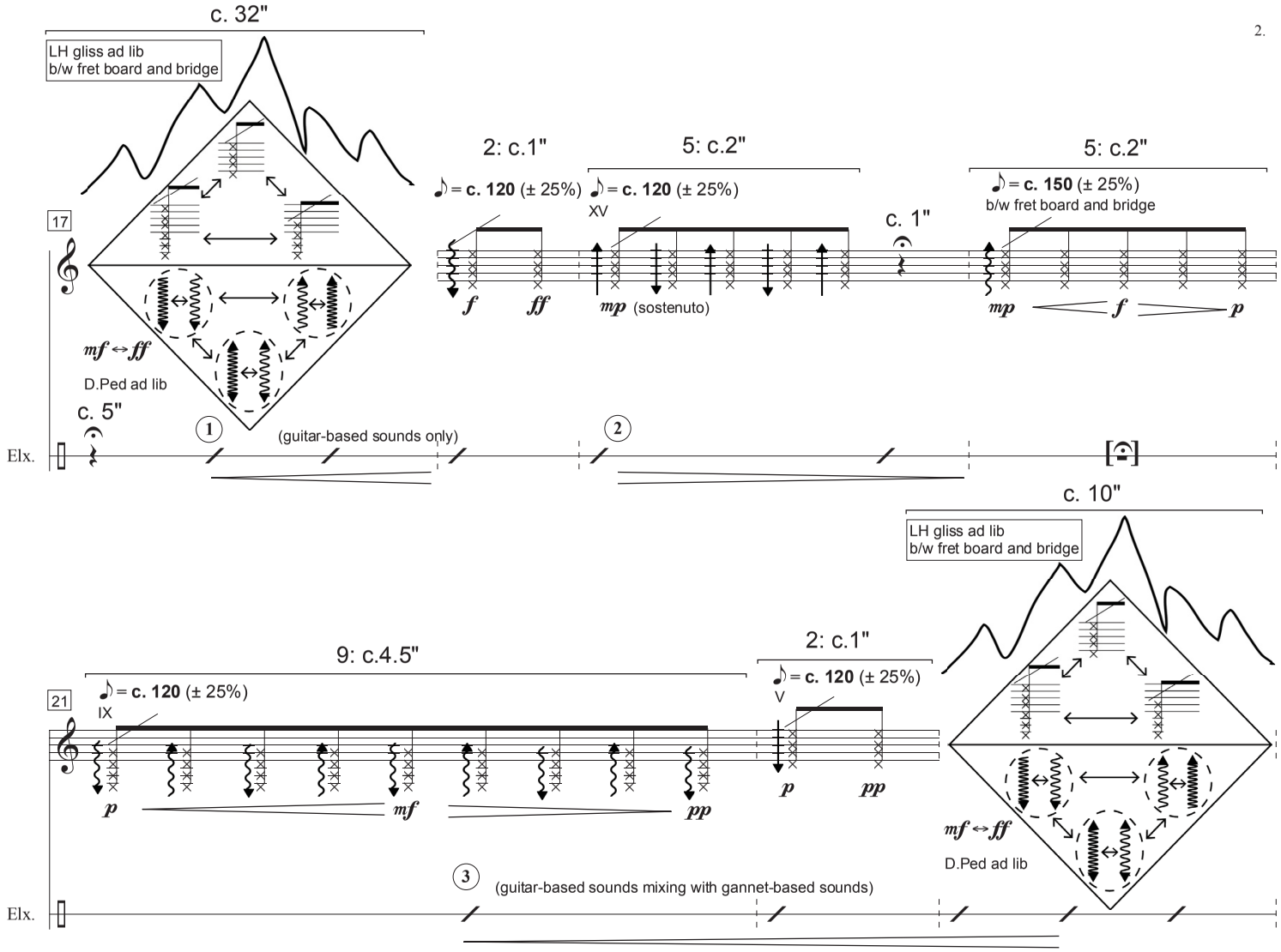
The guitarist should aim for a “clean and bright” tone with high treble, especially in the opening section with the dead strokes. The delay pedal should be pre-set to 0.2s delay and 1s feedback; no modification of these parameters is specified in the score, but the performer may feel free to experiment with different values in the improvisatory sections.

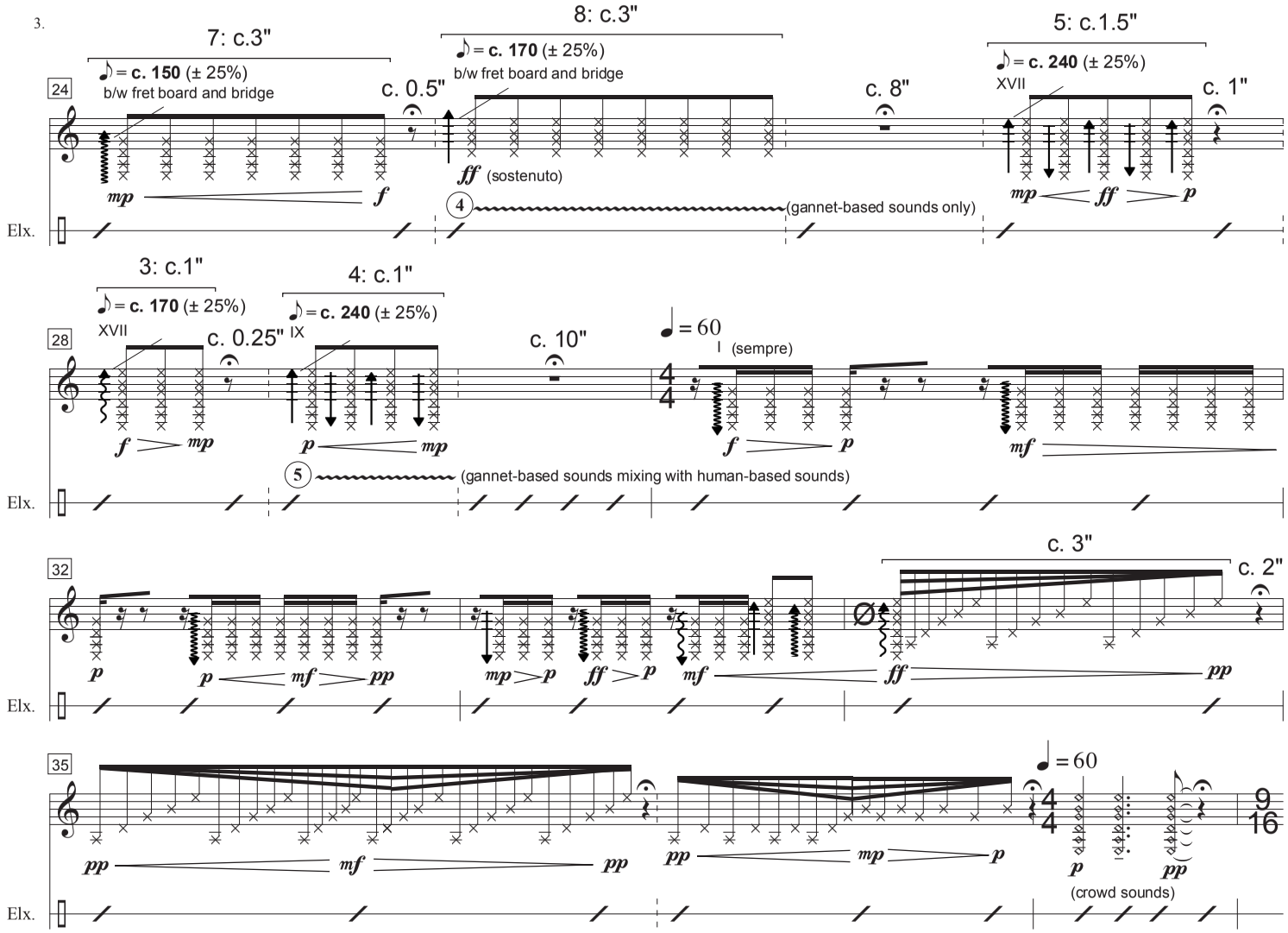
For option (A) (live electronic processing), the circled numbers above the electronics staff are cues for the MIDI trigger, which should be operated by the performer with a foot switch. For option (B), the tape track should begin at cue 1.

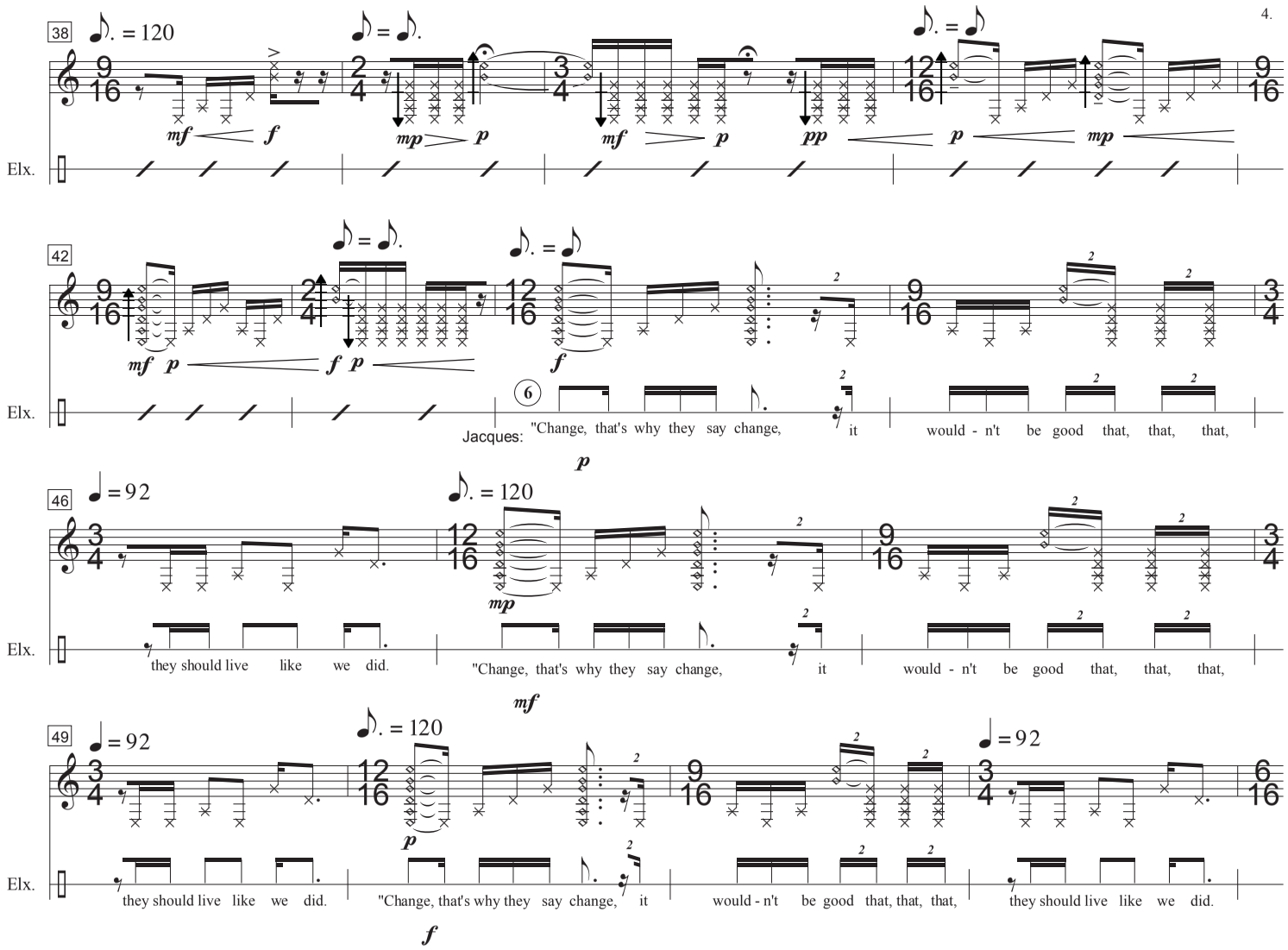
1. Take Me Back

Jason Noble

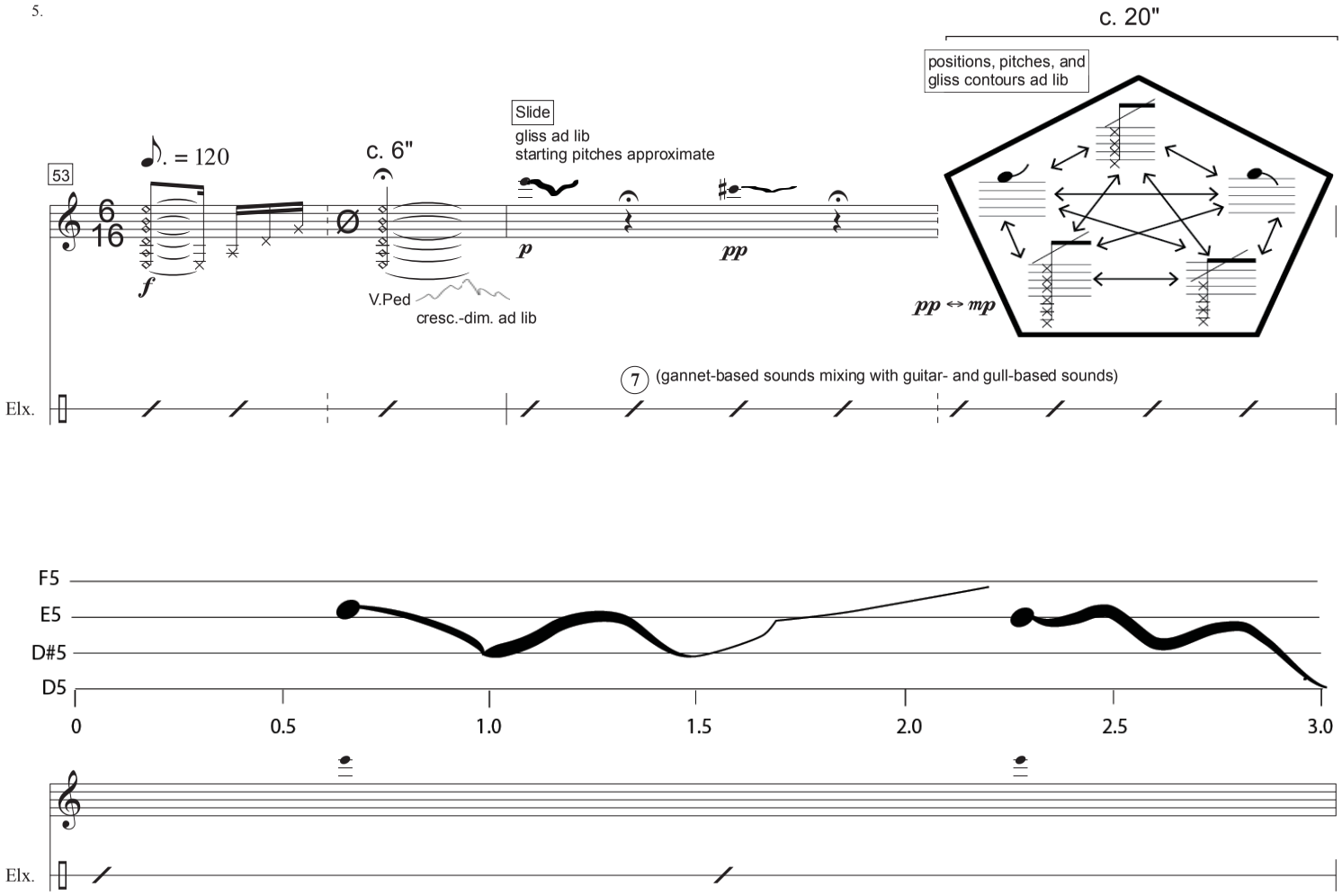


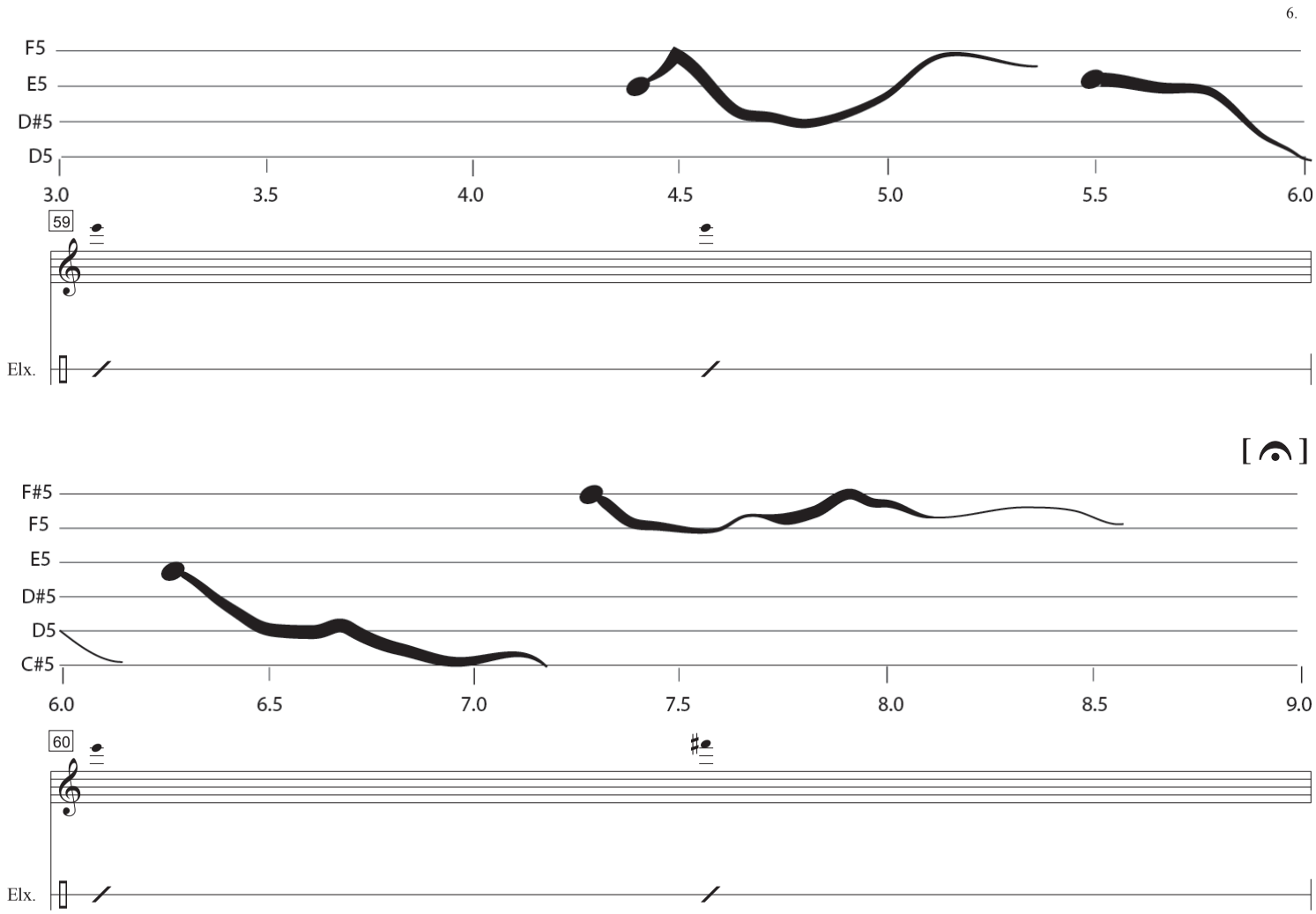

c. 32"
LH gliss ad lib
b/w fret board and bridge
17
mf ↔ ff
D.Ped ad lib
2: c.1"
5: c.2"
♪ = c. 120 (± 25%)
♪ = c. 120 (± 25%)
XV
f
ff
mp (sostenuto)
c. 1"
5: c.2"
♪ = c. 150 (± 25%)
b/w fret board and bridge
mp
f
p
c. 5"
1
(guitar-based sounds only)
2
Elx.
c. 10"
LH gliss ad lib
b/w fret board and bridge
9: c.4.5"
2: c.1"
21
♪ = c. 120 (± 25%)
IX
♪ = c. 120 (± 25%)
V
p
mf
pp
p
pp
mf ↔ ff
D.Ped ad lib
3
(guitar-based sounds mixing with gannet-based sounds)
Elx.


3.
7: c.3"
♪ = c. 150 (± 25%)
b/w fret board and bridge
24
c. 0.5"
8: c.3"
♪ = c. 170 (± 25%)
b/w fret board and bridge
ff (sostenuto)
c. 8"
5: c.1.5"
♪ = c. 240 (± 25%)
XVII
c. 1"
mp
f
mp
ff
p
4
(gannet-based sounds only)
Elx.
3: c.1"
♪ = c. 170 (± 25%)
XVII
4: c.1"
♪ = c. 240 (± 25%)
IX
28
c. 0.25"
c. 10"
♩ = 60
I (sempre)
4/4
f
mp
p
mp
f
p
mf
5
(gannet-based sounds mixing with human-based sounds)
Elx.
c. 3"
c. 2"
32
p
p
mf
pp
mp
p
ff
p
mf
ff
pp
Elx.
35
♩ = 60
4/4
9/16
pp
mf
pp
pp
mp
p
p
pp
(crowd sounds)
Elx.

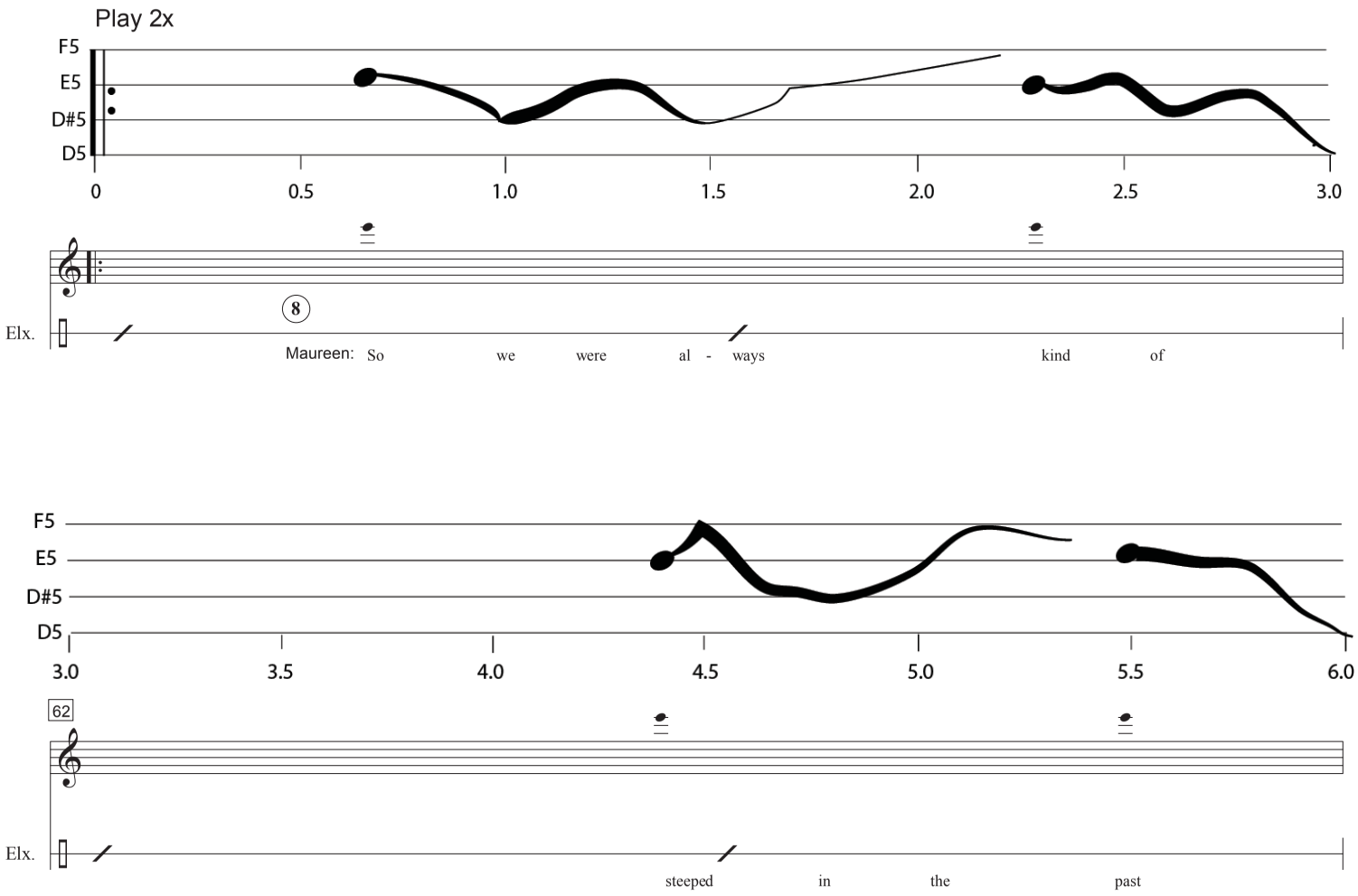

38
Elx.
42
Elx.
Jacques: "Change, that's why they say change, it would - n't be good that, that, that,
46
Elx.
they should live like we did.
"Change, that's why they say change, it would - n't be good that, that, that,
49
Elx.
they should live like we did.
"Change, that's why they say change, it would - n't be good that, that, that,
they should live like we did.

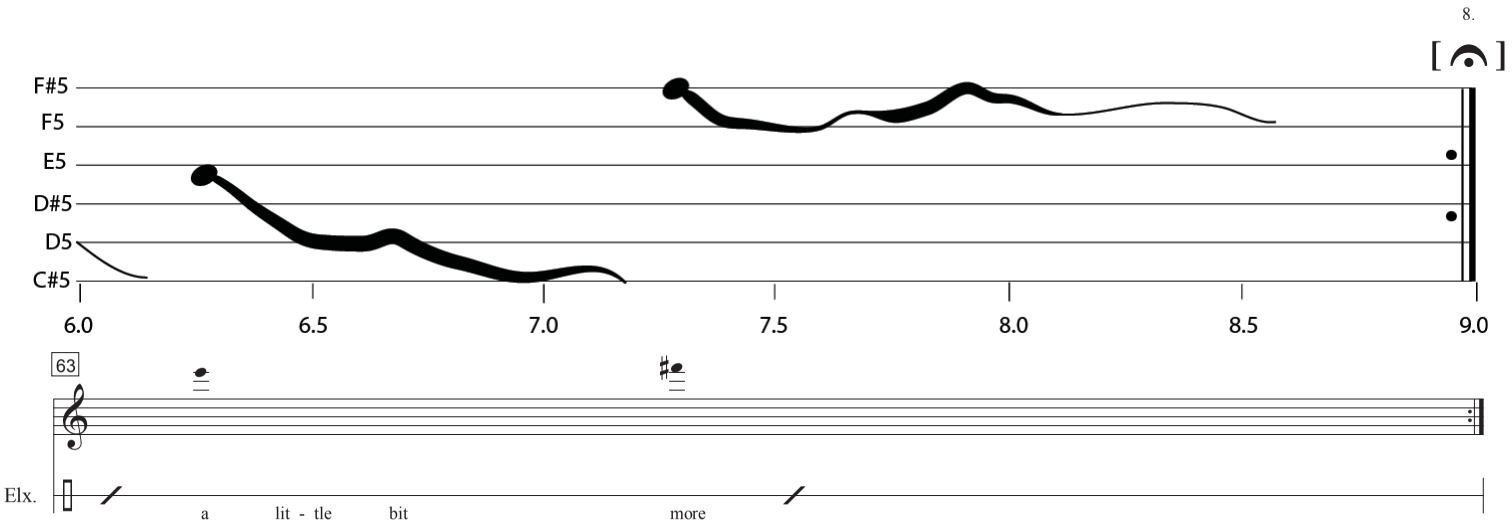
5.


c. 20"
positions, pitches, and
gliss contours ad lib
Slide
gliss ad lib
starting pitches approximate
53
♪. = 120
c. 6"
6
16
f
p
pp
V.Ped
cresc.-dim. ad lib
pp ↔ mp
7 (gannet-based sounds mixing with guitar- and gull-based sounds)
Elx.
F5
E5
D#5
D5
0
0.5
1.0
1.5
2.0
2.5
3.0
Elx.

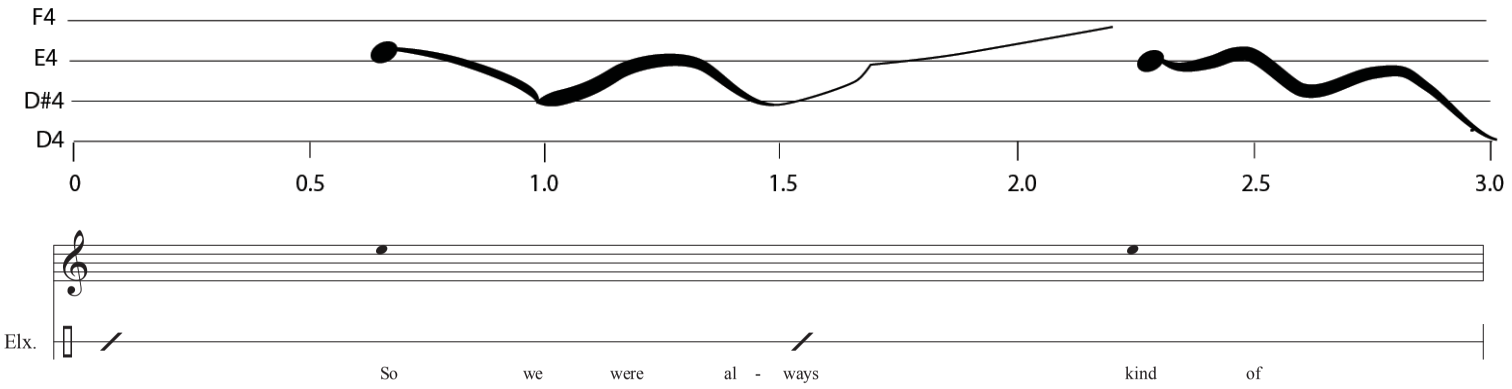

6.
F5
E5
D#5
D5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
59
Elx.
[ ]
F#5
F5
E5
D#5
D5
C#5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
60
Elx.

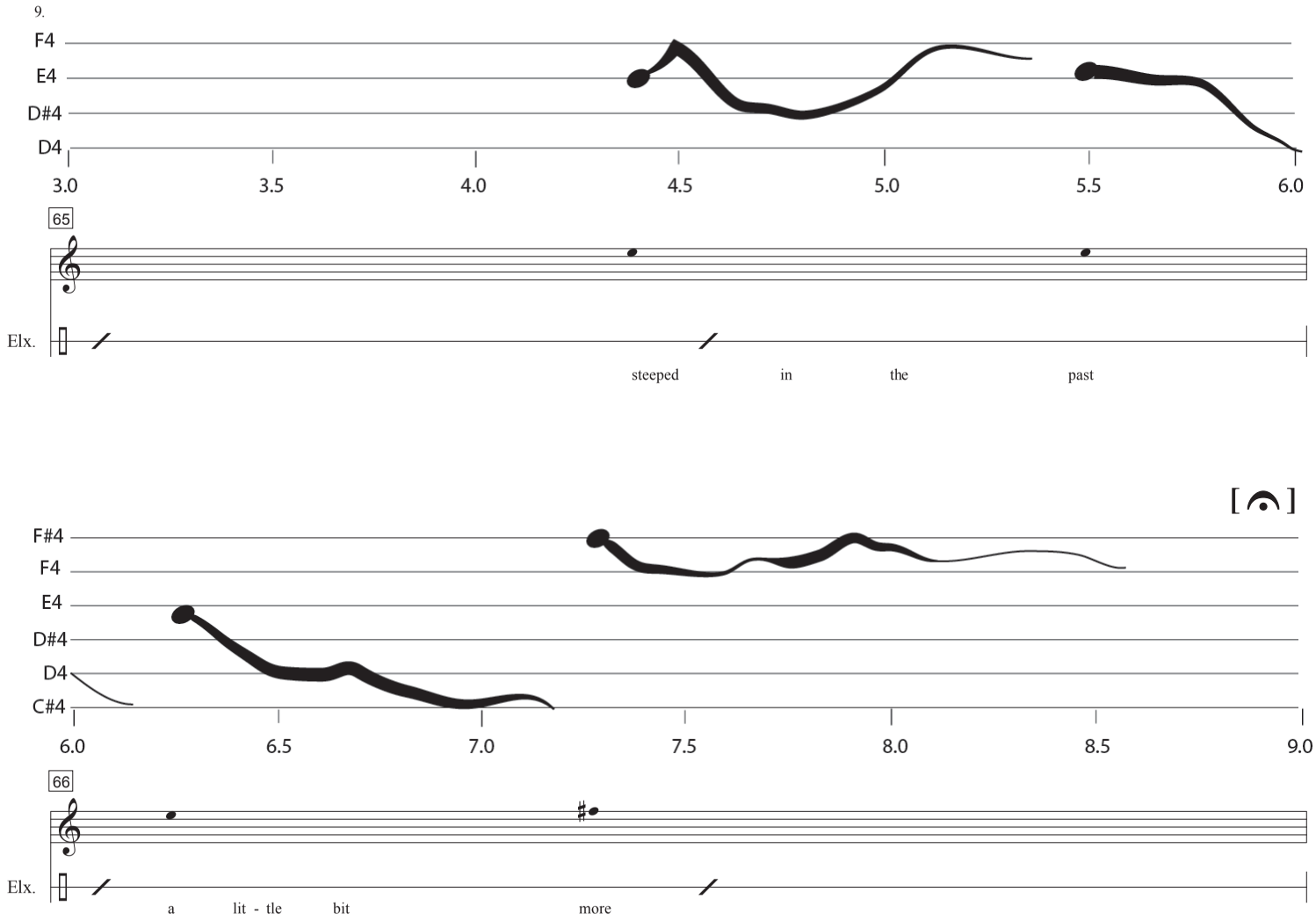
7.

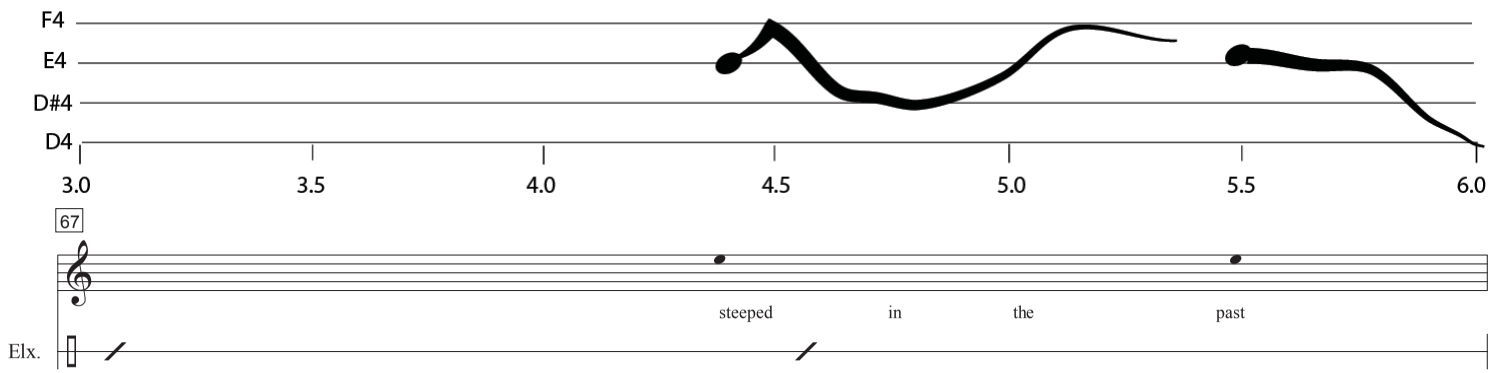

Play 2x
F5
E5
D#5
D5
0
0.5
1.0
1.5
2.0
2.5
3.0
8
Elx.
Maureen: So we were al - ways kind of
F5
E5
D#5
D5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
62
Elx.
steeped in the past

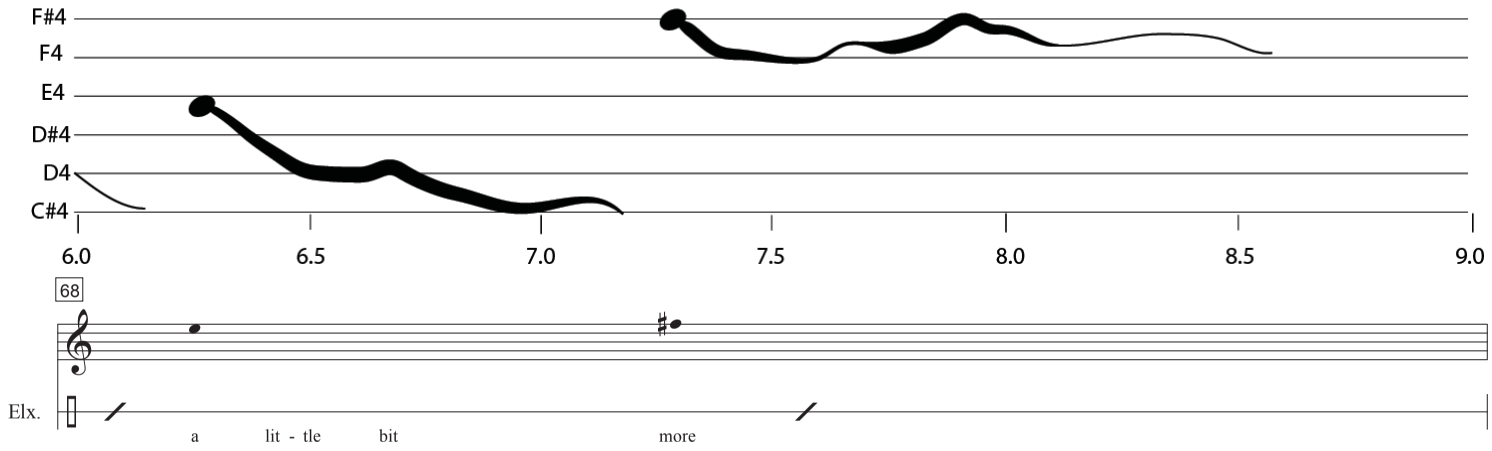


N.B.: one octave lower

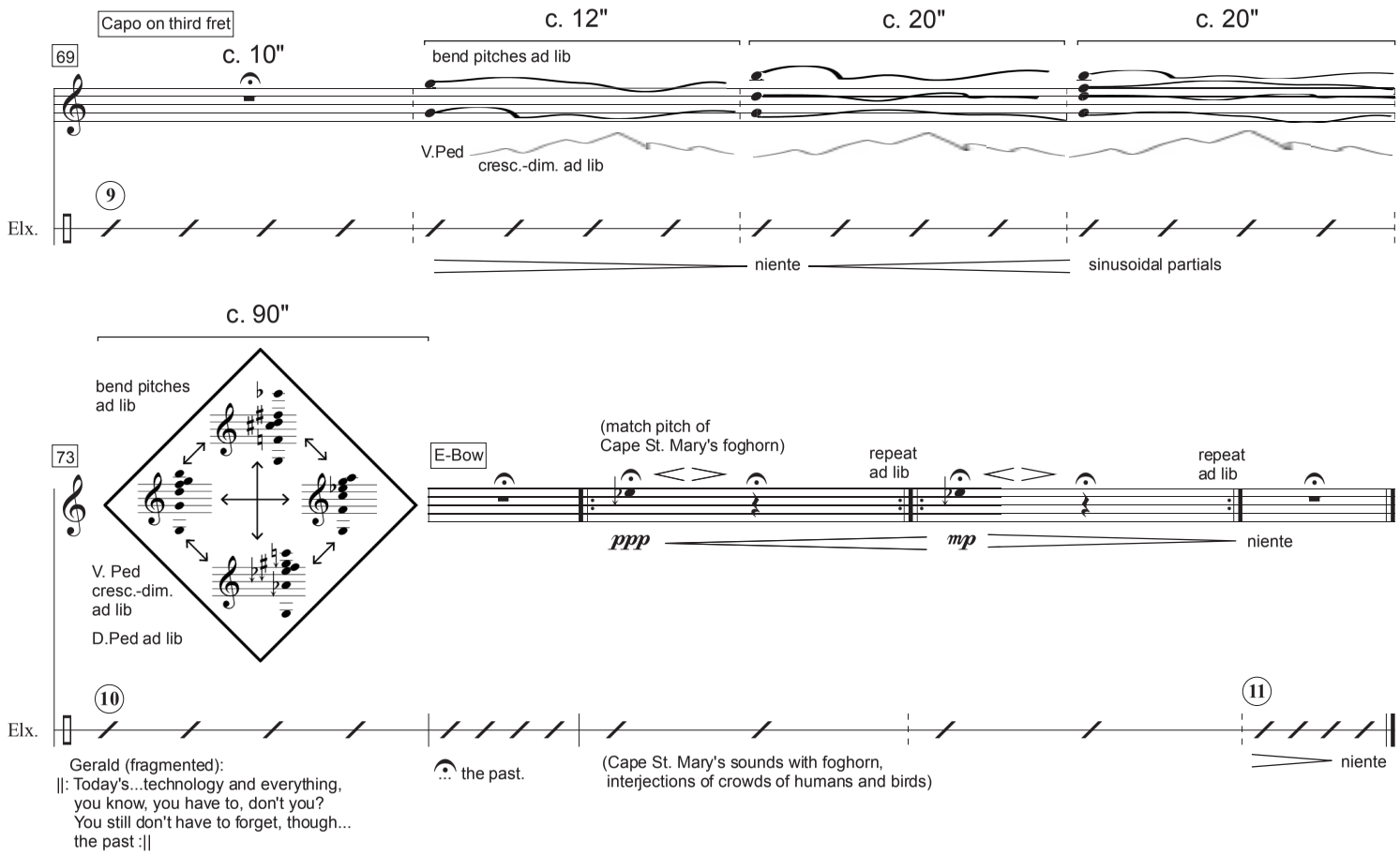



9.
F4
E4
D#4
D4
3.0
3.5
4.0
4.5
5.0
5.5
6.0
65
Elx.
steeped
in
the
past
F#4
F4
E4
D#4
D4
C#4
6.0
6.5
7.0
7.5
8.0
8.5
9.0
66
Elx.
a
lit - tle
bit
more


F4
E4
D#4
D4
3.0
3.5
4.0
4.5
5.0
5.5
6.0
67
steeped
in
the
past
Elx.


F#4
F4
E4
D#4
D4
C#4
6.0
6.5
7.0
7.5
8.0
8.5
9.0
68
Elx.
a
lit - tle
bit
more

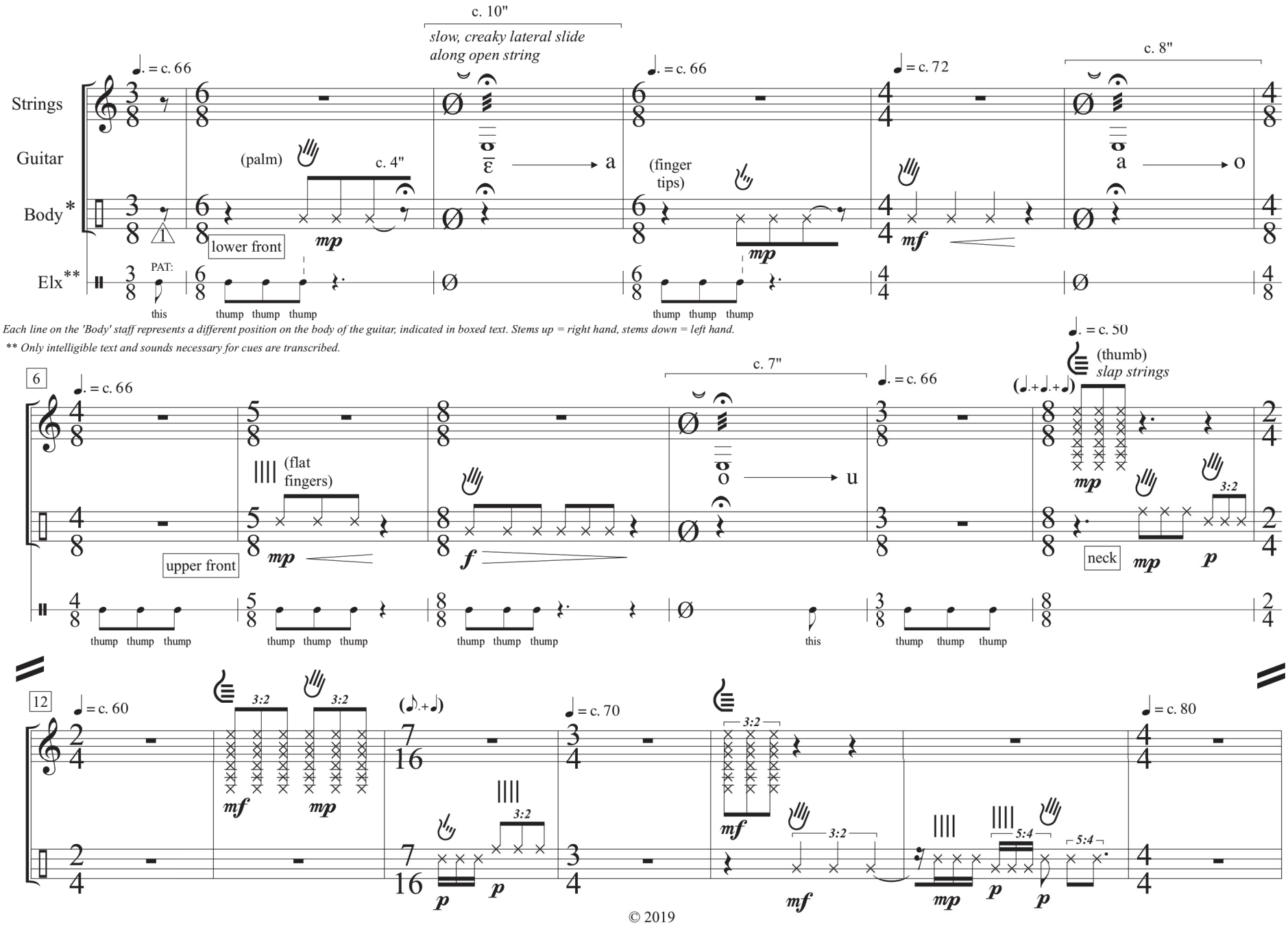
12.

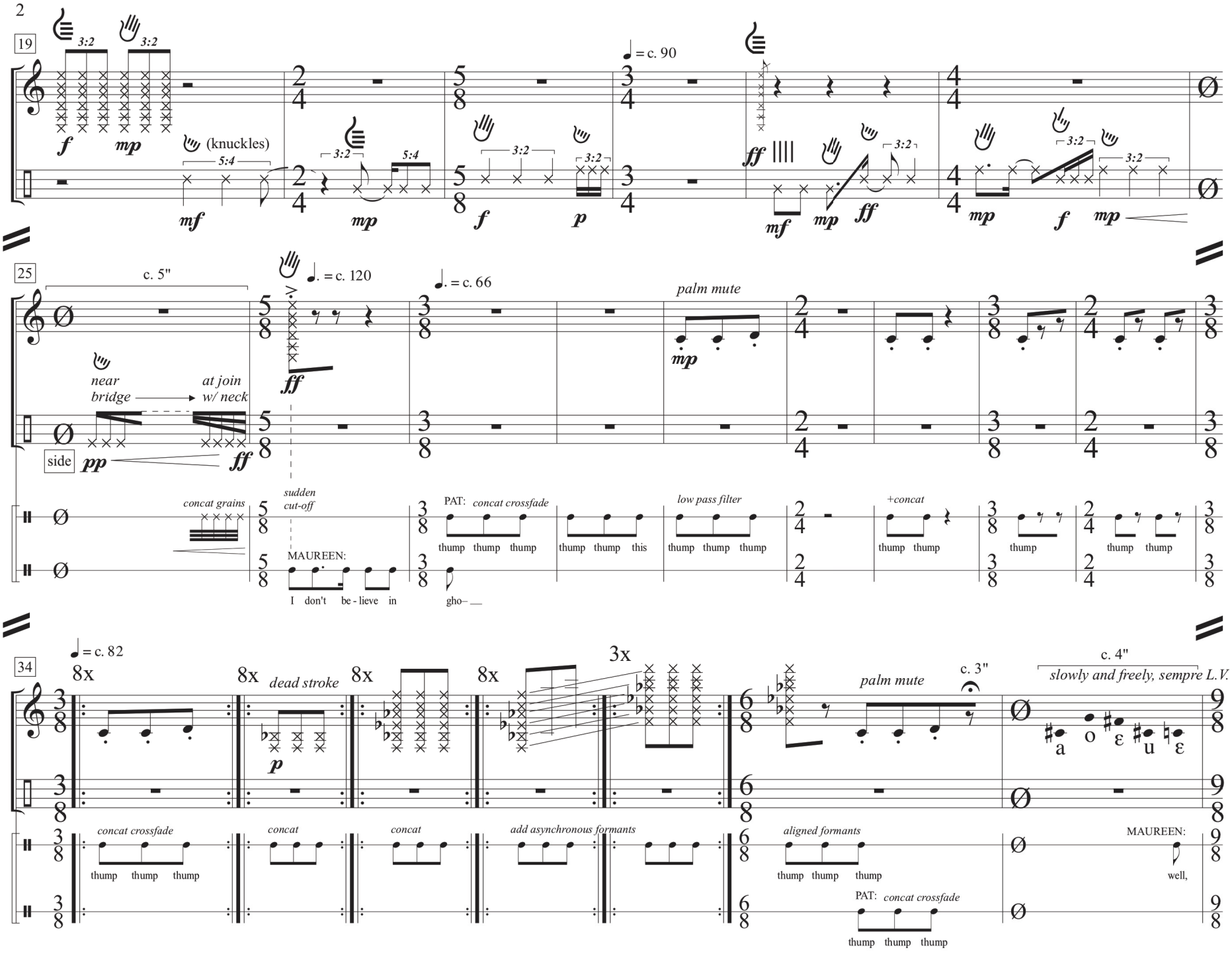

Capo on third fret
69
c. 10"
c. 12"
c. 20"
c. 20"
bend pitches ad lib
V.Ped
cresc.-dim. ad lib
9
Elx.
niente
sinusoidal partials
c. 90"
bend pitches
ad lib
73
E-Bow
(match pitch of
Cape St. Mary's foghorn)
repeat
ad lib
repeat
ad lib
ppp
mp
niente
V. Ped
cresc.-dim.
ad lib
D.Ped ad lib
10
11
Elx.
Gerald (fragmented):
||: Today's...technology and everything,
you know, you have to, don't you?
You still don't have to forget, though...
the past :||
the past.
(Cape St. Mary's sounds with foghorn,
interjections of crowds of humans and birds)
niente

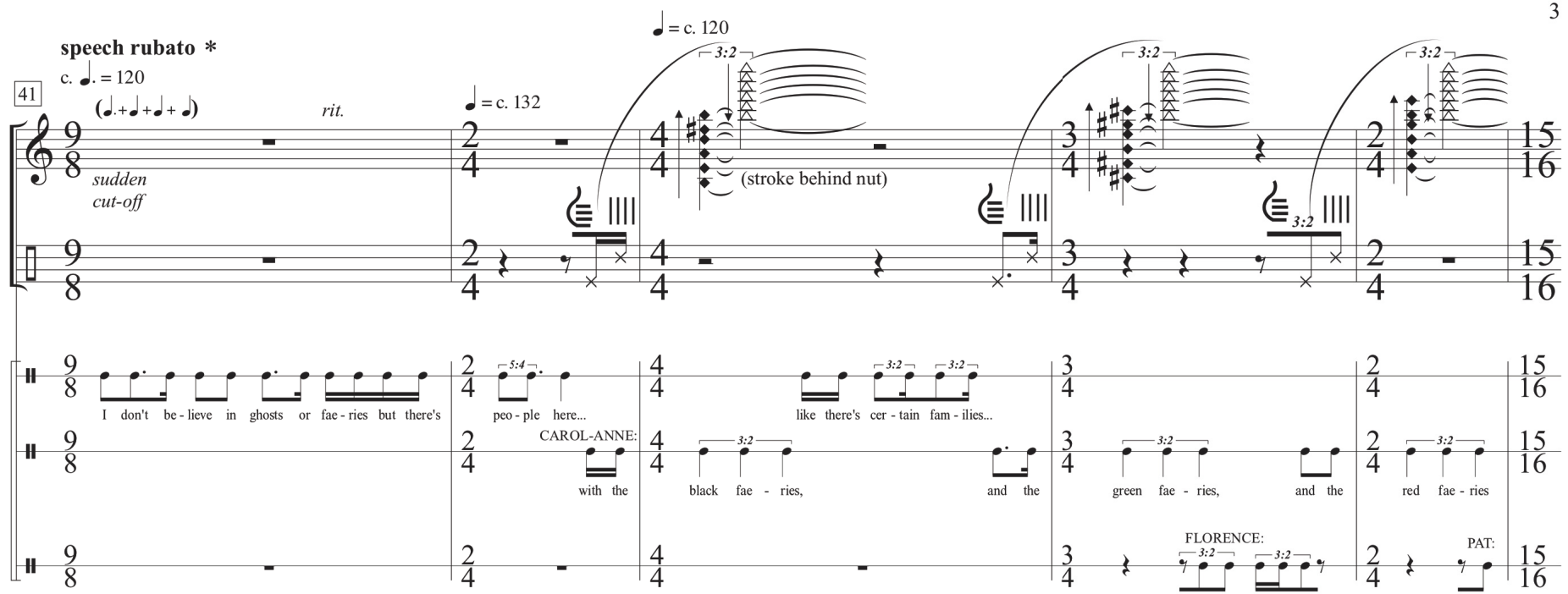
we never told nobody

for Steve Cowan

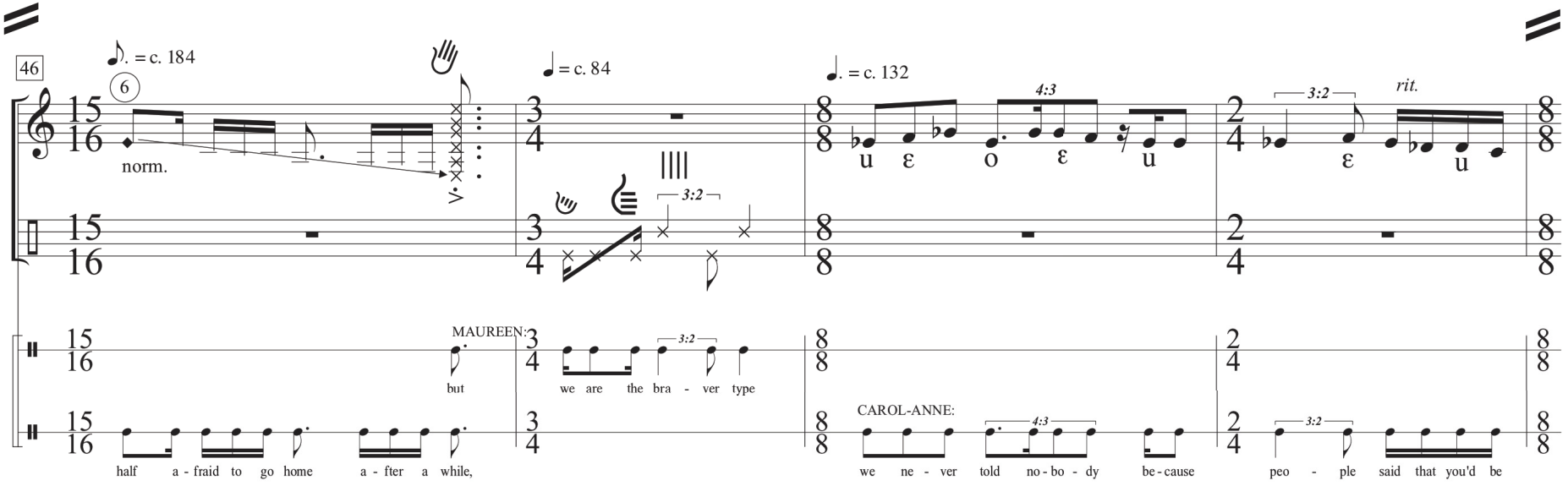
Jason Noble

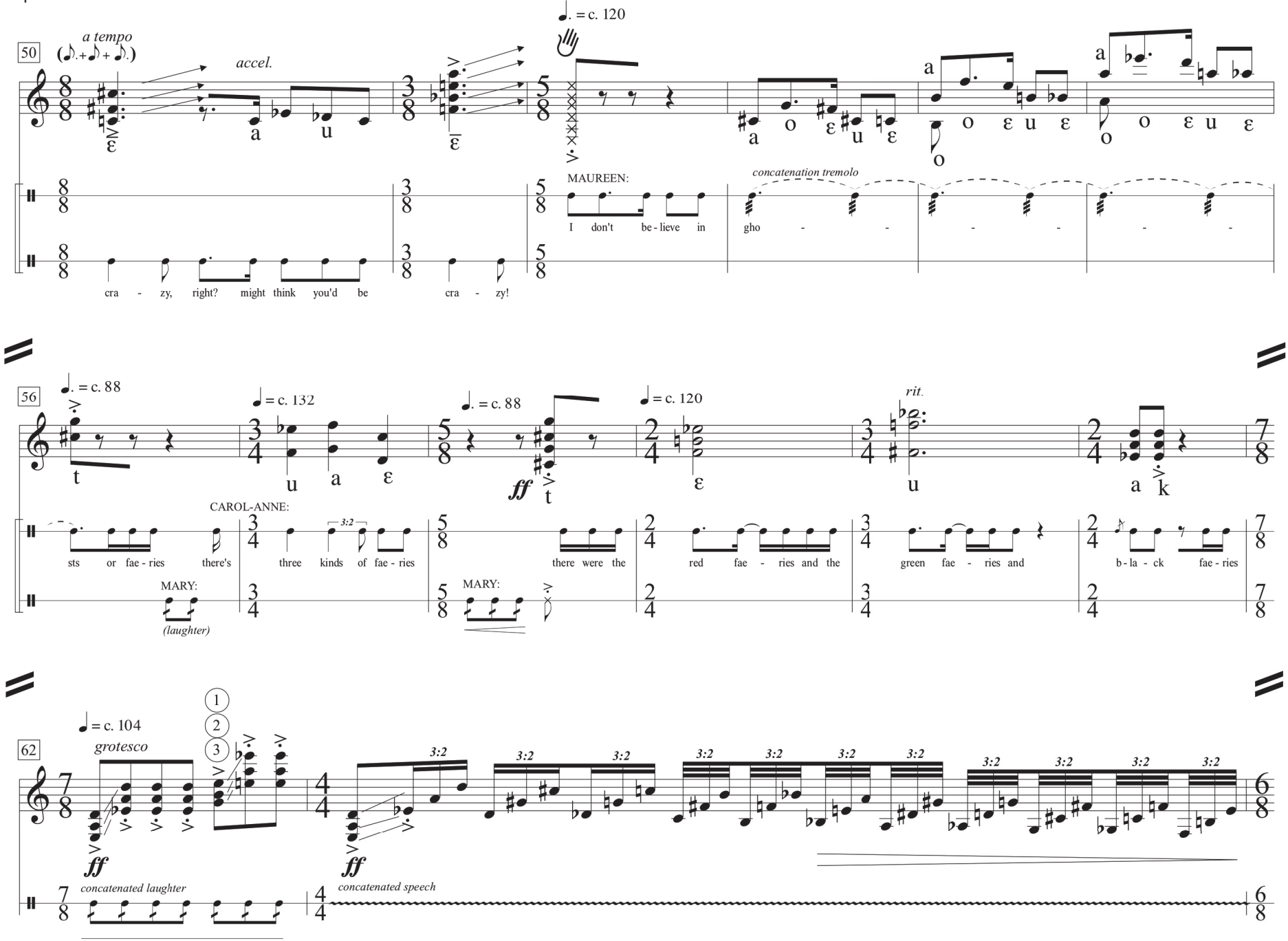


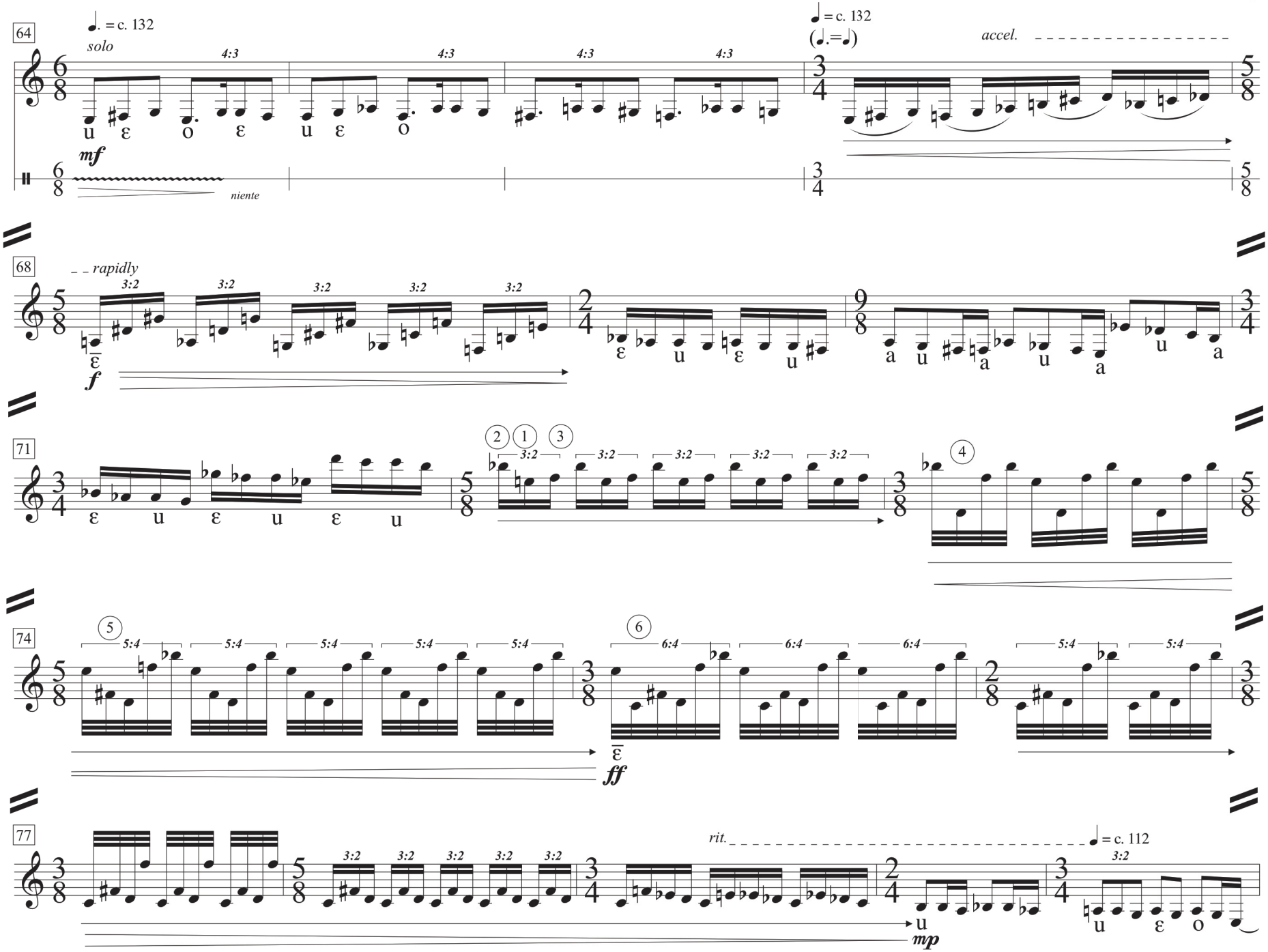

19
3:2
3:2
f
mp
(knuckles)
5:4
mf
3:2
5:4
mp
f
3:2
p
3:2
= c. 90
ff
mf
mp
ff
3:2
mp
f
3:2
mp
25
c. 5"
near bridge
at join w/ neck
side
pp
ff
= c. 120
ff
= c. 66
palm mute
mp
concat grains
sudden cut-off
MAUREEN:
I don't be - lieve in
PAT: concat crossfade
thump thump thump
thump thump this
low pass filter
thump thump thump
+concat
thump thump
thump
thump thump
34
= c. 82
8x
8x
dead stroke
p
8x
8x
3x
palm mute
c. 3"
c. 4"
slowly and freely, sempre L.V.
a
o
ɛ
u
ɛ
concat crossfade
thump thump thump
concat
concat
add asynchronous formants
aligned formants
thump thump thump
PAT: concat crossfade
thump thump thump
MAUREEN:
well,

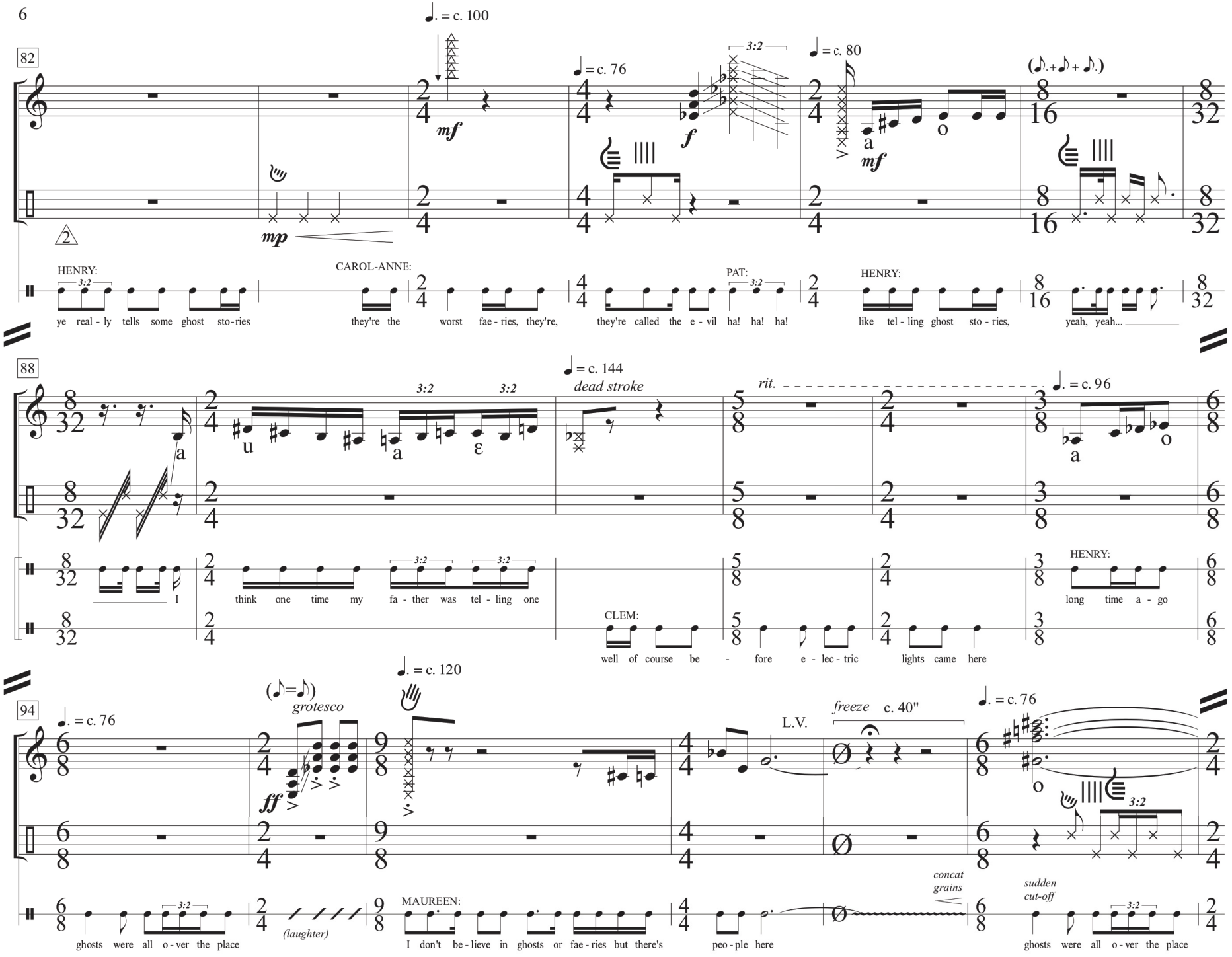


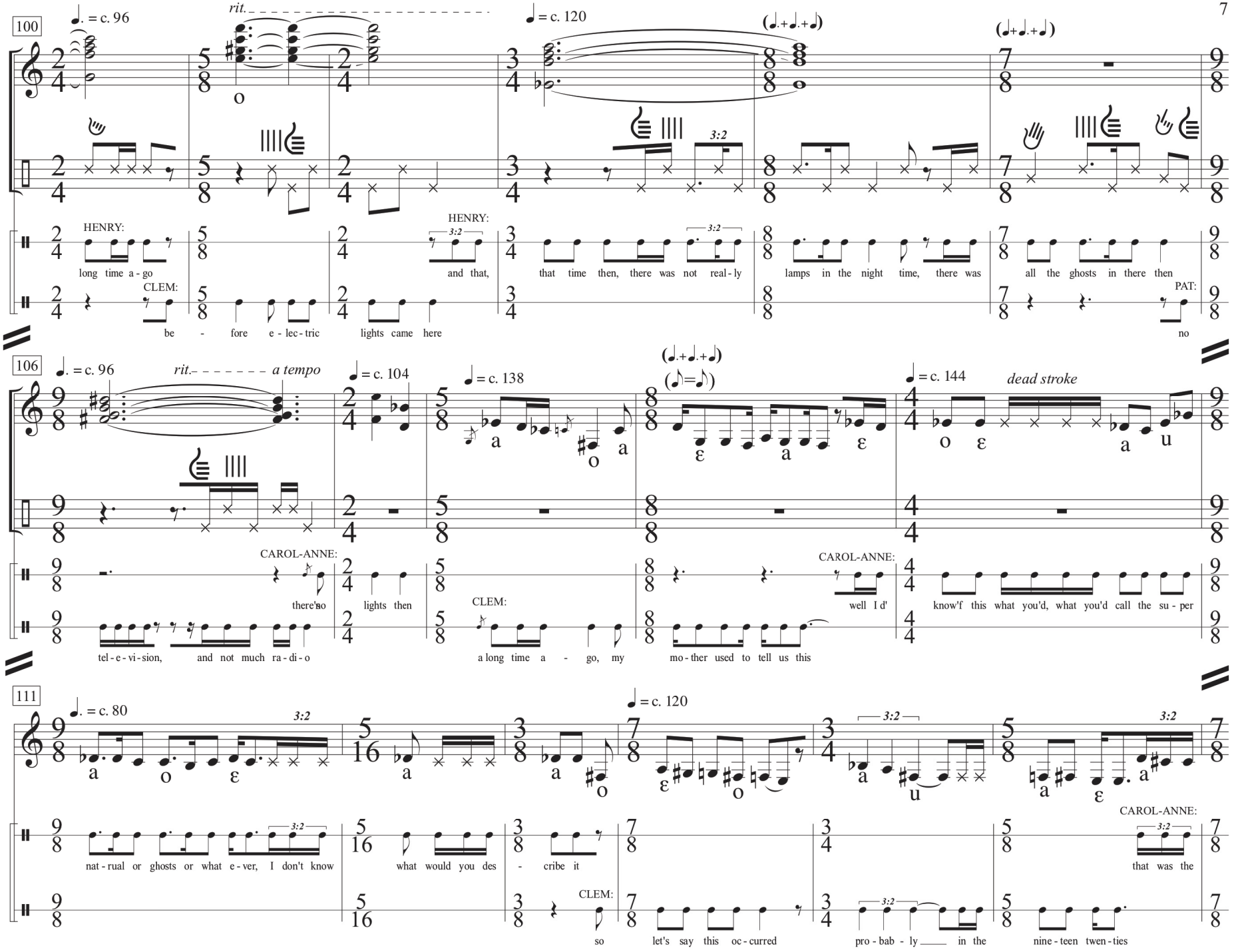
** Tempi and rhyrhmic notation are approximate transcriptions of speech recordings. In case of conflict, trust soundfile over notation.*

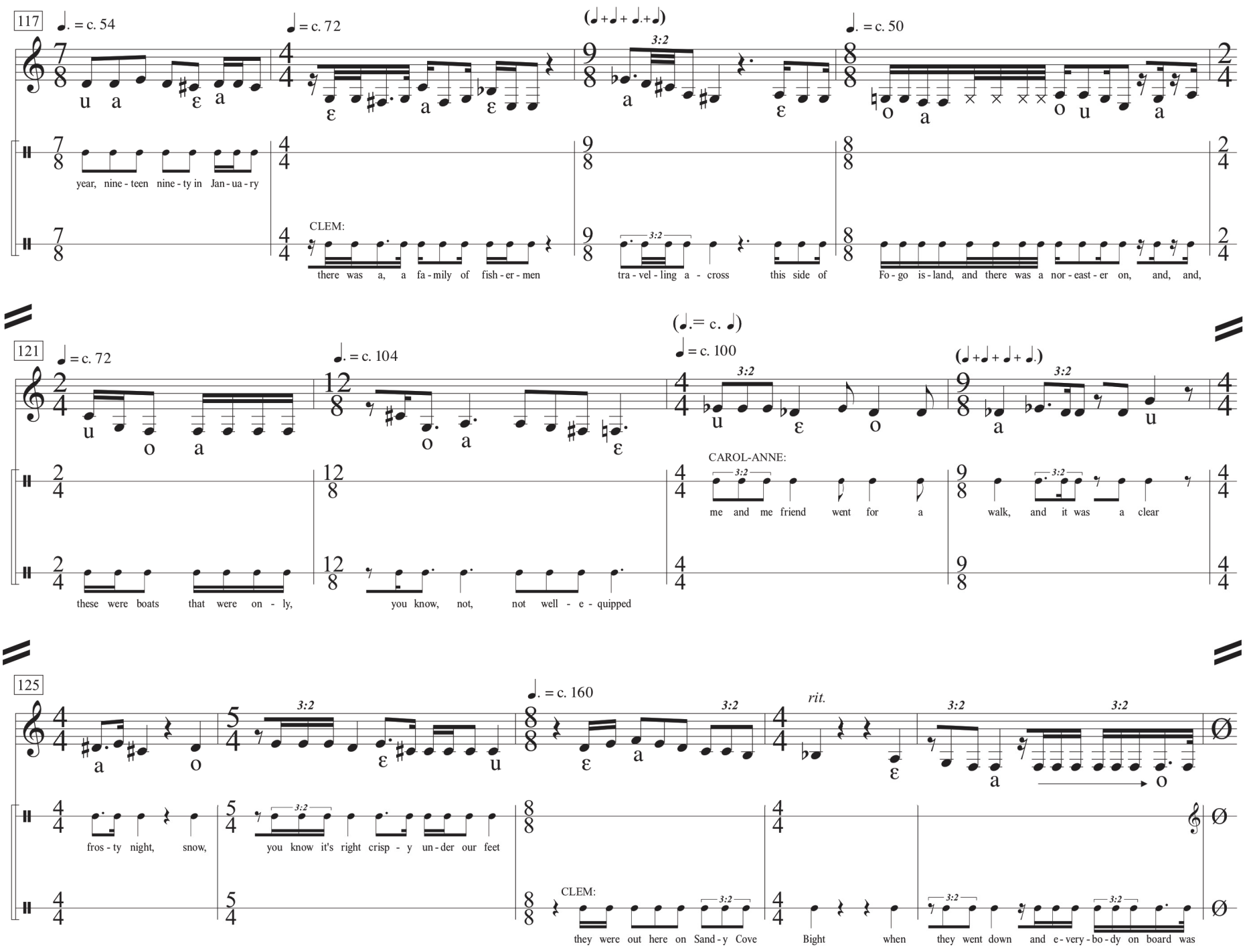


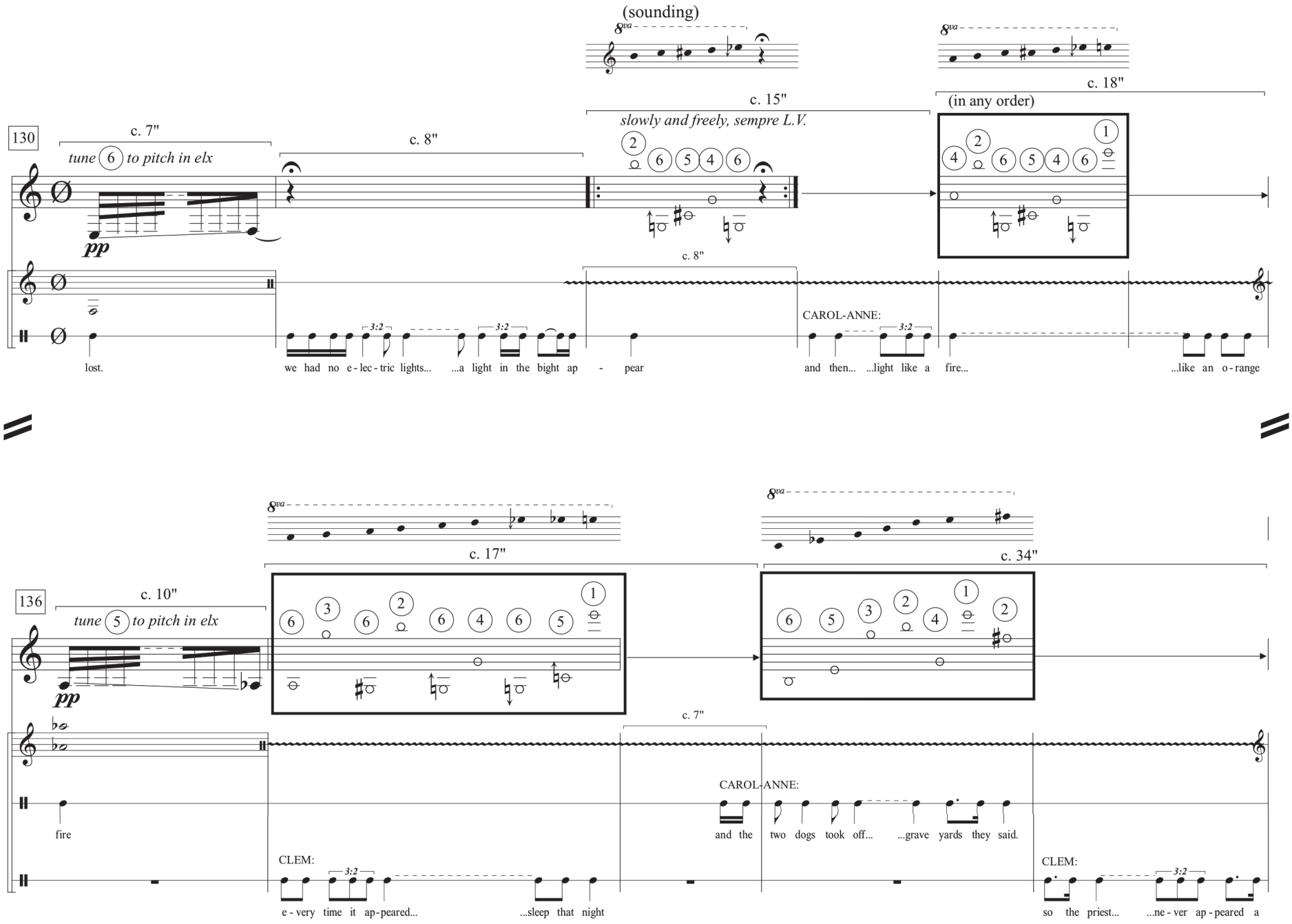

50
a tempo
accel.
♩. = c. 120
MAUREEN:
concatenation tremolo
I don't be - lieve in
gho - - - - - -
cra - zy, right? might think you'd be cra - zy!
56
♩. = c. 88
♩ = c. 132
♩. = c. 88
♩ = c. 120
rit.
CAROL-ANNE:
sts or fae - ries there's three kinds of fae - ries there were the red fae - ries and the green fae - ries and b - la - ck fae - ries
MARY:
(laughter)
MARY:
62
♩ = c. 104
grotesco
ff
concatenated laughter
ff
concatenated speech

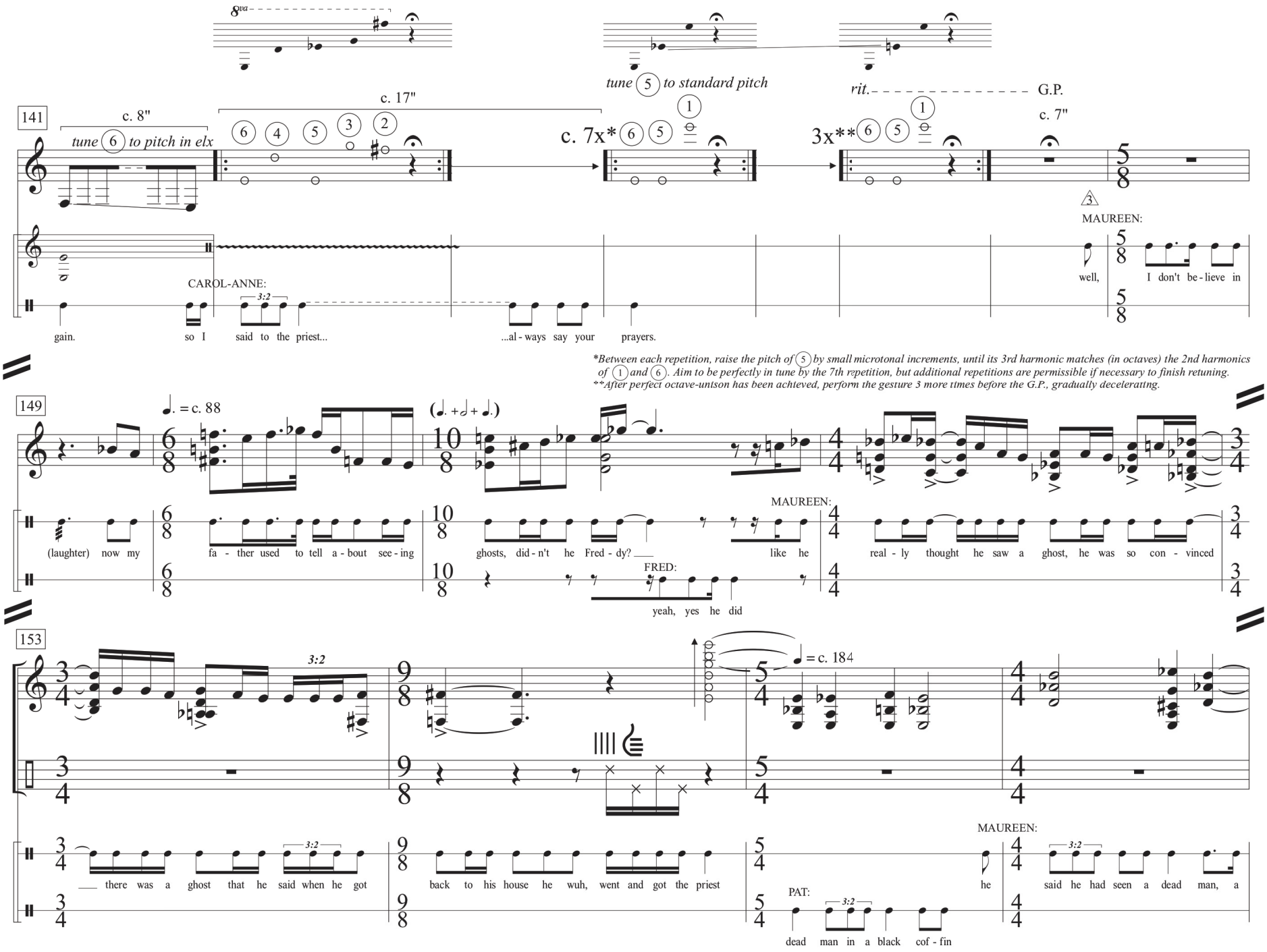

64
♩. = c. 132
solo
4:3
u ɛ o ɛ u ɛ o
mf
niente
♩ = c. 132
(♩.=♩)
accel.
68
rapidly
3:2
ɛ
f
ɛ u ɛ u
a u a u a
71
ɛ u ɛ u ɛ u
2 1 3
3:2
4
74
5
5:4
6
6:4
ɛ
ff
77
3:2
rit.
♩ = c. 112
u
mp
u ɛ o

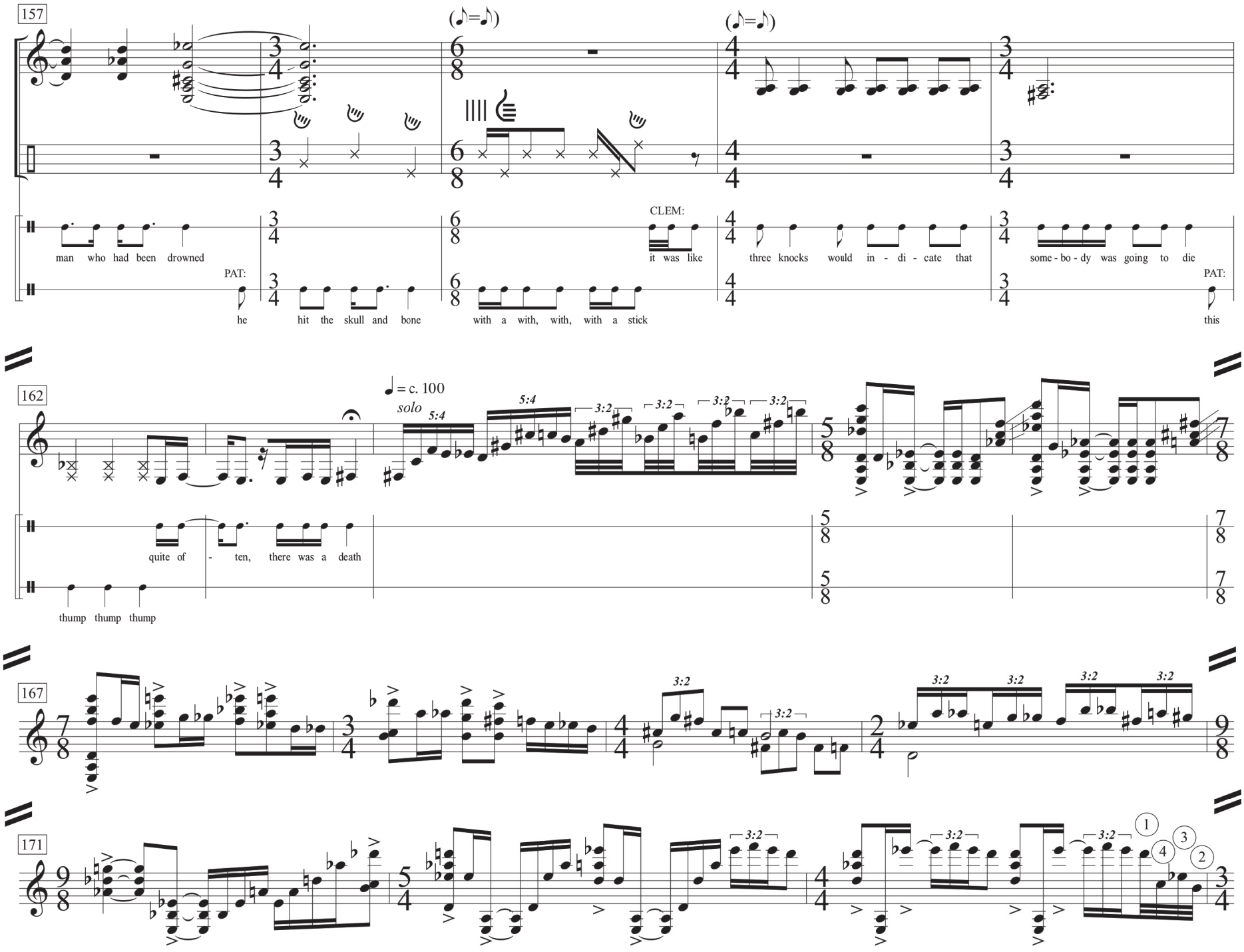

82
♩. = c. 100
mf
mp
♩ = c. 76
f
3:2
♩ = c. 80
mf
(♪.+♪+♪.)
HENRY:
ye real - ly tells some ghost sto-ries
CAROL-ANNE:
they're the worst fae - ries, they're,
PAT:
they're called the e - vil ha! ha! ha!
HENRY:
like tel - ling ghost sto - ries,
yeah, yeah...
88
♩ = c. 144
dead stroke
rit.
♩. = c. 96
I think one time my fa - ther was tel - ling one
CLEM:
well of course be - fore e - lec - tric lights came here
HENRY:
long time a - go
94
♩. = c. 76
(♪=♪)
grotesco
ff
♩. = c. 120
L.V.
freeze c. 40"
♩. = c. 76
concat grains
sudden cut-off
ghosts were all o - ver the place
(laughter)
MAUREEN:
I don't be - lieve in ghosts or fae - ries but there's peo - ple here
ghosts were all o - ver the place

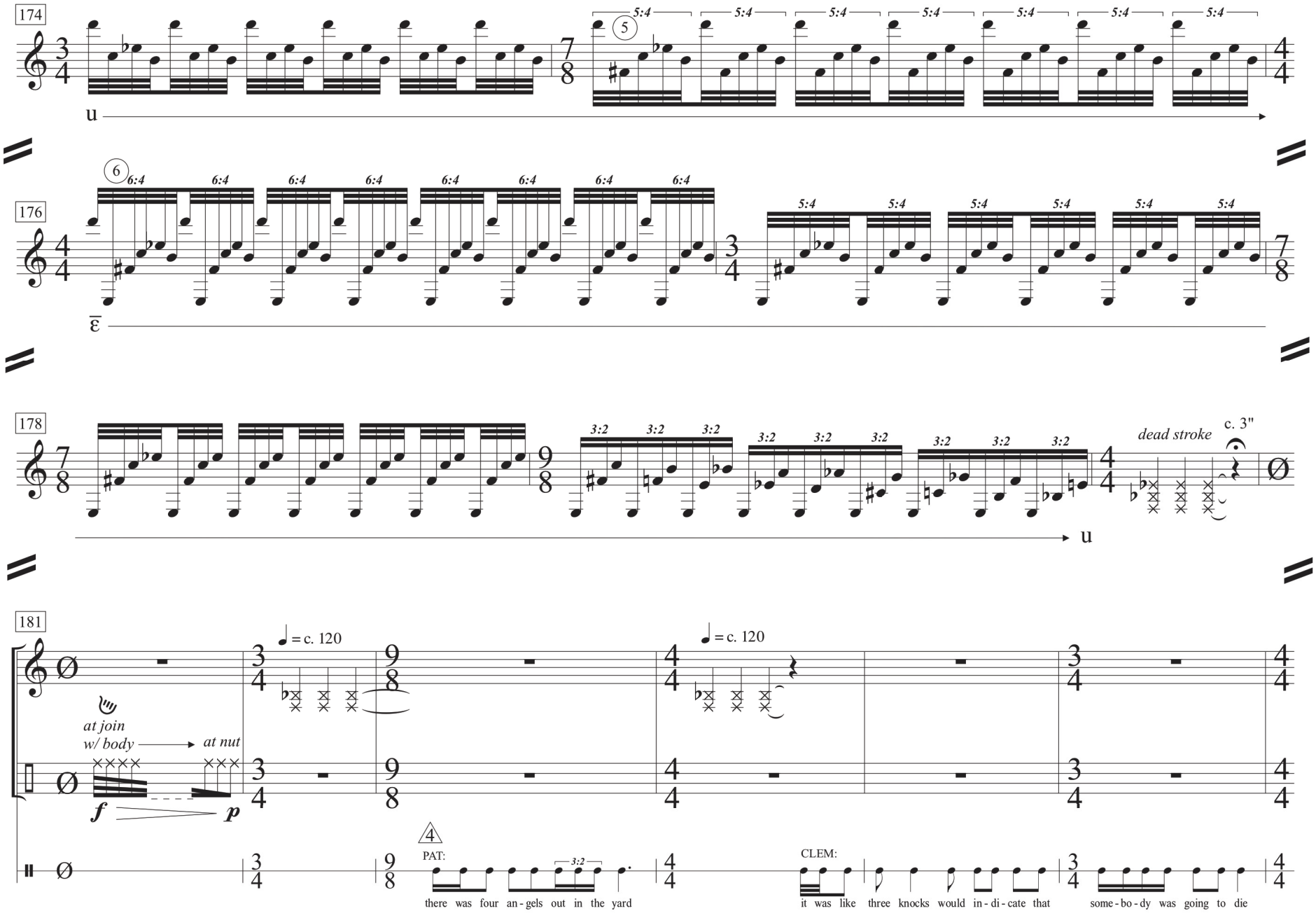

100
♩. = c. 96
rit.
♩ = c. 120
(♩.+♩.+♩)
(♩+♩.+♩)
HENRY:
long time a - go
HENRY:
and that,
that time then, there was not real - ly
lamps in the night time, there was
all the ghosts in there then
CLEM:
be - fore e - lec - tric
lights came here
PAT:
no
106
♩. = c. 96
rit.
a tempo
♩ = c. 104
♩ = c. 138
(♩.+♩.+♩)
(♪=♪)
♩ = c. 144
dead stroke
CAROL-ANNE:
there's so
lights then
CLEM:
CAROL-ANNE:
tel - e - vi - sion, and not much ra - di - o
a long time a - go, my
mo - ther used to tell us this
well I d'
know'f this what you'd, what you'd call the su - per
111
♩. = c. 80
♩ = c. 120
CAROL-ANNE:
nat - rual or ghosts or what e - ver, I don't know
what would you des - cribe it
CLEM:
so
let's say this oc - curred
pro - bab - ly in the
nine - teen twen - ties
that was the

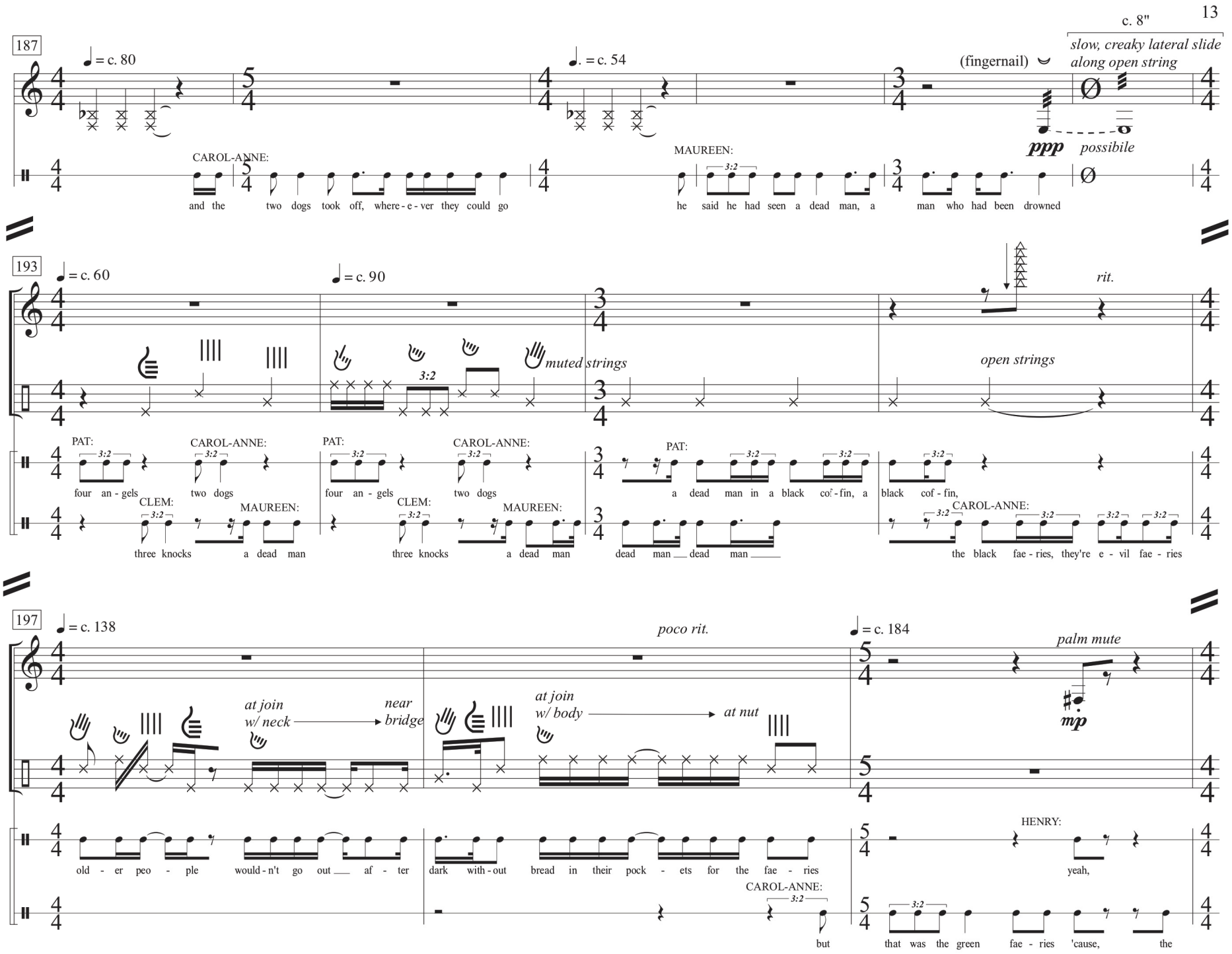

117
♩. = c. 54
♩ = c. 72
(♩+♩+♩.+♩)
♩. = c. 50
u a ɛ a
ɛ a ɛ
a
ɛ
o a o u a
year, nine - teen nine - ty in Jan - ua - ry
CLEM:
there was a, a fa - mily of fish - er - men
tra - vel - ling a - cross this side of
Fo - go is - land, and there was a nor - east - er on, and, and,
121
♩ = c. 72
♩. = c. 104
(♩.= c. ♩)
♩ = c. 100
(♩+♩+♩+♩.)
u o a
o a ɛ
u ɛ o
a u
CAROL-ANNE:
me and me friend went for a
walk, and it was a clear
these were boats that were on - ly,
you know, not, not well - e - quipped
125
♩. = c. 160
rit.
a o
ɛ u
ɛ a
ɛ a o
fros - ty night, snow,
you know it's right crisp - y un - der our feet
CLEM:
they were out here on Sand - y Cove
Bight when
they went down and e - very - bo - dy on board was
3:2

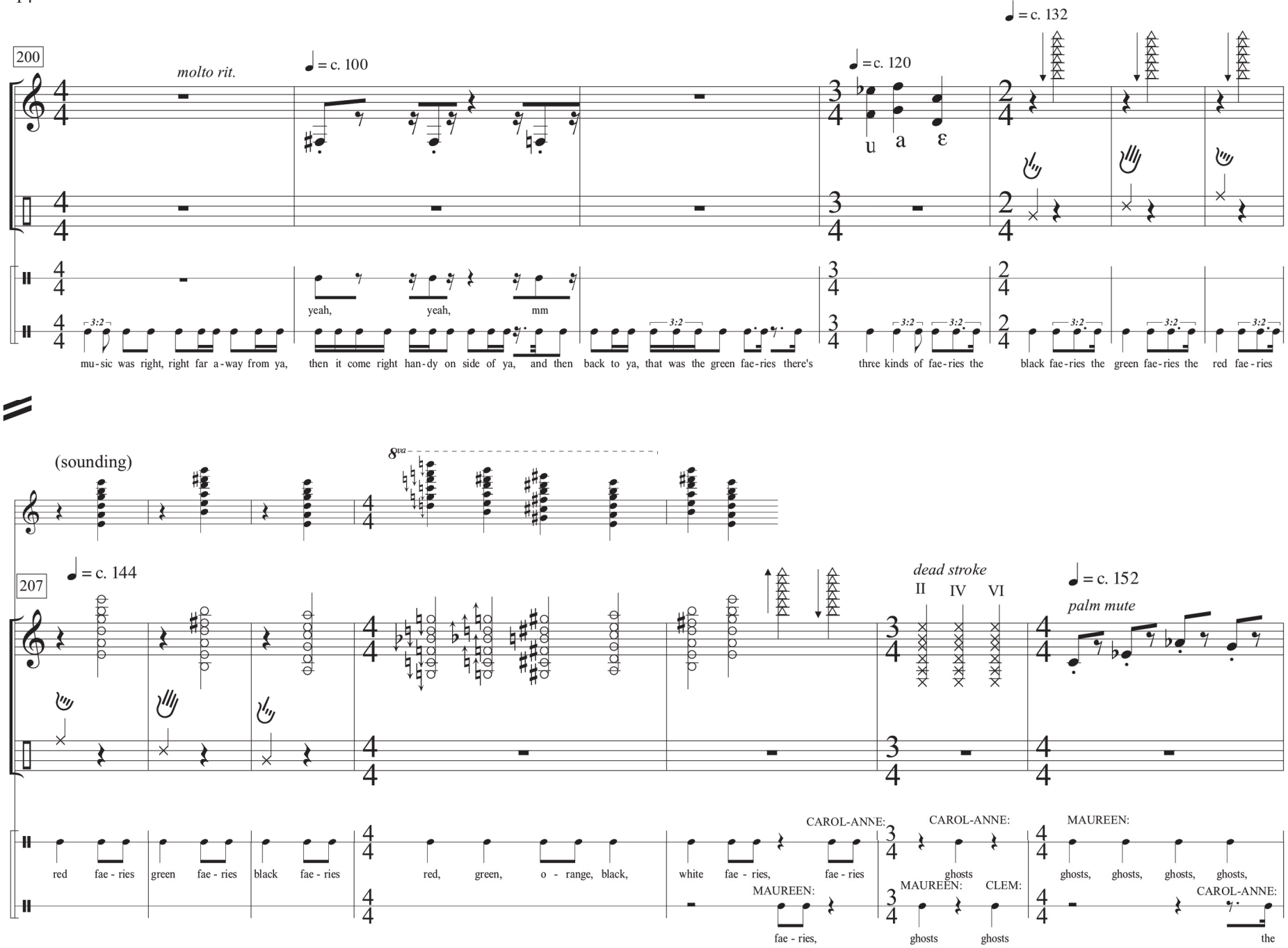

(sounding)
8va
c. 15"
slowly and freely, sempre L.V.
c. 18"
(in any order)
130
c. 7"
tune 6 to pitch in elx
c. 8"
pp
c. 8"
CAROL-ANNE:
3:2
lost.
we had no e - lec - tric lights...
...a light in the bight ap - pear
and then...
...light like a fire...
...like an o - range
8va
c. 17"
c. 34"
136
c. 10"
tune 5 to pitch in elx
pp
c. 7"
CAROL-ANNE:
fire
CLEM:
e - very time it ap - peared...
...sleep that night
and the two dogs took off...
...grave yards they said.
CLEM:
so the priest...
...ne - ver ap - peared a

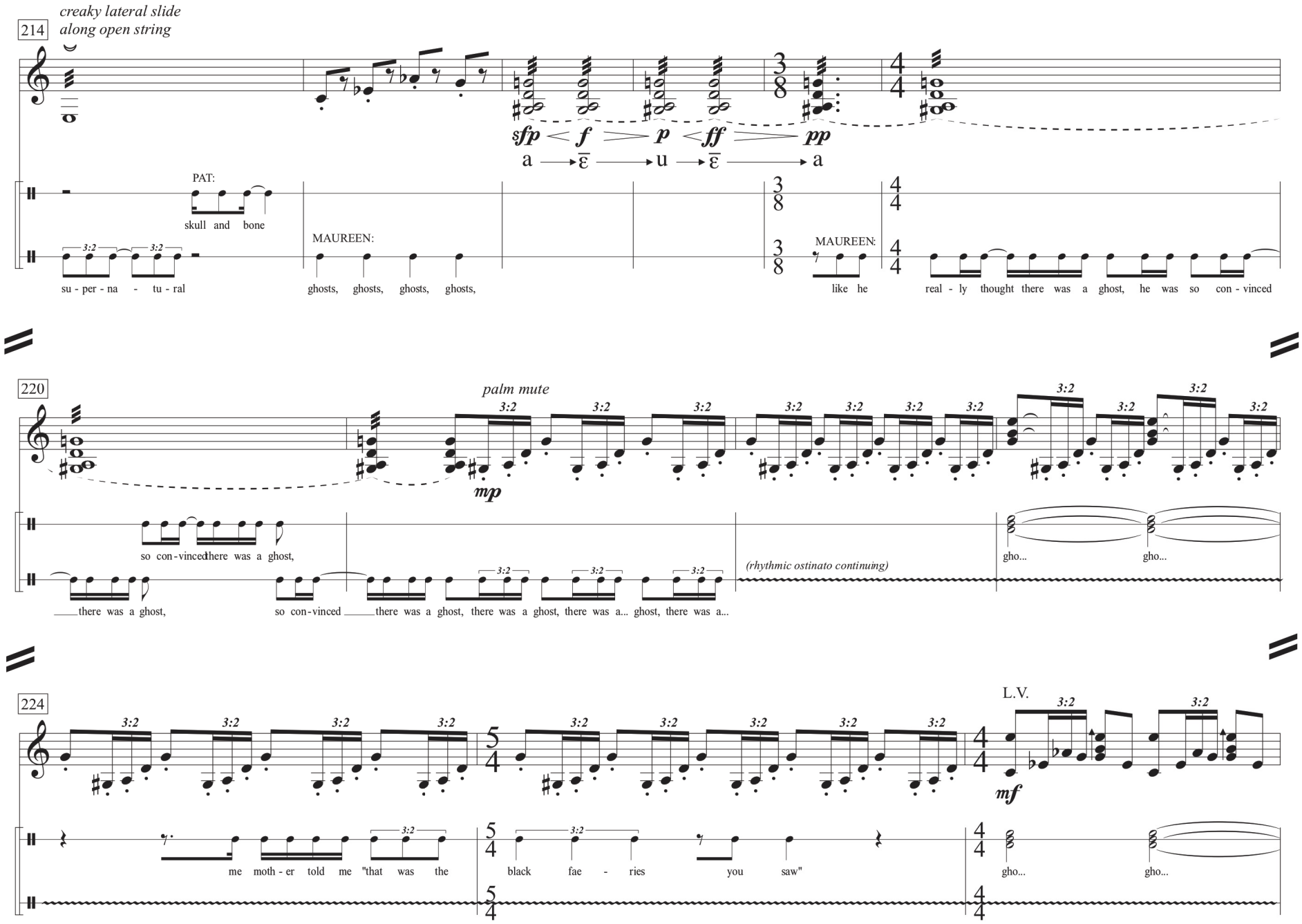

141
c. 8"
tune 6 to pitch in elx
c. 17"
tune 5 to standard pitch
c. 7x*
rit.
G.P.
3x**
c. 7"
MAUREEN:
CAROL-ANNE:
gain.
so I said to the priest...
...al - ways say your prayers.
well,
I don't be - lieve in
*Between each repetition, raise the pitch of 5 by small microtonal increments, until its 3rd harmonic matches (in octaves) the 2nd harmonics of 1 and 6. Aim to be perfectly in tune by the 7th repetition, but additional repetitions are permissible if necessary to finish retuning.
**After perfect octave-unison has been achieved, perform the gesture 3 more times before the G.P., gradually decelerating.
149
♩. = c. 88
(♩. +♩+ ♩.)
MAUREEN:
(laughter) now my
fa - ther used to tell a - bout see - ing
ghosts, did - n't he Fred - dy? ___
like he
real - ly thought he saw a ghost, he was so con - vinced
FRED:
yeah, yes he did
153
3:2
♩ = c. 184
___ there was a ghost that he said when he got
back to his house he wuh, went and got the priest
MAUREEN:
he
said he had seen a dead man, a
PAT:
dead man in a black cof - fin

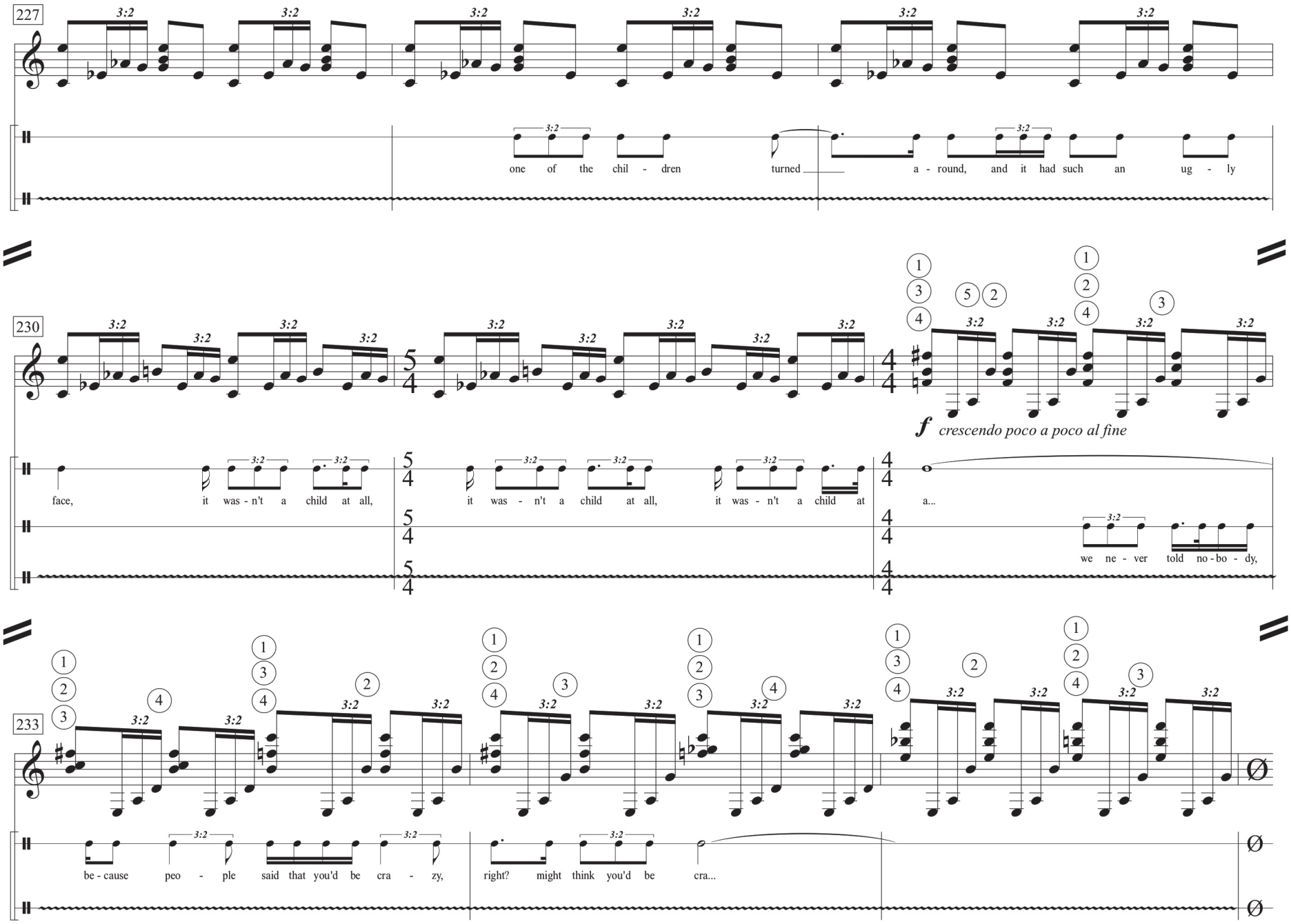

157
(♪=♪)
(♪=♪)
CLEM:
man who had been drowned
PAT:
he hit the skull and bone
with a with, with, with a stick
it was like
three knocks would in - di - cate that
some - bo - dy was going to die
PAT:
this
162
♩ = c. 100
solo
5:4
3:2
quite of - ten, there was a death
thump thump thump
167
171

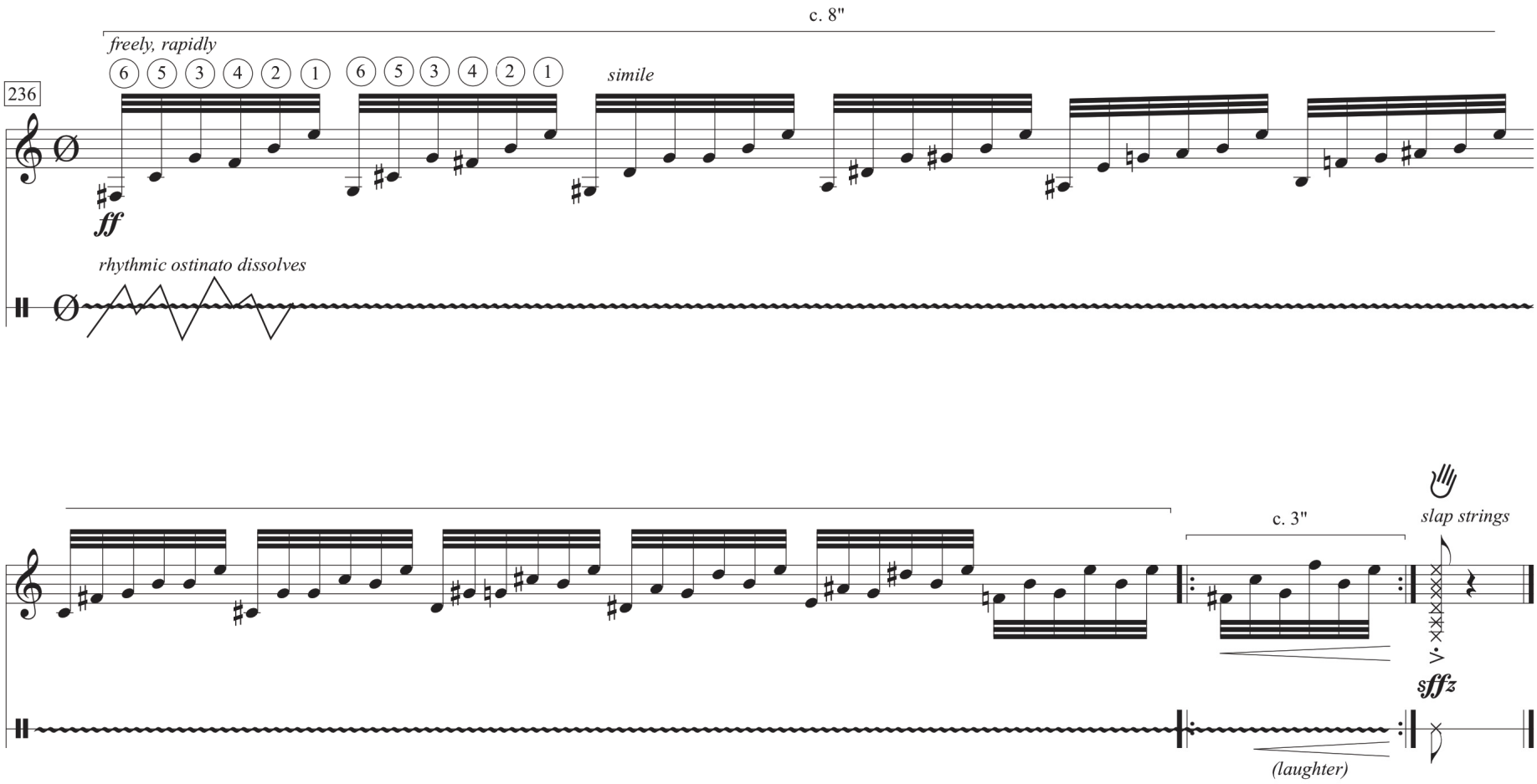

174
5:4
u
176
6:4
ε
178
3:2
dead stroke
c. 3"
u
181
= c. 120
at join
w/ body
at nut
f
p
PAT:
there was four an-gels out in the yard
CLEM:
it was like three knocks would in-di-cate that some-bo-dy was going to die


187
♩ = c. 80
♩. = c. 54
(fingernail)
c. 8"
slow, creaky lateral slide
along open string
ppp
possibile
CAROL-ANNE:
and the two dogs took off, where - e - ver they could go
MAUREEN:
he said he had seen a dead man, a man who had been drowned
193
♩ = c. 60
♩ = c. 90
rit.
muted strings
open strings
PAT:
four an - gels
CAROL-ANNE:
two dogs
CLEM:
three knocks
MAUREEN:
a dead man
a dead man in a black cof - fin, a black cof - fin,
dead man dead man
the black fae - ries, they're e - vil fae - ries
197
♩ = c. 138
poco rit.
♩ = c. 184
palm mute
mp
at join w/ neck
near bridge
at join w/ body
at nut
old - er peo - ple would - n't go out af - ter dark with - out bread in their pock - ets for the fae - ries
CAROL-ANNE:
but
HENRY:
yeah,
that was the green fae - ries 'cause, the


200
molto rit.
♩ = c. 100
♩ = c. 120
♩ = c. 132
u a ɛ
yeah, yeah, mm
mu-sic was right, right far a-way from ya, then it come right han-dy on side of ya, and then back to ya, that was the green fae-ries there's three kinds of fae-ries the black fae-ries the green fae-ries the red fae-ries
(sounding)
8va
207
♩ = c. 144
dead stroke
II IV VI
♩ = c. 152
palm mute
red fae-ries green fae-ries black fae-ries red, green, o-range, black, white fae-ries, fae-ries
CAROL-ANNE: ghosts
MAUREEN: fae-ries,
CAROL-ANNE: ghosts
MAUREEN: ghosts
CLEM: ghosts
MAUREEN: ghosts, ghosts, ghosts, ghosts,
CAROL-ANNE: the


214
creaky lateral slide
along open string
sfp f p ff pp
a ɛ u ɛ a
PAT:
skull and bone
su - per - na - tu - ral
MAUREEN:
ghosts, ghosts, ghosts, ghosts,
MAUREEN:
like he
real - ly thought there was a ghost, he was so con - vinced
220
palm mute
mp
so con - vinced there was a ghost,
there was a ghost,
so con - vinced there was a ghost, there was a ghost, there was a... ghost, there was a...
(rhythmic ostinato continuing)
gho...
gho...
224
L.V.
mf
me moth - er told me "that was the
black fae - ries you saw"
gho...
gho...


227
one of the chil - dren turned a - round, and it had such an ug - ly
230
face, it was - n't a child at all, it was - n't a child at all, it was - n't a child at a...
we ne - ver told no - bo - dy,
f crescendo poco a poco al fine
233
be - cause peo - ple said that you'd be cra - zy, right? might think you'd be cra...


c. 8"
freely, rapidly
6 5 3 4 2 1
6 5 3 4 2 1
simile
236
ff
rhythmic ostinato dissolves
c. 3"
slap strings
sffz
(laughter)

Appendix C: Content of the Videos

One Foot in the Past, for guitar, piano, and electronics

The world premiere of *One Foot in the Past* by Jason Noble, performed by Steve Cowan (guitar) and James Hurley (piano) at the LSPU Hall in St. John's, Newfoundland, on July 11th, 2016, as part of the 18th St. John's International Sound Symposium.

https://www.youtube.com/watch?v=YEpIKR6Tz5U

Take Me Back**,** for electric guitar and electronics

The world premiere of *Take Me Back* by Jason Noble, performed by Steve Cowan at the "Research Alive" series at Schulich School of Music on March 22nd, 2017. This video contains a 50-minute lecture with a performance of *Take Me Back* beginning at 53:55.

https://www.youtube.com/watch?v=wAJ0UX3t4Bs

We Never Told Nobody, for guitar and electronics

The world premiere of *We Never Told Nobody* by Jason Noble, performed by Steve Cowan as part of his Doctoral Lecture-Recital at Schulich School of Music on March 11th, 2019.

https://www.youtube.com/watch?v=L44EW2uCa08&feature=youtu.be

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